Family Options Study

3-Year Impacts of Housing and Services Interventions for Homeless Families

U.S. Department of Housing and Urban Development | Office of Policy Development and Research

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Prepared for
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Prepared by
Daniel Gubits
Marybeth Shinn
Michelle Wood
Stephen Bell
Samuel Dastrup
Claudia D. Solari
Scott R. Brown
Debi McInnis
Tom McCall
Utsav Kattel

Project quality advisors
Jill Khadduri
Jacob Klerman

Abt Associates, Inc.
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Vanderbilt University

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Stephen Bell (Abt Associates) and Marybeth Shinn (Vanderbilt University) are the study's Co-Principal Investigators, Michelle Wood (Abt Associates) is the Project Director, and Daniel Gubits (Abt Associates) is the study's Director of Analysis.

Implementing the study design required the efforts of a large team to recruit sites, develop site-specific implementation plans, and conduct random assignment. Brooke Spellman (Abt Associates) led the site recruitment and implementation activities, with contributions from site research liaisons Burt, Culhane, Shinn, Donald Chamberlin (independent consultant), Wendy Vaulton (formerly with the Center for Social Innovation), Matt White (Abt Associates), and Suzanne Zerger (formerly with the Center for Social Innovation). Satyendra Patrabansh (formerly with Abt Associates) designed the complex random assignment algorithm used to assign families, and Sage Computing developed the randomization software. Scott Brown (Vanderbilt University), Lauren Dunton, Nichole Fiore, and Meghan Henry (Abt Associates) monitored random assignment, collecting updates about the availability of intervention slots and the status of families enrolled in each intervention.

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DISCLAIMER

The contents of this report are the views of the contractor and do not necessarily reflect the views or policies of the U.S. Department of Housing and Urban Development or the U.S. government.

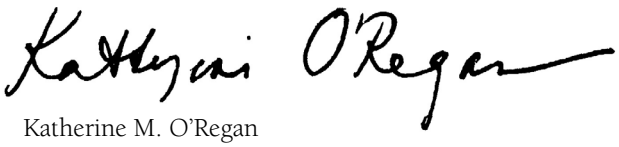
FOREWORD

The 2010 release of *Opening Doors: Federal Strategic Plan To Prevent and End Homelessness* established an ambitious goal to end homelessness among children, families, and youth by 2020. Until now, the U.S. Department of Housing and Urban Development (HUD) has had little empirical evidence to guide its policy and program decisions toward achieving this goal.

This report is the culmination of an 8-year research effort. Launched in 2008, HUD's Family Options Study represents, to date, the most rigorously designed experimental study to determine the effectiveness and relative costs of different interventions that communities may implement to assist families experiencing homelessness—long term housing subsidy, project-based transitional housing, community-based rapid re-housing, and usual care. More than 2,200 homeless families, including more than 5,000 children, in 12 communities were randomly assigned to one of these four interventions. The families were tracked for 3 years and were extensively interviewed at baseline, 20 months after random assignment, and again at 37 months after random assignment to assess outcomes related to housing stability, family preservation, adult well-being, child well-being, and self-sufficiency.

HUD released the short-term outcomes report in July 2015, documenting the outcomes of families 20 months after random assignment and presenting striking evidence of the power of offering a long-term subsidy, such as a voucher, to a homeless family in domains that extended far beyond housing stability. This current report, which documents outcomes of families 37 months after random assignment, amplifies the remarkable short-term findings, demonstrating once again the power of a long-term housing subsidy in conveying significantly improved housing outcomes to formerly homeless families. We also continue to see the radiating benefits to families of stable housing that were observed in the short-term outcomes, such as reductions in adult psychological distress, experiences of intimate partner violence, school mobility among children, food insecurity, and sleep and behavior problems in children. Offering a homeless family a voucher cost roughly $4,000 more than leaving families to find their own way out of shelter over the full 3-year followup period—a modest investment to achieve substantially better outcomes for both parents and children. Among the crisis interventions studied- including rapid re-housing, transitional housing, and emergency shelter—housing stability and other outcomes for families were relatively similar, but, as it was in the short-term study findings, rapid re-housing was the least costly intervention for communities to implement over the full 3-year followup period.

The study findings, in both the short and long terms, provide clear evidence that, when long-term housing assistance is offered to families experiencing homelessness, families are able to both obtain and sustain stable housing and that this housing assistance can have a powerful impact on improving the lives of poor families and children.



Katherine M. O'Regan
Assistant Secretary for Policy Development & Research
U.S. Department of Housing and Urban Development

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LIST OF ABBREVIATIONS AND ACRONYMS

AFCARS	Adoption and Foster Care Analysis and Reporting System
CBRR	priority access to community-based rapid re-housing
CoC	Continuum of Care (program); continuum of care (generic)
FMR	Fair Market Rent
HAP	Housing Assistance Payment
HCV	Housing Choice Voucher program
HMIS	Homeless Management Information System
HPRP	Homelessness Prevention and Rapid Re-Housing Program
HTKS	Head, Toes, Knees, Shoulders
ITT	intention-to-treat
PBTH	priority access to project-based transitional housing
PHA	public housing agency
PIC	Public and Indian Housing Information Center
PTSD	post-traumatic stress disorder
RA	random assignment
SHP	Supportive Housing Program
SNAP	Supplemental Nutrition Assistance Program
SUB	priority access to permanent housing subsidy
TANF	Temporary Assistance for Needy Families
TRACS	Tenant Rental Assistance Certification System
UC	usual care
WIC	Special Supplemental Nutrition Program for Women, Infants, and Children

EXECUTIVE SUMMARY

The U.S. Department of Housing and Urban Development undertook the Family Options Study to gather evidence about which types of housing and services programs work best for homeless families. The study examines the effects of three types of programs—permanent housing subsidies, community-based rapid re-housing, and project-based transitional housing—compared with one another and with the usual care available to homeless families. The three types of programs are distinguished from one another by the duration of housing assistance and the type and intensity of social services provided to families. Usual care consists of emergency shelter and housing or services that families can access without immediate referral to a program that would provide them with a place to live.

From September 2010 through January 2012, 2,282 families enrolled in the Family Options Study across 12 communities[1] after spending at least 7 days in emergency shelter. After providing informed consent and completing a baseline survey, the families were randomly assigned to one of four groups: (1) SUB, in which families have priority access to a permanent housing subsidy; (2) CBRR, in which families have priority access to community-based rapid re-housing; (3) PBTH, in which families have priority access to project-based transitional housing; or (4) UC, in which families have access to usual care homeless and housing assistance but do not have priority access to any particular program. Random assignment yielded groups of families with no systematic differences in baseline characteristics. Families were free to take up the program to which they were offered priority access or to make other arrangements, so each group used a mix of programs. Nonetheless, patterns of program use among the groups of families contrasted substantially. The study therefore provides a strong basis for conclusions about the relative impacts of the interventions on several aspects of family well-being.[2]

At 20 months after random assignment, the Family Options Study produced important and, in some cases, surprising findings (see *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families*; hereafter, the *Short-Term Impacts* report; Gubits et al., 2015); however, 20 months is not a long enough period to evaluate the effects of temporary programs that can last up to 18 months (as with CBRR programs) or 24 months (as with PBTH programs). Some families may not have received a full dose of the temporary assistance by the time of the short-term analysis at 20 months, so different findings may emerge during a longer period. In addition, some families were still in these temporary programs at 20 months, so they may have different outcomes after leaving.

This report presents the analysis of the 3-year impacts of the three interventions in five domains related to family well-being: (1) housing stability, (2) family preservation, (3) adult well-being, (4) child well-being, and (5) self-sufficiency. The report also describes the relative costs of the interventions based on program use during the 3-year followup period.

The 3-year analysis addresses three primary questions.

1. What programs do families who experience homelessness use during a 3-year period, and how does assignment to an intervention that offers priority access to a particular kind of program affect this program use?
2. At 3 years after random assignment, what are the relative effects of the three active interventions compared with usual care and of the active interventions compared with each other?
3. What are the cumulative costs of the interventions during the 3 years following random assignment?

Study Interventions

The study examines four interventions, to which families are randomly assigned:

1. The ***SUB*** intervention offers families a permanent housing subsidy, usually a housing choice voucher, which could include assistance to find housing but no other supportive services.

[1] The 12 communities participating in the study are Alameda County, California; Atlanta, Georgia; Baltimore, Maryland; Boston, Massachusetts; Bridgeport and New Haven, Connecticut; Denver, Colorado; Honolulu, Hawaii; Kansas City, Missouri; Louisville, Kentucky; Minneapolis, Minnesota; Phoenix, Arizona; and Salt Lake City, Utah.

[2] Two previous reports provide information about the Family Options Study: the *Interim Report: Family Options Study* (Gubits et al., 2013), which documented study implementation findings and baseline characteristics of the research sample, and the *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families* (Gubits et al., 2015), which presents findings from the 20-month impact analysis.

2. The ***CBRR*** intervention offers families temporary rental assistance, potentially renewable for up to 18 months, paired with limited, housing-focused services to help families find and rent conventional, private-market housing.

3. The ***PBTH*** intervention offers families temporary housing for up to 24 months in agency-controlled buildings or apartment units, paired with intensive supportive services.

4. The ***UC*** intervention did not offer priority access to any type of homeless or housing assistance. Families assigned to the UC intervention could use any housing or services in the community that a family could access in the absence of immediate referral to the other interventions. The UC intervention typically included at least some additional stay in the emergency shelter from which families were enrolled.

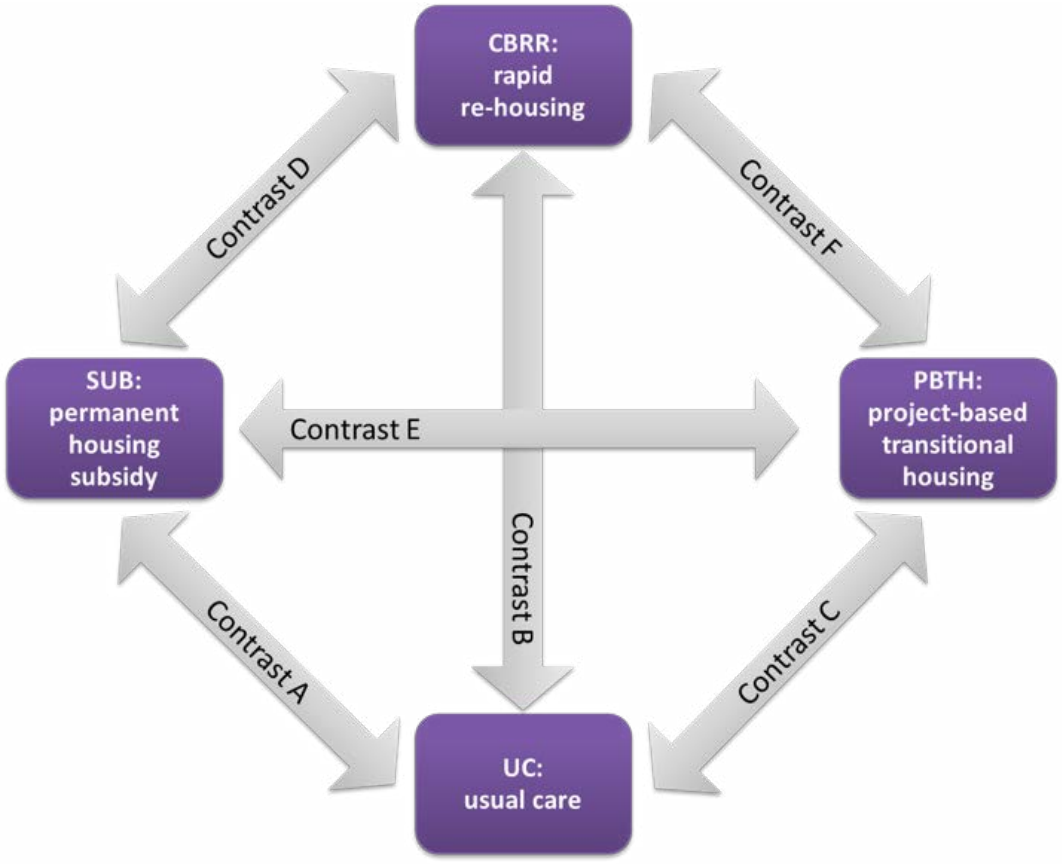
The study team analyzed all six possible contrasts among these four interventions, as shown in Exhibit ES-1. The order of the presentation of findings for the pairwise comparisons is reflected in the alphabetic ordering of the arrows (for example, discussion begins with "Contrast A" between the SUB intervention and the UC intervention).

Random Assignment Design

To be eligible for the study, families had to include at least one child age 15 or younger and had to have resided in emergency shelter for 7 or more days. The study team excluded families who left shelter in fewer than 7 days because the three interventions examined may not be necessary for families who can resolve a housing crisis quickly. As soon as was feasible after the 7-day mark, the study team randomly assigned families to the SUB, CBRR, PBTH, or UC group.

In the original random assignment design, each family was to have had a chance of being assigned to all four groups (SUB, CBRR, PBTH, and UC). A number of factors prevented the study from being implemented exactly as planned. First, all four interventions were offered in only nine sites. Two sites (Atlanta and Baltimore) did not offer the SUB intervention and one site (Boston) did not offer the PBTH intervention. Second, interventions were available to families only in cases in which at least one provider of the intervention type had an available slot. Third, some service providers had unique eligibility requirements for families. Before random assignment, the study team screened families for eligibility for the providers that had

Exhibit ES-1. Six Pairwise Comparisons Among the Four Interventions



available slots using criteria specified by the providers. The purpose of this screening was to minimize the likelihood of assigning families to interventions they would not be eligible to receive. As a result, for an intervention option to be available to a family undergoing random assignment, at least one slot had to be open at an intervention provider for which the family met provider-specific eligibility requirements. All families were eligible for usual care by definition.

These factors cumulatively led to situations in which most study families did not have all four options available to them at the time of random assignment. Of the 2,282 families enrolled in the study, 264 families had two randomization options, 1,544 families had three randomization options, and 474 had all four randomization options available. All analyses were conducted pairwise, contrasting an active intervention with another active intervention or with the usual care. Only families who were eligible for both interventions in a pairwise comparison (for example, the SUB and CBRR interventions) and were randomized to one of them were included in each comparison. Hence, each comparison can be thought of as an experiment between two well-matched groups that differ only in the intervention to which they were assigned.

Exhibit ES-2 shows the total number of families assigned to each intervention. The exhibit also shows the number of families who responded to the followup survey conducted a median of 37 months after random assignment; this set of families is included in the impact analyses in this report.[3] Altogether, 1,621 families (71 percent of the sample) completed both the 20- and 37-month surveys.[4]

Meaning of Intention-to-Treat (ITT) Impact Estimates

The inherent strength of the experimental research design employed in the Family Options Study is the assurance that the groups that are created through the random assignment process will be similar to each other in all respects except for their priority access to a particular type of homeless or housing assistance program. This assurance means that that subsequent differences in outcomes (beyond the bounds of chance sampling variability) reflect the relative impact of those interventions.

The Family Options Study tests for the impacts of three different potential emphases in federal or local assistance policy to homeless families: (1) What impact would priority access to project-based transitional housing (offered to the PBTH group) have on families in shelter who are not able to resolve their episodes of homelessness quickly? (2) How does this policy compare with providing access to community-based rapid re-housing (offered to the CBRR group)? (3) How does it compare to permanent housing subsidies (offered to the SUB group)? In each case, the corresponding policy question is, "What impact would this policy emphasis have on the outcomes of families in shelter relative to usual care or another policy emphasis?"

The 3-year followup data for study participants tell what would happen if each of these ways of targeting offers and access were pursued as federal or local policy—for the families actually studied in the target communities. The pairwise comparisons between active interventions show the impact of offering families priority access to one type of program rather than another. The data also allow for the comparison of each option with the mix of programs that the homeless assistance systems provided at the time of the study (that is, the programs available to the UC group). The pairwise comparisons between active interventions and usual care show the impact of referring a family to a specific type of program compared with the impact of letting families pursue any available assistance on their own.

The analysis in this report measures the impact of having been offered a particular type of program regardless of whether the family involved actually received the program assistance. The findings reflect the real way in which the homeless assistance system interacts with families, in that families are offered

Exhibit ES-2. Total Number of Families Assigned to Each Intervention and Number of Followup Survey Respondents

Intervention	Families Assigned	Families Responding to the 37-Month Followup Survey	Response Rate (%)
Permanent housing subsidy (SUB)	599	501	83.6
Community-based rapid re-housing (CBRR)	569	434	76.3
Project-based transitional housing (PBTH)	368	293	79.6
Usual care (UC)	746	556	74.5
Total	**2,282**	**1,784**	**78.2**

Sources: Random assignment records; Family Options Study 37-month followup survey

[3] The median time from random assignment to the followup survey was 37 months. The minimum time was 32 months and the maximum was 50 months.

[4] Gubits et al. (2015) analyzed short-term impacts of the interventions. The study team attempted to contact families for the study's first followup survey beginning in the 18th month after random assignment. The median time from random assignment to the followup survey was 20 months. The followup period reported in Gubits et al. (2015) is thus 20 months, but the followup survey is sometimes referred to as the 18-month survey.

assistance rather than mandated to accept the assistance being offered. Whether families participate in a program to which they have gained priority access through their randomly assigned intervention reflects the relative desirability and accessibility of the programs for families within the context of the other options they may choose to pursue on their own.

As the report shows, in the 3 years after random assignment, a substantial number of families did not use the program to which they were given priority access, and some used other programs. The full experimental sample for a given intervention collectively shows how different forms of housing assistance are used when families are given priority access to one particular program type while simultaneously having the freedom to use other forms of assistance available in their communities. Including all the families randomly assigned to the UC group similarly reveals the range of programs used when no priority access is provided. The programs (including the programs offered by the interventions examined in this study) that UC families used exist in communities and would each continue to exist even with a stronger federal or local push for only one of them. Thus, the full-sample comparisons between randomly assigned interventions—known as "intention to treat," or ITT, impact estimates—provide the best guide to policymakers in a messy, complex world and are reported here as the main study findings.

Data Sources

The bulk of the impact findings documented in this report is drawn from the 1,784 families who responded to the 37-month followup survey and is based on data from several sources described in Exhibit ES-3.[5]

Exhibit ES-3. Data Sources Used in the Analysis of 3-Year Impacts

Study implementation records	
Random assignment enrollment data	Random assignment enrollment data contain identifiers for enrolled families, responses to eligibility screening questions, information about intervention availability at the time of random assignment, and random assignment result.
Study families	
Baseline survey	The baseline survey conducted immediately before random assignment provides information about the adult respondent and the family. The study team defined covariates from these data and included them in impact models to improve the precision of impacts estimates.
Tracking surveys	Tracking surveys conducted 6, 12, and 27 months after random assignment contain updated contact information and details about family composition and housing status.
20- and 37-month followup surveys	The 20- and 37-month followup surveys with adult respondents measure family outcomes. Adults reported on themselves and up to two children, called focal children, who were part of the family at the time of study enrollment. Focal children were randomly selected within specified age groups.
37-month child assessments	Child assessments, which were conducted with focal children ages 3 years, 6 months to 7 years, 11 months in conjunction with the adult followup survey, measure child well-being outcomes.
37-month child survey	The child survey, conducted with focal children ages 8 to 17 years in conjunction with the adult followup survey, measures child well-being outcomes.
Study intervention providers	
Enrollment verification data	Enrollment verification data collected from program providers measure use of the assigned intervention for each family.
Program information	Program information about the housing and services offered during the study period collected from intervention providers describes the interventions.
Cost information	Cost information collected from intervention providers measures costs of overhead, rental assistance, facility operations, supportive services, and capital costs.
Administrative data systems	
HMIS records	Homeless Management Information System (HMIS) records, collected from the communities where families enrolled, provide indicators of study families' participation in homeless assistance programs.
HUD's PIC records	HUD's Public and Indian Housing Information Center (PIC) records measure receipt of housing assistance from the Housing Choice Voucher program, public housing programs, and project-based voucher programs.
HUD's TRACS records	HUD's Tenant Rental Assistance Certification System (TRACS) records measure receipt of housing assistance through project-based Section 8 programs.
Child welfare records	State and local child welfare agency records (using Adoption and Foster Care Analysis and Reporting System [AFCARS] reporting definitions) on formal foster care placements and adoptions measure family separations and unifications.
Quarterly wage records	National Directory of New Hires data on quarterly wages measure employment and earnings.

[5] Impact findings from administrative earnings records are drawn from the full study sample of 2,282 families. Impact findings from administrative child welfare records are drawn from the full study samples of 5 of the 12 sites (951 families).

Hypothesized Effects of the Interventions

The study team developed hypotheses about the potential effects of the interventions based on the conceptual framework underlying the SUB, CBRR, and PBTH interventions. Chapter 3 of the *Short-Term Impacts* report (Gubits et al., 2015) discusses the theoretical framework in detail. The interventions reflect different implicit theories about the nature of family homelessness and the approaches best suited to address the problem. These implicit theories arise from different understandings of the origins of homelessness, the needs of homeless families, the effect of family challenges on achieving residential stability, and the appropriate role of the homeless assistance system.

Some theories posit that household challenges—for example, trauma, substance use problems, mental health issues, lack of job skills—must be addressed first for families to succeed in housing. Others posit that progress on these issues is likely to be achieved only after families are stabilized in permanent housing.

These different theories and different perceptions of the homeless assistance system's role result in different emphases among three central goals of interventions for homeless families: (1) ending the immediate episode of homelessness and preventing returns to shelter; (2) fostering longer-term residential stability; and (3) promoting nonhousing outcomes, including self-sufficiency, family preservation, and adult and child well-being.

Conceptual Framework for the SUB and CBRR Interventions

It is appropriate to consider the conceptual rationales for the SUB and CBRR interventions together because proponents of both permanent housing subsidies and community-based rapid re-housing believe that the key goal of homeless interventions should be ending homelessness swiftly, reducing the number of families who return to shelter, and restoring families to housing stability. This position follows from the view that family homelessness is largely a consequence of housing costs that outstrip the incomes of poor families, a problem that housing subsidies can solve. Subsidies—whether the permanent housing subsidies of the SUB intervention or the temporary housing subsidies of the CBRR intervention—can help families obtain and maintain stable housing.

Permanent housing subsidies were not created as a response to homelessness. Instead, they already existed as an element of the broader social safety net at the time the homeless assistance system began to expand into its current configuration in the late 1980s. Resource constraints mean that, outside the context of this study, a permanent housing subsidy is rarely accessible by families at the outset of an episode of homelessness unless they already have a place near the top of a waiting list. By contrast, community-based rapid re-housing was developed specifically as a response to homelessness. Unless resources devoted to permanent housing subsidies are vastly increased, this assistance is unlikely to become widely available to families at the time they are experiencing homelessness. Thus, proponents of rapid re-housing argue that limited resources dedicated to homelessness could be stretched to create the best outcomes for the most people by making subsidies temporary (Culhane, Metraux, and Byrne, 2011).

Proponents of rapid re-housing emphasize restoring families to conventional housing as swiftly as possible (the "rapid" in rapid re-housing), thereby reducing time staying in shelter and on the street, which they see as harmful. In addition, they focus on preventing returns to homelessness. Proponents of permanent housing subsidies focus more on long-term stability and question whether the short-term subsidies that rapid re-housing provides are sufficient to foster such stability. Proponents of rapid re-housing argue that a temporary subsidy may induce families to strive to become economically self-sufficient sooner. Unlike permanent housing subsidies, rapid re-housing offers some services focused on housing and self-sufficiency.

Advocates of both types of subsidies acknowledge that homeless families, like other poor families, must contend with a variety of challenges, but these advocates believe that such challenges are better addressed by mainstream community agencies rather than by specialized homeless services. Proponents of both types of subsidies argue that stable housing provides a platform from which families can address other problems on their own using community resources, if they need to and choose to do so, while reserving scarce housing dollars for housing. Thus, the stability that either a short-term or permanent housing subsidy provides may have radiating effects on other aspects of family well-being.

For comparisons involving the SUB and CBRR interventions and usual care, the study team developed four hypotheses that derive from this conceptual framework.

Hypotheses for Comparisons Involving the SUB and CBRR Interventions and Usual Care

SUB Versus UC

Relative to the UC intervention, the SUB intervention will reduce shelter use and improve housing stability and may improve family preservation, adult well-being, and child well-being.

CBRR Versus UC

Relative to the UC intervention, the CBRR intervention will reduce shelter use and may improve housing stability, employment and earnings, family preservation, adult well-being, and child well-being. It will reduce the length of the shelter stay at the time of study entry and may be less costly.

SUB Versus CBRR

Relative to the CBRR intervention, the SUB intervention will reduce shelter use and improve housing stability and may improve family preservation and adult and child well-being.

Relative to the SUB intervention, the CBRR intervention will reduce the length of the shelter stay at the time of study entry and will be less costly. It may improve employment and earnings.

Conceptual Framework for the PBTH Intervention

Proponents of transitional housing have a different understanding of the origins of family homelessness and the appropriate role of the homeless assistance system than do proponents of permanent housing subsidies and rapid re-housing. Although the housing market is difficult for poor families, most families do not experience homelessness. Proponents of transitional housing emphasize that many families who do become homeless have barriers in addition to poverty that make it difficult for them to secure and maintain housing. Thus, housing subsidies alone may be insufficient to ensure housing stability and other desirable outcomes, particularly for families who have been in shelter for at least 7 days (for example, Bassuk and Geller, 2006). Family needs may arise from poverty, health, disability, or other problems that led to homelessness to begin with or from the disruptive effects of homelessness on parents and children.

The premise for project-based transitional housing is that, by addressing these barriers and needs in a supervised residential setting, PBTH programs lay the best foundation for ongoing stability. Basing their work on family needs, case managers coordinate the services (on site or by referral) to lay the essential groundwork for later independence.

Different PBTH programs focus on different issues, but all provide supportive services designed to reduce barriers to housing, enhance adults' well-being, and bolster adults' ability to manage in ordinary housing after they leave programs (Burt, 2010). Practitioners' goals for project-based transitional housing, as documented in the literature (for example, Burt, 2006), thus extend beyond housing stability to adult well-being and aspects of family self-sufficiency. Although some PBTH programs provide services directly to children, family preservation and child outcomes are usually seen as more distal outcomes. Given this conceptual framework for project-based transitional housing, the study team defined five hypotheses about the potential effects of the PBTH intervention when compared with usual care and with the SUB and CBRR interventions.

Hypotheses for Comparisons Involving the PBTH Intervention

PBTH Versus UC

Relative to the UC intervention, the PBTH intervention will reduce shelter use and improve housing stability, employment, earnings, education, and adult well-being and may improve family preservation and child well-being.

PBTH Versus SUB

From the perspective of transitional housing proponents: Relative to the SUB intervention, the PBTH intervention will improve employment, earnings, education, and adult well-being and may improve long-term housing stability, family preservation, and child well-being.

From the perspective of permanent housing subsidy proponents: Relative to the PBTH intervention, the SUB intervention will reduce shelter use and improve housing stability and may improve family preservation, adult well-being, and child well-being.

PBTH Versus CBRR

From the perspective of transitional housing proponents: Relative to the CBRR intervention, the PBTH intervention will improve employment, earnings, education, and adult well-being and may improve long-term stability, family preservation, and child well-being.

From the perspective of rapid re-housing proponents: Relative to the PBTH intervention, the CBRR intervention will reduce shelter use and may improve housing stability, family preservation, adult well-being, child well-being, employment, and earnings. It will reduce the length of time families spend in places not meant for human habitation and in shelters, which are costly.

Even if the longer housing subsidies of the SUB intervention or the more extensive social services of the PBTH intervention are important for some families, an important question is whether all families need such intensive involvement in the homeless assistance system. Thus, the study team also developed hypotheses that the more intensive interventions would have larger effects on outcomes for families who faced more psychosocial challenges and housing barriers.

Baseline Characteristics of the Study Sample

At the time of random assignment, characteristics of the 2,282 families who enrolled in the Family Options Study were similar to characteristics of families who experience homelessness nationwide. This observation is true even though the sites were not a randomly selected sample of communities.

The typical family in the study consisted of an adult woman, a median of 29 years old, living with one or two of her children in an emergency shelter. At baseline, 30 percent of families had more than one adult present. Nearly all families who had two adults present were headed by couples, and 10 percent of families had a partner living elsewhere. As in other studies of homelessness among families, members of minority groups were overrepresented, even in proportion to the poverty population.

A plurality of families (43 percent) had only one child with them in the shelter, and one-half of the families were with a child younger than age 3. Most families in the study (79 percent) were not homeless immediately before entering the shelter from which they were recruited into the study. About 63 percent of family heads in the study, however, had experienced homelessness at some other point in their lifetime, with 16 percent of adult respondents having experienced homelessness as a child. An even greater proportion (85 percent) indicated they lived doubled up at some point as an adult, defined in the survey as "staying with family or friends because you couldn't find or afford a place of your own."

Most family heads were not working at the time of random assignment (83 percent), and more than one-half had not worked for pay in the previous 6 months. The median annual household income of all families in the study at baseline was $7,410. Many reported they either had a poor rental history (26 percent had been evicted) or had never been a leaseholder (35 percent). Nearly one in three reported either post-traumatic stress disorder or serious psychological distress, and 21 percent reported a disability that prevents or limits work.

Intervention Eligibility Screening and Family Decisions

The *Interim Report: Family Options Study* (hereafter the *Interim Report*; Gubits et al., 2013) examined intervention availability and family eligibility at randomization for the 2,282 families in the Family Options Study. Both availability of interventions and family eligibility, according to screening before random assignment, were most constrained for the PBTH intervention. The CBRR intervention was more available than the SUB intervention but had slightly more restrictive eligibility requirements. Thus, it was more difficult for families to meet the eligibility criteria of the programs that are ordinarily part of the homeless assistance system (PBTH and CBRR) than for the programs that are not (SUB programs).

For a family to use the type of program offered to the group to which it had been assigned, it had to (1) pass an eligibility determination conducted by the specific program to which it was referred and (2) choose to take up the program. The *Interim Report* (Gubits et al., 2013) found that some of the families who passed the initial screening by the study were later deemed ineligible by the programs to which they were referred and thus were denied services in the program to which they were given priority access. Other fully eligible families chose not to take up the program to which they were given priority access. Compared with the CBRR and SUB interventions, the PBTH intervention had both the highest proportion of families found ineligible after random assignment and the highest proportion of families who chose not to take up the program to which they were given priority access. Considering both initial screening by the study and later eligibility screening by programs, the SUB intervention was the most accessible to families and the PBTH intervention was the least accessible.

The *Interim Report* (Gubits et al., 2013) concluded that homeless assistance programs in the study communities imposed eligibility criteria that hampered their ability to serve families in shelter who needed the assistance. Even when programs had space available, the programs often screened out families in shelter based on eligibility criteria such as insufficient income, substance abuse, criminal histories, and other factors that presumably contributed to the families' homelessness. Moreover, families who are homeless do not always pursue the programs offered to them, which suggests that some programs deliver assistance that some families perceive as less valuable to them than other alternatives available in their communities.

Study Findings Over the 3-Year Followup Period

The *Short-Term Impacts* report (Gubits et al., 2015) presented findings about the study families and impacts of the interventions at 20 months after random assignment. The body of the current report presents findings about the families and interventions 17 months later, at 37 months after random assignment. The results from both time points are important. Some impacts that were detected at 20 months are not detected in the 37-month analysis. Other impacts are detected at 37 months but were not apparent at the earlier point. Impacts found at either point in time hold importance when considering the relative benefits of the interventions during 3 years of study.

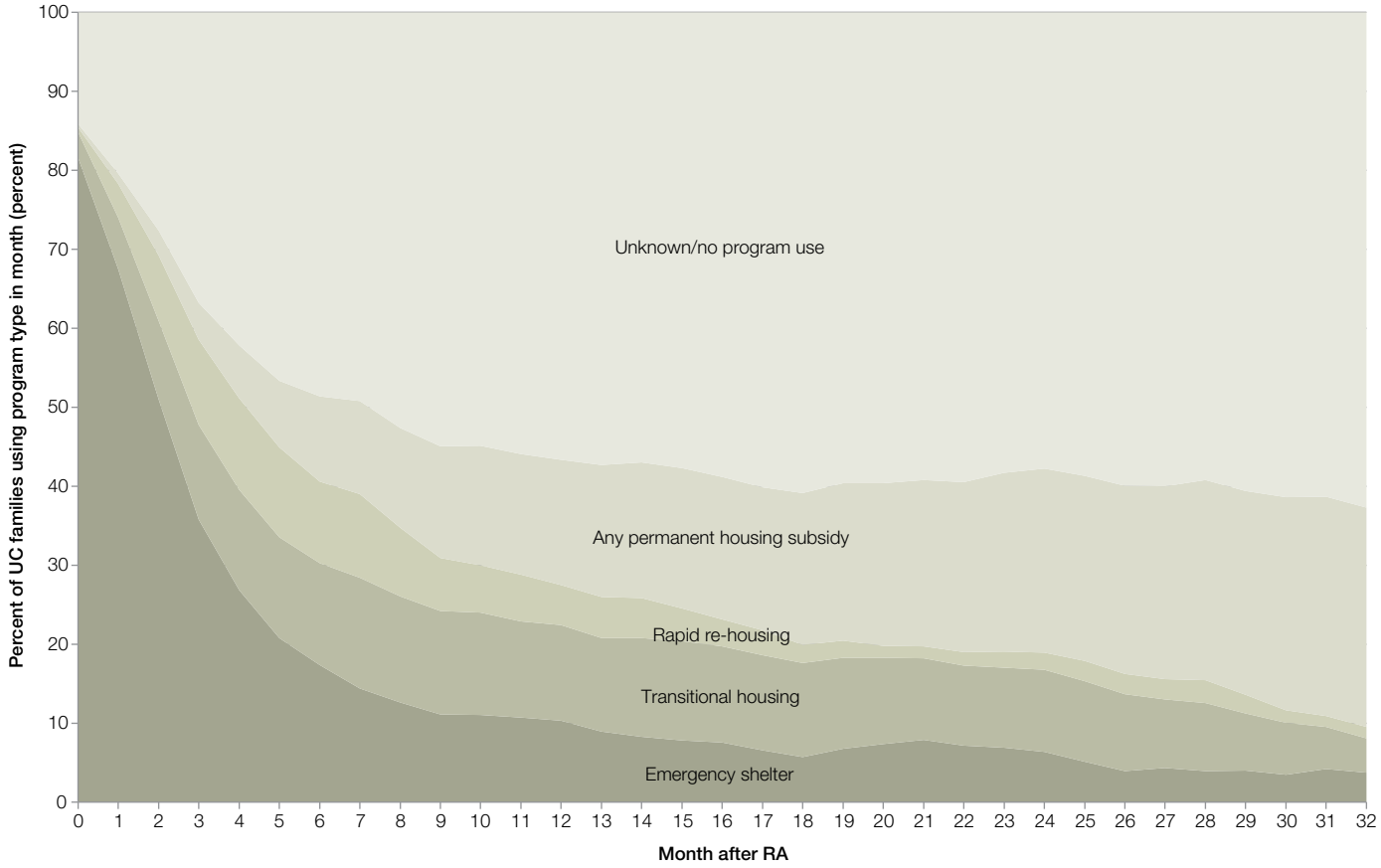
Usual Care Group During the Followup Period

Program Use of the Usual Care Group

Inasmuch as the experiences of families in the 12 study communities reflect families' experiences in the nation more broadly, the experiences of families assigned to the UC group inform policymakers about what typically happens to families who have been in shelter for at least 7 days and who do not receive priority access to any type of designated assistance. On average, families assigned to the UC group spent 4 months in emergency shelter during the 37-month followup period. Exhibit ES-4 shows the proportions of UC families who used different types of programs in each month during the first 32 months after random assignment (the longest period for which the study team has data for all families). It breaks out four categories: (1) any permanent housing subsidy, including mainstream housing programs and permanent supportive housing; (2) rapid re-housing rental assistance; (3) transitional housing; and (4) emergency shelter.

For some families assigned to the UC group, the emergency shelter stay was the only interaction with the homeless or housing assistance systems. As Exhibit ES-4 shows, however, most UC families ultimately found their way to other types of assistance. Of the UC families who responded to the 3-month followup survey, 20 percent received rapid re-housing and 30 percent received transitional housing at some time during the 3-year followup period. Considering all forms of permanent subsidy (housing choice vouchers, public housing, permanent supportive housing, a project-based voucher, or assistance in a Section 8 project), even without priority access, 37 percent of UC families used some form of permanent subsidy for an average of 19 months at some point during the 3-year followup period.[6]

Exhibit ES-4. Program Use of UC Families for 32 Months After RA



UC = usual care.

RA = random assignment.

Notes: This exhibit shows program use for all families assigned to UC who responded to the 37-month survey. Complete Program Usage Data for 37-month respondent families are available only through month 32 after random assignment. Families who have more than one type of program use in a calendar month are counted fractionally in each type.

Source: Family Options Study Program Usage Data

[6] In the entire study, 746 families were randomly assigned to the UC group. Of these families, 556 responded to the followup survey and are the families shown in Exhibit ES-4. Different subsets of these 556 families form the comparison groups for SUB, CBRR, and PBTH.

This percentage continued to grow over time, whereas use of other housing programs declined. By the time of the followup survey (not shown in Exhibit ES-4) more than one-half of the UC families (60 percent) were not using any type of assistance measured, nearly one-third (30 percent) were using some type of permanent housing, and the remainder were using emergency shelter, rapid re-housing, or transitional housing.

Outcomes of the Usual Care Group

UC families were not faring well 20 months after enrollment in the study. One-half had spent at least 1 night homeless or doubled up in the 6 months before the 20-month survey or had been in shelter in the past 12 months. In the 6 months before the survey, 15 percent of families had been separated from a child who was with the family in shelter at study outset, and one-fourth of these separated children were in foster care. At the time of the survey, 32 percent of family heads reported fair or poor health, 15 percent reported alcohol dependence or substance abuse, and 12 percent had experienced intimate partner violence in the past 6 months. Less than one-third of UC family heads (31 percent) were working for pay and previous-year total family income was only about $9,000 per year—much less than what is needed to rent market-rate housing for a family in most communities.

At 37 months after random assignment, UC families still faced substantial challenges, although, on average, their circumstances had improved somewhat since the 20-month survey. Of the whole group, 39 percent had spent at least 1 night homeless or doubled up in the 6 months before the 37-month survey or had been in shelter in the past 12 months, 18 percent reported being homeless in the 6 months before the 37-month survey, and 5 percent were in emergency shelter in the survey month. A little more than two-thirds (69 percent) of families were living in their own house or apartment (up from 58 percent at 20 months). Physical health, substance use, and intimate partner violence were at levels similar to those at 20 months. Only 37 percent of family heads were working for pay in the week before the survey. Median annual cash income from all sources for the previous calendar year was about $12,000, and nearly one-half of the families (47 percent) were food insecure.

Program Use for Pairwise Comparisons

The three panels of Exhibit ES-5 show the use of programs by the SUB, CBRR, and PBTH groups in each of the first 32 months of the followup period (the period for which complete data are available). Program use for each group is initially dominated by the program to which families were offered priority access. The SUB group was offered permanent assistance, and most families were still using the permanent subsidy they were offered by the end of the followup period. The CBRR and PBTH groups were offered temporary assistance, and, by the end of the followup period, most families had ceased using the temporary assistance they were offered (earlier for the CBRR group than for the PBTH group, as expected, because of typical program lengths). In both the CBRR and PBTH groups, the proportions of families using permanent housing subsidies grew steadily during the followup period.

Exhibit ES-5. SUB, CBRR, and PBTH: Program Use for 32 Months After RA

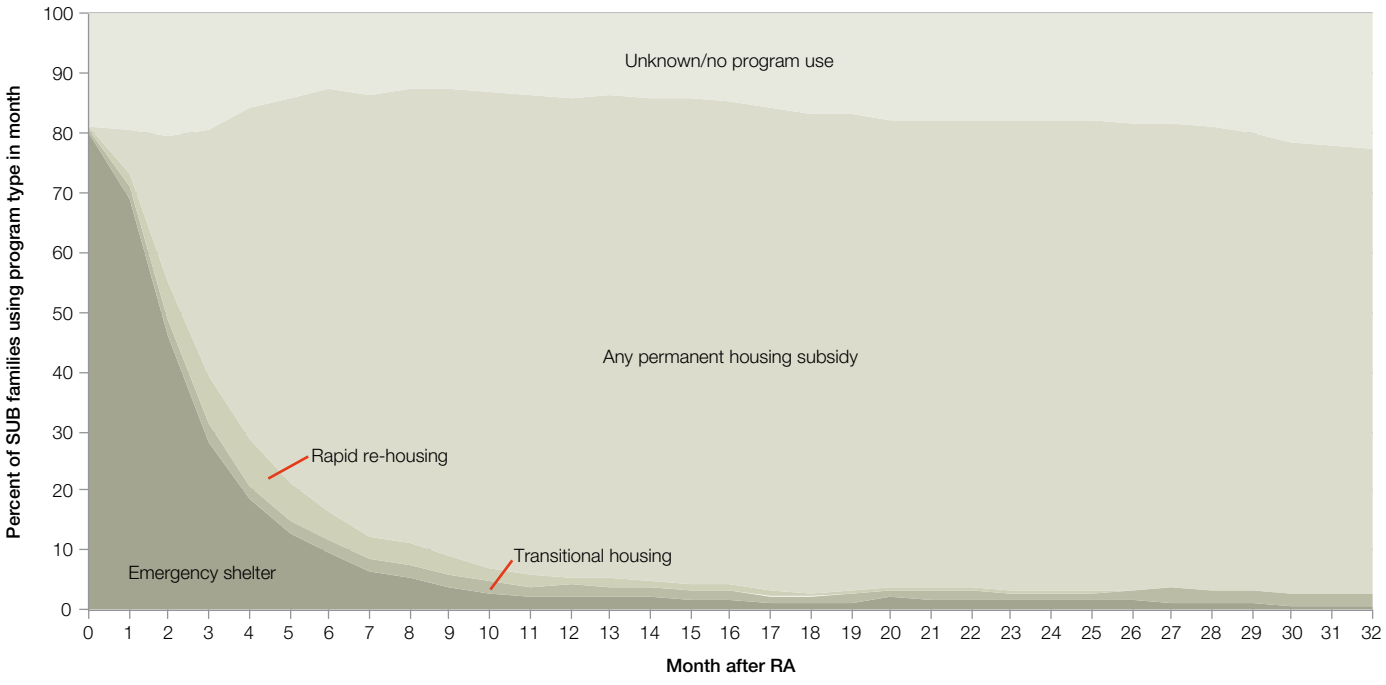
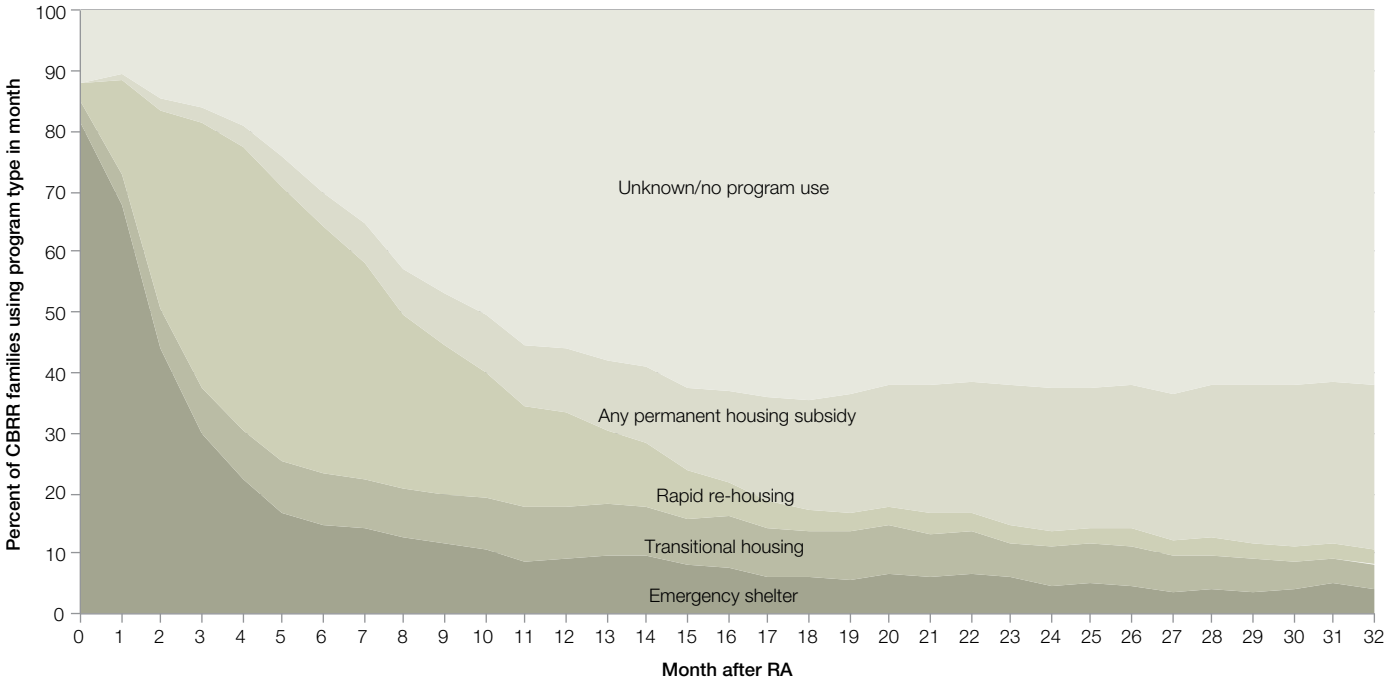
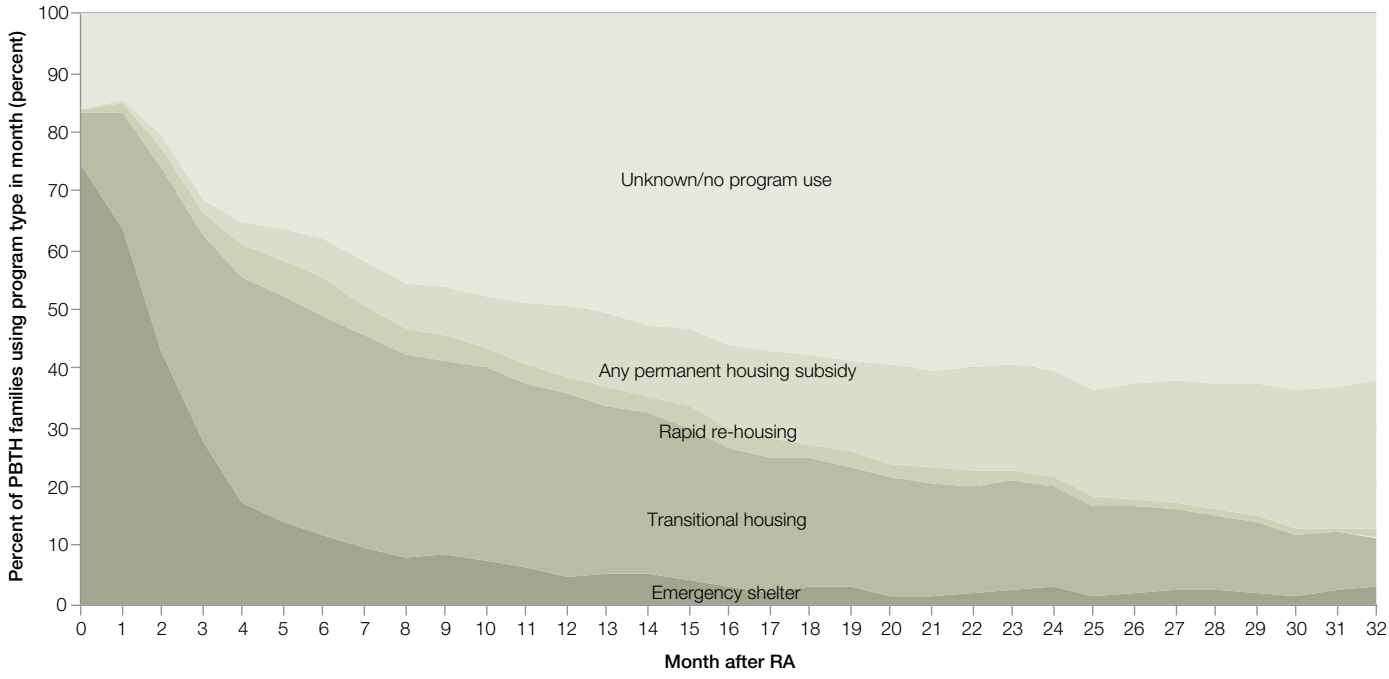


Exhibit ES-5. SUB, CBRR, and PBTH: Program Use for 32 Months After RA (continued)





CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. RA = random assignment

Notes: This exhibit shows program use for all SUB, CBRR, and PBTH families who responded to the 37-month survey. Complete Program Usage Data for 37-month respondent families are available only through month 32 after random assignment. Families who have more than one type of program use in a calendar month are counted fractionally in each type.

Source: Family Options Study Program Usage Data

Exhibit ES-6 documents the program use of the study families who responded to the 37-month followup survey—the sample for the longer-term impact analysis (and same sample shown in Exhibit ES-5). The exhibit shows the percentages of families who ever participated in several types of housing assistance programs between random assignment and the followup survey response. The columns in Exhibit ES-6 are organized by pairwise comparison. The exhibit displays the number of families included in each comparison (see row 10) and details their program use during the followup period (see rows 1 to 9). It accounts for eight types of programs:

1. Permanent housing subsidies offered to the SUB group (housing choice vouchers, public housing in Honolulu, and project-based vouchers in Bridgeport).
2. Rapid re-housing (that is, the temporary subsidies offered to the CBRR group).
3. Transitional housing.[7]
4. Permanent supportive housing.
5. Public housing in places other than Honolulu.
6. Project-based vouchers and units in Section 8 projects in places other than Bridgeport.
7. Any permanent subsidy (that is, any of the programs that comprise the SUB intervention in this study, permanent supportive housing, public housing, or project-based vouchers and units in Section 8 projects).
8. Emergency shelter.

The experimental contrasts in use of these programs are depicted in the exhibit. The exhibit also shows (see row nine) the proportion of families who used no homeless or housing assistance and no emergency shelter after the first 6 months after random assignment.

Exhibit ES-6 shows that the intervention assignments created substantial contrasts in program use, particularly in the use of programs that reflect the intended contrast (the shaded boxes). For example, in the SUB-versus-UC comparison, 83 percent of families assigned to the SUB intervention used the permanent housing subsidies they were offered, whereas only 13 percent of families assigned to the UC group used these permanent

Exhibit ES-6. Program Use Since RA for All Pairwise Impact Comparisons

Type of Homeless or Housing Assistance	Percent of Families Who Ever Used Program Type From RA to 37-Month Followup Survey[a]											
	SUB	UC	CBRR	UC	PBTH	UC	SUB	CBRR	SUB	PBTH	CBRR	PBTH
Permanent housing subsidies offered to the SUB group[b]	83.2	12.7	9.8	12.2	9.6	10.6	82.3	9.8	82.3	7.2	6.7	8.7
Rapid re-housing[c]	11.4	22.9	58.5	22.5	13.7	17.8	14.7	60.5	5.7	12.0	54.6	15.8
Transitional housing[d]	7.4	28.9	23.2	27.5	53.2	34.6	7.4	19.8	9.4	49.5	30.7	53.4
Permanent supportive housing	3.0	10.7	9.8	11.7	11.0	11.6	3.9	11.6	2.1	11.6	9.2	10.7
Public housing	1.6	10.3	10.7	9.8	8.3	8.5	1.1	10.9	1.6	8.2	11.5	9.1
Project-based vouchers/Section 8 projects	1.5	6.1	5.6	6.3	6.2	7.2	1.1	7.0	1.7	7.2	4.8	6.1
Any permanent housing subsidy[e]	88.4	37.9	35.4	37.9	33.0	34.7	87.4	38.4	86.6	30.9	32.3	33.3
Emergency shelter[f]	84.4	89.5	90.7	90.0	83.6	89.7	84.9	90.4	87.9	83.0	88.1	86.5
No use of homeless or housing programs[g]	5.1	24.3	9.2	24.4	18.1	26.9	4.5	9.5	7.1	20.5	14.3	16.8
N	**501**	**395**	**434**	**434**	**293**	**259**	**362**	**290**	**215**	**201**	**180**	**184**

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

RA = random assignment.

[a] Percentage of families who ever used a type of assistance program during the period from the month of RA to the month of 37-month followup survey response (median period duration: 38 calendar months). Percentages do not add to 100 because some families used more than one program type during the followup period.

[b] Subsidies offered to the SUB group are housing choice vouchers plus site-specific programs offered to families assigned to the SUB group in Bridgeport, Connecticut, and Honolulu, Hawaii.

[c] Temporary subsidies offered to the CBRR group.

[d] All types of transitional housing, including those offered to the PBTH group.

[e] Includes the types of permanent subsidy offered to the SUB group plus permanent supportive housing, public housing, and project-based vouchers/Section 8 projects.

[f] All families were in emergency shelter at RA. Percentages less than 100 percent for ever used emergency shelter are because of missing data on shelter use.

[g] Indicates no use of the first six program types in this table during any of the followup period and no use of emergency shelter after the first 6 months after RA. No use in the month of followup survey response indicates no use of any of these seven program types.

Source: Family Options Study Program Usage Data

[7] Some transitional housing programs are based in projects or facilities that families leave after exiting the program. These programs are studied here, hence the term project-based transitional housing. Other transitional housing programs use residential units in the community so that families can "transition in place" to unassisted housing without having to move after supports are no longer needed. Transition-in-place programs of this sort share many of the same characteristics of CBRR programs, so they were not included as programs to which PBTH families could be directed after random assignment. The team made this decision to provide a stronger contrast between the PBTH and CBRR interventions studied. Some PBTH programs to which families were offered priority access provided units in the community (called "scattered-site" units) without the opportunity to transition in place. The Homeless Management Information System records, an important data source for observing program use, unfortunately do not distinguish between project-based and transition-in-place transitional housing. Therefore, some of the transitional housing use shown in Exhibit ES-6 may have been in transition-in-place units.

housing subsidies. The durations of assistance were also longer for the assigned interventions (not shown in the exhibit). In the SUB-versus-UC comparison, families assigned to the SUB intervention who used the offered permanent housing subsidies did so for an average of 31 months, whereas UC families who used these subsidies without priority access used them for only 21 months, on average. These findings generally reflect the longer time it took UC families to obtain access to permanent housing subsidies, if they did so at all. Considering all forms of permanent subsidy, Exhibit ES-6 shows that 38 percent of UC families in the SUB-versus-UC comparison used any form of permanent subsidy during the followup period compared with 88 percent of families assigned to the SUB intervention.

In the CBRR-versus-UC comparison, the contrast in use of rapid re-housing rental assistance is smaller than for the SUB-versus-UC comparison. Of families assigned to the CBRR group, 59 percent used the offered assistance during the followup period compared with 23 percent of their counterparts in the UC group for this comparison. Families assigned to the CBRR group who used rapid re-housing programs did so for an average of 8 months, the same length of time that UC families without priority access to CBRR used rapid re-housing programs. Similar proportions of CBRR and UC families used any form of permanent subsidy (35 and 38 percent, respectively).

In the PBTH-versus-UC comparison, 53 percent of families assigned to the PBTH group used transitional housing during the followup period and 35 percent of UC families also used transitional housing. PBTH families who used transitional housing of any kind did so for an average of 15 months, whereas the UC families who used transitional housing without priority access did so for 11 months, on average. Altogether, 33 percent of families assigned to the PBTH group used any form of permanent subsidy compared with 35 percent of UC families in the PBTH-versus-UC comparison.

Impact Estimates for Pairwise Comparisons

Before seeing the results of the impact analysis, the study team prespecified impacts on 18 key outcomes in the six pairwise comparisons to present in this executive summary. That step was taken to prevent the selective presentation of statistically significant results in the executive summary from among the 84 outcomes examined for each comparison in the body of the report (534 impact estimates). The outcomes deemed most central to the study and those anticipated a priori to be most likely to be affected by the interventions were selected for this executive summary presentation. Impacts on the full set of outcomes are presented in Chapters 3 through 6 of the report.

Exhibit ES-7 reports estimated 3-year impacts for the 18 prespecified outcomes for each pairwise comparison. The exhibit rows are organized into five panels corresponding to each outcome domain. The exhibit columns show the mean value of each outcome for the entire UC group, followed by impact estimates for each outcome in each of the six pairwise comparisons. Asterisks to the right of the impact estimates denote the statistical significance of the differences between the two groups being compared, with more asterisks indicating higher levels of statistical significance.

Within each domain, Exhibit ES-7 presents impacts on three or four outcomes. For the first four outcome domains (housing stability, family preservation, adult well-being, and child well-being), the outcomes are specified so that lower values indicate improvements. That is, for these domains, impact estimates with negative values indicate reductions in unfavorable outcomes or improvements for families. For the self-sufficiency domain, the goals of the interventions are to achieve higher values for each outcome. Thus, positive values for self-sufficiency impact estimates indicate improvements. Detailed definitions for the full set of outcomes appear in Chapter 2 and Appendix B of the report.

The results of the pairwise comparisons appear in the following sections.

SUB Versus UC

The most notable effect of the SUB intervention relative to the UC intervention was its reduction in homelessness and doubling up. Assignment to the SUB intervention reduced the proportion of families who had a shelter stay in months 7 to 18 by almost one-half and in months 21 to 32 by more than three-fourths. At both the 20-month and 37-month followup points, assignment to the SUB intervention reduced by more than one-half the proportion of families who reported having spent at least 1 night in shelter or in places not meant for human habitation in the past 6 months, increased the proportion of families living in their own place by 15 percentage points, and reduced the number of places the families lived in the past 6 months.

Additional effects occurred for some family preservation and child and adult well-being indicators. At 20 months, assignment to the SUB intervention reduced the proportion of families separated from a child present at baseline (10 percent in SUB families compared with 17 percent in UC families). This effect was not detected in the 3-year analysis. At 37 months (but not found earlier), assignment to the SUB intervention increased separations from the spouse or partner present at baseline (48 percent in SUB families compared with 34 percent in UC families). Assignment to the SUB intervention also improved some of the measures of adult well-being preselected for the executive summary presentation. At 20 months, assignment to the SUB group reduced psychological distress, reduced

Exhibit ES-7. Summary of Impacts for Six Policy Comparisons

Outcome	Mean	ITT Impact Estimates					
	All UC Group	SUB vs. UC	CBRR vs. UC	PBTH vs. UC	SUB vs. CBRR	SUB vs. PBTH	CBRR vs. PBTH
Housing stability (intervention goal: lower values)							
At least 1 night homeless[a] or doubled up in past 6 months or in shelter in past 12 months[b] (%) **[confirmatory]**	38.6	– 21.1***	1.9	0.3	– 20.4***	– 24.4***	– 3.1
At least 1 night homeless[a] or doubled up in past 6 months (%)	34.9	– 18.2***	1.8	0.2	– 15.5***	– 22.1***	– 2.8
Number of places lived in past 6 months	1.59	– 0.25***	0.03	– 0.03	– 0.14**	– 0.31***	0.09
Any stay in emergency shelter in months 7 to 18 after RA (%)	17.3	– 14.3***	– 2.5	– 6.0**	– 12.8***	– 5.5**	1.6
Family preservation (intervention goal: lower values)							
Family has at least one child separated in past 6 months[c] (%)	16.7	– 3.3	– 0.5	2.0	– 2.2	– 8.1**	– 3.2
Spouse/partner separated in past 6 months, of those with spouse/partner present at RA[d] (%) **[limited base]**	38.1	13.4**	8.6	11.7	– 6.6	0.3	0.5
Family has no child reunified, of those families with at least one child absent at RA[e] (%) **[limited base]**	66.3	– 6.8	– 3.4	4.1	– 9.8	– 21.0	– 0.1
Adult well-being (intervention goal: lower values)							
Health in past 30 days was poor or fair (%)	31.4	3.1	1.3	– 0.7	0.1	– 2.2	– 1.0
Psychological distress[f]	0.00	– 0.11*	– 0.02	– 0.01	0.01	– 0.11	– 0.20**
Alcohol dependence or drug abuse in past 6 months[g] (%)	11.3	– 2.1	– 1.7	2.8	1.8	– 0.6	– 7.1**
Experienced intimate partner violence in past 6 months (%)	10.5	– 4.0*	– 1.6	– 1.1	– 1.8	– 1.2	0.2
Child well-being (intervention goal: lower values)							
Number of schools attended since RA[h]	2.10	– 0.15**	0.02	0.06	– 0.26***	– 0.22*	0.01
School absences in past month (ages 5 to 17 years)[i]	1.06	– 0.08	– 0.19	– 0.19	0.09	– 0.15	– 0.17
Poor or fair health (%)	5.9	2.0	– 0.6	– 0.0	1.0	– 2.9	– 2.2
Behavior problems[j]	0.59	– 0.23**	– 0.20**	– 0.06	0.06	– 0.25*	– 0.23*
Self-sufficiency (intervention goal: higher values)							
Work for pay in week before survey (%)	37.0	– 0.9	0.5	0.6	– 0.6	– 2.0	– 3.8
Total family income ($)	12,099	– 883	– 505	– 191	– 901	– 1,230	– 1,745
Household is food secure (%)	53.2	9.6***	4.2	1.9	2.6	12.8***	11.6**
Number of families	**556**	**895**	**868**	**551**	**652**	**414**	**363**

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test (not adjusted for multiple comparisons).

[a] The definition of "homeless" in this report includes stays in emergency shelters and places not meant for human habitation. It excludes transitional housing. Additional impacts on the use of transitional housing are provided in Appendix E.

[b] After adjustment for multiple comparisons, the impact on the confirmatory outcome is statistically significant at the .01 level for the SUB-versus-UC, SUB-versus-CBRR, and SUB-versus-PBTH comparisons.

[c] Percentage of families in which a child who was with the family at baseline became separated from the family in the 6 months before the 37-month survey.

[d] Percentage of families in which a spouse or partner who was with the family at baseline became separated from the family in the 6 months before the 37-month survey.

[e] Percentage of families in which at least one child was separated from the family at baseline where no child was reunited with the family at the time of the 37-month survey.

[f] Psychological distress is measured with the Kessler Psychological Distress Scale (K6) and ranges from 0 to 24, with higher scores indicating greater distress. Impacts shown as standardized effect sizes. Effect sizes were standardized by dividing impacts by standard deviation for the UC group.

[g] Measures evidence of alcohol dependence or drug abuse using responses to the Rapid Alcohol Problems Screen (RAPS-4) and six items from the Drug Abuse Screening Test (DAST-10).

[h] Number of schools outcome is topcoded at 4 or more schools.

[i] Absences outcome is defined as 0 = no absences in past month; 1 = one to two absences; 2 = three to five absences; 3 = six or more absences. This parent-reported outcome was collected from only the first 38 percent of parents surveyed due to an error in data collection.

[j] Behavior problems outcome is measured as the standardized Total Difficulties score from the Strengths and Difficulties Questionnaire, or SDQ.

Notes: Impact estimates are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Appendix B for outcome definitions.

Sources: Family Options Study 37-month followup survey; Program Usage Data

evidence of alcohol and drug problems, and halved intimate partner violence compared with usual care. In the 3-year analysis, reductions in psychological distress and intimate partner violence were still evident.

Assignment to the SUB group also caused improvements in a few of the child well-being measures shown in Exhibit ES-7. Relative to usual care, assignment to the SUB intervention reduced the number of schools that children attended since random assignment (evident at both time points). Assignment to the SUB group also reduced the number of school absences (at 20 months only) and reduced the number of behavior problems reported by parents (at 37 months only).

At 20 months after random assignment, assignment to the SUB group, when compared with usual care, reduced the proportion of family heads working in the week before the survey by 6 percentage points. This result is consistent with

economic theory, given that housing subsidies lessened the need for disposable income. A reduction was not evident at the time of the 37-month survey, although reports of work activity between the followup points showed that the proportion of family heads with any work effort between the surveys was reduced by 6 percentage points (not shown in the exhibit).

Assignment to the SUB intervention caused improvements in food security, increasing the percentage of households classified as food secure by 10 percentage points relative to usual care at both followup points.

CBRR Versus UC

Almost no evidence of assignment to the CBRR intervention differentially affecting outcomes compared with assignment to the UC intervention appears at either 20 or 37 months of the followup period across the domains of housing stability, family preservation, and adult and child well-being. It is most striking that, relative to usual care, priority access to the temporary rental assistance offered in the CBRR intervention does not show impacts on subsequent stays in shelter or places not meant for human habitation during the 3-year followup period. Indications about consequences for children are limited, with assignment to the CBRR intervention leading to a reduction in school or childcare absences compared with usual care (at 20 months only) and in parent-reported behavior problems (at 37 months only).

At 20 months, relative to usual care, assignment to the CBRR intervention improved food security and family income (with previous-year income for CBRR families about $1,100 more than for UC families). Neither of these effects was evident at 37 months.

PBTH Versus UC

Compared with the UC intervention, assignment to the PBTH intervention improved housing stability but showed no evidence of impact in other domains. Assignment to the PBTH intervention reduced the proportion of families who had a stay in emergency shelter in months 7 to 18 after random assignment from 27 to 19 percent (a much smaller impact than that of assignment to the SUB intervention relative to usual care). Assignment to the PBTH intervention also reduced the proportion of families who had any stay in emergency shelter in months 21 to 32 after random assignment. This time period corresponds to the last full year observed for all sample members but overlaps a portion of the 24-month period that families could have stayed in transitional housing. For outcomes occurring further along in the followup period, no evidence indicates that assignment to the PBTH intervention is superior to usual care regarding housing stability. Besides housing stability, the study yields no evidence of effects of assignment to the PBTH intervention relative to usual care in other domains at either point in time.

The lack of impacts on adult well-being and family self-sufficiency are particularly noteworthy here, given the emphasis placed by PBTH programs on delivering supportive services in these areas. None of the eight indicators examined for results in these domains showed any impact from assignment to the PBTH intervention compared with usual care, nor did assignment to the PBTH intervention provide better family preservation or child well-being outcomes than usual care. Overall, 3 years after assignment, the study did not find evidence that the goals of this distinctive approach to assisting families facing unstable housing situations were achieved relative to leaving families to find their way out of shelter without priority access to any program.

SUB Versus CBRR

The most noteworthy effect of assignment to the SUB group relative to assignment to the CBRR group was improved housing stability. Relative to assignment to the CBRR intervention, assignment to the SUB intervention reduced the proportion of families who had a shelter stay or an experience of homelessness or doubling up—producing effects, at both followup points, nearly as large as those from the SUB-versus-UC comparison covered previously. By the time of the 37-month survey, the improvement in housing stability seems largely driven by a reduction in doubling up, rather than in shelter stays or in places not meant for human habitation (not shown in the exhibit). At both followup points, the greater stability afforded by assignment to the SUB intervention was also evidenced in a reduction in the number of places families lived in the past 6 months relative to assignment to the CBRR intervention.

At 20 months, other scattered effects shown in the SUB-versus-CBRR comparison mostly suggest more favorable outcomes for families assigned to the SUB intervention. In particular, assignment to the SUB intervention relative to assignment to the CBRR group reduced separations of spouses and partners, intimate partner violence, and the number of schools attended by children; however, it also reduced total prior-year income for the family.

At the later followup point, the study found few statistically significant differences outside the housing stability domain. Of the impacts detected at 20 months in this comparison, only the reduction in the number of schools attended was evident at 37 months.

SUB Versus PBTH

In most respects, the measured effects of assignment to the SUB intervention compared with assignment to the PBTH intervention mirror those found in the previous SUB-versus-UC comparison. At both of the study's followup points, the most noteworthy effect of assignment to the SUB intervention relative to the PBTH intervention is its greater prevention of

stays in shelter or places not meant for human habitation in each 6-month window before the followup surveys and in its reduction in doubled-up housing situations. The greater stability afforded by assignment to the SUB intervention was evidenced in a reduction in the number of places families lived in the past 6 months compared with assignment to the PBTH intervention.

At 20 months, the SUB-versus-PBTH comparison showed effects on family preservation, adult well-being, and child well-being. The most notable effects of assignment to the SUB group relative to assignment to the PBTH group were a reduction in the proportion of families who had a child separation in the past 6 months, a decrease in the psychological distress reported by family heads, and a reduction in the number of schools that children attended since random assignment. The 3-year analysis found two of these three effects: (1) reductions in child separation and in the number of schools attended and (2) an additional reduction in child behavior problems. No effects on adult well-being were found at the later followup point.

In the self-sufficiency domain at 20 months, the study found that assignment to the SUB group relative to assignment to the PBTH group caused a reduction in work effort. Assignment to the SUB intervention reduced the proportion of family heads who worked at 20 months (from 36 to 25 percent) and reduced average prior-year income from $10,500 to $9,000. These effects were not found at 37 months. At both followup points, the additional resources represented by the permanent housing subsidy served to increase food security relative to assignment to the PBTH intervention.

CBRR Versus PBTH

The CBRR-versus-PBTH comparison does not yield a strong pattern of effects across the study domains. In particular, no evidence indicates an effect on housing stability or family preservation. The CBRR-versus-PBTH comparison, however, yields statistically significant effects for four of the outcomes selected for the executive summary presentation in the adult well-being, child well-being, and self-sufficiency domains. All these significant results favored assignment to the CBRR intervention. In the adult well-being domain, at both followup points, assignment to the CBRR intervention reduced the proportion of adult respondents reporting alcohol dependence or drug abuse in the past 6 months and lowered the amount of psychological distress for family heads relative to assignment to the PBTH intervention. Assignment to the CBRR intervention also reduced the proportion of family heads reporting poor or fair health (at 20 months only), reduced parent-reported child behavior problems (at 37 months only), and reduced the proportion of families who are food insecure (at both followup points).

Do Certain Interventions Work Better When Offered to Families Facing Greater Difficulties?

A central question motivating the Family Options Study is whether some interventions work better than other interventions for families who had particular characteristics. The previously described study findings show that, on average, the SUB intervention had substantial impacts relative to the other interventions, not only for housing stability but also for outcomes in other domains. Do all families who experience homelessness need a deep permanent housing subsidy, however, or might some do as well on their own, in usual care, or with the shorter and often shallower subsidies of offered in the CBRR intervention? Conversely, although, on average, assignment to the PBTH intervention had few impacts relative to other interventions, might some families who face more challenges benefit more from its intensive social services? The more general form of these questions is whether the relative benefits of the longer term or more intensive interventions (SUB and PBTH) might increase as families' reported difficulties increase. Because of the number of family characteristics that could lead to differential effects of interventions, the study team confined analyses of impact variations to two broad categories of family characteristics, summarized in indices of psychosocial challenges and barriers to housing. The study team examined whether the impact of the interventions relative to each other and to usual care increased as families' scores on these indices increase.

It is clear that families in this study experience high levels of both psychosocial challenges and barriers to housing, which was by design: the study enrolled families only after they had spent at least 7 days in shelter. The examination of these potential moderator effects at 20 and 37 months does not provide appreciable evidence that any of the interventions studied work comparatively better for families who have more psychosocial challenges or housing barriers than for families who face fewer difficulties. As a result, the study's clearest guidance for policy for *all* types of families at the 3-year followup point consists of the main study results on overall impacts.

Intervention Costs

The Family Options Study interventions were intended to vary in both intensity and duration. The permanent housing subsidies offered to the SUB group provided a deep rental subsidy, limiting families' contributions to rent and utilities to about 30 percent of monthly adjusted income. SUB programs did not provide supportive services, but the rental subsidy was for an indefinite duration. PBTH programs provided intensive housing and services support for a relatively long duration. CBRR programs provided a short-term rental subsidy with more limited

supportive services, while emergency shelter programs often offered intensive supportive services and housing for a limited time. The study team compared the costs of the interventions using two measures of cost:

1. Per-family monthly cost of using a particular type of program (for example, permanent housing subsidies of the type offered to SUB families).
2. Per-family cost of all programs used by those assigned to an intervention (that is, the SUB, CBRR, PBTH, and UC interventions) during the 3-year followup period.

The first measure provides information about the relative costs of funding different types of programs. The second measure provides context for interpreting the impacts of the contrasting results of random assignment—that is, the impact of assignment to a particular intervention presented in the pairwise comparisons in Chapters 3 through 6. This latter measure reflects the combined cost of all homeless and housing assistance program types that families in each pairwise comparison used during the 3-year followup period, those offered by the study and other types as well.

Per-Family Monthly Program Cost

Emergency shelter programs had the highest ***average per-family monthly program cost***—about $4,800—of all the types of programs examined. Supportive services made up 63 percent of emergency shelter costs, the highest share among the four program types considered. PBTH programs had an average cost per family per month of participation of about $2,700, with supportive services constituting, on average, 42 percent of those costs. Permanent subsidy programs cost, on average, about $1,200 per month per participating family. The cost of SUB programs consisted wholly of the cost of housing, because permanent subsidy programs do not provide supportive services. CBRR programs had the lowest per-family per-month cost, averaging about $900. Housing costs made up, on average, 72 percent of CBRR program costs.

Costs of the individual local programs that made up these averages varied considerably. PBTH programs and emergency shelters had the greatest variation, driven largely by variation in supportive services costs across local providers but also by variation in capital costs and administrative expenses. For the 24 PBTH programs examined in the cost analysis, average per-family monthly program cost ranged from $1,300 to $6,300. Average per-family monthly program cost for the 45 emergency shelter programs examined ranged from $1,900 to $9,200.

Variation in rapid re-housing and permanent subsidy costs from one local program to another was driven largely by housing costs. For the 12 CBRR programs in the cost analysis, the average per-family monthly program cost ranged from $550 to $1,400. Across the 10 sites where permanent housing subsidies were offered to families assigned to the SUB group, the average per-family per-month cost of subsidy program participation ranged from $770 to $2,100, largely reflecting differences in the local cost of rental housing.

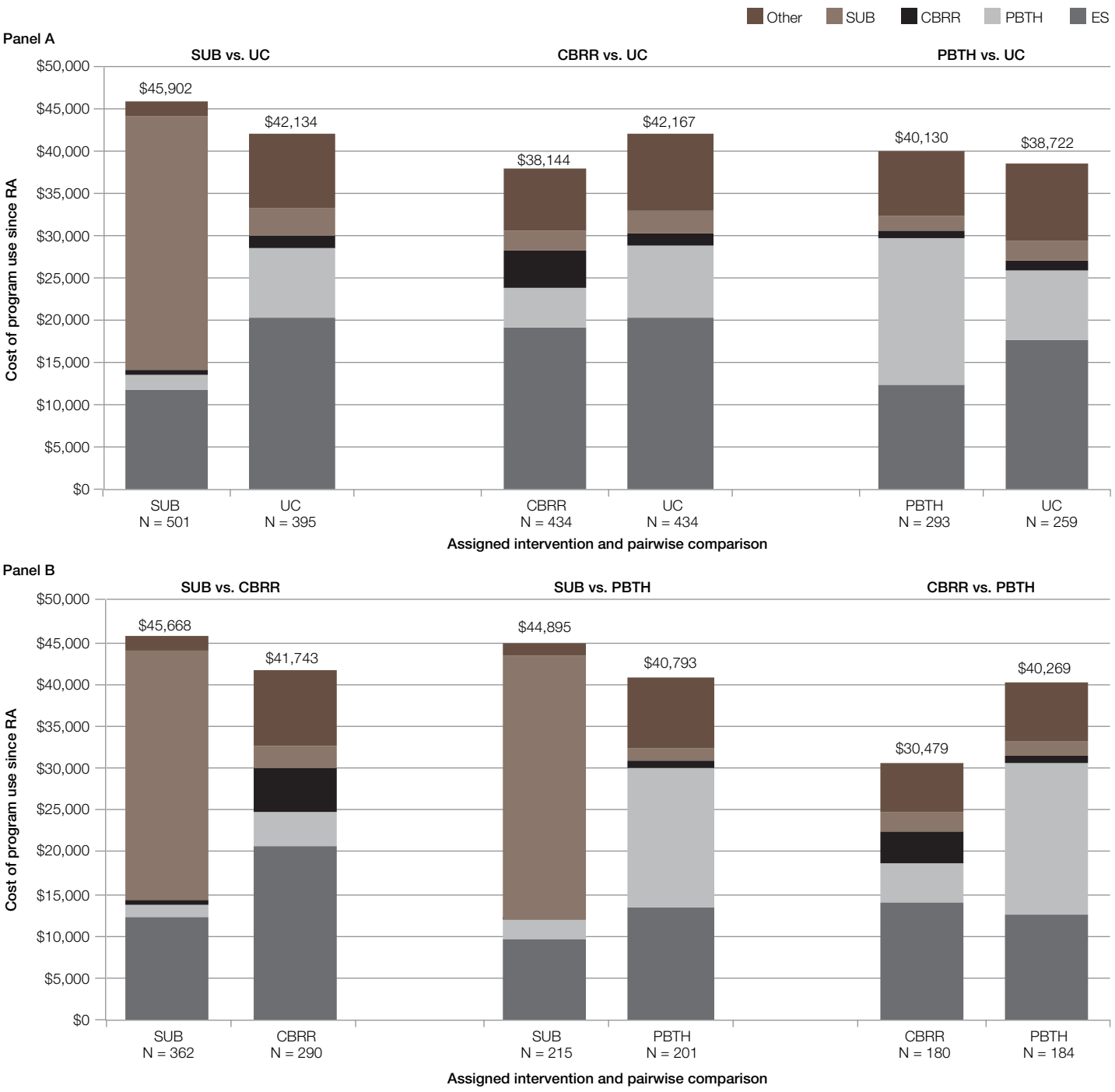
Total Costs of Programs Used During the 3-Year Followup Period

Exhibits ES-4, ES-5, and ES-6 show how families assigned to the four interventions used different mixes of homeless and housing assistance programs during the 3 years studied. The study team combined information about program use with per-family monthly program costs to estimate the total costs of programs used by families in each intervention group in each of the six pairwise comparisons.

At 20 months after random assignment, the study found that the per-family cost of all program use by families assigned usual care was about $30,000. The cost of all program use of all types for families assigned to the SUB intervention was about the same as that for families assigned to usual care, slightly more than that for families assigned to the CBRR intervention, and clearly less than that for PBTH families. The near-equivalent cost of program use for families assigned to the SUB intervention compared with usual care at the 20-month followup survey resulted from the higher use of permanent housing subsidies being offset by the decreased use of relatively expensive emergency shelter and transitional housing programs by families assigned to the SUB intervention. In a similar way, the costs of total program use for families assigned to the SUB and CBRR interventions were nearly equivalent, because the greater use of permanent subsidy programs by SUB families was offset by the greater use of transitional housing, emergency shelter, and other programs by CBRR families. At 20 months after random assignment, the cost of all program use for families assigned to the CBRR intervention was clearly less than that for families in either the UC group or the PBTH group.

Cost results at 37 months after random assignment appear in Exhibit ES-8. The exhibit shows that total program use cost about $41,000 for families assigned to usual care. The cost of all program use during 37 months for families assigned to the SUB intervention was about $3,800 (9 percent) more than for comparable families assigned usual care. This difference arises out of a growing differential between the average monthly costs of all program use in the SUB and UC groups. At the time of the 20-month survey, this monthly differential was only $20 (the difference between $1,086 for the SUB group and $1,066 for the UC group). At the time of the 37-month survey, the monthly differential had reached $136 ($978 for the SUB group compared with $842 for the UC group). In other comparisons involving the SUB intervention, families assigned to the SUB

Exhibit ES-8. Cost of Program Use Since RA for Each Intervention Contrast



CBRR = priority access to community-based rapid re-housing. ES = emergency shelter. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

RA = random assignment.

Notes: Averages are for all 37-month survey respondents in each pairwise comparison and are weighted for survey nonresponse to represent full comparison sample. Cost estimates assume a site-specific average cost per month based on the Family Options Study cost data and HUD administrative data. The *other* category refers to other permanent housing subsidies and includes permanent supportive housing, public housing, and project-based assistance (project-based vouchers or Section 8 projects).

Sources: Family Options Study cost data; U.S. Department of Housing and Urban Development, Public and Indian Housing Information Center, Tenant Rental Assistance Certification System, and Financial Data Schedule records (SUB); Family Options Study Program Usage Data

group have about 9 percent higher average costs during the first 37 months than families assigned to the CBRR group and 10 percent higher than families assigned to the PBTH group.

In other comparisons involving the PBTH group, the high monthly cost of transitional housing programs results in a higher average cost of all programs used for families assigned to the PBTH

group compared with families assigned to either the UC or CBRR group. On the other hand, in each of the three comparisons involving the CBRR intervention, families assigned to the CBRR group have the lowest average cost for all programs used. The largest difference is for the CBRR group compared with the PBTH group, in which the high monthly cost and greater use of transitional housing programs for the latter group results in a nearly $10,000 difference in average cost of all program use for comparable families. For CBRR-versus-UC and SUB-versus-CBRR, CBRR families have an average cost of all programs used that is $4,000 (roughly 10 percent) less than the cost of program use for those assigned to the other interventions.

Conclusions

The Family Options Study's random assignment design for measuring intervention impacts is a stronger design than that of other studies of programs for homeless families. Evidence from the study's 3-year analysis provides important new information about what happens to families who experience homelessness in the absence of any special offers of assistance. It also provides information about the impact of assignment to three active interventions: SUB, CBRR, and PBTH.

A clear finding from the study is that homelessness is expensive for families and communities. Even without priority access to assistance, families in 12 communities used housing and services programs costing about $41,000, on average, during a period of a little more than 3 years. Despite this considerable public (and in some cases private) investment, many families who had been in shelter for at least a week at the outset of the study were still not faring well 3 years later. Well over one-third had been homeless or doubled up recently, nearly one-half were food insecure, and incomes averaged less than two-thirds of the poverty threshold. The high cost of homeless services suggests that prevention efforts with low per-family costs—if they were effective—would not need to be tightly targeted to just the families who would otherwise experience homelessness in order to save resources.

The longer-term evidence from the Family Options Study indicates that having priority access to deep permanent housing subsidies produces substantial benefits for families. More than one-third of families assigned to any intervention found their way to permanent housing subsidies, but families given priority access to that assistance obtained subsidies sooner. Providing priority access to permanent housing subsidies cost 9 percent more than not giving families any priority offer during a 3-year followup period, and it suppressed work effort by about 6 percentage points during the second half of that period; however, it had substantial benefits. Assignment to the SUB intervention group more than halved most forms of residential instability, improved multiple measures of adult and child well-being, and reduced food insecurity.

The 3-year evidence shows that families randomly assigned to the CBRR group do about as well as families assigned to the UC group but at substantially lower cost, mainly because assignment to the CBRR group lowers the rate at which families use costly transitional housing programs. Assignment to the PBTH group has few advantages over other types of assistance. In addition, the study does not provide appreciable evidence that intervention impacts differ according to families' psychosocial challenges or housing barriers at baseline, whatever form of active assistance is prioritized.

The 3-year findings lend support for the underlying theoretical model for permanent housing subsidies. The striking impacts of assignment to the SUB group in reducing subsequent stays in shelter and places not meant for human habitation provide support for the view that, for most families, homelessness is a housing affordability problem that can be remedied with permanent housing subsidies without specialized homeless-specific psychosocial services. The findings also provide support for the more tentative theoretical proposition that resolving homelessness would have a radiating impact, given the short-term impacts found for assignment to the SUB intervention on family preservation, adult well-being, and school stability compared with the impacts of usual care and the continuing effects on adult and child well-being and self-sufficiency after 3 years.

The short-term findings provided less support for the theoretical model underlying the PBTH intervention. PBTH programs are intended to address the root causes of homelessness by providing social services packaged with housing assistance. The short-term analysis did not provide evidence that assignment to the PBTH intervention achieved that goal. Assignment to the PBTH intervention led to modest reductions in homelessness when compared with usual care during the period that some families were still in transitional housing, but effects on housing stability did not last until 3 years, and assignment to the PBTH intervention did not produce effects in other aspects of family well-being during the longer term.

The Family Options Study suggests that families who experience homelessness can successfully use and retain housing vouchers, and that having priority access to deep permanent housing subsidies has considerable benefits at some additional cost. The homeless assistance system does not currently provide immediate access to such subsidies for most families in shelter, although more than one-third of families without priority access nevertheless obtained permanent housing subsidies during a 3-year followup period.

CHAPTER 1. INTRODUCTION

As part of its mission, the U.S. Department of Housing and Urban Development (HUD) has supported a range of programs to provide shelter and services for families experiencing homelessness. The Department has also engaged in partnerships with other federal agencies to focus resources on eradicating homelessness. *Opening Doors: Federal Strategic Plan to Prevent and End Homelessness*, released in 2010 by the U.S. Interagency Council on Homelessness, articulates this collective commitment and lists four goals, one of which is to "prevent and end homelessness for families, youth, and children by 2020" (USICH, 2010, 2015).

During a 12-month period ending September 2015, nearly 155,000 families with children in the United States (502,521 people) stayed in emergency shelters or transitional housing programs (HUD, 2015).[8] Although most homeless individuals are single men, about one-third (34 percent) of the sheltered homeless population are members of families (12-month estimate).

To develop evidence on which to base policy decisions, HUD launched the Family Options Study in 2008, awarding a contract to Abt Associates, Vanderbilt University, and several other partners. The Department intends the results of this study to support its efforts to help families leave homelessness and to create housing stability and other positive outcomes for families who have experienced homelessness, including family preservation, adult well-being, child well-being, and self-sufficiency.

The Family Options Study examines the effects of three types of programs—permanent housing subsidies, community-based rapid re-housing, and project-based transitional housing—compared with one another and with the usual care available to homeless families. The three types of programs are distinguished from one another by the duration of housing assistance and the type and intensity of social services provided to families. Usual care consists of emergency shelter and housing or services that families can access without immediate referral to a program that would provide them with a place to live.

To be specific, the study randomly assigned a sample of 2,282 families in 12 sites to one of three active interventions or to usual care. The *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families* (hereafter, the *Short-Term Impacts* report; Gubits et al., 2015) presented 20-month impact estimates, documenting how families were faring roughly 1 1/2 years after random assignment. This report presents estimates of longer-term impacts at the point of 3 years after random assignment to the interventions studied.[9] This report also presents information about the relative costs of the three active interventions and emergency shelter. The analysis presented in this report uses survey and administrative data for the sample of 1,784 families and 2,665 children from the 12 sites who responded to a followup survey approximately 37 months after random assignment (henceforth referred to as the 37-month followup survey).

The balance of this chapter characterizes study families and interventions, describes the design of the study, summarizes findings from the enrollment phase, and recaps the short-term impacts of the interventions for families in the first 20 months after random assignment. The chapter closes with a discussion of the questions that motivate this longer-term analysis.

1.1. The Research Sample

The study team recruited 12 sites (displayed in Exhibit 1-1) to conduct the study. The 12 study sites represent a diverse range of geographic locations, size, population, and housing and labor market characteristics. Although not a randomly selected sample of communities, the sites are varied in geography and conditions that are related to homelessness. The sites are located in all four of the Census Bureau-designated regions in the country.[10]

At study entry, characteristics of the 2,282 families who enrolled in the Family Options Study were similar to characteristics of families who experience homelessness nationwide. This

[8] AHAR 2015 Part 2, 2015.

[9] Gubits et al. (2015) report the short-term impacts of the Family Options Study in *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families* (Gubits et al., 2015). Two other reports provide information about the Family Options Study: the *Revised Data Collection and Analysis Plan: Family Options Study* (Gubits et al., 2012), which describes the research design and analysis plan, and the *Interim Report: Family Options Study* (Gubits et al., 2013), which documents study implementation findings and baseline characteristics of the research sample.

[10] For more detail on the study sites and baseline characteristics of the research sample, see the *Interim Report: Family Options Study* (Gubits et al., 2013).

Exhibit 1-1. Location of Study Sites

observation is true even though the sites were not a randomly selected sample of communities. This section briefly summarizes the study sample (Exhibit 1-2). Additional details about the baseline characteristics of the research sample are provided in the *Interim Report: Family Options Study* (hereafter, the *Interim Report*; Gubits et al., 2013) and the *Short-Term Impacts* report (Gubits et al., 2015).

The typical family in the study consisted of an adult woman, who was a median of 29 years old and lived with one or two of her children in an emergency shelter. In about one-fourth of the families at least one child was separated from the family at the time of enrollment and was living with other relatives, with friends, or in foster care. At baseline, 30 percent of families had more than one adult present. Nearly all families who had two adults present were headed by couples, and 10 percent of families had a partner living elsewhere. As in other studies of homelessness among families, members of minority groups were overrepresented, even in proportion to the poverty population.

A plurality of families (43 percent) had only one child with them in the shelter, and one-half of the families were with a child younger than age 3. Most families in the study (79 percent) were not homeless immediately before entering the shelter from which they were recruited into the study. About 63 percent of family heads in the study, however, had experienced homelessness at some other point in their lifetime, with 16 percent of adult respondents having experienced homelessness as a child. An even greater proportion (85 percent) indicated they lived doubled up at some point as an adult, defined in the survey as "staying with family or friends because you couldn't find or afford a place of your own."

Most family heads were not working at the time of random assignment (83 percent), and more than one-half had not worked for pay in the previous 6 months. The median annual household income of all families in the study at baseline was $7,410. Many reported they either had a poor rental history (26 percent had been evicted) or had never been a leaseholder (35 percent). Nearly one in three reported either post-traumatic stress disorder or serious psychological distress.

Exhibit 1-2. Family Characteristics

Family Characteristic	Percent of Adult Respondents/ Percent of Families/Years
Family composition	
Adults	
Adult respondent is female	91.8
Median age of adult respondent	29.0 years
Children	
1 child present in shelter	43.2
2 children present in shelter	30.2
3 children present in shelter	15.3
4 or more children present in shelter	11.2
At least 1 child present in shelter younger than age 3	50.4
Mother is pregnant	9.8
At least 1 child not present in shelter	23.9
Housing instability and history of homelessness	
Homelessness history	
Previous episode of homelessness	62.9
Total homelessness in life	Median: 6 months
Doubled up history	
Ever doubled up as adult because could not pay rent	84.7
Time doubled up in past 5 years[a]	Median: 1 year
Income stability and disability	
Employment history of adult respondents[b]	
No work past 1 week	82.9
No work past 6 months	57.1
No work past 1 year	45.0
No work past 2 years	30.3
Family income during the past year	
20th percentile	$2,880
50th percentile (median)	$7,410
80th percentile	$15,000
Barriers to increasing income or finding housing	
Exposure to violence and mental health	
Domestic violence by spouse or partner as an adult	49.0
PTSD symptoms	21.6
Psychological distress	22.1
Previous housing history—problems finding housing	
History of eviction[c]	25.9 big or small problem
Never a leaseholder[c]	34.8 big or small problem

PTSD = post-traumatic stress disorder.
[a] Time doubled up in past 5 years or time doubled up since age 18 for respondents ages 18 to 22 years.
[b] Rows are not mutually exclusive.
[c] Information was collected on history of eviction and never having been a leaseholder only if the respondent thought these factors presented a problem in finding a place to live.
Note: Sample size = 2,282.
Source: Family Options Study baseline survey

1.2. Interventions Studied and Rationales

The Family Options Study compares three active interventions with one another and with usual care in the communities where families were recruited:

1. ***Assignment to the SUB intervention*** provided priority access to a permanent housing subsidy, usually a housing choice voucher that paid the difference between 30 percent of families' incomes and their housing costs in conventional private market housing. Families did not receive any other dedicated services but were free to obtain whatever social services might be available in their communities. The rationale for permanent housing subsidies is that homelessness is an economic problem that subsidies can address. Once stabilized in housing, families can address other nonhousing needs, such as employment services or connections to benefits, with community-based providers. Families could continue receiving housing assistance as long as they remained eligible and followed program rules, such as paying their share of

the rent and living in housing that passes a housing-quality inspection. Families in homeless shelters do not ordinarily have immediate access to housing choice vouchers, which are not typically part of the homeless assistance system.

2. ***Assignment to the CBRR intervention*** provided priority access to temporary rental assistance to help families find and rent conventional, private-market housing, paired with limited services focused on housing and self-sufficiency. Rental assistance, which had to be renewed every 3 months and could last up to 18 months (median stay for study families was 8 months), was structured differently in different communities. All programs assessed family needs at the outset and developed formal services plans focused on housing and self-sufficiency. Case managers adjusted these services plans based on quarterly reassessments conducted to determine whether to renew the rental assistance. Case management ratios varied, but averaged 36 families per case manager, with most families meeting with the case manager monthly. Although rapid re-housing was an emerging practice at the time families enrolled in the study, the programs studied were consistent with the core components in guidelines HUD issued in 2012.[11] The rationale for community-based rapid re-housing is that, although homelessness is largely an economic problem, the role of the homeless assistance system should be to get families into conventional housing as rapidly as possible with the minimum intervention necessary to prevent returns to shelter.

3. ***Assignment to the PBTH intervention*** provided priority access to temporary housing for up to 24 months (the median stay for study families lasted 13 months), coupled with more intensive social services in supervised programs.[12] The rationale for project-based transitional housing is that families who experience homelessness have a variety of additional challenges (mental health or substance issues, lack of job experience or skills, domestic violence, parenting challenges) that must be addressed before families can succeed in independent housing. Families received comprehensive assessments at the outset of the program and most programs provided housing placement assistance, self-sufficiency services, employment or training assistance, life skills, mental and physical health care, parenting, child advocacy and substance abuse services, as needed. Most services were provided by case managers (with an average ratio of 20 families to each case manager, almost twice the intensity of community-based rapid re-housing), but services could also be provided by other agency staff or through dedicated linkages with other agencies.

4. ***Assignment to the UC intervention*** provided no priority access to programs but consisted of whatever housing or services a family accessed in the absence of immediate referral to the programs offered to families assigned to the other interventions. Because all families were recruited from emergency shelter, usual care typically consisted of continued stays in the emergency shelter from which families were enrolled, until families were able to make other arrangements on their own or with the assistance of service providers. Families in shelters also received case management and services similar to those received by families in the PBTH group (with an average ratio of 16 families per case manager, although this varied considerably from shelter to shelter). Families in the UC group found their way into a variety of housing and services programs (see Chapter 2).

For more information about the interventions studied in the Family Options Study see Chapter 2 and Appendix B in the *Interim Report* (Gubits et al., 2013), Chapters 6 to 8 in the *Short-Term Impacts* report (Gubits et al., 2015), and short papers on the SUB and CBRR interventions.[13]

1.3. Evaluation Design

In each study site, the study team recruited families who had stayed in emergency homeless shelters for at least 7 days. The study team excluded families who left shelter in fewer than 7 days, because the more intensive interventions considered in this study may not be necessary for families who can resolve a housing crisis quickly.

In the original design of the study, each family was to have a chance of being assigned to all four groups (SUB, CBRR, PBTH, and UC). A number of factors prevented the study from being implemented as planned. First, all four intervention were offered in only nine sites. Two sites (Atlanta and Baltimore) did not offer the SUB intervention, and one site (Boston) did not offer the PBTH intervention. Second, interventions were available to families only in cases when at least one provider of the intervention type had an available slot. Third, some service providers had unique eligibility requirements for families.

[11] See http://usich.gov/population/families/core-components-rrh/. See also Wood (forthcoming).

[12] To distinguish transitional housing from community-based rapid re-housing, the Family Options Study examined project-based transitional housing (PBTH), rather than scattered-site transitional housing programs that sometimes allow families to assume the lease or "transition in place" at the end of the program. Some PBTH programs included in the study provided units in the community (called "scattered site" units) without the opportunity to transition in place when assistance ended.

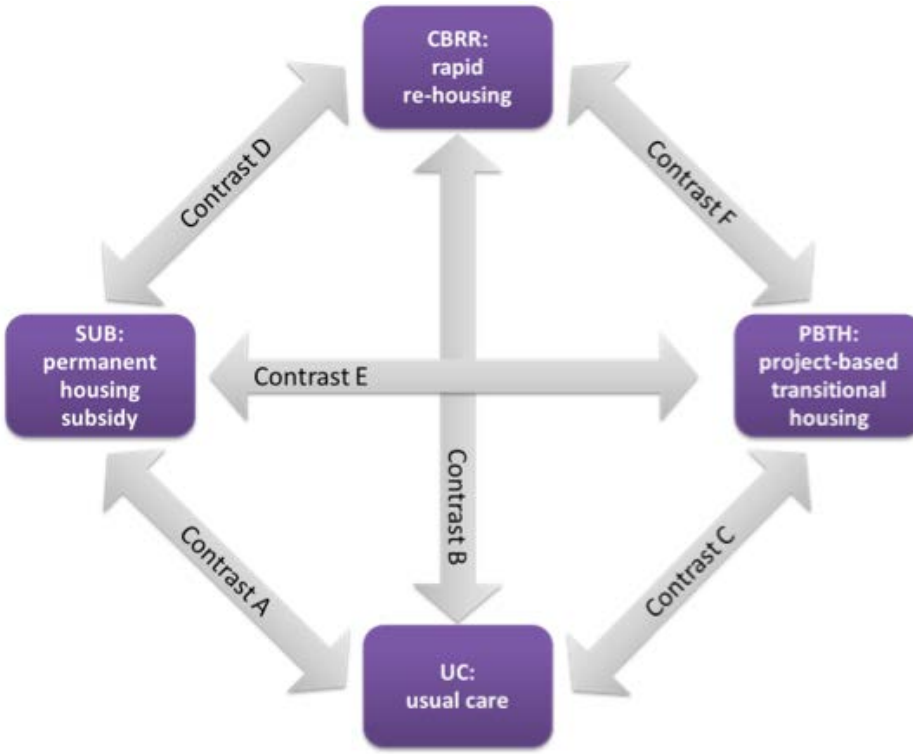
[13] Solari and Khadduri (forthcoming), Wood (forthcoming).

Before random assignment, the study team screened families for eligibility for the providers that had available slots based on criteria specified by the providers. The purpose of this screening was to minimize the likelihood of assigning families to interventions they would not be eligible to receive.[14] As a result, for an intervention option to be available to a family undergoing random assignment, at least one slot had to be open at an intervention provider for which the family met provider-specific eligibility requirements. All families were eligible for usual care by definition.

Families were randomly assigned among available interventions and all analyses compare families who were eligible for both interventions in a comparison and randomized to one of them. Thus, for example, all families who had no PBTH program available at the time of random assignment in their site or who were ineligible for all available PBTH programs were excluded from comparisons involving the PBTH intervention and either usual care or one of the other interventions. This random assignment design assures that comparisons of interventions involve well-matched groups and that any (statistically significant) observed differences in outcomes can be attributed to the differential assignment families received and not to any preexisting differences among the families. Following random assignment, the study team analyzed the baseline characteristics of the sample to confirm that the different sets of families assigned to each intervention were indeed equivalent. The *Interim Report* (Gubits et al., 2013) describes these analyses.

Assignment to an intervention meant that families were given priority access to specific programs that had a place reserved for them and expected them to enroll. Families were not required to enroll in the programs. If families did not take up the offered program, they stayed at the shelter from which they were enrolled until they were able to make other arrangements, either on their own or with the assistance of social service providers at the shelter or elsewhere. Families assigned to each intervention actually used a variety of programs, but they were more likely to use a program when they got a priority offer to it than when they did not, as described in the analysis of the pairwise comparisons in Chapters 3 through 6. Exhibit 1-3 illustrates the six pairwise comparisons. To investigate the impact of offers of priority access to programs, the impact analysis includes all families who received priority offers, regardless of whether they used them.[15]

Exhibit 1-3. Six Pairwise Comparisons Among the Four Interventions



[14] See the *Interim Report* (Gubits et al., 2013) for a detailed description of the eligibility screening conducted before random assignment.

[15] See Appendix C for details of the methods used to estimate impacts.

1.4. Findings From the Enrollment Phase

The *Interim Report* (Gubits et al., 2013) concluded that homeless assistance programs in the study communities imposed eligibility criteria that hampered their ability to serve families in shelter who needed the assistance. Even when programs had space available, the programs often screened out families in shelter based on eligibility criteria such as insufficient income, substance abuse, criminal histories, and other factors that presumably contributed to the families' homelessness. Screening out was most common for PBTH programs and least common for SUB programs. Moreover, families who are homeless do not always choose to pursue the programs offered to them, which suggests that some programs deliver assistance that some families perceive as less valuable to them than other alternatives available in their communities.

1.5. Short-Term Findings (20 Months After Enrollment)

The *Short-Term Impacts* report (Gubits et al., 2015) examined 20-month impacts of intervention assignment for 73 outcomes in five domains: (1) housing stability, (2) family preservation, (3) adult well-being, (4) child well-being, and (5) self-sufficiency.

In the absence of priority access to a specific program, families assigned to the UC group were not faring well 20 months after enrollment in the study. One-half had spent at least 1 night homeless or doubled up in the 6 months before the 20-month survey[16] or had been in shelter in the past 12 months. In the 6 months before the survey, 15 percent of families had been separated from a child who was with the family in shelter at study outset, and 4 percent had children in foster care. At the time of the survey, 15 percent reported alcohol dependence or substance abuse, and 12 percent had experienced intimate partner violence in the past 6 months. Children had attended two schools, on average, in the past 20 months and were absent, on average, about 1 day per month. Less than one-third of UC families (31 percent) were working for pay, and total family income was only $9,067 per year—much less than what is needed to rent market-rate housing for a family in most communities.

Relative to assignment to the UC group, assignment to the SUB group caused striking improvements in families' outcomes in the first 20 months after random assignment. Having priority access to permanent housing subsidies—compared with priority access to community-based rapid re-housing and project-based transitional housing and with usual care reduced homelessness, doubling up, and residential mobility across multiple measures. Impacts of assignment to the SUB intervention radiated beyond housing. Compared with assignment to the UC group, assignment to the SUB group reduced the number of separations of children from parents and adult drug abuse, psychological distress, and domestic violence, and it improved food security. Assignment to the SUB group also reduced the number of schools children attended and their absences from school, although effects on other child outcomes were more sparse. The salutary effects of assignment to the SUB intervention extended across all five of the outcome domains when compared with assignment to the UC group; however, heads of these families exerted less work effort compared with families assigned to the UC group. In the week before the 20-month survey, 30 percent of UC families were working for pay compared with 24 percent of families assigned to the SUB group.

The striking impacts of assignment to the SUB intervention in reducing subsequent stays in shelter and places not meant for human habitation provided support for the view that, for most families, homelessness is a housing affordability problem that can be remedied with permanent housing subsidies without specialized homeless-specific psychosocial services. The findings also provided support for the theoretical proposition that resolving homelessness would have a radiating impact, given the short-term impacts found for assignment to the SUB intervention on family preservation, adult well-being, school stability, and food security compared with usual care.

Considering costs through 20 months (all that was possible as of that analysis), the benefits of having priority access to permanent housing subsidies were achieved at comparable cost with that of usual care, slightly higher costs than priority access to community-based rapid re-housing, and at substantially lower cost than priority access to project-based transitional housing.

CBRR families had housing outcomes similar to those of families assigned to the UC group. Relative to families assigned to the UC group, however, the cost of all program use for families assigned to the CBRR group was lower than for families assigned to the UC group, mainly because assignment to the CBRR intervention lowered the rate at which families used costly transitional housing programs in the first 20 months after random assignment. At the time of the short-term analysis, the three major advantages of assignment to the CBRR intervention over other interventions were (1) the comparatively low cost of the CBRR intervention, (2) the greater income observed among

[16] Gubits et al. (2015) analyzed short-term impacts of the interventions. The study team attempted to contact families for the study's first followup survey beginning in the 18th month after random assignment. The median time from random assignment to the followup survey was 20 months. The followup period reported in Gubits et al. (2015) is thus 20 months, but the followup survey is sometimes referred to as the 18-month survey.

families assigned to the CBRR group compared with income among families assigned to the UC group, and (3) greater work effort compared with families assigned to the SUB group.[17]

Assignment to the PBTH group led to modest reductions in homelessness when compared with assignment to the UC group (during a period when many families were still in the PBTH programs to which they received priority access), but it did not produce effects in other aspects of family well-being. The short-term findings provided little support for the theoretical model that project-based transitional housing would produce better results by addressing families' psychosocial issues in supervised settings. Finally, although the statistical power for these tests was low, the short-term results showed no evidence that intervention impacts differed according to families' psychosocial challenges or housing barriers whatever type of programs were offered to families. Overall, considering the cost of all program use in the first 20 months for families assigned to the PBTH group, the PBTH intervention was more costly and, at the 20-month followup point, had few advantages over other programs.

1.6. Questions for the 3-Year Analysis

The 3-year analysis addresses one primary question about program use and two primary questions about impacts:

1. What programs do families who experience homelessness use during a 3-year period, and how does assignment to an intervention that offers priority access to a particular kind of program affect this program use?
2. At 3 years after random assignment, what are the relative effects of the three active interventions compared with usual care and of the active interventions compared with each other?
3. What are the cumulative costs of the interventions during the 3 years following random assignment?

Longer-term followup is often desirable in assessing the effects of social policy interventions and is especially so in the case of the Family Options Study. To evaluate the effects of temporary assistance that can last up to 18 months (CBRR programs) or 24 months (PBTH programs), 20 months is not a long enough period. Some families may not have received a full dose of a temporary intervention by the time of the 20-month followup analysis, and anxieties about the impending end of a program or disruption from having recently moved at the time of the 20-month survey could have depressed families' outcomes in the CBRR and PBTH interventions. To the extent that assignment to interventions strengthen families or set the foundation for later success, as theorized by proponents of project-based transitional housing, new findings may emerge at 3 years. In a similar way, increases in incomes observed at 20 months for CBRR families may set families on a positive trajectory of sustained benefit from that intervention. On the other hand, to the extent that the reduction in homelessness seen for PBTH families at 20 months was a temporary consequence of still being in PBTH programs at that time, impacts may fade. This 3-year analysis enables the study team to examine outcomes well after families reach the time limits for these temporary programs. Longer-term analysis is also important to measure impacts that may take longer than 20 months to emerge, such as those on child well-being outcomes.

The *Short-Term Impacts* report (Gubits et al., 2015) found that families assigned to all interventions used a variety of programs. The 3-year analysis updates information about the ways that having priority access to particular interventions affected patterns of use. In the case of permanent housing subsidies, which can last as long as families comply with program requirements, it was not clear at 20 months whether families would successfully renew leases and sustain tenancies. The 3-year analysis addresses whether families assigned to the SUB group are able to retain the assistance. Emergency shelters, transitional housing programs, and rapid re-housing programs frequently attempt to enroll their families on waiting lists for permanent housing. Longer-term followup can also show whether these programs serve as way stations to more permanent housing subsidies.

Finally, the *Short-Term Impacts* report (Gubits et al., 2015) found that that, after 20 months, the cost of all the programs used by families assigned to the SUB group was about the same as for families assigned to the UC group. Because the subsidies tested in the SUB intervention are permanent, whereas the CBRR and PBTH interventions are time limited, there is good reason to expect that the relative costs of interventions may change when analyzed over a longer followup period. The current report examines these costs cumulatively for a full 3 years after random assignment.

[17] The *Short-Term Impacts* report (Gubits et al., 2015) also presented results showing that assignment to the CBRR group led to more rapid departures from emergency shelter than assignment to the UC group by about 2 weeks, but those departures were not more rapid than for families assigned to the SUB group or to the PBTH group. Revised analysis using updated Program Usage Data on length of emergency shelter stays, however, has resulted in changes to the findings about length of initial shelter stay. For the full study sample (not limited to 20-month survey respondents), families assigned to the CBRR group left shelter, on average, 1 week faster than families assigned to the UC group. This difference is not statistically significant. The results of the revised analysis are in Appendix I.

In sum, the analyses presented in the report give evidence about the relative impacts and costs of the interventions 3 years after random assignment. The report describes what housing and services interventions families in the 12 communities engage in when they receive no special priority offer of assistance, and how those UC families are faring 3 years after random assignment. It also examines the relative impacts of priority offers of permanent housing subsidies, temporary rapid re-housing assistance, and project-based transitional housing compared with usual care and with each other at that same time point.

1.7. Organization of the Report

The balance of this report is organized as follows. Chapter 2 describes the experiences of the UC group. It also defines the outcomes derived from participant surveys and administrative data that are used to estimate intervention effects. Chapters 3 through 6 then present findings about the relative impacts of the four interventions, organized by six pairwise comparisons. In particular, Chapter 3 provides impact measures for assignment to the SUB intervention compared with usual care, for the five domains of housing stability, family preservation, adult well-being, child well-being, and self-sufficiency. Chapter 4 presents findings from the comparison of assignment to the CBRR intervention with usual care in the five domains, and Chapter 5 does so for the comparison of the PBTH intervention with usual care. Chapter 6 turns to the other pairwise comparisons of the three active interventions, reporting impacts of SUB compared with CBRR, SUB compared with PBTH, and CBRR compared with PBTH. Chapter 7 discusses results about the relative impacts of groups of interventions to illuminate other policy questions. Chapter 8 explores the variability of impacts across types of families, using indices related to psychosocial challenges and housing barriers constructed for each family. Chapter 9 describes the relative costs of the interventions. Chapter 10 discusses study conclusions.

Several technical appendixes support the report. Appendix A provides details about the data sources and data set construction. Appendix B discusses the construction of adult and child well-being outcomes. Appendix C presents technical details regarding the samples and analysis methods. Survey nonresponse analysis is documented in Appendix D. Appendix E presents supplemental tables showing use of transitional housing during the followup period. Appendix F presents exhibits showing the results of the pooled comparisons. Appendix G presents technical details about the cost data collection and analysis.

CHAPTER 2.
DESCRIPTION OF USUAL CARE (UC) AND OUTCOMES MEASURED IN THE STUDY

Evidence from the Family Options Study informs policymakers not only about the effects of assignment to the active interventions—permanent housing subsidy (SUB), community-based rapid re-housing (CBRR), and project-based transitional housing (PBTH)—but also about the experiences of families assigned to remain in usual care (UC) after 7 days in emergency shelter. The types of homeless and housing assistance programs that the UC families use and indicators of their well-being 3 years after study enrollment are instructive. These findings show how families in the 12 study communities navigate the housing and homeless assistance systems and how they fare if they do not receive priority access to one of the active interventions.

This chapter describes the types of programs—both emergency shelters and other housing and homeless assistance programs—that UC families used during the followup period and the timing of their use of those programs. The chapter also introduces the outcomes examined in the impact analysis (reported in Chapters 3 through 6) and presents levels of these outcomes for UC families, the benchmarks against which the impacts of other interventions are measured.

2.1. The Emergency Shelter Experience of Usual Care (UC) Families

Usual care for this study consisted of whatever program services UC families were able to access on their own following a stay in emergency shelter of at least 7 days, without special referral to one of the study's active interventions. All families were recruited for the study from emergency shelters.[18]

Because families assigned to the UC group were not explicitly provided other assistance, all UC families remained in emergency shelter until they navigated their way out or until they reached the shelters' length-of-stay limits. Emergency shelter staff may have provided some assistance to UC families in leaving shelter, but the study team asked shelter staff not to actively help UC families enter SUB, CBRR, or PBTH programs.

Across all 12 study sites, 746 families were randomly assigned to the UC group from 56 emergency shelters.[19] Of these 746 families, 556 (75 percent) responded to the 37-month followup survey and are therefore included in the impact analysis in this report. We refer to these 556 families as the UC respondent families.

2.1.1. Length of Time UC Families Spent in Emergency Shelters

The Program Usage Data collected for the study from various sources indicate the time that study families spent in emergency shelter during the followup period.[20] These data show that UC respondent families stayed in emergency shelter for a mean of 4 months and a median of 3 months during the followup period.[21] Exhibit 2-1 shows the distribution of total month durations in emergency shelter across all shelter stays during

[18] A description of the UC program environment, including profiles of the housing and supportive services provided by the emergency shelters from which study participants were drawn, is provided in Chapter 5 of the *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families* (Gubits et al., 2015).

[19] One family was enrolled into the study from a 57th shelter, but this family was not assigned to the UC group.

[20] See Appendix A for details of how the sources of program usage were combined into a single data set. Missing data on emergency shelter stays bias the counts of total time spent in emergency shelter somewhat downward. The baseline stay in emergency shelter does not appear in the Program Usage Data (largely based on data from the Homeless Management Information Systems) for 16.7 percent of UC respondent families.

[21] The mean and median are computed with weights to adjust for survey nonresponse, so that the respondent families represent all 746 families assigned to the UC group. The length of the followup period is from the month of random assignment to the month of the followup survey response (median 38 calendar months included in followup period). Most families had only one *spell* in emergency shelter, wherein spells are separated by at least 1 calendar month with no emergency shelter stay. The weighted percentage of families with zero spells (that is, missing data on the spell when they were recruited from shelter at baseline and also no subsequent spell recorded in the Homeless Management Information System Program Usage Data) is 10.2 percent, with one spell is 63.7 percent, with two spells is 18.7 percent, with three spells is 5.0 percent, and with four or more spells is 2.4 percent.

Exhibit 2-1. Length of Time Spent in Emergency Shelters by UC Families

Number of Months (with at least 1 night stay) in Emergency Shelter During Followup Period[a]	Percent of UC Respondent Families[b] (N = 556)
0.00[c]	11.1
Less than 1 month	18.9
1 to 1.99	15.4
2 to 2.99	14.1
3 to 3.99	8.6
4 to 4.99	4.8
5 to 5.99	5.7
6 to 6.99	4.1
7 to 7.99	2.8
8 to 8.99	2.1
9 to 11.99	4.6
12 to 14.99	3.4
15 to 17.99	2.3
18 to 23.99	0.9
24 and above	1.3

UC = usual care.

[a] Total time spent in emergency shelter is calculated from entry and exit dates in Homeless Management Information System (HMIS) and survey data. Missing data on emergency shelter stays bias the counts of total months spent in emergency shelter somewhat downward. The baseline stay in emergency shelter does not appear in the Program Usage Data for 16.7 percent of UC respondent families.

[b] Percentages are weighted for survey nonresponse to represent all 746 UC families.

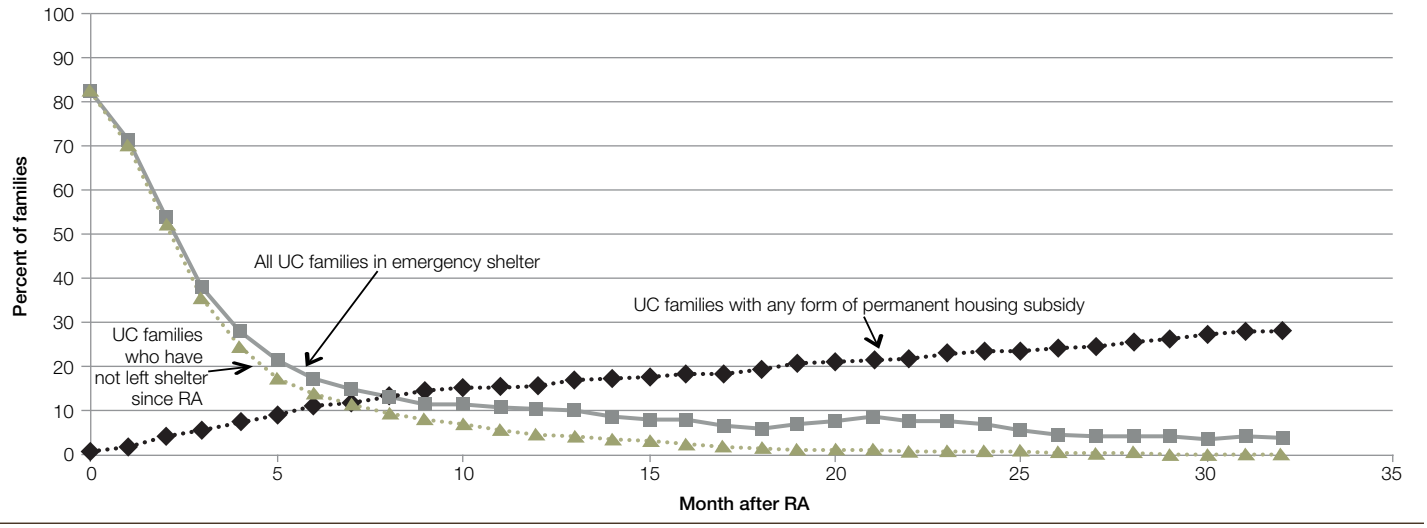
[c] Of UC respondent families, 11.1 percent do not have any emergency shelter stay (at baseline or after baseline) in the HMIS Program Usage Data, even though all families were recruited from emergency shelters. These families are among the 16.7 percent of UC respondent families whose *baseline* stay in emergency shelter does not appear in the data. The other 5.6 percent of UC respondent families (16.7–11.1=5.6) whose baseline stay in emergency shelter does not appear in the data have at least one stay in emergency shelter *after baseline* and so are included in the rows below the 0.00 months row.

Source: Family Options Study Program Usage Data

the followup period. About 60 percent of UC families stayed in emergency shelter for fewer than 3 months during the followup period. Another 19 percent stayed between 3 and 6 months during the followup period, and 21 percent stayed 6 or more months. Only 2 percent stayed in emergency shelter for 18 or more months.

Exhibit 2-2 shows the percentage of UC families who have at least 1 night in emergency shelter during the month for each month after random assignment. A second line shows the percentage of UC families who have not left the initial stay in shelter each month. The exhibit shows that most families had left emergency shelter by the 3rd or 4th month after random assignment. The exhibit shows that only about 17 percent of UC families are in any emergency shelter by the 6th month after random assignment. Past this point, the percentage drops slowly and, by 32 months after random assignment (the longest period for which the study team has data for all families), about 4 percent of UC families are in emergency shelter. From Exhibit 2-2, which also shows almost no UC families still in their baseline emergency shelter stay by the 32nd month, it is possible to deduce that almost all the families in shelter in the 32nd month after random assignment had returned to shelter after a departure. A third line in the exhibit shows the percentage of UC families using any form of permanent subsidy each month after random assignment. The exhibit illustrates that the proportion of families assigned to the UC group who use shelter declines as the proportion who use any form of permanent

Exhibit 2-2. Percent of UC Families With at Least 1-Night Stay in Emergency Shelter During Month, by Number of Months After RA



UC = usual care.

RA = random assignment.

Notes: Percentages are weighted for survey nonresponse to represent all UC families in the study. Missing data on emergency shelter stays bias the percentages somewhat downward. The baseline stay in emergency shelter does not appear in the data for 16.7 percent of UC respondent families. The missing data rate for subsequent stays in emergency shelter is unknown.

Source: Family Options Study Program Usage Data

subsidy increases. By 32 months after random assignment, nearly 30 percent of UC families were receiving some form of permanent subsidy.

2.2. Use of Other Homeless and Housing Assistance Programs by Usual Care (UC) Families

For some families assigned to the UC group, emergency shelters were the families' only interaction with the homeless assistance or housing subsidy system. Other UC families found their way into permanent housing subsidies, rapid re-housing, and transitional housing programs on their own. Exhibit 2-3 shows the use of homeless and housing programs by UC families during the followup period. The exhibit shows eight types of programs.

- Subsidy (that is, the programs comprising the SUB intervention in this study: housing choice vouchers; public housing in Honolulu, Hawaii; and project-based vouchers in Bridgeport, Connecticut).
- Rapid re-housing (that is, programs offered to families assigned to the CBRR intervention).
- Transitional housing (both non-"transition-in-place" and "transition-in-place").
- Permanent supportive housing.
- Public housing in places other than Honolulu.
- Project-based vouchers or Section 8 projects in places other than Bridgeport.
- Any form of permanent housing subsidy (that is, any of the programs that comprise the SUB intervention in this study, permanent supportive housing, public housing, or project-based vouchers and Section 8 projects).
- Emergency shelter.

All families enrolled in the study while staying in emergency shelter. By the 7th month after random assignment, most UC families had departed from emergency shelter. Exhibit 2-3 shows information on the proportion of UC families who did not use emergency shelter again and did not use any of the other programs during the entire followup period. For one-fourth of the UC families, the initial stay in emergency shelter is the only use of housing or homeless assistance observed during the followup period.

The first column of Exhibit 2-3 shows the percentage of UC families who ever used a type of program between the month of random assignment and the month of the followup survey response. This column shows that, during this entire period, 20 percent of UC families received rapid re-housing assistance (at least once) and 30 percent of UC families received transitional housing (at least once). Altogether, more than one-third (37 percent) of UC families received some sort of

Exhibit 2-3. Program Use Since RA for UC Families

Type of Homeless or Housing Assistance	Percent Ever Used From RA to 37-Month Followup Survey[a]	Number of Months Used From RA to 37-Month Followup Survey, if Ever Used Type of Housing Assistance		Percent Used in Month of Followup Survey Response
	UC	UC		UC
		Mean	Median	
Permanent housing subsidies offered to the SUB group	11.7	19.0	19.5	9.7
Rapid re-housing	20.4	7.6	6.0	1.5
Transitional housing	29.8	12.0	10.0	4.2
Permanent supportive housing	11.0	16.9	15.5	7.6
Public housing	9.8	18.3	17.5	7.6
Project-based vouchers or Section 8 projects	6.5	18.9	17.5	5.2
Any permanent housing subsidy[c]	*36.6*	*19.4*	*19.5*	*29.9*
Emergency shelter[d]	89.8	4.4	2.8	5.2
No use of homeless or housing programs[e]	25.3	—	—	60.0
N	**556**	**—**	**—**	**556**

UC = usual care.

RA = random assignment.

[a] Percentage of families who ever used a type of assistance program during the period from the month of RA to the month of the 37-month followup survey response (median period duration: 37 months). Percentages do not add to 100 because some families use more than one program type during the followup period.

[b] Subsidies offered to the SUB group are housing choice vouchers plus site-specific programs offered to families assigned to the SUB group in Bridgeport, Connecticut, and Honolulu, Hawaii.

[c] Any form of permanent housing subsidy includes the types of permanent subsidy offered to the SUB group, permanent supportive housing, public housing, and project-based vouchers/Section 8 projects.

[d] All families were in emergency shelter at random assignment. The percentage less than 100 is because of missing data on shelter use.

[e] Indicates no use of the six program types in this table during any of the followup period and no use of emergency shelter after the first 6 months after RA. No use in the month of followup survey response indicates no use of any of these seven program types.

Notes: Percentages are regression adjusted, controlling for site and randomization ratio. Percentages, means, and medians are weighted for survey nonresponse to represent full comparison sample.

Source: Family Options Study Program Usage Data

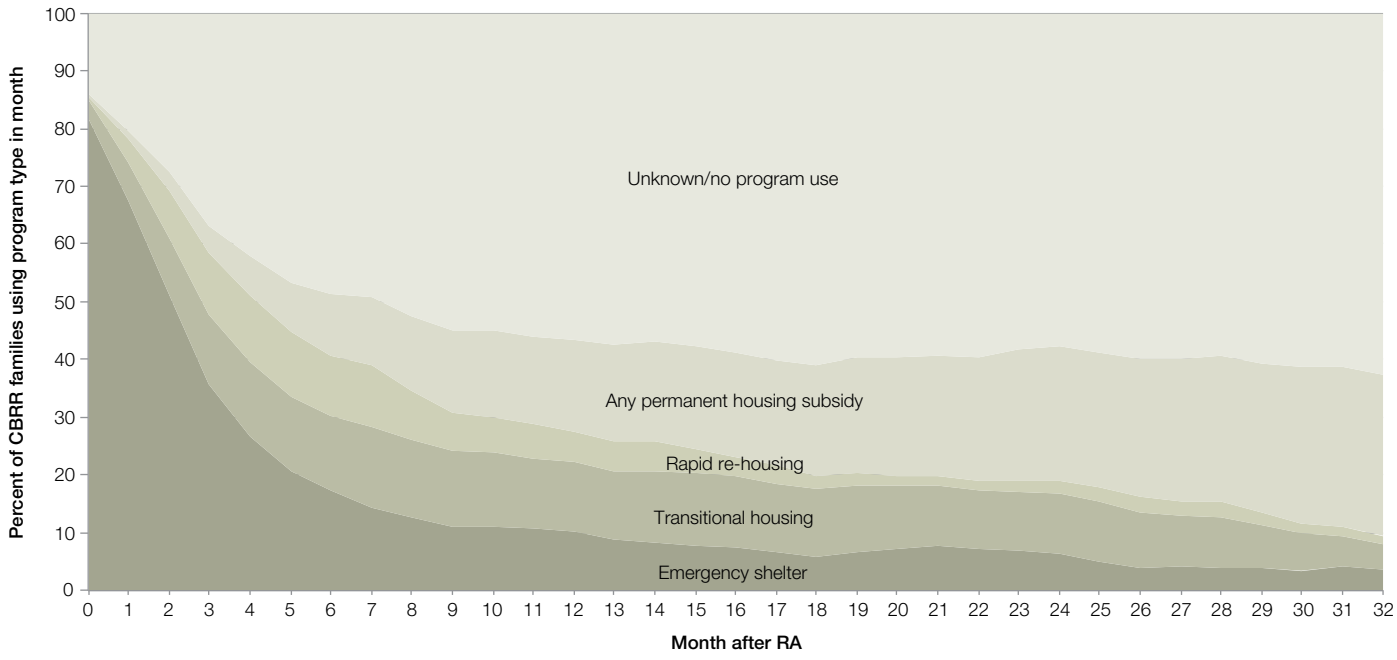
permanent subsidy during the followup period—accessing the subsidy, public housing, permanent supportive housing, or project-based housing assistance programs.

The second and third columns of Exhibit 2-3 show the mean and median number of months of program usage *for those families who used the program*. The number of months of use of rapid re-housing (median 6 months) and transitional housing (median 10 months) during the study period are consistent with the expected durations of these program types. Also consistent with expectations are higher median use for all types of permanent housing subsidies compared with other types of programs—20 months for the subsidy intervention defined for the study, 18 months for public housing and project-based vouchers or Section 8 projects, and 16 months for permanent supportive housing, during the study period.

The fourth column of Exhibit 2-3 shows the percentage of families who used a program type in the month of the followup survey response. Although the study team expects that many outcomes in the report will be influenced by assistance received at any point during the entire followup period, some outcomes will be most strongly influenced by assistance that is received at the time of the followup survey response. By the time of the followup survey, 60 percent of UC families were not receiving any of the assistance shown in the exhibit. Nearly one-third of the families (30 percent) were receiving some form of permanent subsidy, 5 percent were using emergency shelter assistance, 4 percent were using transitional housing, and 2 percent were using rapid re-housing. Altogether, 82 percent of families who ever used a form of permanent subsidy were still doing so at the time of the survey. By contrast, 7 percent who ever used rapid re-housing were still using it at the time of the survey and 14 percent who ever used transitional housing assistance were still using the assistance at the time of the survey. Thus, most families who ever used either rapid re-housing or transitional housing assistance were no longer using it at the time of the followup survey, whereas most UC families who accessed permanent assistance were still receiving it.

Exhibit 2-4 provides a more detailed characterization of the timing of program use by the families in the UC group. This exhibit shows the proportions of families within the UC group who received different types of assistance during each calendar month for the first 32 months after random assignment.[22] As shown here, the UC group used a mix of program types coming out of emergency shelter. The UC families' use of rapid re-housing had greatly diminished by month 20 (the followup period for the *Family Options Study: Short-Term Impacts of*

Exhibit 2-4. Program Use of UC Families for 32 Months After RA



UC = usual care.
RA = random assignment.
Notes: This exhibit shows program use for all families assigned to UC who responded to the 37-month survey. Complete Program Usage Data for 37-month respondent families are available only through month 32 after random assignment. Families who have more than one type of program use in a calendar month are counted fractionally in each type.
Source: Family Options Study Program Usage Data

[22] Month 32 is the latest month for which the study team has data for all the families who responded to the 37-month survey.

Housing and Services Interventions for Homeless Families report; Gubits et al. [2015]). Their use of transitional housing continued past this point, only beginning to decrease in the third year. Use of permanent housing subsidies steadily increased throughout the followup period. Slightly more than 20 percent of UC families were receiving some form of permanent subsidy 20 months after random assignment and nearly 30 percent were receiving some form of permanent subsidy 32 months after random assignment. Some UC families may have been on waiting lists for permanent housing subsidies at the time of random assignment and others may have entered waiting lists after random assignment.[23]

2.3. Outcomes for Families Randomly Assigned to Usual Care (UC)

Having just discussed the patterns of program use for the UC respondent families during the 37-month followup period, the chapter now turns to a discussion of the outcomes examined in the Family Options Study impact analysis. This section serves the dual purpose of (1) introducing the outcomes examined in the impact analysis and (2) describing the outcomes of families assigned to the UC group who responded to the 37-month followup survey. The section is organized according to the five outcome domains: (1) housing stability, (2) family preservation, (3) adult well-being, (4) child well-being, and (5) self-sufficiency. Each outcome domain first includes the specific outcomes considered (including how they are measured) and then presents the outcomes for the UC respondent families. Changes in measured outcomes between the study's earlier 20-month followup point and the current 37-month window occasionally are noted, along with their statistical significance. This information about the status of UC respondent families 3 years after study entry is important for policymakers. The data from the Family Options Study show how families in the 12 communities fare after an episode of emergency shelter use when they do not receive an immediate offer of assistance through one of the active interventions. Appendix B provides additional technical details regarding the construction of the outcome measures from survey and administrative data.[24]

2.3.1. Measures of Housing Stability

The study team defined several outcomes related to homelessness and housing stability and used information from the followup survey and Program Usage Data to measure these indicators. The study team developed eight measures related to housing stability and homelessness experienced during the followup period. The following bullet points list the concepts of interest, how the study team operationalized the concept, during what period it is defined, and the data sources used to measure the indicator.

- **At least 1 night homeless in the past 6 months (percent of families).** This outcome measures the percentage of families who reported having spent at least 1 night in a shelter or a place not meant for human habitation in the 6 months before the 37-month followup survey.[25] This measure is based on responses to the followup survey.
- **At least 1 night doubled up in the past 6 months (percent of families).** This outcome measures the percentage of families who reported having spent at least 1 night in the 6 months before the 37-month survey living with a friend or relative *because they could not find or afford a place of their own*. This outcome is intended to measure episodes in which families reported the doubled-up living situations that may precede or follow a stay in emergency shelter. This outcome is measured from responses to the followup survey.
- **At least 1 night homeless or doubled up in the past 6 months (percent of families).** This outcome measures the percentage of study families who reported either of the previous two outcomes.
- **Any stay in emergency shelter in the past 6 months (percent of families).** This measure is the percentage of families who spent at least 1 night in emergency shelter in the 6 months before the survey. The measure is based on the Program Usage Data (see Appendix A) and is primarily taken from the Homeless Management Information System (HMIS), but it also uses survey data.

[23] Note that the exhibit does not indicate the two-way flows of families moving into and out of these program types from month to month. Instead, it reflects only the overall usage level in a given month. Though most programs showed positive participation in all 32 reported months, no individual family necessarily remained in the same program for the entire followup period.

[24] The *Revised Data Collection and Analysis Plan: Family Options Study* (Gubits et al., 2012) provides additional details about the selection of outcome domains. Chapter 3 of the *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families* (Gubits et al., 2015) addresses the theoretical framework for the interventions and hypothesized effects on the outcome domains.

[25] See *24 CFR 91.5*. HUD defines homelessness as living in a supervised publicly or privately operated shelter designated to provide temporary living arrangement (including congregate shelters, transitional housing, and hotels and motels paid for by charitable organizations or by federal, state, or local government programs for low-income individuals). In the followup survey, the study team asked survey respondents if, during the 6 months before the survey, they had spent at least 1 night staying in shelters, institutions, or places not typically used for sleeping, such as on the street, in a car, in an abandoned building, or in a bus or train station. The survey question excluded stays in transitional housing from the question because project-based transitional housing is one of the study interventions.

- **Any stay in emergency shelter in months 21 to 32 after random assignment (percent of families).** This measure is the percentage of families who spent at least 1 night in emergency shelter during the period 21 to 32 months after random assignment. The measure is based on the Program Usage Data. This time period is the latest 1-year period for which data are available for all families.
- **Number of days homeless in the past 6 months.** This outcome measures the average number of days spent in shelters or places not meant for human habitation in the 6 months before the survey. It is measured from survey data.
- **Number of days doubled up in the past 6 months.** This outcome measures the average number of days spent living with friends or relatives in the 6 months before the survey. It is measured from survey data.
- **Number of days homeless or doubled up in the past 6 months.** This outcome sums the previous two outcomes.

Because housing stability is the central outcome domain for the study, the study team designated a small set of impact comparisons and hypothesis tests related to housing stability as the confirmatory set.[26] For this purpose, the analysts constructed a single composite outcome for the 37-month followup point. This binary outcome is defined as "at least one return to homelessness" measured from both the followup survey and Program Usage Data.

- **Confirmatory outcome.** At least 1 night spent staying in a shelter or a place not meant for human habitation or doubled up during the past 6 months at the time of the survey (measured from survey data) OR any stay in emergency shelter in the 12 months before the date of the survey (measured from Program Usage Data).

The analysts also used data from the followup survey to construct outcomes pertaining to the type of living arrangements at the time of the followup survey, the number of places families lived, and housing quality. All these measures are from the followup survey.

- **Living in own house or apartment at the time of the survey (percent of families).** Survey respondents are considered to have *independent housing* if they rented or owned their own housing at the time of the survey. (Housing owned or rented by a "boyfriend/girlfriend, fiancé or significant other" is not counted as living in the respondent's own house or apartment). This outcome measures the percentage of families who reported living in their own house or apartment, either with or without housing assistance.
- **Living in own house or apartment at the time of the survey with no housing assistance (percent of families).** This outcome measures the percentage of families who reported living in their own house or apartment at the time of the survey and who were not receiving housing assistance.
- **Living in own house or apartment at the time of the survey with housing assistance (percent of families).** This outcome measures the percentage of families who reported living in their own house or apartment at the time of the survey and who were receiving housing assistance to help pay the rent.
- **Number of places families lived in the past 6 months.** This outcome measures the number of places the family lived in the 6 months before the survey. The number of places families lived is top-coded at six places.
- **Persons per room.** This outcome measures housing crowding using information collected from the adult respondent about the number of rooms in the housing unit (not counting kitchens, hallways, and bathrooms) and the number of people living in the housing unit. Housing situations with more than one person per room are considered crowded.
- **Housing is of fair or poor quality (percent of families).** This outcome measures the percentage of families reporting that the condition of their housing at the time of the survey was fair or poor.[27]

2.3.2. Housing Stability of the UC Group

Exhibit 2-5 shows the values of these indicators for the UC group. The exhibit displays the average value of each outcome measured for the 556 families assigned to the UC group who responded to the 37-month followup survey.[28] The UC group displays substantial housing instability during the followup period. Based on responses to the survey, 18 percent of UC families reported having been homeless in the *6 months* before the survey, with *homeless* defined as spending at least 1 night in shelter or in places not meant for human habitation. Based

[26] The motivation for designating a confirmatory set of outcomes is based on considerations of multiple comparisons; that is, the problem of interpreting individual statistical tests when a large number of tests are conducted. See Appendix C for a discussion of the study's approach to the multiple comparisons problem, the role of the confirmatory outcome in this approach, and the details of the adjustment procedure.

[27] The housing-quality outcome is measured with self-reported assessments of housing condition. This outcome should not be interpreted as representing housing quality as determined by third-party inspections, such as those conducted as part of HUD's Housing Quality Standards process.

[28] Outcome values are weighted for survey nonresponse so the responses represent all families randomly assigned to the UC group.

Exhibit 2-5. Housing Stability Outcomes for UC Families

Outcome	UC Group	
	Mean Value	(Standard Deviation)
Homeless or doubled up during followup period		
At least 1 night homeless[a] or doubled up in past 6 months or in shelter in past 12 months (%)	38.6	(56.5)
At least 1 night homeless or doubled up in past 6 months (%)	34.9	(55.2)
At least 1 night homeless in past 6 months (%)	18.1	(44.7)
At least 1 night doubled up in past 6 months (%)	28.5	(52.3)
Any stay in emergency shelter in past 6 months (%)	8.6	(32.6)
Any stay in emergency shelter in months 21 to 32 after RA (%)	17.3	(43.8)
Number of days homeless or doubled up in past 6 months	47.7	(86.1)
Number of days homeless in past 6 months	18.5	(55.8)
Number of days doubled up in past 6 months	33.3	(73.0)
Housing independence		
Living in own house or apartment at followup (%)	69.0	(53.6)
Living in own house or apartment with no housing assistance (%)	41.1	(57.1)
Living in own house or apartment with housing assistance (%)	27.9	(52.0)
Number of places lived		
Number of places lived in past 6 months[b]	1.6	(1.2)
Housing quality		
Persons per room	1.6	(1.3)
Housing quality is poor or fair (%)	31.5	(53.8)

UC = usual care.
RA = random assignment.
[a] The definition of "homeless" in this report includes stays in emergency shelters and places not meant for human habitation. It excludes transitional housing.
[b] The number of places lived in the past 6 months is topcoded at 6 places.
Notes: N = 556. See Appendix B for details on outcome specifications and values. Means and standard deviations are weighted to adjust for survey nonresponse.
Sources: Family Options Study 37-month followup survey; Program Usage Data for three measures including emergency shelter

on Program Usage Data, 9 percent of UC families had stayed in emergency shelter at some point during the same 6-month time period. Looking at a longer time period, about 17 percent of UC families had stayed in emergency shelter during months 21 to 32 after random assignment.[29]

UC families also reported other experiences that indicate housing instability 37 months after random assignment. More than one-fourth of UC families (28 percent) said they spent at least 1 night living with friends or relatives because they could not find or pay for housing in the 6 months before the survey. More than one-third (35 percent) of UC families reported spending at least 1 night either homeless or doubled up in the 6 months before the survey.

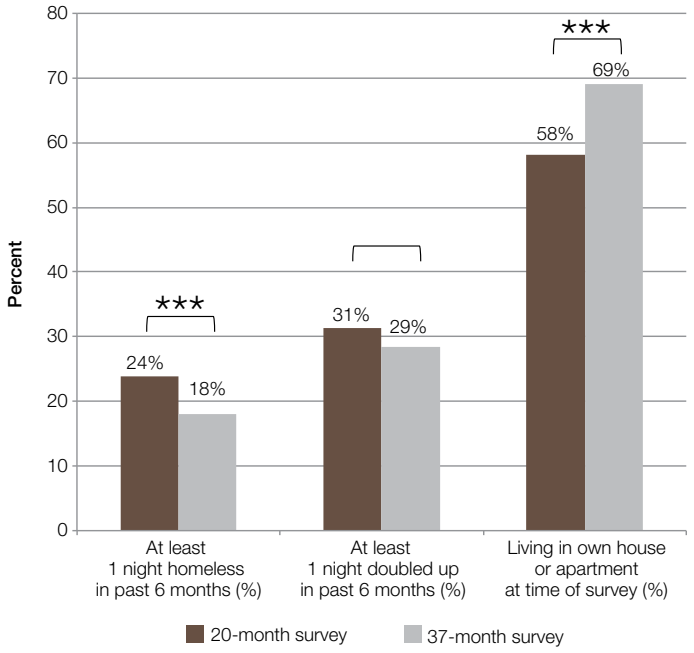
Measuring housing stability using the confirmatory outcome revealed that 39 percent of UC families spent at least 1 night homeless or doubled up in the 6 months before the survey or in emergency shelter in the 12 months before the survey. Taken together, these indicators show that families assigned to the UC group were experiencing a substantial degree of housing instability 37 months after study enrollment.

Exhibit 2-6 shows the mean values for three key outcomes for the UC respondents to the 20-month and 37-month surveys. The proportion of UC families who reported being homeless in the past 6 months declined by a statistically significant amount, from 24 percent to 18 percent. The proportion who reported being doubled up in the past 6 months did not change significantly between the two time points; it equaled approximately 30 percent at each time point. The UC families had improved housing stability over time as measured by the third outcome, living in own house or apartment. At 20 months, 58 percent of the families were living in their own place. This proportion increased significantly, to 69 percent of families, at the later followup point.[30]

[29] The proportion of families using emergency shelter during the past 6 months is only about one-half of those reporting being homeless in the past 6 months. This discrepancy is likely due to two factors: (1) some of the homelessness captured in the survey measure is for stays in places not meant for human habitation rather than in emergency shelter, and (2) measurement error in the survey (recall bias) and Program Usage Data (lack of coverage of all local shelters in HMIS records and lack of coverage for families who moved away from the community where they enrolled in the study). The relative importance of these factors is unknown.

[30] These results are based on a partial paired t-test. See Appendix C for additional details about the test.

Exhibit 2-6. Homeless, Doubled Up, and Living in Own Place in the UC Group at 20 and 37 Months After RA



UC = usual care.
RA = random assignment.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
Notes: See Appendix B for details on outcome specifications and values. Means are weighted to adjust for survey nonresponse.
Sources: Family Options Study 20-month followup survey and 37-month followup survey.

2.3.3. Measures of Family Preservation

Family preservation refers to separation and reunification of family members. The study team collected detailed information about changes in family composition during the followup period. The study team collected names and ages of family members with the adult respondent in shelter at the time of random assignment. Interviewers also collected information about family members the adult respondent considered part of the family but who were separated from the family at the time of random assignment. Then, during the 37-month followup survey, the study team collected information on the whereabouts of all family members reported at baseline. The team also collected information about new family members who joined the family since the previous survey. The family preservation analysis examines impacts on five outcomes.

The study team used information on changes in family composition to construct outcomes measuring recent separations of family members who were present at baseline.

- **The family has at least one child separated in the past 6 months (percent of families).** This outcome measures the percentage of families for whom a child who had been with the family in shelter was separated from the family at any time in the 6 months before the 37-month followup survey. This outcome includes both formal (that is, by a child welfare agency) and informal separations from the family and both ongoing and new separations in this period. To exclude children who had reached the legal age of adulthood before the separation, the outcome is based on children who are less than 18 years, 6 months at the time of the followup survey. The time period for this outcome, 6 months before the survey, thus included at least some time before the children reached adulthood.

- **The family has at least one foster care placement in the past 6 months (percent of families).** This outcome measures the percentage of families who reported that a child was in a formal foster care placement or was adopted by another family at any time in the 6 months before the 37-month survey. It includes both new and ongoing foster care placements. This outcome excludes informal arrangements in which a child may have stayed with friends or family members, but it includes adoptions of children by another family.

- **Spouse or partner separated in the past 6 months, of those with a spouse or partner present at the time of random assignment (percent of families).** This outcome measures the percentage of families in which a spouse or partner who had been with the family in shelter at baseline was separated from the family at any time in the 6 months before the 37-month survey. The outcome is measured only for families in which a spouse or partner was present at baseline (151 families) and includes both new and ongoing separations.

The team also constructed the following family reunification outcomes that measure the return of family members who had been separated from the family at baseline.

- **The family has at least one child reunified, of those families who had at least one child absent at the time of random assignment (percent of families).** This outcome measures the percentage of families in which a child who had been living apart from the family at baseline had rejoined the family at the time of the 37-month followup survey. This outcome is measured only for families in which a child was separated from the family at the time of random assignment (107 families).

- **Spouse or partner reunified (percent of families).** This outcome measures the percentage of families in which a spouse or partner who was separated from the family at baseline had rejoined the family at the time of the 37-month

followup survey. This outcome is measured only for families in which a spouse or partner was separated from the family at the time of random assignment (55 families).

In addition to constructing the outcomes measured from the 37-month followup survey, the study team also estimated impacts on two family preservation outcomes measured from child welfare administrative data that use Adoption and Foster Care Analysis and Reporting System (AFCARS) reporting definitions. The team was able to negotiate data use agreements in five of the sites (Alameda County, Baltimore, Kansas City, Minneapolis, and Phoenix) to obtain data on out-of-home placements for children in the study sample. The administrative data measure formal out-of-home placements that family heads may have been reluctant to acknowledge to the interviewer. The child welfare administrative records also permitted the team to measure the duration of child separations, including those that may have started or ended between surveys. These administrative data thus provide an important supplement to the self-reported family preservation measures collected in the survey.

The study team constructed two outcome measures for the five sites that provided child welfare administrative data.

- **Any formal separations from a child (percent of families).** This outcome measures the percentage of families who experienced any formal, out-of-home placements of any children after random assignment. The length of the followup period was approximately 3 years but varied by site, ranging from 1,046 days to 1,123 days after random assignment.
- **Total number of days during the followup period that the family was separated from at least one child.** This outcome counts the total number of days the family was separated from at least one child. The outcome includes days separated from children who were with the family at the time of random assignment and children who were not with the family at the time of random assignment.

2.3.4. Family Preservation in the UC Group

Exhibit 2-7 presents the values of the family preservation outcomes for the UC group. Across the UC group, 17 percent of families had a child with the family in shelter at the time of the baseline survey who was separated from the family at any time during the 6 months before the 37-month followup survey. Only 3 percent of the UC families reported formal placements in foster care. Among UC families in which a child was separated at the time of random assignment, 34 percent reported that the child had rejoined the family at the time of the 37-month survey.

Of families who reported a spouse or partner present at baseline, 38 percent experienced separation from that spouse or partner at any time in the 6 months before the 37-month followup survey. Of the families who had a spouse or partner separated at baseline, 21 percent reported that the spouse or partner had rejoined the family.

Exhibit 2-8 shows the mean values of outcomes measured in the child welfare agency records collected from 5 of the 12 study sites. Of the UC family heads in these sites, 12 percent had a formal child separation that began after random assignment. This proportion is notably higher than the survey-reported rate of formal separations in the 6 months before the 37-month followup survey. The average total number of days during the followup period that UC family heads were formally separated from at least one child was 83 days. For those UC family heads with any formal separation (14.0 percent, not shown in exhibit), the average number of days separated from at least one child was 594 days, or about 20 months out of the 3-year followup period.

Exhibit 2-7. Family Preservation Outcomes in the UC Group

Outcome	UC Group	
	Mean Value (%)	(Standard Deviation)
Current or recent separations of family members present at baseline		
Family has at least one child separated in past 6 months (%) (N = 545)	16.7	(43.3)
Family has at least one foster care placement in past 6 months[a] (%) (N = 550)	3.4	(20.9)
Spouse/partner separated in past 6 months, of those with spouse/partner present at RA (%) (N = 151)	38.1	(57.7)
Reunification of family members reported as separated at baseline		
Family has at least one child reunified, of those families with at least one child absent at RA (%) (N = 107)	33.7	(55.4)
Spouse/partner reunified, of those with spouse/partner absent at RA (%) (N = 55)	20.7	(46.3)

UC = usual care.
RA = random assignment.
[a] Foster care placement outcome includes any children (present at baseline) who are placed in foster care or adopted by another family at the time of followup.
Notes: N = 556. See Appendix B for details on outcome specifications and values. Means and standard deviations are weighted to adjust for survey nonresponse.
Source: Family Options Study 37-month followup survey

Exhibit 2-8. Child Welfare Outcomes in the UC Group

Outcome	UC Group	
	Mean Value (%)	(Standard Deviation)
Had a formal child separation that began after RA (%)	12.3	(32.9)
Total days during followup separated from at least one child[a]	83.4	(244.2)

UC = usual care.
RA = random assignment.
[a] Includes separations started before and after RA. Length of followup varies by site. Alameda County = 1,075 days. Baltimore = 1,071 days. Kansas City = 1,069 days. Minneapolis = 1,046 days. Phoenix = 1,123 days.
Notes: N = 292. See Appendix B for details on outcome specifications and values.
Source: State child welfare agency records

2.3.5. Measures of Adult Well-Being

The study team included outcomes measuring several aspects of well-being for the adult respondent in the study families. The outcomes address physical health, mental health, symptoms of trauma, substance use, and experience with domestic violence. All these outcomes are measured in the followup survey.

Adult Physical Health

Health in the past 30 days was poor or fair (percent of family heads). Adult respondents provided self-reported assessments of their physical health in the 37-month followup survey. The outcome measures the percentage of families in which the adult respondent reported poor or fair health (rather than good, very good, or excellent health) in the 30 days before the survey.

Adult Mental Health

The team measured two outcomes related to adult mental health.

- **Goal-oriented thinking.** This outcome is measured with a modified version of the State Hope Scale (Snyder et al., 1996). Scores range from 1 to 6, with higher scores representing higher levels of positive, goal-oriented thinking.
- **Psychological distress.** The study team used the Kessler Psychological Distress Scale (K6) to measure nonspecific psychological distress in the 30 days before the survey (Kessler et al., 2003). The scale ranges from 0 to 24, with higher scores indicating greater psychological distress.

Adult Trauma Symptoms

- **Post-traumatic stress disorder (PTSD) symptoms (percent of family heads).** This outcome measures the percentage of families in which the adult respondent experienced symptoms of PTSD in the 30 days before the survey. The study team used responses to the 17 items about PTSD symptoms from the Posttraumatic Stress Diagnostic Scale, or PDS, to make this determination.

Adult Substance Use

- **Alcohol dependence (percent of family heads).** This outcome measures the percentage of families in which the adult respondent displayed evidence of alcohol dependence based on self-reported behavior in the past 6 months. Adult respondents were asked to report on the four items in the Rapid Alcohol Problems Screen, or RAPS4 (Cherpitel, 2000). An affirmative answer to any of the four items indicates dependence.
- **Drug abuse (percent of family heads).** This outcome measures the percentage of families in which the adult respondent showed evidence of drug abuse based on self-reported behavior in the past 6 months. Evidence of a drug problem was measured using six items from the Drug Abuse Screening Test, or DAST-10 (Skinner, 1982). An affirmative answer to any of the six items indicates abuse.
- **Alcohol dependence or drug abuse (percent of family heads).** This outcome measures the percentage of families in which the adult respondent displayed evidence of alcohol dependence or drug abuse.

Experience of Intimate Partner Violence

- **Experienced intimate partner violence in the past 6 months. (percent of family heads).** The outcome measures the percentage of adult respondents reporting experience of intimate partner violence in the 6 months before the survey. The survey asks whether the adult respondent had been physically abused or threatened with violence by a person he or she was romantically involved with, such as a spouse, boyfriend or girlfriend, or partner in the 6 months before the survey.

2.3.6. Adult Well-Being in the UC Group

Exhibit 2-9 shows the mean values of the adult well-being outcomes for the UC group measured in the 37-month survey. Nearly one-third (31 percent) of the adult respondents described their health as fair or poor. Across the UC group, 17 percent of adult respondents in UC families experienced psychological distress, and 23 percent gave survey responses that indicate symptoms of PTSD. These rates of PTSD and serious psychological distress for homeless families are substantially higher than national rates of PTSD (5.2 percent for women and

Exhibit 2-9. Adult Well-Being Outcomes in the UC Group

Outcome	UC Group	
	Mean Value	(Standard Deviation)
Maternal physical health		
Health in past 30 days was poor or fair (%)	31.4	(53.8)
Maternal mental health		
Goal-oriented thinking[a]	4.50	(1.14)
Psychological distress score[b]	7.20	(6.73)
Symptoms of serious psychological distress (%)	17.33	(43.89)
Maternal trauma symptoms		
Post-traumatic stress disorder (PTSD) symptoms in past 30 days (%)	22.9	(48.7)
Maternal substance use		
Alcohol dependence or drug abuse[c] (%)	11.3	(36.7)
Alcohol dependence[c] (%)	8.3	(31.9)
Drug abuse[c] (%)	5.1	(25.5)
Experience of intimate partner violence		
Experienced intimate partner violence in past 6 months (%)	10.5	(35.5)

UC = usual care.

[a] Goal-oriented thinking is measured with a modified version of the State Hope Scale and ranges from 1 to 6, with higher scores indicating higher levels of positive, goal-oriented thinking.

[b] Psychological distress is measured with the Kessler Psychological Distress Scale (K6) and ranges from 0 to 24, with higher scores indicating greater distress.

[c] Alcohol dependence is measured with the Rapid Alcohol Problems Screen (RAPS-4), and drug abuse is measured with six items from the Drug Abuse Screening Test (DAST-10). Both are measured for the 6 months before the 37-month survey.

Notes: N = 556. See Appendix B for details on outcome specifications and values. Means and standard deviations are weighted to adjust for survey nonresponse.

Source: Family Options Study 37-month followup survey

1.8 percent for men)[31] and serious psychological distress (3.9 percent for women and 2.9 percent for men) (CDC, 2012a).[32]

Of UC families, 8 percent of adult respondents gave survey responses that indicate alcohol abuse in the 6 months before the survey, and 5 percent of respondents gave survey responses that indicate a history of drug abuse during the same period. These rates are substantially lower than those reported (using different measures) by homeless adults in families to the U.S. Census Bureau's National Survey of Homeless Assistance Providers and Clients, or NSHAPC (18 percent for alcohol use problems and 38 percent for drug use problems within the past year; Burt et al., 2001). In another study of homeless families, Rog and Buckner (2007) reported that 12 percent of adult respondents had used illicit drugs in the past year. Both studies measured substance use at the time families were in shelter, using different measures. Rates for Family Options Study families during the baseline shelter stay were more comparable to the Rog and Buckner (2007) figure. At the Family Options Study baseline, 11 percent indicated alcohol abuse and 14 percent of family heads reported drug use in the past year.[33]

Regarding incidence of intimate partner violence, 11 percent of the adult respondents in the UC group reported having experienced intimate partner violence in the 6 months before the 37-month survey. This percentage is substantially lower than figures reported in other studies, but other studies report on experience of such violence during a longer period of time (and often use more detailed measures). At enrollment, 49 percent of the Family Options Study sample reported having experienced violence during their entire adulthood.

2.3.7. Measures of Child Well-Being

The study team collected several types of data to measure outcomes associated with child well-being. For all focal children, parents reported on children's school or childcare enrollment; attendance; grades; grade completion; experiences at childcare, preschool, or school; behavior at school or childcare; and attitudes about school or childcare. Parents also reported on prosocial behaviors and emotional and behavioral problems of children with the Strengths and Difficulties Questionnaires (SDQ; Goodman, 1997) and also on children's health, access to

[31] The statistic for PTSD is the national 12-month prevalence rate as measured in the National Comorbidity Survey Replication (NCS-R), which was fielded in 2001 and 2002. The NCS-R used a different instrument to measure PTSD than did the Family Options Study. See Harvard Medical School (2012).

[32] The statistic for national rate of serious psychological distress is from the 2011 National Health Interview Survey. This survey used the same measure of psychological distress as used in the Family Options Study (CDC, 2012a).

[33] See the *Interim Report: Family Options Study* (Gubits et al., 2013) for additional detail about the study sample at the time of random assignment.

health care, and sleep disruptions, which are associated with a variety of emotional and behavioral disorders (Dahl and Harvey, 2007). Additional instruments were tuned to children's developmental stage. Children 12 to 66 months of age were assessed with the Ages and Stages Questionnaires (ASQ-3)—a family of questionnaires used to measure gross and fine motor skills, social development, communication, and problemsolving, as observed by parents (Squires et al., 2009). The adult respondent completed the ASQ-3 form. Study staff assessed children from 3 years, 6 months to 7 years, 11 months of age with the Woodcock-Johnson III (WJ III) letter-word identification and applied problems scales (Woodcock, McGrew, and Mather, 2001), which are early indicators of verbal and quantitative/analytic skills, respectively. Children in this age group also completed the Head Toes Knees Shoulders (HTKS) task. HTKS assesses self-regulation, in which children must remember rules and inhibit incorrect responses (for example, by following instructions to touch their head when the interviewer says "touch your toes").

Finally, the study team conducted surveys with children from 8 years to 17 years, 11 months of age measuring anxiety, fears, and substance use. This array of measures, along with the parental report, captured the most likely mental health consequences of homelessness and behavioral responses thereto. Parental reports of behavior for this age group included arrests or police involvement. Youth reported on school effort to supplement parental reports of functioning in the key developmental domain of school. Youth also completed the Children's Hope Scale (Snyder et al., 1997), a measure of goal-oriented thinking.

Child Well-Being Measures From Parental Report Across Age Groups

The study team used the parent-reported information on focal children to construct the following child well-being outcomes that are measured for children across age groups.[34] All these outcomes are measured in the 37-month adult followup survey.

Child education

- **Number of schools attended since random assignment.** This outcome is measured from parental reports on the 37-month survey. The outcome indicates the total number of schools a child attended since random assignment. (Change in school could be because of grade completion, residential move, or another reason.) The outcome is measured using a count of 1 to 4. Number of schools is top coded at four or more schools.
- **Grade completion—not held back (percent of focal children).** This outcome is measured from the parent survey and defined for children who have been in school at any time since random assignment and who are less than age 18 at the time of the 37-month survey. The outcome measures the percentage of these children who have not repeated a grade level and have not been prevented from moving on to the next grade level since random assignment.
- **School grades.** This outcome measures the parent's assessment of the child's school grades for the most recently completed term. The outcome uses a 4-point scale ranging from 1 (mostly Ds and Fs) to 4 (mostly As).

Health

- **Poor or fair health (percent of focal children).** This outcome measures the parent's assessment of the child's health at the time of the 37-month followup survey. The outcome measures the percentage of children with poor or fair health (rather than good, very good, or excellent health), based on the parent's assessment.
- **Well-child checkup in the past year (percent of focal children).** This outcome measures the percentage of focal children who received a physical examination or well-child checkup in the year before the 37-month survey, based on the parental report.
- **Child has a regular source of health care (percent of focal children).** This outcome measures the percentage of focal children who had a regular provider of health care at the time of the 37-month followup survey, based on the parental report.
- **Sleep problems.** This outcome measures the parental report on the frequency of two indicators of sleep problems—tiredness on waking and tiredness during the day. The outcome is measured using a score of 1 to 5, with higher values indicating a greater frequency of these sleep problems.

Behavioral challenges and strengths

- **Behavior problems.** The followup survey included the SDQ, a battery of items about the behavioral strengths and difficulties of children. This outcome is measured as the nationally standardized score from the SDQ. The parent reported on focal children's behavior using the SDQ. The total problem score measures emotional symptoms, conduct problems, hyperactivity, and peer problems. The reported

[34] The study team analyzes child outcomes in this report somewhat differently than for the *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families* (Gubits et al., 2015). For example, school absences in the past month, positive school experiences, positive school attitudes, and school conduct problems were collected for only the first 38 percent of parents surveyed due to an error in data collection. Parallel questions for younger, preschool aged children were collected from all parents. These outcomes are thus analyzed and presented separately by child age group. In addition, preschool and school enrollment are analyzed and presented by age group. See Appendix B for additional information about the child outcomes.

scores are standardized by age and gender so that children can be compared with their peers in a national sample. Higher scores indicate greater behavior problems.

- **Prosocial behavior.** Parents reported on focal children's prosocial behavior. Prosocial behavior refers to positive actions that benefit others. Prosocial behavior is measured for the study using the parental report to the SDQ prosocial domain and is a nationally standardized score. Higher scores indicate greater prosocial behavior.

2.3.8. Characteristics of Focal Children in the UC Group

Exhibit 2-10 displays the values of the just-described outcomes for focal children in the UC group.

School and Childcare

Children had attended 2.1 schools, on average, since random assignment, which means one school change, on average, in 3 years. School mobility is associated with lower levels of academic achievement.[35] Furthermore, only 91 percent of children had completed all the grade levels in which they were enrolled by the end of the school year; that is, 9 percent had been held back since random assignment. The grades that children earned in school, as reported by parents, averaged 3.06 on a scale wherein 3 is mostly Bs and 4 is mostly As.

Health

Parents reported that 6 percent of children in the UC group were in fair or poor health 37 months after random assignment. This percentage is similar to 5 percent of poor children but is higher than 1 percent of nonpoor children younger than age 18 in the National Health Interview Survey in 2012. The proportion of study children who had a regular source of medical care was similar to the national rate for poor children (92 percent compared with the national rate of 95 percent; Bloom, Jones, and Freeman, 2013). Only 91 percent of children in the UC group had received a well-child checkup in the year before the 37-month survey. Parents reported that children rarely had trouble waking up or were tired during the day (2.18 on a 5-point scale, wherein 2 indicates rarely).

Behavioral Challenges and Strengths

Children in the UC group scored markedly higher than national norms on behavioral problems (0.59 standard deviations in the national data) and somewhat lower (0.24 standard deviations) on prosocial behavior.

Child Well-Being Outcomes for Specific Age Groups

The study team constructed the following child well-being outcomes measured only for specific age groups.[36]

Exhibit 2-10. Child Well-Being Outcomes in the UC Group Measured for Children Across Age Groups

Outcome	UC Group	
	Mean Value	(Standard Deviation)
Child education		
Number of schools attended since random assignment[a]	2.10	(1.18)
Grade completion—not held back (%)	91.0	(38.2)
School grades[b]	3.06	(1.14)
Child physical health		
Poor or fair health (%)	5.9	(31.0)
Well-child checkup in past year (%)	90.6	(38.4)
Child has regular source of health care (%)	91.7	(36.4)
Sleep problems[c]	2.18	(1.46)
Child behavioral strengths and challenges		
Behavior problems[d]	0.59	(1.69)
Prosocial behavior[e]	– 0.24	(1.43)

UC = usual care.
[a] Number of schools outcome is topcoded at 4 or more schools.
[b] School grades outcome is defined as 1 = mostly Ds or Fs, 2 = mostly Cs, 3 = mostly Bs, and 4 = mostly As.
[c] Sleep problems outcome ranges from 1 to 5, with higher values indicating more frequent tiredness on waking and during the day.
[d] Behavior problems outcome is measured as the standardized Total Difficulties score from the Strengths and Difficulties Questionnaire (SDQ).
[e] Prosocial behavior is measured as the standardized prosocial domain score from the Strengths and Difficulties Questionnaire (SDQ).
Notes: Sample sizes vary by outcome. See Appendix B for details on outcome specifications and values. Means and standard deviations are weighted to adjust for survey nonresponse.
Source: Family Options Study 37-month followup survey (parent report)

[35] National Research Council and Institute of Medicine (2010).

[36] *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families* (Gubits et al., 2015) also examined low birth weight for randomly selected focal children born since random assignment. The study team did not reanalyze this outcome in the 37-month analysis because only an additional 10 focal children born since random assignment were newly selected at the time of the 37-month survey. Therefore, results would have been almost identical to those previously reported.

Ages 2 years to 5 years[37]

- **Preschool or Head Start enrollment (percent of focal children).** This parent-reported outcome measures the percentage of children in the age range who were enrolled in preschool, center-based childcare, or Head Start at the time of the 37-month followup survey.[38]
- **Childcare or preschool absences in the past month.** This outcome is measured from parental reports of the number of absences from childcare or preschool in the month before the survey. The outcome is measured using a scale of 0 to 3, with 0 indicating no absences, 1 indicating 1 to 2 absences, 2 indicating 3 to 5 absences, and 3 indicating 6 or more absences.
- **Positive childcare or preschool experiences.** This outcome measures the parent's assessment of the child's childcare or preschool experiences, rating them as mostly positive (=1), both positive and negative (=0), or mostly negative (=-1).
- **Positive childcare or preschool attitudes.** This outcome measures the parent's assessment of the child's attitude toward childcare or preschool. The parent was asked to rate how much the child likes childcare or preschool. The outcome uses a 5-point scale ranging from 1 (not at all) to 5 (very much).
- **Childcare or preschool conduct problems (percent of focal children).** This outcome measures whether the parent reports having been contacted by the child's childcare or preschool provider regarding the child's conduct problems or if the child was suspended or expelled.

Ages 2 years to 5 years, 6 months

- **Met developmental milestones (percent of focal children).** This outcome is defined as the percentage of focal children who scored above the typical developmental thresholds on the five domains measured in the parent-reported ASQ-3.[39]

Ages 3 years, 6 months to 7 years

- **Verbal ability.** This outcome is measured as the nationally standardized score from the WJ III letter-word identification test. The study team administered the assessment to focal children ages 3 years, 6 months to 7 years.
- **Math ability.** This outcome is measured as the nationally standardized score from the WJ III applied problems test. The study team administered the assessment to focal children ages 3 years, 6 months to 7 years.
- **Executive functioning (self-regulation).** This outcome is measured using the HTKS developmental assessment, measuring inhibitory control, attention, and working memory. The study team administered the assessment to children ages 3 years, 6 months to 7 years.

Ages 5 years to 17 years[40]

- **School enrollment (percent of focal children).** This outcome is measured for children ages 5 to 17 years, using the parental report. It measures the percentage of children ages 5 to 17 who were enrolled in school at the time of the 37-month followup survey.
- **School absences in the past month.** This outcome is measured from the parental report of the number of absences from school in the month before the survey. The outcome is measured using a scale of 0 to 3, with 0 indicating no absences, 1 indicating 1 to 2 absences, 2 indicating 3 to 5 absences, and 3 indicating 6 or more absences.
- **Positive school experiences.** This outcome measures the parent's assessment of the child's school experiences, rating them as mostly positive (=1), both positive and negative (=0), or mostly negative (=-1).
- **Positive school attitudes.** This outcome measures the parent's assessment of the child's attitude toward school. The parent was asked to rate how much the child likes school or childcare. The outcome uses a 5-point scale ranging from 1 (not at all) to 5 (very much).
- **School conduct problems (percent of focal children).** This outcome measures whether the parental reports having been contacted by the child's school or childcare provider regarding the child's conduct problems or if the child was suspended or expelled.

In this age group, the last four outcomes about school-aged children (school absences, school experiences, school attitudes, and school conduct problems) were collected from only the

[37] This age group includes focal children who were ages 4 years or younger on the September 1st before the 37-month survey. These children had thus not reached 5 years of age (typical school age) in the school year corresponding to the 37-month survey.

[38] Though this enrollment outcome is named differently than the school enrollment outcome for children ages 5 to 17 years, the two outcomes are defined identically. For this younger group, enrollment is overwhelmingly in preschool or center-based childcare. For the older group, enrollment is overwhelmingly in school.

[39] In the 20-month data collection, the ASQ-3 was collected for focal children who were less than 3 years, 6 months of age. To capture the same set of children at the later followup point, the outcome was collected for focal children who were up to 5 years, 6 months of age.

[40] This age group includes focal children who were ages 5 to 17 years on the September 1st before the 37-month parent survey and who were no older than 17 years at the time of the survey. These children were thus typical school age in the school year corresponding to the 37-month survey.

first 38 percent of parents surveyed due to an error in data collection. The parallel outcomes for younger, preschool-aged children were collected from all parents. Because of the discrepancy in data collection between the two age groups, these outcomes are analyzed separately according to age group.

Ages 8 years to 17 years

Older children were surveyed about a broader array of developmental outcomes. For focal children between the ages of 8 and 17 at the time of the 37-month followup data collection, the study team measured five outcomes from the child survey and one from the parental report.

- **Anxiety.** This outcome is measured using the A-Trait scale from the State-Trait Anxiety Inventory for Children, or STAIC (Spielberger et al., 1973). Scores range from 20 to 60, with higher scores indicating greater anxiety.
- **Fears.** This outcome is measured using the Children's Fear Scale (Ramirez, Masten, and Samsa, 1991). Scores range from 33 to 99, with higher scores indicating more fear. Children were asked to indicate the extent to which they had 33 different fears.
- **Substance use.** This outcome, which combines data using 23 items from the Centers for Disease Control and Prevention (CDC, 2012c) Youth Risk Behavior Surveillance—United States, 2011, measures whether the child had used tobacco, alcohol, or marijuana in the past 30 days or had ever used other substances—cocaine, inhalants, or steroids (ages 8 to 17) or ecstasy, methamphetamine, heroin, controlled prescription drugs, or injected drugs (ages 13 to 17 only).
- **Goal-oriented thinking.** This outcome is measured with a modified version of the Children's Hope Scale (Snyder et al., 1997), which measures positive, goal-oriented thinking. Scores range from 6 to 30, with higher scores indicating greater hope.
- **School effort in the past month.** On the child survey, respondents were asked to report on how hard they worked in the month before the survey during the school day and on homework. The outcome measure ranges from 1 to 4, with higher scores indicating greater effort at school and on homework.
- **Arrests or police involvement in the past 6 months (percent of focal children).** This outcome is measured using the parental report about whether the child had any problems that involved the police contacting the parent and whether the child had been arrested in the 6 months before the followup survey.

2.3.9. Characteristics of Focal Children by Age-Specific Outcomes in the UC Group

Exhibit 2-11 displays the values of the outcomes described previously for focal children in the UC group.

Ages 2 years to 5 years

Among children ages 2 years to 5 years in the UC group, 39 percent were enrolled in center-based care, preschool, or Head Start. Children in this age group scored 0.8, on average, for absences from preschool or childcare in the past month, wherein 0 indicates no absences and 3 indicates 6 or more absences. (During the summer, parents reported on the most recent month of enrollment.) Parents reported that children had mostly positive experiences in preschool or childcare (0.8 on a 3-point scale wherein 0 indicates both positive and negative experiences, 1 indicates mostly positive experiences and -1 indicates mostly negative experiences). Parents also reported that children liked preschool or childcare, averaging 4.5 on a scale wherein 4 is pretty much and 5 is very much. Parents reported that about 5 percent of the children had conduct problems necessitating some contact from preschool or childcare.

Ages 2 years to 5 years

By parental report, only 72 percent of children met the developmental cutoff score in all five domains of ASQ-3. This rate was somewhat less than the national rate of 77 to 86 percent used by the creators of the ASQ-3 instrument.[41] Children were least likely to meet age standards for fine motor development and most likely to meet standards for gross motor development, with performance in the communication, problemsolving, and personal-social domains falling in between.

Ages 3 years, 6 months to 7 years

Children ages 3 years, 6 months to 7 years were assessed directly with two subscales of the WJ III test of cognitive abilities, with scores compared with national age norms. Given the large association of family income with reading and math ability (for example, Miller, Votruba-Drzal, and Setodji, 2013), it is not surprising that children in the UC group scored about one-third of a standard deviation below national norms on both letter-word identification (a measure of verbal ability) and applied problems (an early measure of math ability).

Children also completed the HTKS test of self-regulation or executive functioning, with a mean score of 17.8 out of a possible 40. The mean score was substantially lower than in a normative sample of largely middle-class children in Michigan and Oregon (27.45 out of 40) of the same mean age, although both the age range and the variability of scores for children in

[41] Squires et al. (2009).

Exhibit 2-11. Child Well-Being Developmental Outcomes in the UC Group for Children in Specific Age Groups

Outcome	UC Group	
	Mean Value	(Standard Deviation)
Ages 2 to 5 years[a]		
Preschool or Head Start enrollment[b]	39.0	(61.7)
Child care or preschool absences in past month[c]	0.8	(1.1)
Positive child care or preschool experiences[d]	0.8	(0.5)
Positive child care or preschool attitudes[e]	4.5	(0.8)
Child care or preschool conduct problems[f]	5.2	(27.5)
Ages 2 years to 5 years, 6 months		
Met developmental milestones[g] (%)	72.1	(59.2)
Ages 3 years, 6 months to 7 years		
Verbal ability[h]	– 0.33	(1.49)
Math ability[i]	– 0.30	(1.30)
Executive functioning[j] (self-regulation)	17.8	(23.9)
Ages 5 to 17 years[k]		
School enrollment[b]	97.9	(19.2)
School absences in past month[c,r]	1.1	(1.3)
Positive school experiences[d,r]	0.5	(0.8)
Positive school attitudes[e,r]	4.1	(1.5)
School conduct problems[f,r]	30.3	(62.5)
Ages 8 to 17 years		
Anxiety[l]	35.5	(10.9)
Fears[m]	63.6	(21.0)
Substance use[n] (%)	7.4	(38.2)
Goal-oriented thinking[o]	22.1	(6.8)
School effort in past month[p]	2.8	(1.1)
Arrests or police involvement in past 6 months[q] (%)	8.4	(38.2)

UC = usual care.

[a] Includes focal children who were age 4 years or younger on September 1 before the 37-month parent survey.

[b] Outcome defined as enrollment in preschool, center-based child care, or school.

[c] Absences outcome is defined as 0 = no absences in past month, 1 = one to two absences, 2 = three to five absences, 3 = six or more absences.

[d] Positive childcare or school experiences outcome is defined as -1 = mostly negative experiences, 0 = both positive and negative experiences, 1 = mostly positive experiences.

[e] Positive childcare or school attitudes outcome is parent report of how much child likes school and ranges from 1 to 5, with higher values indicating greater like of school.

[f] Childcare or school conduct problems outcome is defined as 0 = no conduct problems reported to parent, 1 = parent contacted about conduct problems or suspension or expulsion from school or childcare center.

[g] Met developmental milestones outcome is defined as scoring above the typical development cutoffs in all domains of the Ages and Stages Questionnaire (ASQ-3).

[h] Verbal ability outcome is the nationally standardized score from the Woodcock-Johnson III (WJ III) letter-word Identification test.

[i] Math ability outcome is the nationally standardized score from the WJ III applied problems test.

[j] Executive functioning outcome is the Head Toes Knees Shoulders (HTKS) score and ranges from 0 to 40, with higher scores indicating greater executive functioning.

[k] Includes focal children who were ages 5 to 17 years on September 1 before the 37-month parent survey and no older than 17 years at the time of the survey.

[l] Anxiety (child report) is measured using the A-Trait scale from the State-Trait Anxiety Inventory for Children (STAIC). Scores range from 20 to 60, with higher scores indicating greater anxiety.

[m] Fears outcome (child report) is the score from the Fears Scale and ranges from 33 to 99, with higher scores indicating more fear.

[n] Substance use (child report) is measured with 23 items from the Centers for Disease Control and Prevention (CDC) 2011 Youth Risk Behavior Survey.

[o] Goal-oriented thinking (child report) is measured with a modified version of the Children's Hope Scale and ranges from 6 to 30, with higher scores indicating higher levels of positive, goal-oriented thinking.

[p] School effort outcome (child report) ranges from 1 to 4, with higher scores indicating greater effort during school day and on homework.

[q] Arrests or police involvement in past 6 months is from parent report.

[r] This parent-reported outcome was collected from only the first 38 percent of parents surveyed due to an error in data collection.

Notes: Sample sizes vay by outcome. See Appendix B for details on outcome specifications and values. Means and standard deviations are weighted to adjust for survey and assessment nonresponse.

Sources: Family Options Study 37-month followup survey; ASQ-3; WJ III; HTKS assessment; Family Options Study 37-month child survey

our sample were larger (fall scores from Ponitz et al., 2009). Children in our study scored about the same as in the control group of an intervention study involving low-income, multiracial, multiethnic children in San Diego, California (Layzer, 2014).

Ages 5 years to 17 years

Among school-age children ages 5 to 17 years, 97.9 percent were enrolled in school at the time of the 37-month survey. This rate is similar to the national enrollment rate (92.9 to 97.8 percent for children ages 7 to 17; U.S. Bureau of the Census, 2014). Children in the 5-to-17 age group scored 1.1, on average,

for absences from school in the past month, wherein 0 indicates no absences and 3 indicates 6 or more absences. Most children in the UC group (70 percent) had no conduct problems at school, but the balance (30 percent) did have problems that led to the school's contacting the parent or suspending or expelling the child.

Ages 8 years to 17 years

Children's scores on the State-Trait Anxiety Inventory for Children—STAIC measure, a general measure of worries, (mean of 35.5) were somewhat less than those in the normative sample of fourth graders from the test originators (36.3 for males and 38.1 for females; Spielberger, 1970) and further were less than those in a large sample of disadvantaged Black children from a large metropolitan school district (40.0 for males and 40.26 for females; Papay and Hedl, 1978). A score of 40 would reflect an average answer of "sometimes" on a 3-point scale from "hardly ever" to "often" across all items.

Across 33 specific fears, rated on a scale from "not at all" to "a lot," children averaged slightly less than "some," or 63.6, at the 37-month followup survey (a consistent answer of "some" would yield a score of 66). The fears most commonly rated "a lot" (by more than one-half of the youth) were "I worry about my brothers and sisters," "I worry about my parents," and "I worry about myself."

Substance use in the UC group was quite low by comparison with national norms. (Our data are self-reported, but so are the corresponding national norms from CDC (2012c). Only 7 percent of children ages 8 to 17 in the UC group reported having used tobacco, alcohol, or marijuana in the past 30 days or had ever used more serious drugs. The CDC provides norms for children in grades 9 through 12, to which the 13- to 17-year-old youth in the study are compared.[42] Study youth were less likely to have smoked (8 versus 22 percent), used alcohol (11 versus 35 percent), or used marijuana (10 versus 23 percent) in the past 30 days.

The measure of goal-oriented thinking, a version of the Children's Hope Scale (Snyder et al., 1997), measures both belief in one's ability to solve problems and reach goals and belief about esteem or efficacy. The version in this study used a slightly different scoring format than the original. The average score of 22.1 indicates answers closer to having these beliefs "most of the time," or 24, than "a lot of the time," or 18.

For school effort, children rated how hard they worked on homework and during the school day, with an average of 2.8 on a 4-point scale wherein 2 is "could have done a little better" and 3 is "did about as well as you could."

Parents reported that 8 percent of children ages 12 to 17 had had a problem that involved the police contacting the parent or had been arrested in the 6 months before the 37-month survey.

2.3.10. Measures of Self-Sufficiency

The impact analysis examines relative effects of the four interventions on several outcomes pertaining to self-sufficiency. The study team used the 37-month followup survey to construct five categories of self-sufficiency outcomes: (1) employment, (2) sources of income, (3) receipt of education or training, (4) food security, and (5) economic hardship.

Employment

The study team used responses to the adult followup survey to construct six outcomes regarding employment status.

- **Work for pay in the week before the survey (percent of family heads).** This outcome measures the percentage of survey respondents who reported working for pay in the week before the 37-month followup survey.
- **Any work for pay since the 20-month survey (percent of family heads).** This outcome measures the percentage of survey respondents who reported working for pay at any time since the date of their 20-month survey. It is defined only for families who responded to both 20-month and 37-month followup surveys.
- **Months worked for pay since the 20-month survey (includes partial months).** This outcome is a count of the months worked since random assignment, including partial months. It is defined only for families who responded to both 20-month and 37-month followup surveys.
- **Any work for pay since random assignment (percent of family heads).** This outcome measures the percentage of survey respondents who reported working for pay at any time since random assignment.
- **Months worked for pay since random assignment (includes partial months).** This outcome is a count of the months worked since random assignment, including partial months.
- **Hours of work per week at current main job.** For adult respondents who had more than one job in the week before the 37-month survey, the main job is defined as the job at which she or he usually worked the most number of hours per week.

[42] Kann et al. (2014).

Income Sources and Amounts

The study team also constructed outcomes that measure the percentage of families who reported receiving income from each of the following sources in the month before the survey. The family heads reported whether anyone in the family had received income from each of the following sources in the past month.

- Earnings.
- Temporary Assistance for Needy Families (TANF).
- Social Security Disability Insurance (SSDI).
- Supplemental Security Income (SSI).
- Supplemental Nutrition Assistance Program (SNAP).
- Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

The study team also constructed two other outcomes related to income.

- **Annualized earnings from the main job.** This outcome measures the annualized value of current earnings from the job reported at the time of the 37-month survey. This value usually represents either the product of the reported hourly wage and usual hours per week multiplied by 52 weeks or the reported usual weekly earnings multiplied by 52 weeks. By construction, the measure ignores any seasonality in earnings.
- **Total family income.** This outcome measures total family income from all sources for the calendar year preceding the survey (2013 for all respondents).

Education and Training

The analysts constructed five outcomes pertaining to participation in education and training activities during the followup period. The followup survey asked respondents whether they had participated in any education or training activities since random assignment and, if so, how many weeks they spent in such programs. For up to six programs reported, sample members reported on the type of program. The study team used this information to construct the following education and training outcomes.

- **Participated in any school or training lasting 2 weeks or more since random assignment (percent of family heads).** This outcome measures the percentage of families in whom the adult respondent reported having participated in any type of school or training lasting 2 or more weeks since random assignment.
- **Number of weeks in training programs since random assignment.**
- **Participated in school lasting 2 weeks or more since random assignment (percent of family heads).** This outcome measures the percentage of families in whom the adult respondent reported having participated in school or academic training lasting 2 weeks or more since random assignment. School or academic training is defined as attending a regular high school directed toward a high school diploma; preparing for a general educational development, or GED, examination; taking courses at a 2-year or 4-year college; or taking graduate courses.
- **Participated in basic education lasting 2 weeks or more since random assignment (percent of family heads).** This outcome measures the percentage of families in whom the adult respondent reported having participated in basic education lasting 2 or more weeks since random assignment. Basic education is defined as nonvocational adult education, literacy training, or English as a second language not directed toward a degree.
- **Participated in vocational education or training lasting 2 weeks or more since random assignment (percent of family heads).** This outcome measures the percentage of families in whom the adult respondent reported having participated in vocational education or training lasting 2 or more weeks since random assignment. Vocational education or training is defined as business or technical schools, employer- or union-provided training, or military training in vocational skills (not military skills).

Food Security

The analysis examines impacts of the interventions on food security for two outcomes.

- **Household is food insecure (percent of families).** This outcome measures the percentage of families determined "food insecure" at the time of the followup survey according to criteria used by the U.S. Department of Agriculture (USDA).[43]
- **Food insecurity scale.** This outcome measures the food insecurity level of each family based on responses to the USDA food security questions included on the followup survey. The food insecurity scale ranges from 0 to 6, with higher values indicating greater food insecurity.[44]

[43] See Nord, Andrews, and Carlsen (2005). The assessment of food insecurity is based on two USDA short-form metrics, which are scores assigned to a household based on answers to six survey questions.

[44] See Appendix B for further details on the construction of this outcome.

Economic Hardship

The study team also measured the economic hardship reported by each family at the time of the 37-month followup survey on a measure derived from Pearlin and Schooler (1978). The outcome, expressed as an economic stress scale, measures the extent of hardship using responses about the frequency with which the family said they experienced an inability to afford medical care the family needed, clothing the family needed, leisure activities the family wanted, or rent. The economic stress scale also takes into account the adult respondent's assessment of the family's monthly finances; that is, whether they usually have some money left over at the end of the month, barely enough to make ends meet, or not enough to make ends meet.

Earnings and Employment From Administrative Data

In addition to the self-sufficiency outcomes constructed from survey data, the study team measured three employment and earnings outcomes from administrative records. Under a Memorandum of Understanding with the U.S. Department of Health and Human Services' Office of Child Support Enforcement (OCSE), HUD matched the Family Options Study to quarterly wage records maintained by HHS. These records are part of the larger National Directory of New Hires (NDNH) database, administered by the OCSE. To adhere to privacy protections that govern the use of the NDNH data for research purposes, HUD personnel analyzed these data and provided results to the study team.

The Family Options Study obtained quarterly earnings for the study sample for the period covering the second quarter of 2013 through the third quarter of 2015. This calendar period provided data for the full study sample that corresponds with the 11th through 14th quarters after the quarter of random assignment. This 1-year period covered by the NDNH earnings data is approximately 32 to 44 months after random assignment and includes the date of 37-month followup survey response for nearly all the survey respondents.

The study team constructed three outcomes from the NDNH quarterly wage data.

- **Total earnings in quarters 11 to 14 after random assignment.** This outcome measures the sum of all earnings for each family head in the 11th through 14th quarters after the quarter of random assignment. The outcome is measured in 2015, quarter 3 dollars. Because earnings are available for four consecutive quarters for all families, the earnings measure is not subject to seasonality bias.
- **Any employment in quarters 11 to 14 after random assignment (percent of families).** This outcome measures the percentage of family heads with any employment in quarters 11 to 14 after the quarter of random assignment, as indicated by the presence of any earnings during the quarter.
- **Number of quarters employed in quarters 11 to 14 after random assignment.** This outcome counts the total number of quarters that the family head was employed during quarters 11 to 14 after the quarter of random assignment. The team measured this outcome using the number of quarters in which the NDNH data indicated that the family head had earnings.

2.3.11. Self-Sufficiency Indicators for the UC Group

Exhibit 2-12 displays the values of the self-sufficiency outcome measures for the UC group. More than one-third (37 percent) of the adult respondents in these families reported working for pay in the week before the survey, and 72 percent said they had worked for pay at some time since random assignment. The adult respondents in the UC group spent an average of 13.1 months working for pay since random assignment. Including respondents who were not working at all, they worked an average of 11.8 hours per week at the current job, and annualized earnings from the current job averaged $6,414. The 37 percent of UC families who were working at the time of the survey worked an average of 32 hours per week, had hourly earnings of $10.57,[45] and had annualized earnings for the current job of $18,125.

Exhibit 2-13 shows the proportion of families working for pay and having any work since random assignment to the UC group. A statistically significant higher proportion of UC families (37 percent) were working at the 37-month survey than either at baseline (17 percent) or at the 20-month survey (31 percent). The proportion that had performed any work for pay since random assignment also significantly increased between 20 and 37 months, from 61 percent to 72 percent. The large difference[46] between the proportions working for pay at the surveys and those who had worked for pay at any point since random assignment shows that a sizable proportion of the family heads are working intermittently.

Families in the UC group reported median cash income from all sources of $12,099 for the calendar year before the 37-month survey (2013 for all families), higher than the

[45] The average hourly earnings were calculated for those who reported wages on an hourly, a weekly, or a biweekly basis (representing 89 percent of those working for pay at the time of the followup survey).

[46] Results are based on partial paired t-tests. See Appendix C for more details about the test.

Exhibit 2-12. Self-Sufficiency Outcomes in the UC Group

Outcome	UC Group	
	Mean Value	(Standard Deviation)
Employment status		
Work for pay in week before survey (%)	37.0	(56.0)
Any work for pay since 20-month survey[a] (%)	63.6	(48.2)
Months worked for pay since 20-month survey[a,b]	7.2	(7.9)
Any work for pay since RA (%)	72.3	(51.9)
Months worked for pay since RA[b]	13.1	(15.5)
Hours of work per week at current main job[c]	11.8	(19.3)
Income sources and amounts		
Annualized current earnings ($)	6,414	(12,250)
Total family income ($)	12,099	(13,102)
Anyone in family had earnings in past month (%)	50.1	(58.0)
Anyone in family received TANF in past month (%)	22.9	(48.7)
Anyone in family received SSDI in past month (%)	9.1	(33.3)
Anyone in family received SSI in past month (%)	14.8	(41.2)
Anyone in family received SNAP/food stamps in past month (%)	81.6	(44.9)
Anyone in family received WIC in past month (%)	23.0	(48.8)
Education and training		
Participated in 2 weeks or more of any school or training since RA (%)	38.8	(56.5)
Number of weeks in school or training programs since RA	8.5	(20.2)
Participated in 2 weeks or more of school since RA (%)	11.5	(37.0)
Participated in 2 weeks or more of basic education since RA (%)	2.2	(16.9)
Participated in 2 weeks or more of vocational education since RA (%)	14.3	(40.5)
Food security		
Household is food insecure (%)	46.8	(57.8)
Food insecurity scale[d]	1.94	(2.42)
Economic stressors		
Economic stress scale[e]	– 0.11	(0.57)

UC = usual care.

RA = random assignment. SNAP = Supplemental Nutrition Assistance Program. SSDI = Social Security Disability Insurance. SSI = Supplemental Security Income. TANF = Temporary Assistance for Needy Families. WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

[a] Includes only families who responded to both 20-month and 37-month followup surveys; not weighted for survey nonresponse.

[b] Number of months worked for pay includes partial calendar months.

[c] Hours of work per week includes those not currently working (that is, those with 0 hours of work per week).

[d] Food insecurity scale ranges from 0 to 6, with higher values indicating higher food insecurity.

[e] Economic stress scale ranges from – 1 to 1, with higher values indicating higher economic stress.

Notes: N = 556. See Appendix B for details on outcome specifications and values. Means and standard deviations are weighted to adjust for survey nonresponse.

Source: Family Options Study 37-month followup survey

amount reported at the 20-month survey ($9,067) and at baseline ($7,410). The 2013 federal poverty threshold for three-person households (the median family size for study families) was $18,769 (U.S. Census Bureau, 2013).

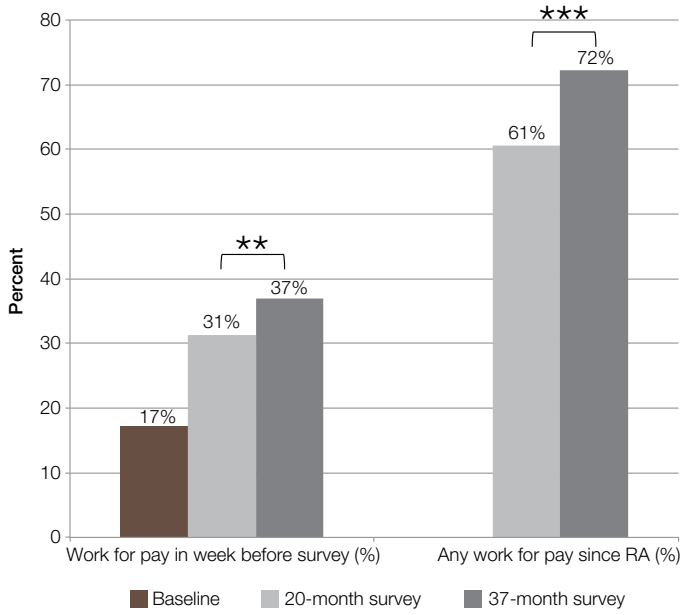
Regarding sources of income in the month before the 37-month survey, the UC families reported a high rate of SNAP receipt (82 percent). Other sources of income reported were earned income (50 percent of families), TANF (23 percent), WIC (23 percent), SSI (15 percent), and SSDI (9 percent).

More than one-third (39 percent) of the adult respondents in the UC families said they had participated in 2 or more weeks of school or training since random assignment. On average, families in the UC group said they spent 8.5 weeks in education or training activities. Nearly one-half (47 percent) of UC families met USDA criteria for food insecurity at the time of the 37-month followup survey.[47]

Exhibit 2-14 shows the means for the earnings and employment outcomes measured in the administrative quarterly wage records. The mean value of earnings during the 11th through

[47] The proportion of UC families who met criteria for food insecurity at the time of the 20-month survey was nearly identical, at 45.9 percent. Due to a programming error, this proportion was erroneously reported as 35.5 percent in the *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families* (Gubits et al., 2015; Exhibit 5-13).

Exhibit 2-13. Work for Pay at 20 and 37 Months After RA in the UC Group



RA = random assignment.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

Notes. See Appendix B for details on outcome specifications and values. Means are weighted to adjust for survey nonresponse.

Sources: Family Options Study baseline survey, 20-month followup survey, and 37-month followup survey

14th quarters after the quarter of random assignment for UC family heads was $5,555. About 57 percent of UC family heads had any employment during this 1-year period. The average number of quarters with employment during this 1-year period for all UC family heads was 1.7 quarters, and the average number of quarters with employment for UC families who had any employment during the year was 2.9 quarters.

2.4. Summary

The experiences of families who did not receive a special offer of assistance at the time of random assignment tell how families in the 12 study communities navigate the housing and homeless assistance system and how they fare 3 years after entering emergency shelter. This chapter examined patterns of program use and outcomes for families assigned to the UC group who responded to the 37-month followup survey.

Emergency shelters in this study were the entry points into homeless assistance in each site. Families randomly assigned to the UC group typically remained in emergency shelter and sought whatever assistance was available in the community. UC families stayed in emergency shelter for an average of 4 months during the followup period. For about one-fourth of families assigned to the UC group, the emergency shelter where families were recruited was the families' only interaction with the homeless assistance or housing subsidy system during the 3-year followup period. The remainder found their way to other types of assistance. In the 3 years after random assignment, 20 percent of UC families received rapid re-housing assistance and 30 percent received transitional housing. Altogether, more than one-third (37 percent) of those in the UC group received some sort of permanent housing subsidy during the followup period—accessing either the subsidy intervention defined for the study, public housing, permanent supportive housing, or project-based housing assistance programs. Families in the UC group who received permanent housing subsidies tended to retain them. Most UC families (82 percent) who ever used a permanent subsidy in the 3-year followup period were still receiving the assistance at the time of the 37-month survey.

Overall, UC families were not faring that well at 37 months after random assignment, although they were somewhat better off, on average, than at 20 months. Of the whole group, 18 percent reported being homeless in the 6 months before the 37-month survey, 5 percent were in emergency shelter in the survey month, and 69 percent were living in their own house or apartment. Only 37 percent of family heads had worked for pay in the week before the survey. Median annual cash income from all sources for the calendar year before the survey was about $12,000.

The 37-month outcomes presented in this chapter for the UC families provide the benchmarks against which the study team estimated impacts of the active interventions. The next chapter presents the impacts of priority access to the permanent housing subsidy intervention compared with usual care.

Exhibit 2-14. Earnings and Employment in the UC Group

Outcome	UC Group	
	Mean Value (%)	(Standard Deviation)
Earnings in quarters 11 to 14 after RA (2015Q3$)	5,555	(9,366)
Any employment in quarters 11 to 14 after RA (%)	57.5	(49.5)
Number of quarters employed in quarters 11 to 14 after RA	1.7	(1.7)

UC = usual care.

RA = random assignment.

Notes: N = 746. See Appendix B for details on outcome specifications and values.

Source: Quarterly wage records from the National Directory of New Hires

CHAPTER 3.
IMPACTS OF PERMANENT HOUSING SUBSIDY (SUB) COMPARED WITH USUAL CARE (UC)

This chapter presents estimates of the impact of the permanent housing subsidy (SUB) intervention relative to usual care. The goal of the analyses presented in this chapter is to determine the extent to which being offered a permanent housing subsidy on a priority basis (that is, not having to enroll in and reach the top of waiting lists for subsidy assistance) increases families' housing stability and improves other family outcomes 3 years after receiving the priority offer.

The analysis presented in the *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families* (hereafter, the *Short-Term Impacts* report; Gubits et al., 2015) showed that assignment to the SUB intervention caused striking improvements in housing stability relative to usual care in the first 20 months after random assignment. The 20-month impact analysis also found that, compared with usual care, the benefits of having priority access to permanent housing subsidies extended beyond housing stability to other outcome domains of family preservation, adult well-being, child well-being, and self-sufficiency. Assignment to the SUB intervention reduced child separations, increased adult well-being, and reduced the number of schools that children attended. Assignment to the SUB intervention also reduced labor market engagement 20 months after random assignment but improved food security and reduced economic stress. Longer-term effects beyond this window hold particular importance for the SUB-versus-UC comparison, given the long-term support that permanent housing subsidies provide.

This chapter begins with a brief description of the assistance offered to the families assigned to the SUB intervention. It then reviews the extent to which families in both the SUB and UC groups used permanent housing subsidies and other housing and services programs available to them in the study sites during the course of the followup period. Then, the core sections of the chapter present the 3-year effects of being offered the SUB intervention (compared with usual care) on outcomes within each of the study domains: housing stability, family preservation, adult well-being, child well-being, and self-sufficiency. The final section is a summary of the 3-year impacts of the SUB intervention relative to usual care.

3.1. Permanent Housing Subsidy (SUB) Intervention

The SUB intervention provided priority access to rental assistance without a time limit, typically in private-market housing.[48] The permanent housing subsidies offered to families assigned to the SUB group could include housing placement assistance but not ongoing social services. The SUB intervention was available in 10 of the 12 study sites. The subsidies were provided by 18 local and state public housing agencies (PHAs), with some sites having more than 1 participating PHA.

All the housing assistance included in the SUB intervention is considered permanent—that is, families can continue receiving housing assistance as long as they remain eligible and follow program rules, such as paying their share of the rent and living in housing that passes a housing-quality inspection. In all sites, recipients of the subsidy had to participate in the annual recertification of their income that would determine their share of the rent and the amount of the housing assistance payment made to the owner of the housing.

In 8 of the 10 sites, the SUB intervention provided priority access to a tenant-based voucher provided by one or more PHAs through the Housing Choice Voucher (HCV) program, as shown in Exhibit 3-1. One site also offered some permanent

[48] Chapter 6 of the *Short-Term Impacts* report (Gubits et al., 2015) provides additional details about the SUB intervention.contract with a property owner for specified units and for a specified term. Recipients of this type of assistance also pay 30 percent of adjusted monthly income for rent.

Exhibit 3-1. Subsidy Type Provided by Site

Type of Subsidy	Number of Participating Subsidy Programs With This Type of Subsidy	Percent of Families Assigned to Subsidy Intervention of This Type (N = 599)
Tenant-based voucher	16	92
Project-based voucher	1	3
Public housing	1	6

Note: Percentages do not add to 100 because of rounding.
Sources: Program data; random assignment enrollment data

housing subsidies through public housing units,[49] and another offered some project-based vouchers.[50] Tenant-based vouchers made up 92 percent of all family referrals.

The HCV program is the federal government's largest housing assistance program, providing rental subsidies to more than 2 million households across the country.[51] Participants in the study who were assigned to the SUB intervention, accepted by the PHA, and issued a voucher were free to use the voucher to rent a housing unit of their choice in the private rental market as long as it met HUD's Housing Quality Standards and had a rent that the PHA determined to be reasonable when compared with the rents of unassisted units in the same housing market. The voucher assistance subsidized the monthly rent for the unit, and the amount that the subsidy provided was the payment standard established by the PHA (or the unit's actual rent, if lower) minus 30 percent of the family's adjusted monthly income.[52]

3.2. Program Use by Families in the Permanent Housing Subsidy (SUB) Versus Usual Care (UC) Comparison

Each impact comparison in the study may be thought of as a distinct experiment or test. This chapter addresses only the comparison between the SUB intervention and usual care, without reference to the families who were randomized to the community-based rapid re-housing (CBRR) and project-based transitional housing (PBTH) interventions. In total, 1,139 families took part in the test of the SUB intervention versus usual care. These families all had the SUB intervention and usual care available to them at the time of random assignment and were assigned to one of these two interventions; 599 families were assigned to the SUB group, and 540 families were assigned to the UC group.[53] Of these 1,139 families, 896 (501 SUB families and 395 UC families), or 79 percent, responded to the 37-month followup survey and are included in the SUB-versus-UC impact comparison reported in this chapter. The current section describes the extent to which these 501 SUB families used the SUB intervention and other types of homeless and housing assistance during the followup period. Parallel information is presented for the 395 included UC families.

Exhibit 3-2 shows the use of eight types of homeless and housing programs. The first column shows the percentage of the 501 families assigned to the SUB intervention who ever used each program type during the followup period. The top row (shaded in the exhibit) shows the takeup of the permanent housing subsidies offered to the SUB group by the families assigned to that group; 83.2 percent of families assigned to the SUB group received the permanent subsidy they were offered at some point during the 37-month followup period—meaning they successfully leased a housing unit with a voucher or moved into an assisted housing unit.[54] The second column correspondingly shows the percentage of the 395 families assigned

[49] In Honolulu, Hawaii, the subsidy intervention consisted of 33 units of public housing provided by the state PHA and 10 units of tenant-based rental assistance provided by the City and County of Honolulu Department of Community Services. Public housing units are owned and managed by the PHA. Like voucher program participants, tenants in public housing pay 30 percent of adjusted monthly income for rent. The city's tenant-based rental assistance program that provided five permanent housing subsidy units for the study operates much like the HCV program.

[50] In Bridgeport, Connecticut, which together with New Haven, Norwalk, and Stamford made up one of the study sites, the subsidy intervention was provided through 15 units of project-based vouchers. PHAs can use up to 20 percent of their HCV program funding for project-based assistance, under which a PHA enters into an assistance contract with a property owner for specified units and for a specified term. Recipients of this type of assistance also pay 30 percent of adjusted monthly income for rent.

[51] http://portal.hud.gov/hudportal/HUD?src=/program_offices/cfo/reports/2013/main_toc.

[52] Payment standards are adjusted for the number of bedrooms in the unit. The total rent payment that the PHA uses to calculate the subsidy includes an estimate of the cost of utilities paid for by the tenant. Details regarding the calculation of housing assistance payments under the HCV program are in 24 CFR Part 982.505.

[53] In the entire study, 746 families were randomly assigned to the UC group. Only 540 of these families had the SUB intervention available to them when they were randomized, however. Therefore, only those 540 UC families are part of the SUB-versus-UC comparison sample. All 599 families randomly assigned to the SUB group had usual care available to them when they were randomized, so all are part of the SUB-versus-UC comparison sample.

[54] All percentages, means, and medians in the exhibit are weighted to adjust for survey nonresponse and, hence, as best as possible, represent the full experimental sample of 1,139 families. The findings on program use are thus in line with similarly weighted impact estimates provided later in the chapter. Appendix D provides details about the nonresponse analysis and adjustments.

Exhibit 3-2. SUB Versus UC: Program Use Since RA

Type of Homeless or Housing Assistance	Percent Ever Used From RA to 37-Month Followup Survey[a]		Number of Months Used From RA to 37-Month Followup Survey, if Ever Used Type of Assistance				Percent Used in Month of Followup Survey Response	
			SUB		UC			
	SUB	UC	Mean	Median	Mean	Median	SUB	UC
Permanent housing subsidies offered to the SUB group[b]	83.2	12.7	31.0	32.5	20.7	21.5	68.4	10.8
Rapid re-housing[c]	11.4	22.9	5.6	4.5	7.8	6.5	0.3	1.8
Transitional housing[d]	7.4	28.9	9.0	6.0	11.4	10.0	0.9	3.7
Permanent supportive housing	3.0	10.7	11.3	9.5	15.1	12.5	2.3	6.9
Public housing	1.6	10.3	22.7	24.5	19.3	18.5	1.4	7.6
Project-based vouchers/Section 8 projects	1.5	6.1	14.3	12.5	18.8	19.5	0.8	5.4
Any permanent housing subsidy[e]	*88.4*	*37.9*	*30.2*	*32.5*	*19.5*	*19.5*	*73.0*	*30.5*
Emergency shelter[f]	84.4	89.5	3.0	2.0	4.6	2.9	1.7	5.4
No use of homeless or housing programs[g]	5.1	24.3	—	—-	—	—	24.1	59.1
N	**501**	**395**	**—**	**—**	**—**	**—**	**501**	**395**

SUB = priority access to permanent housing subsidy. UC = usual care.

RA = random assignment.

[a] Percentage of families who ever used a type of assistance program during the period from the month of RA to the month of 37-month followup survey response (median period duration: 38 calendar months). Percentages do not add to 100 because some families used more than one program type during the followup period.

[b] Subsidies offered to the SUB group are housing choice vouchers plus site-specific programs offered to families assigned to the SUB group in Bridgeport, Connecticut, and Honolulu, Hawaii.

[c] Temporary subsidies offered to the CBRR group.

[d] All types of transitional housing, including those offered to the PBTH group.

[e] Includes the types of permanent subsidy offered to the SUB group plus permanent supportive housing, public housing, and project-based vouchers/Section 8 projects.

[f] All families were in emergency shelter at RA. Percentages less than 100 percent for ever used emergency shelter are because of missing data on shelter use.

[g] Indicates no use of the first six program types in this table during any of the followup period and no use of emergency shelter after the first 6 months after RA. No use in the month of followup survey response indicates no use of any of these seven program types.

Notes: Percentages are regression adjusted, controlling for site and randomization ratio. Percentages, means, and medians are weighted for survey nonresponse to represent full comparison sample.

Source: Family Options Study Program Usage Data

to the UC group who ever used each program type during the followup period.[55] The top row of the second column shows that 12.7 percent of the UC families received the permanent housing subsidy offered to the SUB group during the followup period, presumably through the regular process of coming off waiting lists and leasing units during the course of 3 years.

The next five rows of the exhibit show participation in other nonshelter types of homeless and housing assistance programs. For all programs other than SUB programs, use is higher for the UC group than for the SUB group, presumably because the UC group did not have the SUB intervention easily available and so turned to other types of assistance. The second and third rows show use of rapid re-housing and transitional housing. Continuing to focus for the moment on the first two columns of overall participation figures, 23 percent of UC families found their way to rapid re-housing assistance at some point during the 37-month followup period, and 29 percent found their way to transitional housing. The next three rows of the exhibit show the use of permanent housing subsidies to which neither families randomly assigned to the SUB group nor families assigned to the UC group had priority access: permanent supportive housing, public housing, and project-based vouchers/Section 8 projects.[56] Both SUB and UC families found their way to these programs. It is not surprising that that finding their way to the programs was more common for the UC families who did not have priority access to a permanent housing subsidy through the study's SUB intervention. The seventh row shows the use of any type of permanent housing subsidy, which includes the permanent subsidy programs offered to the SUB group, permanent supportive housing, public housing, and project-based vouchers/Section 8 projects. Nearly two-fifths (37.9 percent) of UC families obtained some form of permanent subsidy during the followup period.

The eighth row shows the use of emergency shelter during the followup period. All study families started in emergency shelter; however, the numbers in this row are largely based on administrative data, which was missing for some of the study families. Nonetheless, the exhibit shows a contrast between

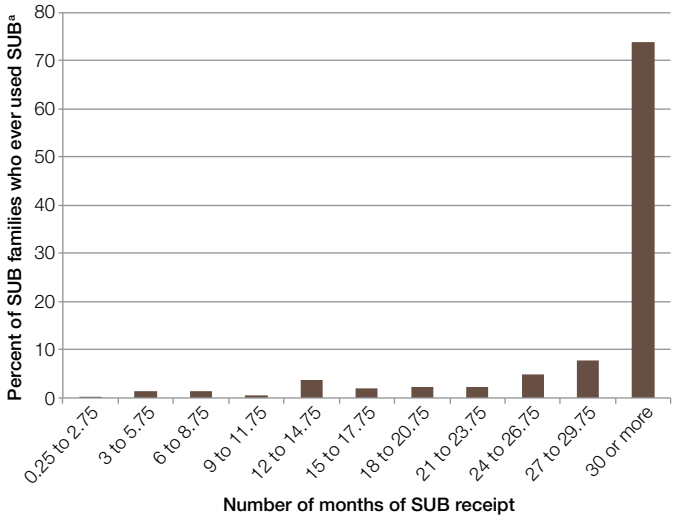
[55] The percentages in rows one through six and row eight of these columns are not mutually exclusive, because some families used more than one program type during the followup period. Row seven is a summary of rows one, four, five, and six.

[56] Although project-based vouchers and Section 8 projects are distinct programs, the distinction is not relevant to this analysis; therefore, use of these programs is reported collectively.

SUB and UC families. The ninth and final row shows the percentages of families in the SUB and UC groups who used none of the six nonshelter types of programs shown in the exhibit during the 37-month followup period *and* who did not use emergency shelter from the 7th month after random assignment onward. These families made no use of the homeless assistance system after their initial shelter stay. About 5 percent of SUB families and one-fourth of UC families fall into this group.

The mean and median numbers of months of use for each program type are also shown in the exhibit (third and fourth columns for SUB families, fifth and sixth columns for UC families) *for only those families who ever used a given program type*.[57] As one might expect, given that housing subsidies were readily available to SUB families, the number of months of SUB intervention use is higher for participating SUB families (median of 33 months) than for the 12.7 percent of UC families who used the permanent housing subsidies offered to the SUB group by coming off waiting lists for assisted housing (median of 22 months). Almost none of the SUB families used the permanent subsidy for less than 12 months, and the vast majority used it for 31 months or more (shown in Exhibit 3-3). For most other program types, median durations of use are longer for the UC group than for the SUB group.

Exhibit 3-3. Number of Months of Subsidy Receipt During Followup Period by SUB Families Who Ever Used Offered Permanent Subsidy



SUB = priority access to permanent housing subsidy.

[a] Percentages are weighted for survey nonresponse to represent all families in comparison sample.

Note: N = 419.

Source: Family Options Study Program Usage Data

Whereas the previous columns consider all experience from between randomization and the survey, the last two columns consider the program use as of the month of the 37-month survey. Although most outcomes in the report are expected to be influenced by assistance received during the entire followup period, some outcomes will be particularly strongly influenced by assistance received at the time of the followup survey response. The first row of the seventh column shows that 68 percent of SUB families received permanent housing subsidies offered to the SUB group in the month they responded to the 37-month followup survey. Whereas the use of temporary assistance programs had fallen off by the time of the followup survey, 31 percent of UC families compared with 73 percent of SUB families were receiving some form of permanent subsidy. Most UC families (59 percent) were not participating in a homeless or housing program at the time they responded to the followup survey compared with 24 percent of SUB families.

Exhibit 3-4 provides a more detailed picture of the timing of program use by the families in the SUB-versus-UC comparison.[58] The top panel shows the proportions of families within the SUB group who are receiving different types of assistance during each calendar month for the first 32 months after random assignment.[59] It is not surprising that program use for SUB families is dominated by permanent housing subsidies. More notable is that the use of permanent housing subsidies continued at a high level throughout the followup period, falling off only slightly over time, suggesting that most families were able to comply with rules imposed by landlords and by the subsidy program. SUB families also made some use of other programs.

The bottom panel shows the proportions of program use over time for the UC families in the SUB-versus-UC comparison. Compared with the SUB group, the UC group made more extensive use of programs other than permanent housing subsidies following their initial stay in emergency shelter. The UC families' use of rapid re-housing had largely ended by month 20, but their use of transitional housing continued past this point, only beginning to decrease in the third year (month 25 and following). Use of permanent housing subsidies steadily increased throughout the followup period for the UC group, because families used regular waiting list processes rather than the study's priority access to gain admittance to those programs; however, it remained well under one-half of the level of

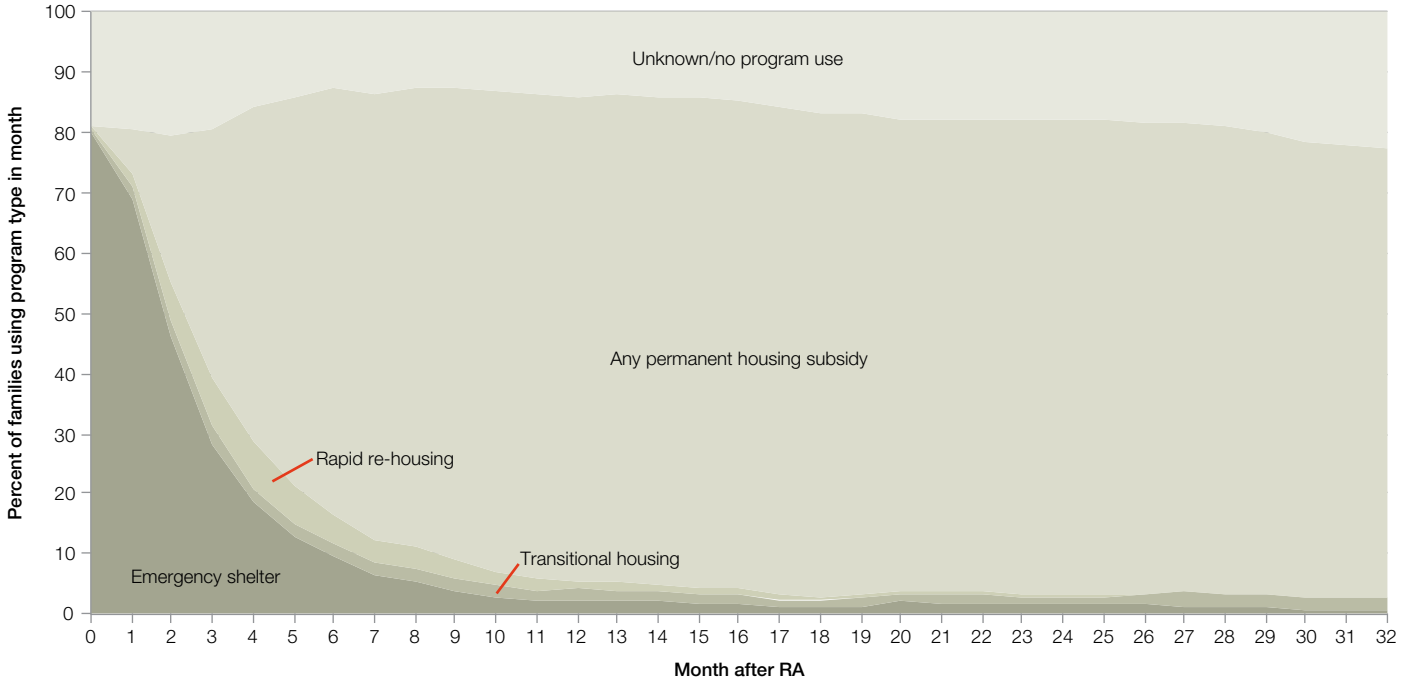
[57] Hence, 0 values are not used in computing the means, nor do they pull downward the medians of the various distributions.

[58] Exhibit 3-4 is closely related to the analysis of the costs of this pairwise comparison presented in Chapter 9. The reader should note that the exhibit does not indicate the two-way flows of families moving into and out of these program types from month to month. Instead, it reflects only the overall usage level in a given month.

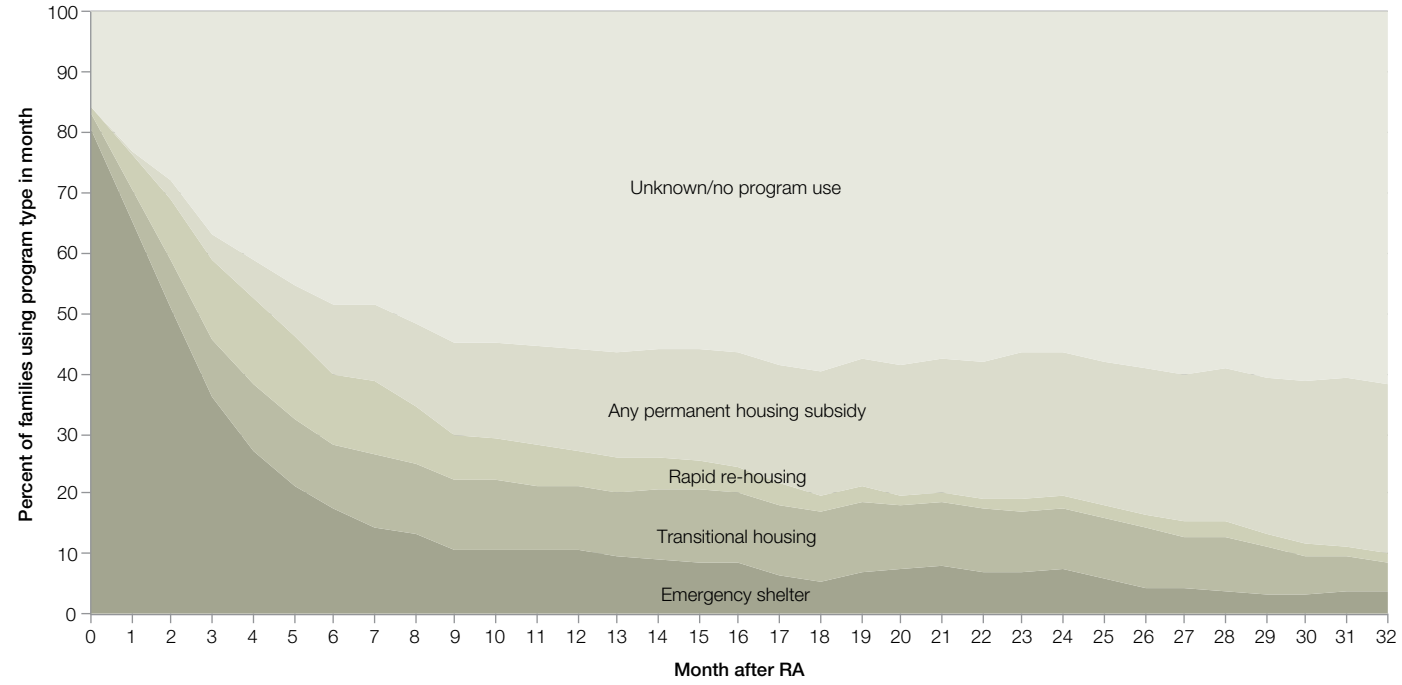
[59] Month 32 is the latest month for which the study team has data for all the families who responded to the 37-month survey.

Exhibit 3-4. SUB Versus UC: Program Use in Each Month of Followup Period

Panel A: Program Use of SUB Families for 32 Months After RA



Panel B: Program Use of UC Families for 32 Months After RA



SUB = priority access to permanent housing subsidy. UC = usual care.
RA = random assignment.
Notes: Families who have more than one type of program use in a calendar month are counted fractionally in each type.
Source: Family Options Study Program Usage Data

use of permanent housing subsidies by the SUB families, who got priority access to such programs. Appendix Exhibit H-1 shows additional information about program use in the second half of the followup period, from month 19 after random assignment until the month of the 37-month survey response.

Exhibits 3-2 and 3-4 show that most families assigned to the SUB group used permanent housing subsidies after departing from emergency shelter. Nevertheless, a small proportion of SUB families used other programs in addition to the program to which they were offered priority access, which is consistent with the design of the study: families were not required to use the programs offered to the group to which they were assigned and were also not forbidden from using other programs that were available to them in their community. The intent of the study was to maximize use of the programs offered in the assigned group (in this case, maximize use of the SUB programs by the SUB families) and thereby to create as wide a contrast as possible between program mixes for the different assignment groups (in this case, SUB versus UC). As shown in the exhibits, the mix of programs used was very different for the SUB group than for the UC group. The contrast in usage is large, with 83.3 percent of SUB families using the programs that were part of the SUB intervention compared with 12.9 percent of UC families. Considering all forms of permanent subsidy, (permanent housing subsidies offered to the SUB group, permanent supportive housing, public housing, and project-based assistance), the contrast between the two groups is 88 percent compared with 38 percent, a somewhat narrower gap but still large. This difference in the use of permanent housing subsidies by the SUB and UC groups is large enough that concerns about the study's ability to detect an impact in the presence of nonparticipation and crossover are minimal.

As is conventional in random assignment analyses, the goal here is to estimate the intention-to-treat (ITT) impact—that is, the impact of offering a program to families, regardless of whether they actually use that program (or some other program). The remainder of this chapter reports estimated impacts in the various outcome domains that—if statistically significant—can be causally attributed to the offer of a permanent housing subsidy to the families randomly assigned to the SUB group at the start of the followup period in contrast with no such privileged access being available to UC families.

3.3. Impacts on Housing Stability in the Permanent Housing Subsidy (SUB) Versus Usual Care (UC) Comparison

Proponents of permanent housing subsidies view the lack of housing affordability as the root cause of homelessness among families and believe that, because families who experience homelessness are very poor, they are likely to require long-term rental subsidies to become stably housed.[60] The SUB-versus-UC comparison in the current study provides a direct test of this hypothesis by measuring the effects of making the SUB programs easily available to families compared with a situation in which permanent housing subsidies are relatively difficult to access in the near term.

At 20 months after random assignment, the priority access to a permanent housing subsidy provided to the SUB group had a strong positive effect on housing stability. What do the housing stability effects of assignment the SUB intervention at 3 years after random assignment tell?

Exhibit 3-5 shows the experimentally based evidence of effects on homelessness, housing independence, residential moves, and housing quality at 37 months. All the rows of the exhibit (and other impact exhibits in the balance of this report) have the same format. The first three columns of the exhibit provide information about the SUB families—the number of families with data on a particular outcome and the mean value and standard deviation of the outcome. The next three columns provide the corresponding information for the UC families included in this particular pairwise comparison.[61] The seventh column is the difference between the mean value (or proportion) of the SUB families and the mean value (or proportion) of the UC families, referred to as the *impact* of assignment to SUB relative to usual care.[62] Asterisks to the right of this column denote the statistical significance of the impact estimate, with more asterisks indicating higher levels of statistical significance. The eighth column of the exhibit contains the standard error of the impact estimates, which is used to test for statistical significance and can be used to construct a confidence interval around the impact estimate. The results are weighted to adjust for survey nonresponse.

The last column shows the standardized effect size of the impact, calculated by dividing the impact estimate by the standard deviation of the outcome for *all* study families assigned to

[60] For further discussion of hypotheses about the SUB intervention, see Chapter 3 of the *Short-Term Impacts* report (Gubits et al., 2015).

[61] The UC families in this comparison are those who could have been randomized to the SUB group. The mean values of outcomes for all UC families are shown in Chapter 2.

[62] As explained in Appendix C, the mean values and the impact estimate are regression adjusted for baseline covariates.

Exhibit 3-5. SUB Versus UC: Impacts on Housing Stability at 37 Months

Outcome	SUB			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Homelessness or doubled up during the followup period									
At least 1 night homeless[b] or doubled up (past 6 mo.) or in shelter in past 12 months (%) **[confirmatory]**[c]	500	17.0	(36.7)	395	38.1	(48.5)	– 21.1***	(3.0)	– 0.37
At least 1 night homeless[b] or doubled up in past 6 months (%)	500	15.8	(35.3)	395	34.0	(47.3)	– 18.2***	(2.9)	– 0.33
At least 1 night homeless[b] in past 6 months (%)	500	8.9	(27.8)	395	17.6	(37.8)	– 8.6***	(2.3)	– 0.20
At least 1 night doubled up in past 6 months (%)	501	11.4	(30.8)	395	28.0	(44.8)	– 16.6***	(2.7)	– 0.32
Any stay in emergency shelter in past 6 months (%) [Program Usage Data]	501	3.3	(17.1)	395	8.1	(26.9)	– 4.9***	(1.7)	– 0.15
Any stay in emergency shelter in months 21 to 32 after RA (%) [Program Usage Data]	501	4.6	(20.9)	395	18.8	(38.4)	– 14.3***	(2.3)	– 0.33
Number of days homeless[b] or doubled up in past 6 months	499	18.6	(48.1)	393	47.5	(74.1)	– 28.9***	(4.5)	– 0.33
Number of days homeless[b] in past 6 months	500	8.7	(33.3)	395	18.9	(48.1)	– 10.2***	(2.9)	– 0.18
Number of days doubled up in past 6 months	500	11.7	(38.4)	393	33.3	(63.6)	– 21.5***	(3.7)	– 0.29
Housing independence									
Living in own house or apartment at followup (%)	501	84.7	(35.9)	395	69.1	(46.3)	15.5***	(2.9)	0.29
Living in own house or apartment with no housing assistance (%)	500	14.2	(34.9)	392	40.0	(48.7)	– 25.8***	(3.1)	– 0.45
Living in own house or apartment with housing assistance (%)	500	70.4	(45.6)	392	29.2	(46.1)	41.2***	(3.2)	0.80
Number of places lived									
Number of places lived in past 6 months[d]	501	1.3	(0.8)	395	1.6	(1.1)	– 0.2***	(0.1)	– 0.20
Housing quality									
Persons per room	479	1.2	(0.6)	375	1.6	(1.2)	– 0.4***	(0.1)	– 0.31
Housing quality is poor or fair (%)	478	28.8	(44.8)	374	32.5	(46.8)	– 3.7	(3.2)	– 0.07

SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] The definition of "homeless" in this report includes stays in emergency shelters and places not meant for human habitation. It excludes transitional housing.

[c] After adjustment of multiple comparisons, the impact on the confirmatory outcome is statistically significant at the .01 level for the SUB-versus-UC comparison.

[d] The number of places lived in past 6 months is topcoded at 6 places.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Sources: Family Options Study 37-month followup survey; Program Usage Data

the UC group.[63] The standardized effect size is thus a measure of impact relative to natural variability in the outcome. Such standardized effect sizes are a conventional way to compare impact magnitudes across outcomes and domains with different scales. For example, one may compare the standardized effect sizes for housing stability outcomes in Exhibit 3-4 with those for other outcomes in other domains shown in this chapter. Standardized effect sizes may also allow for the size of effects found in this study to be compared with the size of effects on similar outcomes that are defined differently in other studies.

Exhibit 3-5 shows that the SUB intervention reduced stays in shelter or places not meant for human habitation in the period before the 37-month survey by a large amount. The first row of the exhibit shows evidence for the confirmatory outcome of the study. The outcome is constructed from a combination of survey and Program Usage Data: (1) at least 1 night in shelter or a place not meant for human habitation or doubled up in the past 6 months (from the followup survey), *or* (2) at least 1 night in emergency shelter in the past 12 months (from the study's Program Usage Data). Of the families assigned to the UC group, 38 percent experienced one of these two situations. For the SUB group, that proportion was 17 percent, representing a reduction in homelessness of 21 percentage points, more than one-half of the homelessness measured by this outcome for the UC group. This impact is highly statistically significant (even after the adjustment for multiple comparisons applied to this confirmatory outcome).[64]

[63] The standard deviations for the entire UC group are shown in Chapter 2. The entire UC group is used in computing effect sizes so that the effect sizes across impact comparisons will have common metrics.

[64] The study estimates impacts on this confirmatory outcome for each of the six paired comparisons and four pooled comparisons. Seven of these estimates (impacts in the six paired comparisons and the pooled SUB+CBRR+PBTH-versus-UC comparison) have been prespecified as "confirmatory tests." A multiple comparison procedure is performed to compute adjusted *p*-values for these tests to reduce the possibility of chance findings of statistical significance. See Appendix C for a discussion of the study's approach to the multiple comparisons problem, the role of the confirmatory outcome in this approach, and the details of the adjustment procedure.

The next three rows present results for three outcomes constructed solely from survey data: (1) at least 1 night homeless or doubled up in the past 6 months, (2) at least 1 night homeless in the past 6 months, and (3) at least 1 night doubled up in the past 6 months. The impact estimates in these three rows of the exhibit show that, compared with usual care, the SUB intervention caused substantial, statistically significant reductions in all three of these survey-based measures of homelessness.[65] The next row uses a different data source—largely Homeless Management Information System (HMIS) data—to measure the proportion of families using at least 1 night of emergency shelter during the same period of the 6 months before the survey response.[66] Access to the SUB intervention reduced the proportion by more than one-half, from 8 to 3 percent.[67]

The sixth row of Exhibit 3-4 shows the impact on any stay in emergency shelter in months 21 to 32 after random assignment, which is the latest 12-month period for which data are available for every survey respondent family.[68] About 19 percent of UC families spent at least 1 night in emergency shelter during this period. Only 5 percent of SUB families spent at least 1 night in emergency shelter during this time, a reduction of 14 percentage points. Thus, with the availability of a housing subsidy, the shelter usage rate in this period was reduced by three-fourths.

Exhibit 3-6 provides a more detailed characterization of the timing of emergency shelter stays for SUB and UC families. For reference, it also shows month-by-month usage of any permanent housing subsidy in the two groups.

The Program Usage Data are missing the initial stay in emergency shelter for about 20 percent of families. The study team has no reason to believe, however, that missing data rates are associated with randomly assigned group (that is, data are equally likely to be missing for the SUB group and the UC group), leaving little concern about bias in the comparison of stay rates *between* the two groups. The Program Usage Data show a gap beginning to emerge between the shelter use of SUB and UC families in the third month after study entry, a gap that reaches 8 percentage points by the fifth month, with 15 percent of SUB families having at least 1 night in shelter (black line) compared with 23 percent of UC families (dark gray line). This slight lag in the emergence of a gap is consistent with the need for families assigned to the SUB group to have their incomes verified and to find and lease a unit—see the rising rate of permanent housing subsidy use along the light gray line in the exhibit. Families may have remained in shelter during that process. A gap of 6 to 9 percentage points remains through the 24th month. From the 10th month onward, the share of SUB families in shelter is much less than one-half the proportion of UC families.

The last three homelessness outcomes examined (see again Exhibit 3-5) measure the number of days in the past 6 months that a family was homeless or doubled up. Assignment to the SUB group reduced the amount of time spent homeless or doubled up by an average of 4 weeks in the past 6 months relative to assignment to the UC group.[69]

The housing independence outcomes in the next panel of Exhibit 3-5 measure whether a family lived in its own house or apartment at the time of the followup survey, either with or without housing assistance. The SUB intervention increased the proportion of families living in their own dwelling place from 69 to 85 percent relative to usual care. This difference is the net result of two opposing effects. As would be expected, the proportion of SUB families living in their own places without housing assistance (14 percent) was much lower than the corresponding proportion for UC families (40 percent). By contrast, and more than offsetting that effect, the proportion of

[65] All impacts in this table, with the exception of the first row, are considered exploratory and are not adjusted for the presence of multiple comparisons. Likewise, all impacts in other study domains are also considered exploratory.

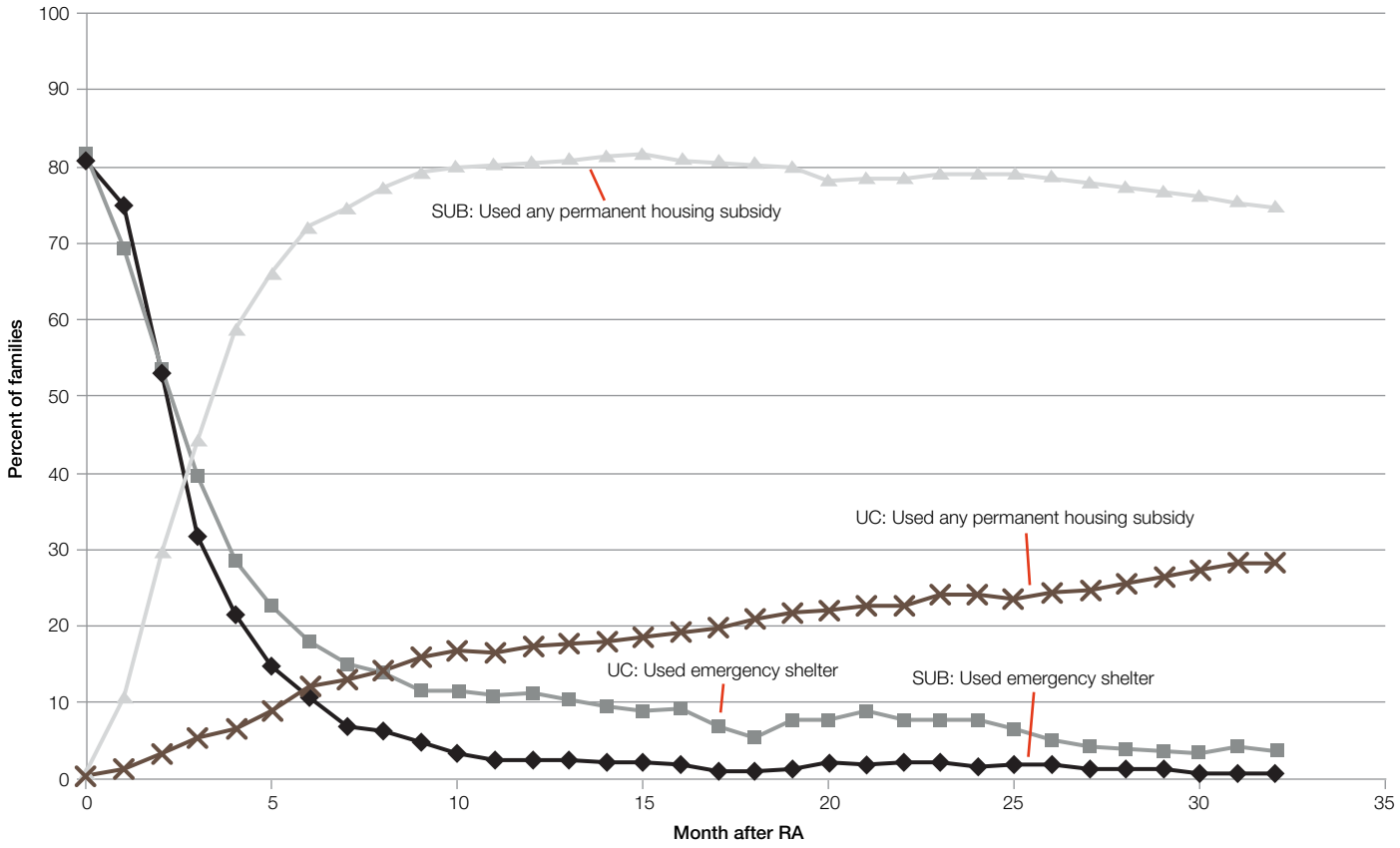
[66] Outcomes regarding shelter stays are based on study Program Usage Data; these outcomes are described in Appendix A.

[67] The proportions of families using emergency shelter during the past 6 months are less than one-half of those reporting being homeless in the past 6 months. This discrepancy is likely due to two factors: (1) some of the homelessness captured in the survey measure is for stays in places not meant for human habitation rather than in emergency shelter, and (2) measurement error in the survey (recall bias) and Program Usage Data (lack of coverage of all local shelters in HMIS records and lack of coverage for families who moved away from the community where they enrolled in the study). The relative importance of these factors is unknown.

[68] Although most families have longer followup than 32 months, the families with the shortest survey followup periods responded to the survey in their 32nd month after random assignment. Therefore, Program Usage Data for survey respondents are available for the full respondent sample only through month 32 after random assignment.

[69] Dividing the average number of days spent homeless or doubled up in the past 6 months for SUB families by the percentage who experienced either state (18.6 days/0.158 = 117.7 days) reveals that those who did experience either state spent 118 days, on average, either homeless or doubled up in the past 6 months. Performing the same calculation for UC families (47.5 days/0.34 = 139.7 days) reveals that UC families who experienced either state spent more time (139 days), on average, either homeless or doubled up in the past 6 months than did families assigned to the SUB group. These calculations show that about 1 week of the overall 4-week difference is explained by the difference in proportions experiencing homelessness or doubled up, and the other 3 weeks are explained by a difference in the average length of time spent homeless or doubled up conditional on having experienced either state.

Exhibit 3-6. SUB Versus UC: Percent of Families With Any Stay in Emergency Shelter and Any Permanent Housing Subsidy During Month, by Month After RA



SUB = priority access to permanent housing subsidy. UC = usual care.
RA = random assignment.
Notes: Percentages are weighted for survey nonresponse to represent all families in the SUB-versus-UC comparison sample. Missing data on emergency shelter stays bias the percentages somewhat downward. The baseline stay in emergency shelter does not appear in the data for 16.7 percent of UC respondent families. The missing data rate for subsequent stays in emergency shelter is unknown. Any permanent housing subsidy includes the permanent subsidy programs offered to the SUB group, permanent supportive housing, public housing, and project-based vouchers/Section 8 projects.
Source: Family Options Study Program Usage Data

SUB families living in their own places *with* housing assistance (70 percent) was much higher than the corresponding proportion for UC families (29 percent).[70]

The stability offered by the SUB intervention also reduced the average number of places where families lived during the past 6 months from 1.6 to 1.3. Because this outcome has a lower bound of 1 (the family had to have lived in at least one place), the UC group mean of 1.6 compared with 1.3 for the SUB group means that the SUB intervention reduced the number of moves during the final 6 months of the followup period by almost one-half (42 percent, when using more digits than shown in Exhibit 3-5).[71]

The last two rows in Exhibit 3-5 show how the SUB intervention affected the nature of the housing occupied by study families as of the 37-month followup survey by considering the number of persons per room (a measure of crowding) and residence in poor-quality housing. The number of persons per room is a standard proxy for overcrowding. The SUB

[70] Although the survey response indicates that 70 percent of the SUB families were living in their own house or apartment with housing assistance at the time of the survey, the Program Usage Data show that the proportion of families using permanent housing subsidies offered to the SUB group, public housing, or project-based vouchers in the survey month is 73 percent. This discrepancy between response to the survey item and the Program Usage Data (largely based on HUD administrative records for these program types) suggests some measurement error in one or both of these data sources.

[71] This outcome counts each place in which the family lived only once. Thus, it is not technically the same as the number of moves plus one additional place lived. It is possible for a family to move out of a place (for example, a housing unit shared with friends or relatives) and then move back into the same unit during the 6-month period. Its interpretation as a measure of housing instability, however, is essentially the same.

intervention reduced the number of persons per room from 1.6 to 1.2. Nearly one-third (31 percent) of UC families reported poor or fair housing at the 37-month survey, as did 28 percent of families assigned to the SUB group; the difference is not statistically significant.

In sum, the SUB intervention had a strong, positive effect on housing stability compared with usual care for every measure considered, except for housing quality.

3.4. Impacts on Family Preservation in the Permanent Housing Subsidy (SUB) Versus Usual Care (UC) Comparison

Any effects of assignment to the SUB intervention on family preservation would be expected to be indirect, via the effects on housing stability. To test for effects of priority access to a permanent housing subsidy on family preservation, Exhibit 3-7 reports estimated impacts on family preservation from the SUB-versus-UC comparison.

At 20 months after random assignment, relative to usual care, assignment to the SUB intervention reduced recent and ongoing child separations and foster care placements among children who were with the family in shelter at baseline. Exhibit 3-7 shows that no such effects were evident 37 months after random assignment.

At 37 months, assignment to the SUB intervention increased separations of spouses and partners who had been with the family in shelter at baseline (a result that was not found at the earlier followup point). Of SUB families, who had a spouse or partner present at baseline, 48 percent experienced a separation of that spouse in the past 6 months at the latter followup point, compared with 34 percent of UC families. It is not clear whether this increase in separations is beneficial or detrimental to SUB families. No impacts were detected at either time point on family reunifications with children or partners among the much smaller group of families separated in these ways at baseline.

Exhibit 3-8 reports impacts on outcomes from the child welfare agency administrative data collected in 5 of the 12 study sites. No effect is detected on either the proportion of family heads

Exhibit 3-7. SUB Versus UC: Impacts on Family Preservation at 37 Months

Outcome	SUB			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Current or recent separations of family members present at baseline									
Family has at least one child separated in past 6 months (%)	486	13.5	(34.1)	389	16.9	(35.9)	– 3.3	(2.6)	– 0.08
Family has at least one foster care placement in past 6 months[b] (%)	492	3.0	(17.2)	392	4.2	(18.6)	– 1.1	(1.4)	– 0.05
Spouse/partner separated in past 6 months, of those with spouse/partner present at RA (%)	125	47.8	(49.9)	116	34.3	(48.7)	13.4**	(6.5)	0.23
Reunification of family members reported as separated at baseline									
Family has at least one child reunified, of those families with at least one child absent at RA (%)	95	44.1	(49.9)	78	37.3	(48.6)	6.8	(8.0)	0.12
Spouse/partner reunified, of those with spouse/partner absent at RA (%)	51	29.3	(45.1)	34	17.2	(41.0)	12.1	(10.9)	0.26

SUB = priority access to permanent housing subsidy. UC = usual care.
ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
[b] Foster care placement outcome includes any children (present at baseline) who are placed in foster care or adopted by another family at the time of followup.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.
Source: Family Options Study 37-month followup survey

Exhibit 3-8. SUB Versus UC: Impacts on Child Welfare Outcomes

Outcome	SUB			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Had a formal child separation that began after RA (%)	262	8.8	(27.8)	250	10.7	(31.6)	– 1.9	(2.6)	– 5.80
Total days during followup separated from at least one child[b]	262	52.9	(182.9)	250	71.2	(228.7)	– 18.3	(15.8)	– 0.07

SUB = priority access to permanent housing subsidy. UC = usual care.
ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
[b] Includes separations started before and after RA. Length of followup varies by site. Alameda County = 1,075 days. Baltimore = 1,071 days. Kansas City = 1,069 days. Minneapolis = 1,046 days. Phoenix = 1,123 days.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions. Sample limited to five sites where child welfare records were collected (Alameda County, Baltimore, Kansas City, Minneapolis, and Phoenix).
Source: State child welfare agency records

with a formal child separation that began after random assignment or on the total days during the followup period of being separated from at least one child.

3.5. Impacts on Adult Well-Being in the Permanent Housing Subsidy (SUB) Versus Usual Care (UC) Comparison

The SUB intervention did not include services related to adult well-being.[72] Even so, Exhibit 3-9 provides evidence of two longer-run impacts in this domain. At the 37-month point, having priority access to a permanent housing subsidy reduced psychological distress, relative to usual care, by about one-tenth of a standard deviation and intimate partner violence by one-third. In combination with the effect of assignment to the SUB intervention on increased separation from partners (shown in the previous section), it is plausible that access to permanent housing subsidies enabled family heads to leave abusive relationships. This interpretation is consistent with qualitative evidence from the evaluation presented in the *Effects of Housing Vouchers on Welfare Families*.[73]

Reductions in psychological distress and intimate partner violence for SUB families were also evident at 20 months after random assignment (the *Short-Term Impacts* report [Gubits et al., 2015]; Exhibit 3-9). At that earlier point, relative to usual care, improvements in three other outcomes—goal-oriented thinking, alcohol dependence, and the combined measure of alcohol dependence and drug abuse—were detected. No effects on these outcomes were found 37 months after random assignment.

3.6. Impacts on Child Well-Being in the Permanent Housing Subsidy (SUB) Versus Usual Care (UC) Comparison

Any effects of assignment to the SUB intervention on child well-being would be expected to be indirect and to occur through the substantial effect of priority access to a permanent housing subsidy on housing stability. At 20 months, having priority access to a permanent housing subsidy led to positive effects relative to usual care on two outcomes—reducing children's recent absences from school and reducing movements

Exhibit 3-9. SUB Versus UC: Impacts on Adult Well-Being at 37 Months

Outcome	SUB			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Adult physical health									
Health in past 30 days was poor or fair (%)	500	32.2	(46.5)	394	29.1	(45.5)	3.1	(2.9)	0.06
Adult mental health									
Goal-oriented thinking[b]	495	4.45	(1.04)	394	4.51	(0.95)	– 0.06	(0.07)	– 0.05
Psychological distress[c]	499	6.69	(5.56)	393	7.42	(5.80)	– 0.73*	(0.38)	– 0.11
Adult trauma symptoms									
Post-traumatic stress disorder (PTSD) symptoms in past 30 days (%)	496	22.7	(41.6)	391	23.6	(42.0)	– 0.8	(2.9)	– 0.02
Adult substance use									
Alcohol dependence or drug abuse[d] (%)	500	12.3	(32.3)	393	14.4	(35.3)	– 2.1	(2.4)	– 0.06
Alcohol dependence[d] (%)	501	8.8	(28.0)	394	10.7	(30.9)	– 1.9	(2.1)	– 0.06
Drug abuse[d] (%)	500	4.3	(19.6)	394	6.3	(24.4)	– 2.0	(1.6)	– 0.08
Experience of intimate partner violence									
Experienced intimate partner violence in past 6 months (%)	498	7.8	(26.3)	392	11.8	(32.5)	– 4.0*	(2.2)	– 0.12

SUB = priority access to permanent housing subsidy. UC = usual care.
ITT = intention-to-treat. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
[b] Goal-oriented thinking is measured with a modified version of the State Hope Scale and ranges from 1 to 6, with higher scores indicating higher levels of positive, goal-oriented thinking.
[c] Psychological distress is measured with the Kessler Psychological Distress Scale (K6) and ranges from 0 to 24, with higher scores indicating greater distress.
[d] Alcohol dependence is measured with the Rapid Alcohol Problems Screen (RAPS-4), and drug abuse is measured with six items from the Drug Abuse Screening Test (DAST-10). Both are measured for the 6 months before the 37-month survey.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.
Source: Family Options Study 37-month followup survey

[72] Services related directly to housing, such as assistance with searching for housing and negotiating with landlords, were permitted but not required.

[73] Mills et al. (2006).

among schools—but, overall, it appeared to have little effect on child well-being. At 37 months, the study team found a handful of favorable effects and one single adverse effect.

Considering first the outcomes measured across age groups (Exhibit 3-10), for children in the SUB families, the analysis continues to find a reduction in the number of schools attended since random assignment relative to children in UC families. The reduction—one fewer school move for every six children—is not independent of the effect observed at 20 months, because this outcome measures school mobility since random assignment. In addition, children in the SUB group had fewer sleep problems, fewer behavior problems, and more prosocial behavior at 37 months, all based on the parental report. The size of these effects, scored on multi-item scales, ranges from 0.11 to 0.13 standard deviations.

Exhibit 3-11 shows estimated impacts on outcomes measured by age group. Young children in families assigned to the SUB group have more positive childcare or preschool attitudes and older children have more positive school attitudes than their counterparts in the UC families. Children ages 3.5 to 7 years in SUB families, however, have lower executive functioning as measured by the Head Toes Knees Shoulders assessment, by 0.12 standard deviations.

Overall, across 29 outcomes in the child well-being domain, 7 effects reach statistical significance, 6 of them favoring the SUB group, indicating a positive effect of the SUB intervention compared with the usual care on child well-being.

3.7. Impacts on Self-Sufficiency in the Permanent Housing Subsidy (SUB) Versus Usual Care (UC) Comparison

By increasing housing stability, assignment to the SUB intervention may plausibly have indirect effects on family self-sufficiency relative to usual care. In particular, the opportunity to obtain stable housing with a sharply and permanently lower burden for housing costs may enable adult family members to transfer attention from staying housed to issues of employment and earnings and even enhancing their skills through education and training participation. On the other hand, the ability to obtain housing with limited out-of-pocket costs (30 percent of income) makes available household financial resources go further—lessening the pressure to work, earn, and acquire new skills and education. Unlike the other active interventions studied in this report, the programs offered to families assigned to the SUB intervention do not include case management guidance or referrals to services intended to increase skills or encourage work.

The *Short-Term Impacts* report (Gubits et al., 2015) found that, in the first 20 months after random assignment, assignment to the SUB intervention reduced some important aspects of family self-sufficiency relative to usual care and increased others. Assignment to the SUB intervention caused reductions in the proportion of family heads working at the time of the

Exhibit 3-10. SUB Versus UC: Impacts on Child Well-Being Across Age Groups at 37 Months

Outcome	SUB			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Child education									
Number of schools attended since RA[b]	588	1.9	(0.9)	460	2.0	(0.9)	– 0.2**	(0.1)	– 0.13
Grade completion (not held back) (%)	485	92.53	(27.54)	377	89.54	(30.15)	2.99	(2.20)	0.08
School grades[c]	443	3.1	(0.9)	332	3.1	(0.8)	0.0	(0.1)	0.04
Child physical health									
Poor or fair health in past 30 days (%)	678	7.9	(25.2)	532	5.9	(23.8)	2.0	(1.8)	0.07
Well-child checkup in past year (%)	677	88.8	(31.2)	529	91.5	(29.0)	– 2.7	(2.0)	– 0.07
Child has regular source of health care (%)	677	91.6	(26.2)	530	90.9	(28.5)	0.6	(2.4)	0.02
Sleep problems[d]	678	1.99	(1.04)	533	2.19	(1.09)	– 0.19**	(0.08)	– 0.13
Child behavioral strengths and challenges									
Behavior problems[e]	638	0.44	(1.26)	506	0.67	(1.26)	– 0.23**	(2.4)	– 0.06
Prosocial behavior[f]	640	– 0.15	(1.11)	509	– 0.30	(1.09)	0.16**	(2.1)	– 0.06

SUB = priority access to permanent housing subsidy. UC = usual care.
ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
[b] Number of schools outcome is topcoded at 4 or more schools.
[c] School grades outcome is defined as 1 = mostly Ds or Fs, 2 = mostly Cs, 3 = mostly Bs, 4 = mostly As.
[d] Sleep problems outcome ranges from 1 to 5, with higher values indicating more frequent tiredness upon waking and during the day.
[e] Behavior problems outcome is measured as the standardized Total Difficulties score from the Strengths and Difficulties Questionnaire (SDQ).
[f] Prosocial behavior is measured as the standardized prosocial domain score from the SDQ.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.
Source: Family Options Study 37-month followup survey (parent report)

Exhibit 3-11. SUB Versus UC: Impacts on Child Well-Being Developmental Outcomes by Age Group at 37 Months

Outcome	SUB			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Ages 2 to 5 years[b]									
Preschool or Head Start enrollment[c] (%)	211	35.6	(48.9)	170	42.3	(49.6)	– 6.7	(5.5)	– 0.11
Child care or preschool absences in past month[d]	86	0.86	(0.96)	71	0.75	(0.84)	0.11	(0.16)	0.09
Positive child care or preschool experiences[e]	89	0.89	(0.37)	73	0.81	(0.40)	0.08	(0.06)	0.16
Positive child care or preschool attitudes[f]	90	4.74	(0.70)	72	4.53	(0.73)	0.21**	(0.10)	0.25
Child care or preschool conduct problems[g] (%)	93	7.3	(29.7)	74	4.5	(19.9)	2.9	(4.3)	0.10
Ages 2 years to 5 years, 6 months									
Met developmental milestones[h] (%)	183	72.0	(44.1)	154	73.5	(45.9)	– 1.6	(5.9)	– 0.03
Ages 3 years, 6 months to 7 years									
Verbal ability[i]	254	– 0.18	(1.01)	184	– 0.34	(1.03)	0.16	(0.14)	0.12
Math ability[j]	253	– 0.21	(0.99)	186	– 0.25	(0.93)	0.04	(0.11)	0.04
Executive functioning[k] (self-regulation)	248	16.08	(16.19)	179	18.45	(16.63)	– 2.36*	(1.27)	– 0.12
Ages 5 to 17 years[l]									
School enrollment[c] (%)	470	98.6	(11.2)	365	97.3	(14.7)	1.3	(1.2)	0.07
School absences in past month[d,m]	195	0.93	(0.91)	139	1.01	(1.00)	– 0.08	(0.13)	– 0.06
Positive school experiences[e,m]	196	0.56	(0.58)	140	0.51	(0.62)	0.05	(0.08)	0.05
Positive school attitudes[f,m]	195	4.21	(1.09)	140	3.98	(1.14)	0.22*	(0.13)	0.15
School conduct problems[g,m] (%)	197	22.9	(41.1)	142	30.8	(46.1)	– 7.9	(5.6)	– 0.13
Ages 8 to 17 years									
Anxiety[n]	285	35.27	(7.51)	221	35.07	(7.85)	0.20	(0.75)	0.02
Fears[o]	287	63.31	(14.34)	222	62.02	(14.84)	1.29	(1.27)	0.07
Substance use[p] (%)	283	4.20	(20.19)	219	6.91	(26.82)	– 2.71	(2.24)	– 0.07
Goal-oriented thinking[q]	277	21.96	(5.10)	214	22.10	(4.86)	– 0.13	(0.54)	– 0.02
School effort in past month[r]	283	2.82	(0.77)	218	2.86	(0.78)	– 0.04	(0.08)	– 0.04
Arrests or police involvement in past 6 months[s] (%)	152	9.24	(27.05)	123	10.57	(28.65)	– 1.32	(3.99)	– 0.03

SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes focal children who were ages 4 years or younger on the September 1 before the 37-month parent survey.

[c] Preschool or Head Start enrollment outcome is defined as enrollment in preschool, center-based child care, or school.

[d] Absences outcome is defined as 0 = no absences in past month, 1 = one to two absences, 2 = three to five absences, 3 = six or more absences.

[e] Positive child care, preschool, or school experiences outcome is defined as – 1 = mostly negative experiences, 0 = both positive and negative experiences, 1 = mostly positive experiences.

[f] Positive child care, preschool, or school attitudes outcome is parent report of how much child likes school and ranges from 1 to 5, with higher values indicating greater like of school.

[g] Child care, preschool, or school conduct problems outcome is defined as 0 = no conduct problems reported to parent, 1 = parent contacted about conduct problems or suspension or expulsion from school or child care center.

[h] Met developmental milestones outcome is defined as scoring above the typical development cutoffs in all domains of the Ages and Stages Questionnaire (ASQ-3).

[i] Verbal ability outcome is the nationally standardized score from the Woodcock-Johnson III (WJ III) letter-word identification test.

[j] Math ability outcome is the nationally standardized score from the WJ III applied problems test.

[k] Executive functioning outcome is the Head Toes Knees Shoulders (HTKS) score and ranges from 0 to 40, with higher scores indicating greater executive functioning.

[l] Includes focal children who were ages 5 to 17 years on the September 1 before the 37-month parent survey and no older than 17 years at the time of the survey.

[m] This parent-reported outcome was collected from only the first 38 percent of parents surveyed due to an error in data collection.

[n] Anxiety (child report) is measured using the A-Trait scale from the State-Trait Anxiety Inventory for Children (STAIC). Scores range from 20 to 60, with higher scores indicating greater anxiety.

[o] Fears outcome (child report) is the score from the Fears Scale and ranges from 33 to 99, with higher scores indicating more fear.

[p] Substance use (child report) is measured with 23 items from the Centers for Disease Control and Prevention 2011 Youth Risk Behavior Survey.

[q] Goal-oriented thinking (child report) is measured with a modified version of the Children's Hope Scale and ranges from 6 to 30, with higher scores indicating higher levels of positive, goal-oriented thinking.

[r] School effort outcome (child report) ranges from 1 to 4, with higher scores indicating greater effort during school day and on homework.

[s] Arrest or police involvement in past 6 months is from parent report.

Notes: Impact estimates and outcome means are regression-adjusted for baseline characteristics and are weighted to adjust for survey non-response. See Chapter 2 and Appendix B for outcome definitions.

Sources: Family Options Study 37-month followup survey (parent report); Family Options Study 37-month child survey (child report); ASQ-3; WJ III; HTKS

20-month survey compared with usual care, proportion with any employment since random assignment, and average number of months worked since random assignment.

Even with the reduction in work effort, however, SUB families appeared to be in a better financial position than UC families 20 months after random assignment: the additional resources represented by the housing subsidy improved the food security of SUB families and decreased economic stress.

Exhibit 3-12 shows effects on self-sufficiency outcomes for the SUB-versus-UC comparison during the longer, 37-month followup period. Of the 22 outcomes examined, 8 had statistically significant effects. No effects are evident on either working for pay at the time of the survey (first row) or the proportion of families who had any earnings in the past month (ninth row); however, during the period between the 20-month and 37-month surveys, the study team finds a reduction in work effort in the proportion who performed any work for pay (a

Exhibit 3-12. SUB Versus UC: Impacts on Self-Sufficiency at 37 Months

Outcome	SUB			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Employment status									
Work for pay in week before survey (%)	500	35.7	(48.2)	395	36.6	(48.3)	– 0.9	(3.2)	– 0.02
Any work for pay since 20-month survey[b] (%)	466	58.2	(49.3)	346	64.1	(48.3)	– 5.9*	(3.3)	– 0.12
Months worked for pay since 20-month survey[b,c]	464	6.6	(7.8)	343	7.5	(8.0)	– 1.0*	(0.6)	– 0.12
Any work for pay since RA (%)	500	67.9	(46.2)	394	73.7	(44.8)	– 5.7**	(2.8)	– 0.11
Months worked for pay since RA[c]	494	11.4	(13.3)	386	13.1	(13.3)	– 1.7**	(0.8)	– 0.11
Hours of work per week at current main job[d]	498	10.6	(16.2)	395	11.7	(16.5)	– 1.0	(1.1)	– 0.05
Income sources and amounts									
Annualized current earnings ($)	491	5,817	(10,173)	387	6,066	(9,720)	– 249	(676)	– 0.02
Total family income ($)	470	10,933	(9,420)	383	11,816	(10,387)	– 883	(689)	– 0.07
Anyone in family had earnings in past month (%)	501	45.8	(49.9)	395	49.3	(50.1)	– 3.6	(3.3)	– 0.06
Anyone in family received TANF in past month (%)	501	29.6	(45.4)	395	25.2	(44.2)	4.4	(2.9)	0.09
Anyone in family received SSDI in past month (%)	498	7.8	(26.6)	395	9.0	(30.2)	– 1.2	(1.8)	– 0.04
Anyone in family received SSI in past month (%)	501	14.0	(34.7)	395	13.6	(34.4)	0.4	(1.8)	0.01
Anyone in family received SNAP/Food Stamps in past month (%)	501	82.2	(38.6)	395	81.4	(38.9)	0.8	(2.7)	0.02
Anyone in family received WIC in past month (%)	501	25.4	(43.4)	395	24.4	(43.8)	1.0	(2.9)	0.02
Education and training									
Participated in 2 weeks or more of any school or training since RA (%)	499	38.2	(48.7)	394	40.6	(49.0)	– 2.3	(3.3)	– 0.04
Number of weeks in school/training programs since RA	496	7.3	(14.7)	389	8.9	(17.5)	– 1.6	(1.1)	– 0.08
Participated in 2 weeks or more of school since RA (%)	499	13.0	(33.2)	394	12.1	(32.2)	0.8	(2.3)	0.02
Participated in 2 weeks or more of basic education since RA (%)	499	2.5	(15.3)	394	2.7	(17.2)	– 0.2	(1.0)	– 0.01
Participated in 2 weeks or more of vocational education since RA (%)	499	10.4	(31.6)	394	16.5	(36.5)	– 6.1***	(2.3)	– 0.15
Food security									
Household is food insecure (%)	501	38.9	(48.9)	395	48.5	(50.0)	– 9.6***	(3.5)	– 0.17
Food insecurity scale[e]	499	1.58	(2.00)	394	2.04	(2.11)	– 0.46***	(0.14)	– 0.19
Economic stressors									
Economic stress scale[f]	497	– 0.22	(0.44)	394	– 0.10	(0.49)	– 0.12***	(0.03)	– 0.21

SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error. SNAP = Supplemental Nutrition Assistance Program. SSDI = Social Security Disability Insurance. SSI = Supplemental Security Income. TANF = Temporary Assistance for Needy Families. WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes only families who responded to both 20-month and 37-month followup surveys; not weighted for survey nonresponse.

[c] Number of months worked for pay includes partial calendar months.

[d] Hours of work per week includes those not currently working (that is, those with 0 hours of work per week).

[e] Food insecurity scale ranges from 0 to 6, with higher values indicating higher food insecurity.

[f] Economic stress scale ranges from – 1 to 1, with higher values indicating higher economic stress.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

reduction of 6 percentage points) and in the average number of months worked in this period (a reduction of 1 month).[74] During the entire followup period since random assignment, having priority access to a permanent housing subsidy reduced the proportion with any work for pay by 6 percentage points and reduced the average number of months worked by about 2 months compared with usual care.

The *Short-Term Impacts* report (Gubits et al., 2015) found a reduction in working for pay and in the proportion of families who had earnings at 20 months after random assignment. The 37-month analysis does not find statistically significant impacts on these two outcomes. Given our relatively small sample sizes, however, the study team is unable to confirm that the effects of assignment to the SUB intervention in these areas at the 37-month point are smaller than they were at the 20-month point.

Administrative data provide another opportunity to examine intervention effects on earnings and employment of family heads. Exhibit 3-13 shows impact estimates on outcomes for the 11th through 14th calendar quarters following the quarter of random assignment. Assignment to the SUB group relative to assignment to the UC group reduced the proportion of family heads with any employment during this year from 57.5 percent to 52 percent. The magnitude of this effect on employment is consistent with the effects found in survey data on employment over the 37-month followup period and in the period since the 20-month survey. The analysis of administrative data finds no effect on either total earnings during the year or the number of quarters employed (that is, with positive earnings) during the year.

The second section of Exhibit 3-12 shows no longer-run effect of assignment to the SUB group on total family income in the previous calendar year. The family income measure does not include the value of the housing subsidy provided by the voucher or Supplemental Nutrition Assistance Program (SNAP) benefits. The analysis also finds no effect on receipt of public assistance through Temporary Assistance for Needy Families; SNAP; Special Supplemental Nutrition Program for Women, Infants, and Children; Social Security Disability Insurance; or Supplemental Security Income benefits.

The third section of Exhibit 3-12 shows impacts on education and training since random assignment. Having priority access to a permanent housing subsidy did not cause a detectable impact on the proportion of family heads who participated in any type of school or training during the 37-month period but did appear to cause a reduction in the share that engaged in vocational education (10 percent of SUB families compared with 16 percent of UC families).

Although no effect on total income was evident, the financial position of SUB families appears to have improved with access to a permanent housing subsidy compared with UC families at 37 months after random assignment. Assignment to the SUB intervention lowered the share of households classified as food insecure from 49 to 39 percent and reduced the average score on a food insecurity scale by a 0.19 standardized effect size. These results are not surprising: total household resources—including both cash income (which did not differ between groups) and the value of the housing subsidies—were much higher for the SUB families. Some of these additional resources appear to have been spent on food, thus decreasing food insecurity. Assignment to the SUB intervention also reduced economic stress (measured through survey items that asked about the frequency of not being able to afford rent, medical care, clothing, and so on) by 0.12 points on a scale from -1 to 1.

Exhibit 3-13. SUB Versus UC: Earnings and Employment

Outcome	SUB			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Earnings in quarters 11 to 14 after RA (2015Q3$)	579	5,658	(9,005)	517	5,555	(9,366)	103	(559)	0.01
Any employment in quarters 11 to 14 after RA (%)	579	52.0	(50.0)	517	57.5	(49.5)	– 5.5*	(3.0)	– 0.11
Number of quarters employed in quarters 11 to 14 after RA	579	1.6	(1.7)	517	1.7	(1.7)	– 0.1	(0.1)	– 0.05

SUB = priority access to permanent housing subsidy. UC = usual care.
ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
Note: See Chapter 2 and Appendix B for outcome definitions.
Source: Quarterly wage records from the National Directory of New Hires

[74] Outcomes for the period between the surveys are available for analysis for only those family heads who responded to both the 20-month and 37-month waves of the surveys. Measures specific to the period between the 20-month and 37-month surveys were collected for only those who had been 20-month survey respondents. Family heads who did *not* respond to the 20-month survey were asked questions about the entire followup period since random assignment, reporting information that could not be broken out by a narrower time window.

3.8. Summary of the Permanent Housing Subsidy (SUB) Versus Usual Care (UC) Comparison Across Domains

Having priority access to a permanent housing subsidy produced a notable difference in program use during the 3 years after random assignment between SUB and UC families. Of all families assigned to the SUB group, 83 percent received the housing subsidies offered to families assigned to the SUB group at some point in the followup period compared with 13 percent of families assigned to the UC group. On a broader measure of receipt of any type of permanent housing subsidy, the contrast was also large: 88 percent for the SUB group compared with 38 percent for the UC group.

This contrast in program use led to notable impacts on the housing experiences of SUB families compared with UC families at 37 months after random assignment. The most striking effect of assignment to the SUB intervention relative to usual care was its prevention of a substantial share of subsequent stays in shelter or places not meant for human habitation. Of families assigned to the SUB group, 17 percent spent at least 1 night homeless or doubled up in the 6 months before the 37-month followup survey or at least 1 night in emergency shelter in the 12 months before the survey compared with 38 percent of families assigned to the UC group. That is, assignment to the SUB group after 7 days in emergency shelter reduced subsequent homelessness by more than one-half. Assignment to the SUB group also caused substantial, statistically significant reductions in all other measures of homelessness at the 3-year followup point: the proportion of families who experienced (1) at least 1 night in a shelter or a place not meant for human habitation in the past 6 months, (2) at least 1 night doubled up in the past 6 months, (3) at least 1 night in a shelter or places not meant for human habitation or doubled up in the past 6 months, and (4) at least one stay in emergency shelter in months 21 to 32 after random assignment.

The effects of priority access to a permanent housing subsidy were also evident at the 3-year followup point for measures of housing independence. Altogether, 85 percent of SUB families were living in their own house or apartment compared with 69 percent of UC families. As expected, however, the proportion of SUB families living in their own dwelling place without housing assistance (14 percent) is much lower than the corresponding proportion of UC families (40 percent). Assignment to the SUB intervention also reduced the average number of places where families lived in the past 6 months and housing crowding relative to usual care. In contrast with the short-term findings, no improvement in housing quality was evident.

The *Short-Term Impacts* report (Gubits et al., 2015) found notable indirect benefits of having priority access to a permanent housing subsidy for several family preservation indicators and adult well-being measures 20 months after random assignment. A few of these indirect effects are evident 3 years after random assignment. At that point, having priority access to a permanent housing subsidy reduced psychological distress and intimate partner violence relative to usual care, the latter a one-third reduction. In the family preservation domain, short-term reductions in child separations and foster care placements are not detected at 37 months; however, assignment to the SUB group at that point caused more separations between spouses and partners relative to usual care, an effect not detected in the 20-month analysis.

Some positive effects of priority access to a permanent housing subsidy on child development are evident at 37 months. The analysis continues to find a reduction in the number of schools attended since random assignment and also newly evident effects of more positive school attitudes, fewer sleep problems, fewer behavior problems, and more prosocial behavior. No effects were found on direct measures of verbal and math ability for younger children or on self-reported outcomes of mental health, school effort, and delinquent behavior for older children. The study team finds one adverse effect of priority access to a permanent housing subsidy on the executive functioning of children ages 3.5 to 7 years. This single adverse effect is difficult to interpret in light of the other detected effects of assignment to the SUB intervention, all of which are improvements in well-being.

In the self-sufficiency domain, the study team finds evidence that having priority access to a permanent housing subsidy reduced work effort during the full 3-year followup period and during the second half of the followup period. The team did not find evidence of a reduction in the proportion of family heads working for pay at the time of the 37-month survey or of a reduction in the proportion of families who had earnings income at that point—both of which were observed 20 months after random assignment. Given the relatively small sample sizes, the team was unable to confirm that the effect of assignment to the SUB intervention on work effort at the 37-month point was smaller than it was at the 20-month point. The 37-month analysis finds no effect of priority access to a permanent housing subsidy on receipt of any type of public assistance or disability benefits.

Families assigned to the SUB group appear be in a better financial position than UC families 3 years after random assignment. Without counting housing assistance as income, no difference in income is evident however, the housing assistance is valuable. The freed-up resources appear to lead to an improvement

in the food security of SUB families, lowering the percentage of households classified as food insecure from 36 to 28 percent relative to UC families, and to a decrease in economic stress.

Overall, evidence suggests that families assigned to the SUB group continue to benefit substantially from having priority access to permanent housing subsidy assistance 3 years after random assignment in multiple domains. Families assigned to the SUB group at that point had greater housing stability, less psychological distress, less intimate partner violence, better child outcomes, less food insecurity, and less economic stress than their counterparts assigned to the UC group. Chapter 6 addresses how the SUB intervention compares with the two other active interventions: CBRR and PBTH.

CHAPTER 4.
IMPACTS OF COMMUNITY-BASED RAPID RE-HOUSING (CBRR) COMPARED WITH USUAL CARE (UC)

This chapter presents estimates of the impact of assignment to the community-based rapid re-housing (CBRR) intervention relative to usual care in the study communities. The goal of the analyses presented in this chapter is to determine the extent to which an offer of temporary rental assistance to help families exit shelter rapidly increases families' housing stability and improves other family outcomes 3 years after receiving the offer.

At 20 months after random assignment, assignment to the CBRR group did not affect housing stability, family preservation, or adult well-being compared with assignment to the UC group. Assignment to the CBRR group may have had some consequences for children compared with assignment to the UC group, but the indications were limited and mixed in direction. Assignment to the CBRR group did lead to improved family income in the year before the 20-month survey (annual family income was about $1,100 higher for families assigned to the CBRR group), greater food security, and increased receipt of Supplemental Nutrition Assistance Program benefits.[75]

This chapter begins with a brief description of the assistance offered to the families assigned to the CBRR intervention. It then reviews the extent to which families in both the CBRR and UC groups used temporary subsidies and other housing and services programs available to them in the study sites during the course of the followup period. Then, the core sections of the chapter present the 3-year effects of being assigned to the CBRR group (compared with being assigned to the UC group) on outcomes within each of the study domains: housing stability, family preservation, adult well-being, child well-being, and self-sufficiency. The final section summarizes the 3-year impacts of the CBRR intervention relative to usual care.

4.1. Community-Based Rapid Re-Housing (CBRR) Intervention

The CBRR intervention provides program participants with priority access to temporary rental assistance (usually for 7 to 8 months) and limited services focused on housing search assistance, self-sufficiency, and basic services coordination.[76] The programs studied largely conformed to standards that HUD and the U.S. Interagency Council on Homelessness later established for rapid re-housing programs in guidance issued in 2012.[77] The CBRR intervention was available in all 12 study sites and was provided by 27 CBRR programs across the sites.

Nearly all the CBRR providers in the Family Options Study were community-based nonprofit organizations. The only exceptions were in Louisville, Kentucky, and Phoenix, Arizona, where city government agencies provided CBRR programs. CBRR programs were funded by the rapid re-housing component of the Homelessness Prevention and Rapid Re-Housing

[75] *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families* (Gubits et al., 2015) also presented results showing that assignment to the CBRR group led to more rapid departures from emergency shelter than assignment to the UC group by about 2 weeks, but not more rapid departures than for families assigned to the SUB, group or to the PBTH group. Revised analysis using updated Program Usage Data on length of emergency shelter stays, however, has resulted in changes to the findings about length of initial shelter stay. For the full study sample (not limited to 20-month survey respondents), families assigned to the CBRR group left shelter, on average, 1 week faster than families assigned to the UC group. This difference is not statistically significant. The results of the revised analysis are shown in Appendix I.

[76] Chapter 7 of Gubits et al., 2015 provides additional details about the CBRR intervention. The adjective "community-based" in the name of the intervention is intended to describe the usual providers of the assistance. The study does not distinguish different types of rapid re-housing programs and so the terms *community-based rapid re-housing* assistance and *rapid re-housing* assistance are used interchangeably in the text.

[77] http://usich.gov/population/families/core-components-rrh/.

Program (HPRP) in all the sites except one.[78, 79] The HPRP rapid re-housing funding could be used to provide rental assistance (up to 18 months), security deposits, utility deposits and payments, help with moving costs, and hotel and motel vouchers. HPRP also could fund case management for participating families. As defined by the study, families are considered to have used rapid re-housing assistance only when they have received rental assistance. (This rental assistance was usually accompanied by other HPRP-funded assistance, including some case management.) Any rental assistance paid for with HPRP funds had to meet rent reasonableness standards, and units had to pass a habitability inspection. The inspection requirements were slightly less stringent than the Housing Quality Standards required for the Housing Choice Voucher program form of permanent housing subsidy (SUB).

4.2. Program Use by Families in the Community-Based Rapid Re-Housing (CBRR) Versus Usual Care (UC) Comparison

Each impact comparison in the study may be thought of as a distinct experiment or test. This chapter addresses only the comparison between the CBRR intervention and usual care, without reference to the families who were randomized to the SUB or PBTH interventions. In total, 1,144 families took part in the test of the CBRR intervention versus usual care. These families all had both the CBRR intervention and usual care available to them at the time of random assignment and were assigned to one of these two interventions; 569 families were assigned to the CBRR group, and 575 families were assigned to the UC group.[80] Of these 1,144 families, 868 (434 CBRR families and 434 UC families), or 76 percent, responded to the 37-month followup survey and are included in the CBRR-versus-UC comparison reported in this chapter. The current section describes the extent to which these 434 CBRR families used rapid re-housing and other types of homeless and housing assistance during the followup period. Parallel information is also presented for the 434 included UC families.

Exhibit 4-1 shows the use of eight types of homeless and housing assistance programs. The first column shows the percentage of families assigned to the CBRR group who ever used each program type during the followup period. The second row (shaded in the exhibit) shows the takeup of rapid re-housing by the families assigned to that intervention; 58.5 percent of families referred to a CBRR program received rapid re-housing assistance at some point during the followup period—usually meaning they followed up on the referral, were deemed eligible by the program, found a housing unit, and received one of the types of temporary rental assistance offered to families assigned to the CBRR intervention.[81, 82]

The second column shows the percentage of families assigned to the UC group who ever used each program type during the followup period.[83] The shaded row of the second column shows that 22.5 percent of the UC families received rapid re-housing assistance during the followup period, despite not being given priority access to rapid re-housing. These families may have sought rapid re-housing rental assistance after learning of its availability (perhaps from friends or family members) or they may have already been clients of the community-based nonprofit organizations that administered the local CBRR programs.[84]

The first row of the exhibit and rows three through six show participation in other nonshelter types of homeless and housing assistance programs. The seventh row shows participation in any form of permanent subsidy. Any form of permanent housing subsidy includes the permanent subsidy programs offered to the SUB group, permanent supportive housing, public housing, and project-based vouchers/Section 8 projects. Of the UC families in the CBRR-versus-UC comparison, 38 percent found their way to permanent housing subsidy programs and

[78] HPRP was authorized through the American Recovery and Reinvestment Act of 2009. Across the nation, communities received $1.5 billion in HPRP funding, a one-time funding stream available for 3 years from program inception, to provide homelessness prevention and rapid re-housing assistance to individuals and families facing homelessness.

[79] In Boston, the CBRR intervention was funded by the State of Massachusetts. The Boston programs offered assistance very similar to HPRP, although rental assistance could be provided for longer periods. The Minneapolis and Salt Lake City CBRR programs supplemented HPRP funds with state funds and other ARRA funds, respectively.

[80] In the entire study, 746 families were randomly assigned to the UC group. Only 575 of these families had the CBRR intervention available to them when they were randomized, however. Therefore, only those 575 UC families are part of the CBRR-versus-UC comparison sample. All 569 families randomly assigned to the CBRR intervention during the course of the study had usual care available to them, so all are part of the CBRR-versus-UC comparison sample.

[81] All percentages, means, and medians in the exhibit are weighted to adjust for survey nonresponse and, hence, as best as possible, represent the full sample of 1,144 families assigned to this experimental contrast. The findings on program use are thus in line with similarly weighted impact estimates provided subsequently in the chapter.

[82] The rapid re-housing use in the table for the CBRR group also includes a small number of CBRR families who did not use the rapid re-housing assistance when initially offered, but who did use rapid re-housing rental assistance at a later time during the followup period.

[83] The percentages in the first seven rows of these columns are not mutually exclusive because some families used more than one program type during the followup period.

[84] Emergency shelter staff committed to not referring UC families to active interventions to which they did not have priority access. This commitment may not have been upheld in all cases.

Exhibit 4-1. CBRR Versus UC: Program Use Since RA

Type of Housing Assistance	Percent Ever Used From RA to 37-Month Followup Survey[a]		Number of Months Used From RA to 37-Month Followup Survey, if Ever Used Type of Assistance				Percent Used in Month of Followup Survey Response	
			CBRR		UC			
	CBRR	UC	Mean	Median	Mean	Median	CBRR	UC
Permanent housing subsidies offered to the SUB group[b]	9.8	12.2	20.0	21.5	19.2	19.5	8.5	10.2
Rapid re-housing[c]	58.5	22.5	8.0	7.5	7.8	6.5	2.3	1.1
Transitional housing[d]	23.2	27.5	9.9	7.5	11.6	9.0	4.2	3.3
Permanent supportive housing	9.8	11.7	15.9	12.0	17.3	17.0	6.7	8.0
Public housing	10.7	9.8	18.1	18.5	18.7	16.5	9.4	8.2
Project-based vouchers/Section 8 projects	5.6	6.3	18.4	17.5	17.3	15.5	5.3	4.8
Any permanent housing subsidy[e]	*35.4*	*37.9*	*18.3*	*18.5*	*19.2*	*19.5*	*29.7*	*31.1*
Emergency shelter[f]	90.7	90.0	4.3	2.5	4.6	2.8	2.6	5.2
No use of homeless or housing programsg	9.2	24.4	—	—	—	—	61.3	59.9
N	**434**	**434**	**—**	**—**	**—**	**—**	**434**	**434**

CBRR = priority access to community-based rapid re-housing. UC = usual care.

RA = random assignment.

[a] Percentage of families who ever used a type of assistance program during the period from the month of RA to the month of 37-month followup survey response (median period duration: 38 calendar months). Percentages do not add to 100 because some families used more than one program type during the followup period.

[b] Subsidies offered to the SUB group are housing choice vouchers plus site-specific programs offered to families assigned to the SUB group in Bridgeport, Connecticut, and Honolulu, Hawaii.

[c] Temporary subsidies offered to the CBRR group.

[d] All types of transitional housing, including those offered to the PBTH group.

[e] Includes the types of permanent subsidy offered to the SUB group plus permanent supportive housing, public housing, and project-based vouchers/Section 8 projects.

[f] All families were in emergency shelter at RA. Percentages less than 100 percent for ever used emergency shelter are because of missing data on shelter use.

[g] Indicates no use of the first six program types in this table during any of the followup period and no use of emergency shelter after the first 6 months after RA. No use in the month of followup survey response indicates no use of any of these seven program types.

Notes: Percentages are regression adjusted, controlling for site and randomization ratio. Percentages, means, and medians are weighted for survey nonresponse to represent full comparison sample.

Source: Family Options Study Program Usage Data

27 percent found their way to transitional housing—despite the lack of preferential access to those programs through the study. The proportions of the CBRR group that used programs other than rapid re-housing programs are roughly similar to those of the UC group; thus, assignment to the CBRR group did not act as a conduit to permanent subsidies to a greater extent than did being in the UC group.[85] The ninth row shows the percentages of families in the CBRR and UC groups who used none of the six types of programs during the 37-month followup period *and* did not use emergency shelter from the 7th month after random assignment onward. About 9 percent of CBRR families and 24 percent of UC families fall into this group.

The mean and median number of months of use for each program type are also shown in the exhibit (third and fourth columns for CBRR families, fifth and sixth columns for UC families) *for only those families who ever used a given program type*.[86] The number of months of rapid re-housing assistance use (median of 8 months) for the families assigned to the CBRR group is similar to that of the 23 percent of UC families who received rapid re-housing assistance (median of 7 months).[87] Additional detail about the use of the rapid re-housing by CBRR families is shown in Exhibit 4-2. This exhibit shows that nearly one-half (49 percent) of CBRR families who used rapid re-housing did so for less than 7 months, and 86 percent did so for less than 12 months.[88] These relatively short periods of use may be surprising, given that the program rules permit use of rapid re-housing for up to 18 months. Instead, these short periods of use reflect the reality of how the program was being administered in the study sites and how families were using it.

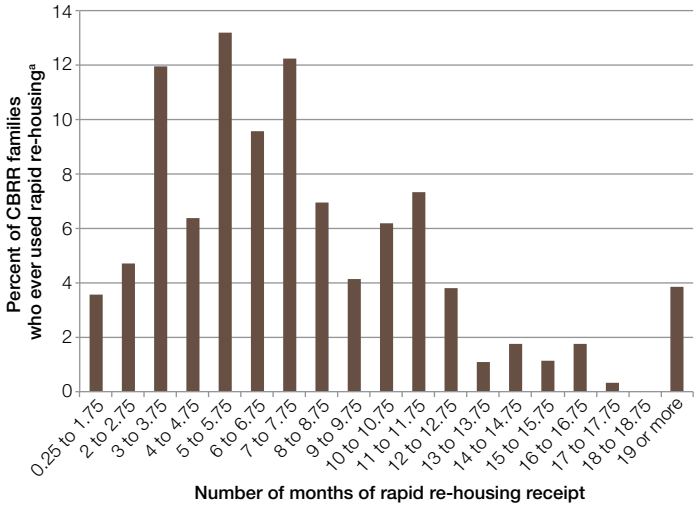
[85] Although proportions that used any permanent housing subsidy are similar in the CBRR and UC groups, Exhibit 4-5 shows that assignment to the CBRR group caused some delay in the use of permanent housing subsidies.

[86] Hence, 0 values are not factored into the means, nor do they pull downward the medians of the various distributions.

[87] Because the distribution of receipt durations is nonnormal (shown in Exhibit 4-2), the study team used the median rather than the mean to describe the typical length of rapid re-housing rental assistance receipt.

[88] By policy, HPRP-funded rapid re-housing assistance was limited to 18 months. Exhibit 4-2 shows that very few families received community-based rapid re-housing for longer periods.

Exhibit 4-2. Number of Months of Rapid Re-Housing Receipt During Followup Period by CBRR Families Who Ever Used Rapid Re-housing



CBRR = priority access to community-based rapid re-housing.

[a] Percentages are weighted for survey nonresponse to represent all families in comparison sample.

Note: N = 252.

Source: Family Options Study Program Usage Data

Whereas the previous columns consider all experience between randomization and the survey, the last two columns consider program use as of the month of the 37-month survey. Although most outcomes in the report are expected to be influenced by assistance received during the entire followup period, some outcomes will be particularly strongly influenced by assistance received at the time of the followup survey response. The second row of the seventh and eighth columns shows that, in both the CBRR and UC groups, rapid re-housing assistance had ended by the followup survey for most of the families who ever received it. Most CBRR families (61 percent) and UC families (60 percent) were not participating in a homeless or housing program at the time they responded to the followup survey. Thus, differences are expected in the outcomes of CBRR and UC families only to the extent that these outcomes reflect a lasting influence of families having been offered temporary rental assistance to help them leave homelessness.

Exhibit 4-3 provides a more detailed picture of the timing of program use by the families in the CBRR-versus-UC comparison. The top panel shows the proportions of families within the CBRR group who are receiving different types of assistance during each calendar month for the first 32 months after random assignment.[89, 90] It is not surprising that, in the first 10 months after random assignment, program use for CBRR families is dominated by rapid re-housing. After this period, however, use of rapid re-housing declines steadily. After month 16, all program use levels off, with only about 40 percent of families using any type of program in any month. The use of permanent housing subsidies steadily increases throughout the followup period and accounts for more than one-half of the remaining program use after month 18.

The bottom panel shows the proportions of program use over time for the UC families. Compared with the CBRR group, the UC group used rapid re-housing much less (as engineered by the study) and used transitional housing and permanent housing subsidies somewhat more extensively following their initial stay in emergency shelter. After about month 18, the total and by-type program use of the UC group is similar to that of the CBRR group. Appendix Exhibit H-1 shows additional information about program use in the second half of the followup period, from month 19 after random assignment until the month of the 37-month survey response.

As Exhibits 4-1 and 4-3 make clear, the CBRR families used a range of programs in addition to the program to which they were referred by the study, a pattern that is consistent with the design of the study. Families were not required to use the program to which they were given priority access and were also not forbidden from using other programs that were available to them in their community. The intent of the study was to maximize use of the programs to which families assigned to the intervention were given priority access (in this case, maximize use of rapid re-housing by the CBRR families) and to create the largest possible contrast between the program mixes of different assignment groups (in this case, CBRR versus UC). As shown in the exhibit, the use of rapid re-housing was different for the CBRR and UC groups. The contrast in usage of rapid re-housing—58.5 percent for CBRR families and 22.5 percent for UC families—is sizable, although smaller than the analogous contrast between the SUB and UC groups (where use of some form of permanent subsidy was higher for both groups).

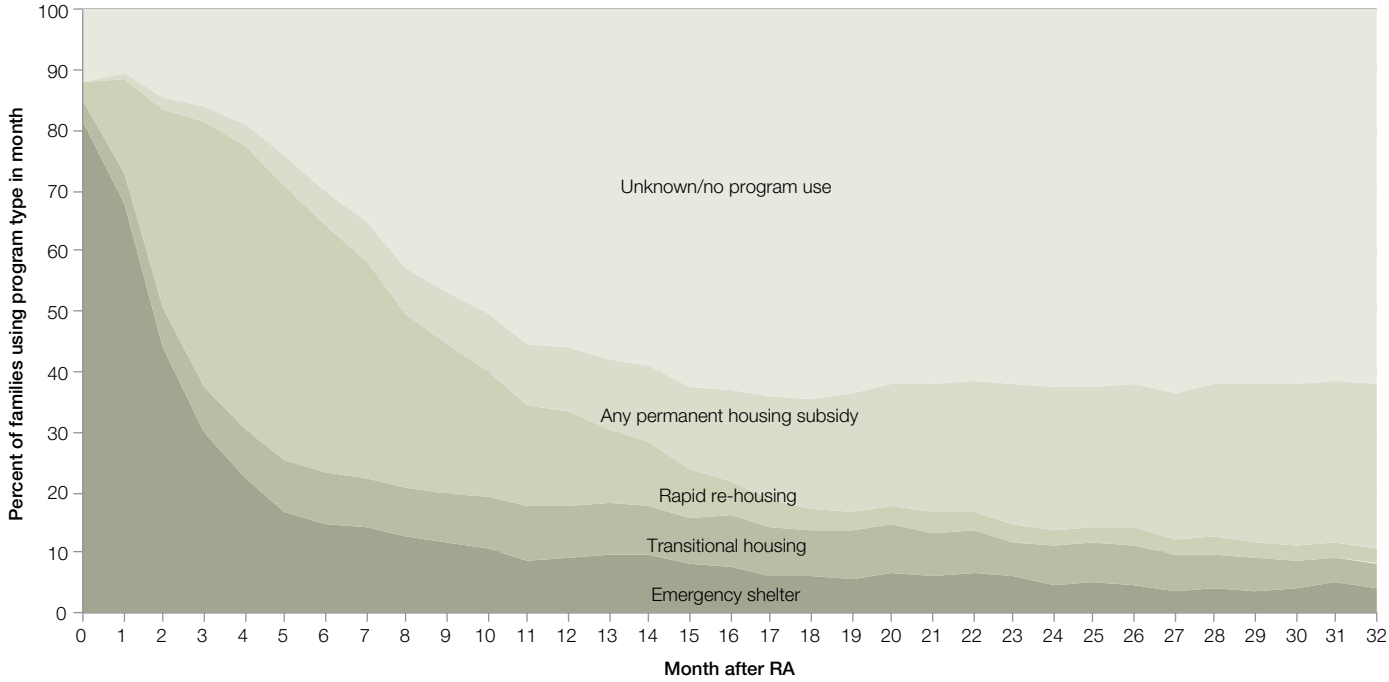
As is conventional in random assignment analyses, our goal is to estimate the intention-to-treat (ITT) impact—that is, the impact of offering a program to families, regardless of whether they actually used that program (or some other program). This goal is consistent with the policy option of making a treatment available to a family but not requiring the family to use that treatment.

[89] Month 32 is the latest month for which the study team has data for all the families who responded to the 37-month survey.

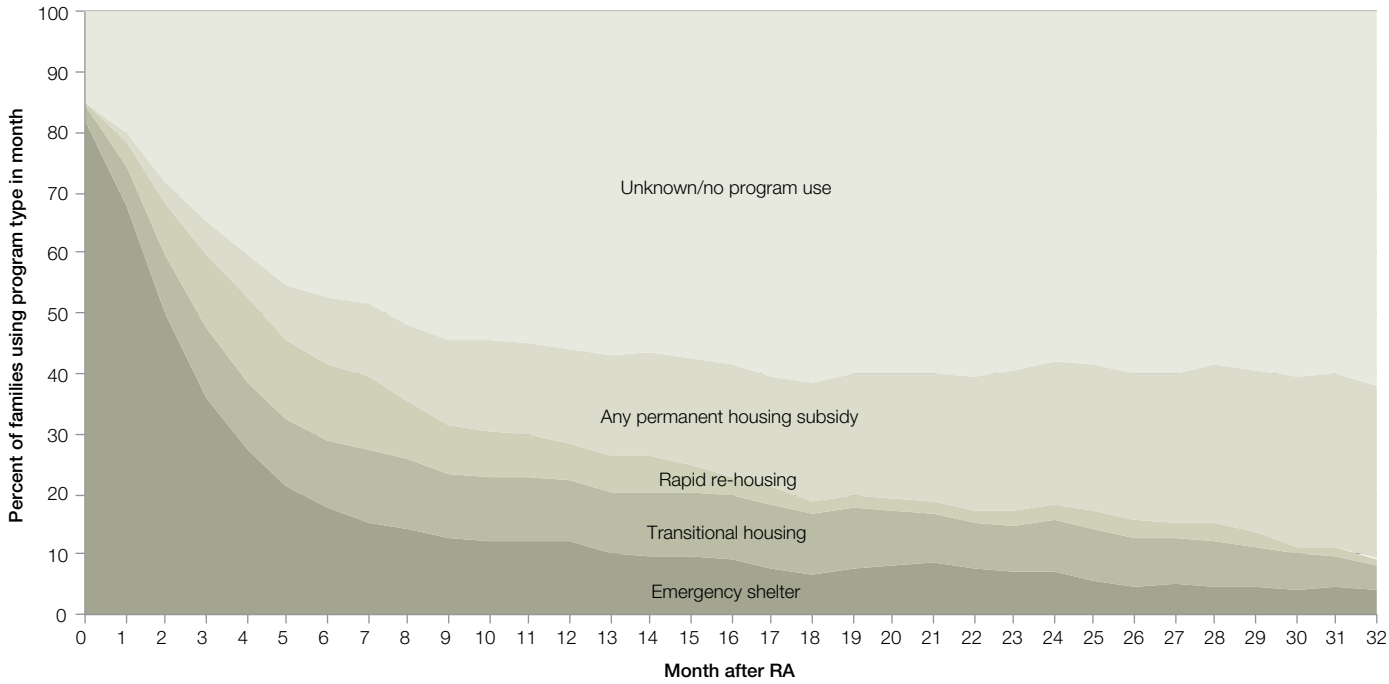
[90] Exhibit 3-4 is closely related to the analysis of the costs of this pairwise comparison presented in Chapter 9. The reader should note that the exhibit does not indicate the two-way flows of families moving into and out of these program types from month to month. Instead, it reflects only the overall usage level in a given month.

Exhibit 4-3. CBRR Versus UC: Program Use in Each Month of Followup Period

Panel A: Program Use of CBRR Families for 32 Months After RA



Panel B: Program Use of UC Families for 32 Months After RA



CBRR = priority access to community-based rapid re-housing. UC = usual care.
RA = random assignment.
Notes: Families who have more than one type of program use in a calendar month are counted fractionally in each type.
Source: Family Options Study Program Usage Data

Because not all families randomly assigned to the CBRR group *used* rapid re-housing and because some families assigned to the UC group *did use* rapid re-housing, the true ITT impact is likely smaller than it would have been had the gap in rapid re-housing usage been wider (assuming that rapid re-housing truly has a nonzero impact on families who use it). In particular, the difference in the use of rapid re-housing by the CBRR and UC groups is narrow enough, given the relatively small sample size available for analysis, that the study may have failed to detect as statistically significant one or more ITT impacts large enough to be of policy importance.

The remainder of this chapter reports estimated impacts in the various outcome domains that—if statistically significant—can be causally attributed to the offer of a temporary housing subsidy with light case management to the families randomly assigned to the CBRR group at the start of the followup period in contrast with no such directed referral or privileged access being available to UC families.

4.3. Impacts on Housing Stability in the Community-Based Rapid Re-Housing (CBRR) Versus Usual Care (UC) Comparison

Proponents of community-based rapid re-housing share a view with the proponents of permanent housing subsidies: the lack of housing affordability is the root cause of homelessness among families. Because permanent housing subsidies are constrained by limited appropriations, proponents of rapid re-housing argue that limited resources dedicated to homelessness could be stretched to create the best outcomes for the most people by making subsidies temporary. The CBRR-versus-UC comparison offers evidence on whether priority access to the temporary subsidies is an effective tool for improving housing stability relative to usual care.

Exhibit 4-4 shows the impacts of assignment to the CBRR group on homelessness, housing independence, residential moves, and housing quality. Relative to assignment to the UC

Exhibit 4-4. CBRR Versus UC: Impacts on Housing Stability at 37 Months

Outcome	CBRR			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Homelessness or doubled up during the followup period									
At least 1 night homeless[b] or doubled up in past 6 months or in shelter in past 12 months (%) **[confirmatory]**[c]	434	39.7	(48.8)	434	37.8	(48.5)	1.9	(3.6)	0.03
At least 1 night homeless[b] or doubled up in past 6 months (%)	434	35.5	(47.7)	434	33.7	(47.2)	1.8	(3.5)	0.03
At least 1 night homeless[b] in past 6 months (%)	434	16.8	(36.6)	434	17.0	(37.4)	– 0.1	(2.8)	0.00
At least 1 night doubled up in past 6 months (%)	434	30.5	(45.8)	434	27.6	(44.8)	2.8	(3.3)	0.05
Any stay in emergency shelter in past 6 months (%) [Program Usage Data]	434	6.8	(24.2)	434	8.8	(28.0)	– 2.0	(2.2)	– 0.06
Any stay in emergency shelter in months 21 to 32 after RA (%) [Program Usage Data]	434	16.3	(36.2)	434	18.8	(38.8)	– 2.5	(2.9)	– 0.06
Number of days homeless[b] or doubled up in past 6 months	433	50.2	(74.1)	431	46.2	(73.6)	4.0	(5.6)	0.05
Number of days homeless[b] in past 6 months	434	15.7	(41.6)	434	18.5	(48.4)	– 2.8	(3.7)	– 0.05
Number of days doubled up in past 6 months	433	38.4	(66.7)	431	31.7	(61.4)	6.7	(4.7)	0.09
Housing independence									
Living in own house or apartment at followup (%)	434	68.8	(46.7)	434	69.3	(46.2)	– 0.6	(3.4)	– 0.01
Living in own house or apartment with no housing assistance (%)	432	39.4	(48.6)	431	41.3	(49.1)	– 1.9	(3.5)	– 0.03
Living in own house or apartment with housing assistance (%)	432	29.9	(45.9)	431	27.8	(45.4)	2.0	(3.3)	0.04
Number of places lived									
Number of places lived in past 6 months[d]	434	1.6	(1.0)	434	1.6	(1.1)	0.0	(0.1)	0.02
Housing quality									
Persons per room	412	1.6	(1.3)	411	1.6	(1.2)	0.0	(0.1)	0.03
Housing quality is poor or fair (%)	415	30.4	(45.9)	410	34.5	(47.2)	– 4.1	(3.6)	– 0.08

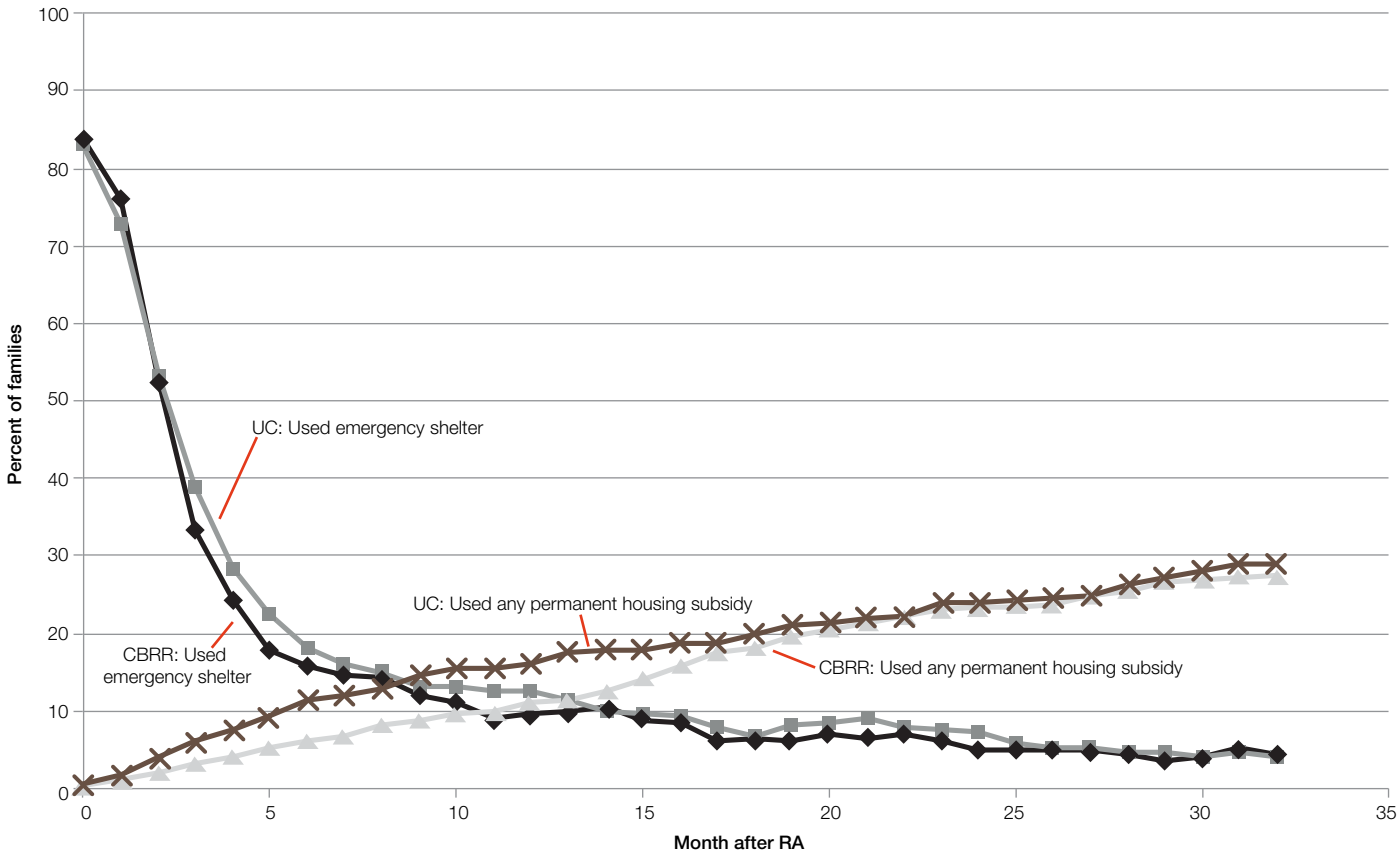
CBRR = priority access to community-based rapid re-housing. UC = usual care.
ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
[b] The definition of "homeless" in this report includes stays in emergency shelters and places not meant for human habitation. It excludes transitional housing.
[c] After adjustment of multiple comparisons, the impact on the confirmatory outcome is not statistically significant at the .10 level for the CBRR-versus-UC comparison.
[d] The number of places lived in past 6 months is topcoded at 6 places.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.
Sources: Family Options Study 37-month followup survey; Program Usage Data

group, at the 3-year followup survey, assignment to the CBRR group does not appear to reduce homelessness in this sample of families.

None of the eight impact estimates for homelessness and doubled-up outcomes is statistically different from 0. Assignment to the CBRR group has no effect on the proportion of families experiencing homelessness 3 years after random assignment in measures based on the survey, based on Program Usage Data, or based on a combination of the two. The estimates also provide no evidence of effects on the number of days spent homeless or doubled up in the 6 months before the 37-month followup survey. Nearly two-fifths of both the CBRR group (39.7 percent) and the UC group (37.8 percent) reported being homeless or doubled up in the past 6 months or appeared in shelter records for the past year at the time of the followup survey. The last six rows of Exhibit 4-4 show that assignment to the CBRR group has no effect on three measures: housing independence, the number of places families lived, and housing quality relative to assignment to the UC group.

One main goal of the CBRR intervention is to reduce the use of emergency shelter. Exhibit 4-5 shows the month-by-month impacts of random assignment to the CBRR group versus the UC group on the proportions of families who had at least 1 night in emergency shelter and with use of any permanent housing subsidy. Compared with proportions of the UC group, similar proportions of the CBRR group used emergency shelter in most months. Only during some months within the 1st year after random assignment does it appear that assignment to the CBRR group diverts families from using emergency shelter relative to assignment to the UC group.[91]

Exhibit 4-5. CBRR Versus UC: Percent of Families With Any Stay in Emergency Shelter and Any Permanent Housing Subsidy During Month, by Number of Months After RA



CBRR = priority access to community-based rapid re-housing. UC = usual care.

RA = random assignment.

Notes: Percentages are weighted for survey nonresponse to represent all families in the SUB-versus-UC comparison sample. Missing data on emergency shelter stays bias the percentages somewhat downward. The baseline stay in emergency shelter does not appear in the data for 16.7 percent of UC respondent families. The missing data rate for subsequent stays in emergency shelter is unknown. Any permanent housing subsidy includes the permanent subsidy programs offered to the SUB group, permanent supportive housing, public housing, and project-based vouchers/Section 8 projects.

Source: Family Options Study Program Usage Data

[91] CBRR proportions in emergency shelter are lower than those of the UC group by statistically significant amounts (each at the .10 level) in months 3, 5, and 11.

Although having priority access to rapid re-housing appears to have little effect on the use of emergency shelter, it does appear to reduce the use of permanent housing subsidies (including permanent supportive housing programs and mainstream housing programs) during the first half of the followup period. The proportions of the CBRR families using any permanent housing subsidy are about 6 percentage points lower than the corresponding proportions for the UC families in months 6 to 14 (and are statistically significantly different in months 2 to 14). These differences disappear in the second half of the followup period, when use of permanent housing subsidies by the CBRR group catches up to that of the UC group.

Overall, it appears that the offer of priority access to rapid re-housing for the CBRR families has no effect on housing stability during the 37-month followup period relative to usual care.

4.4. Impacts on Family Preservation in the Community-Based Rapid Re-Housing (CBRR) Versus Usual Care (UC) Comparison

Any effects of assignment to the CBRR group on family preservation would be expected to be indirect, via increases in housing stability, but no such effects were detected. Exhibit 4-6 shows that no evidence from survey data is found of longer-term effects on family separations from children or from spouses or partners who were with the family at baseline. Nor is evidence found of effects on reunifications of the much smaller number of family members who were separated from the family at baseline. No effect was detected on foster care placements.

Exhibit 4-7 shows impacts on outcomes from the child welfare agency administrative data collected in 5 of the 12 study sites. No effect is detected on the proportion of family heads with a formal child separation that began after random assignment.

Exhibit 4-6. CBRR Versus UC: Impacts on Family Preservation at 37 Months

Outcome	CBRR			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Current or recent separations of family members present at baseline									
Family has at least one child separated in past 6 months (%)	430	15.3	(35.9)	424	15.8	(35.6)	– 0.5	(2.6)	– 0.01
Family has at least one foster care placement in past 6 months[b] (%)	430	3.8	(18.4)	428	3.2	(17.2)	0.6	(1.6)	0.03
Spouse/partner separated in past 6 months, of those with spouse/partner present at RA (%)	110	44.8	(49.0)	112	36.2	(48.9)	8.6	(7.2)	0.15
Reunification of family members reported as separated at baseline									
Family has at least one child reunified, of those families with at least one child absent at RA (%)	80	35.0	(49.3)	82	31.6	(45.8)	3.4	(7.4)	0.06
Spouse/partner reunified, of those with spouse/partner absent at RA (%)	41	31.3	(44.9)	46	21.1	(40.1)	10.2	(10.8)	0.22

CBRR = priority access to community-based rapid re-housing. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Foster care placement outcome includes any children (present at baseline) who are placed in foster care or adopted by another family at the time of followup.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey.

Exhibit 4-7. CBRR Versus UC: Impacts on Child Welfare Outcomes

Outcome	CBRR			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Had a formal child separation that began after RA (%)	220	10.5	(30.7)	194	11.3	(31.8)	– 0.7	(2.9)	– 2.24
Total days during followup separated from at least one child[b]	220	47.4	(176.3)	194	76.7	(247.9)	– 29.3*	(15.5)	– 0.12

CBRR = priority access to community-based rapid re-housing. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes separations started before and after RA. Length of followup varies by site. Alameda County = 1,075 days. Baltimore = 1,071 days. Kansas City = 1,069 days. Minneapolis = 1,046 days. Phoenix = 1,123 days.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions. Sample limited to five sites where child welfare records were collected (Alameda County, Baltimore, Kansas City, Minneapolis, and Phoenix).

Source: State child welfare agency records

The study team did find an effect on total time with any separation. Assignment to the CBRR group reduced the total number of days separated from at least one child during the 3-year followup period by 29 days. This difference represents a reduction of about 5 months for those family heads who experienced a separation.[92] The study team investigated whether this effect was associated with the particular 5 sites where administrative data were collected. In the survey data, the team finds a reduction of 10 percentage points for CBRR families versus UC families for the subsample of these 5 sites on the proportion of family heads with any foster care or adoption. The magnitude of this effect contrasts with the estimate for the full sample of less than 1 percentage point (shown in the first row of Exhibit 4-6). This evidence shows that the effect detected in the administrative data may arise because the analysis sample is limited to these particular 5 sites. The study team therefore suspects that the effect in 5-site administrative data does not generalize to all 12 sites.

4.5. Impacts on Adult Well-Being in the Community-Based Rapid Re-Housing (CBRR) Versus Usual Care (UC) Comparison

The theory and goals of the CBRR intervention compared with those of usual care do not hypothesize important effects on adult well-being. Consistent with this expectation, 20 months after random assignment, no differences were detected between the CBRR and UC groups on any measure of adult well-being. Because having priority access to the temporary subsidies of the CBRR intervention did not lead to improvements in well-being in the short term, one would not expect longer-term benefits to emerge well after the subsidies ended, and, indeed, they did not. As shown in Exhibit 4-8, no evidence indicates 3-year impacts on any measure of adult physical or mental health, trauma or intimate partner violence, or substance dependence or abuse.

Exhibit 4-8. CBRR Versus UC: Impacts on Adult Well-Being at 37 Months

Outcome	CBRR			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Adult physical health									
Health in past 30 days was poor or fair (%)	433	31.5	(46.2)	434	30.2	(45.8)	1.3	(3.1)	0.02
Adult mental health									
Goal-oriented thinking[b]	429	4.46	(0.98)	431	4.57	(0.98)	– 0.10	(0.07)	– 0.09
Psychological distress[c]	432	6.74	(5.63)	433	6.90	(5.72)	– 0.16	(0.39)	– 0.02
Adult trauma symptoms									
Post-traumatic stress disorder (PTSD) symptoms in past 30 days (%)	430	20.8	(39.7)	433	21.3	(41.7)	– 0.5	(3.0)	– 0.01
Adult substance use									
Alcohol dependence or drug abuse[d] (%)	433	9.3	(29.3)	433	11.1	(31.7)	– 1.7	(2.2)	– 0.05
Alcohol dependence[d] (%)	433	7.5	(26.9)	434	7.9	(26.9)	– 0.4	(2.0)	– 0.01
Drug abuse[d] (%)	433	3.0	(15.8)	433	4.7	(22.0)	– 1.8	(1.4)	– 0.07
Experience of intimate partner violence									
Experienced intimate partner violence in past 6 months (%)	434	7.6	(26.5)	433	9.2	(29.9)	– 1.6	(2.0)	– 0.05

CBRR = priority access to community-based rapid re-housing. UC = usual care.
ITT = intention-to-treat. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
[b] Goal-oriented thinking is measured with a modified version of the State Hope Scale and ranges from 1 to 6, with higher scores indicating higher levels of positive, goal-oriented thinking.
[c] Psychological distress is measured with the Kessler Psychological Distress Scale (K6) and ranges from 0 to 24, with higher scores indicating greater distress.
[d] Alcohol dependence is measured with the Rapid Alcohol Problems Screen (RAPS-4), and drug abuse is measured with six items from the Drug Abuse Screening Test (DAST-10). Both are measured for the 6 months before the 37-month survey.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.
Source: Family Options Study 37-month followup survey.

[92] Dividing mean number of days separated by the proportion of family heads with at least one separation (not shown) results in an average of 443 days for CBRR family heads with at least one separation compared with an average of 585 days for UC family heads.

4.6. Impacts on Child Well-Being in the Community-Based Rapid Re-Housing (CBRR) Versus Usual Care (UC) Comparison

Any effects of assignment to the CBRR group on child well-being would be expected to be indirect, via increases in housing stability. Given the lack of effect of assignment to the CBRR group on housing stability compared with the UC group at 37 months, the study team would not expect strong effects on child well-being, and, indeed the team finds none. The team finds evidence of one effect on outcomes measured across age groups—children in the CBRR group have lower behavior problems with an effect size of 0.12 standard deviations (Exhibit 4-9). The study team finds no evidence of age-specific effects (Exhibit 4-10). With 1 significant effect out of 29—fewer than would be expected by chance—the team concludes that assignment to the CBRR group had little effect on children's well-being relative to assignment to the UC group.

4.7. Impacts on Self-Sufficiency in the Community-Based Rapid Re-Housing (CBRR) Versus Usual Care (UC) Comparison

Any effects of assignment to the CBRR group on family self-sufficiency relative to assignment to the UC group would be expected to be indirect. In particular, spending 4 to 6 months in stable housing within families' own communities with a sharply lower burden of housing costs could enable adult family members to concentrate more on employment and earnings and even enhance their skills through education and training participation. In some CBRR programs, case management guidance and referrals may further enhance efforts at work and access to resources that make families more self-sufficient.

For the 37-month period following families' assignment to the CBRR intervention, the analysis shows significant effects of assignment to the CBRR intervention on 2 of 20 outcomes examined, or about the number that would be expected by chance alone (see Exhibit 4-11). Assignment to the CBRR intervention led to increased participation in Temporary Assistance for Needy Families (TANF) in the month before the 37-month survey (28 percent of families assigned to the CBRR group reported receiving TANF compared with 21 percent of families assigned to the UC group). Assignment to the CBRR intervention also reduced family heads' participation in 2 or more weeks of vocational education in the 3-year period since random assignment compared with usual care. In other self-sufficiency areas, most notably in the subdomains of employment, income, and food security, the study team finds no evidence of impacts of assignment to the CBRR group relative to assignment to the UC group.

Exhibit 4-12 shows impact estimates from administrative data on outcomes for quarters 11 to 14 after the quarter of random assignment. The analysis of administrative data finds no effect

Exhibit 4-9. CBRR Versus UC: Impacts on Child Well-Being Across Age Groups at 37 Months

Outcome	CBRR			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Child education									
Number of schools attended since RA[b]	514	2.1	(1.0)	521	2.1	(0.9)	0.0	(0.1)	0.01
Grade completion (not held back) (%)	427	91.52	(28.51)	428	92.48	(26.33)	– 0.96	(2.01)	– 0.03
School grades[c]	399	3.1	(0.9)	387	3.1	(0.9)	0.0	(0.1)	0.00
Child physical health									
Poor or fair health in past 30 days (%)	597	5.5	(22.5)	581	6.1	(24.4)	– 0.6	(1.6)	– 0.02
Well-child checkup in past year (%)	597	90.8	(28.9)	580	90.0	(28.6)	0.8	(2.3)	0.02
Child has regular source of health care (%)	598	93.7	(23.8)	580	92.6	(25.7)	1.0	(1.9)	0.03
Sleep problems[d]	597	2.08	(1.03)	583	2.19	(1.10)	– 0.12	(0.08)	– 0.08
Child behavioral strengths and challenges									
Behavior problems[e]	576	0.38	(1.22)	560	0.58	(1.28)	– 0.20**	(0.10)	– 0.12
Prosocial behavior[f]	577	– 0.18	(1.13)	561	– 0.23	(1.10)	0.06	(0.09)	0.04

CBRR = priority access to community-based rapid re-housing. UC = usual care.
ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
[b] Number of schools outcome is topcoded at 4 or more schools.
[c] School grades outcome is defined as 1 = mostly Ds or Fs, 2 = mostly Cs, 3 = mostly Bs, 4 = mostly As.
[d] Sleep problems outcome ranges from 1 to 5, with higher values indicating more frequent tiredness upon waking and during the day.
[e] Behavior problems outcome is measured as the standardized Total Difficulties score from the Strengths and Difficulties Questionnaire (SDQ).
[f] Prosocial behavior is measured as the standardized prosocial domain score from the SDQ.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.
Source: Family Options Study 37-month followup survey (parent report)

Exhibit 4-10. CBRR Versus UC: Impacts on Child Well-Being Developmental Outcomes by Age Group at 37 Months

Outcome	CBRR			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Ages 2 to 5 years[b]									
Preschool or Head Start enrollment[c] (%)	187	36.8	(49.0)	169	38.0	(49.3)	– 1.2	(6.0)	– 0.02
Child care or preschool absences in past month[d]	63	0.55	(0.89)	73	0.90	(0.93)	– 0.34	(0.22)	– 0.31
Positive child care or preschool experiences[e]	65	0.86	(0.38)	74	0.80	(0.37)	0.06	(0.09)	0.13
Positive child care or preschool attitudes[f]	65	4.42	(0.92)	74	4.62	(0.66)	– 0.19	(0.17)	– 0.23
Child care or preschool conduct problems[g] (%)	69	5.9	(28.4)	75	5.6	(22.6)	0.3	(5.3)	0.01
Ages 2 years to 5 years, 6 months									
Met developmental milestones[h] (%)	169	73.3	(44.6)	155	67.6	(46.9)	5.7	(6.6)	0.10
Ages 3 years, 6 months to 7 years									
Verbal ability[i]	195	– 0.20	(1.01)	191	– 0.33	(1.02)	0.14	(0.12)	0.11
Math ability[j]	194	– 0.27	(0.81)	193	– 0.31	(0.90)	0.04	(0.10)	0.03
Executive functioning[k] (self-regulation)	185	16.05	(16.35)	189	17.40	(16.35)	– 1.35	(1.48)	– 0.07
Ages 5 to 17 years[l]									
School enrollment[c] (%)	413	97.3	(15.4)	417	97.4	(14.5)	– 0.2	(1.5)	– 0.01
School absences in past month[d,m]	141	0.82	(0.95)	143	1.01	(0.93)	– 0.19	(0.14)	– 0.15
Positive school experiences[e,m]	140	0.52	(0.58)	145	0.45	(0.60)	0.06	(0.08)	0.07
Positive school attitudes[f,m]	141	4.16	(1.13)	145	4.16	(1.07)	0.00	(0.12)	0.00
School conduct problems[g,m] (%)	140	24.7	(44.6)	147	32.9	(46.8)	– 8.2	(5.7)	– 0.13
Ages 8 to 17 years									
Anxiety[n]	263	35.61	(7.21)	260	35.27	(7.48)	0.34	(0.69)	0.03
Fears[o]	266	64.27	(14.39)	260	63.47	(14.72)	0.80	(1.31)	0.04
Substance use[p] (%)	260	5.97	(23.36)	253	8.63	(29.36)	– 2.67	(2.72)	– 0.07
Goal-oriented thinking[q]	255	22.53	(4.68)	251	22.52	(4.27)	0.01	(0.47)	0.00
School effort in past month[r]	262	2.70	(0.82)	255	2.81	(0.78)	– 0.10	(0.08)	– 0.10
Arrests or police involvement in past 6 months[s] (%)	151	9.31	(28.14)	148	8.27	(26.32)	1.04	(3.41)	0.03

CBRR = priority access to community-based rapid re-housing. UC = usual care.

ITT = intention-to-treat. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes focal children who were ages 4 years or younger on the September 1 before the 37-month parent survey.

[c] Preschool or Head Start enrollment outcome is defined as enrollment in preschool, center-based child care, or school.

[d] Absences outcome is defined as 0 = no absences in past month, 1 = one to two absences, 2 = three to five absences, 3 = six or more absences.

[e] Positive child care, preschool, or school experiences outcome is defined as – 1 = mostly negative experiences, 0 = both positive and negative experiences, 1 = mostly positive experiences.

[f] Positive child care, preschool, or school attitudes outcome is parent report of how much child likes school and ranges from 1 to 5, with higher values indicating greater like of school.

[g] Child care, preschool, or school conduct problems outcome is defined as 0 = no conduct problems reported to parent, 1 = parent contacted about conduct problems or suspension or expulsion from school or child care center.

[h] Met developmental milestones outcome is defined as scoring above the typical development cutoffs in all domains of the Ages and Stages Questionnaire (ASQ-3).

[i] Verbal ability outcome is the nationally standardized score from the Woodcock-Johnson III (WJ III) letter-word identification test.

[j] Math ability outcome is the nationally standardized score from the WJ III applied problems test.

[k] Executive functioning outcome is the Head Toes Knees Shoulders (HTKS) score and ranges from 0 to 40, with higher scores indicating greater executive functioning.

[l] Includes focal children who were ages 5 to 17 years on the September 1 before the 37-month parent survey and no older than 17 years at the time of the survey.

[m] This parent-reported outcome was collected from only the first 38 percent of parents surveyed due to an error in data collection.

[n] Anxiety (child report) is measured using the A-Trait scale from the State-Trait Anxiety Inventory for Children (STAIC). Scores range from 20 to 60, with higher scores indicating greater anxiety.

[o] Fears outcome (child report) is the score from the Fears Scale and ranges from 33 to 99, with higher scores indicating more fear.

[p] Substance use (child report) is measured with 23 items from the Centers for Disease Control and Prevention 2011 Youth Risk Behavior Survey.

[q] Goal-oriented thinking (child report) is measured with a modified version of the Children's Hope Scale and ranges from 6 to 30, with higher scores indicating higher levels of positive, goal-oriented thinking.

[r] School effort outcome (child report) ranges from 1 to 4, with higher scores indicating greater effort during school day and on homework.

[s] Arrest or police involvement in past 6 months is from parent report.

Notes: Impact estimates and outcome means are regression-adjusted for baseline characteristics and are weighted to adjust for survey non-response. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey (parent report); Family Options Study 37-month child survey (child report); ASQ-3; WJ III; HTKS.

Exhibit 4-11. CBRR Versus UC: Impacts on Self-Sufficiency at 37 Months

Outcome	CBRR			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Employment status									
Work for pay in week before survey (%)	434	39.6	(49.2)	434	39.1	(48.8)	0.5	(3.4)	0.01
Any work for pay since 20-month survey[b] (%)	406	62.2	(48.0)	387	66.5	(47.9)	– 4.2	(3.4)	– 0.09
Months worked for pay since 20-month survey[b,c]	406	7.3	(7.8)	383	7.6	(7.9)	– 0.3	(0.5)	– 0.04
Any work for pay since RA (%)	434	75.1	(41.6)	433	75.2	(44.0)	– 0.1	(3.0)	0.00
Months worked for pay since RA[c]	430	14.4	(13.4)	420	13.9	(13.6)	0.5	(0.8)	0.03
Hours of work per week at current main job[d]	433	12.8	(17.2)	433	12.7	(16.9)	0.1	(1.2)	0.01
Income sources and amounts									
Annualized current earnings ($)	425	7,127	(11,047)	422	7,154	(11,183)	– 27	(748)	0.00
Total family income ($)	415	11,837	(9,299)	423	12,343	(11,782)	– 505	(725)	– 0.04
Anyone in family had earnings in past month (%)	434	50.4	(50.0)	434	51.4	(50.1)	– 1.1	(3.5)	– 0.02
Anyone in family received TANF in past month (%)	434	28.0	(44.4)	434	21.4	(41.6)	6.6**	(2.9)	0.13
Anyone in family received SSDI in past month (%)	434	10.7	(29.0)	434	9.1	(31.1)	1.6	(2.0)	0.05
Anyone in family received SSI in past month (%)	434	13.8	(34.6)	434	14.1	(36.6)	– 0.3	(2.2)	– 0.01
Anyone in family received SNAP/Food Stamps in past month (%)	434	82.9	(36.6)	434	82.3	(38.8)	0.6	(2.7)	0.01
Anyone in family received WIC in past month (%)	434	25.9	(44.7)	434	23.9	(42.5)	2.0	(3.0)	0.04
Education and training									
Participated in 2 weeks or more of any school or training since RA (%)	434	39.5	(49.3)	433	39.7	(48.7)	– 0.2	(3.4)	0.00
Number of weeks in school/training programs since RA	425	7.4	(16.5)	425	8.9	(16.8)	– 1.5	(1.2)	– 0.07
Participated in 2 weeks or more of school since RA (%)	433	7.9	(27.6)	433	10.9	(30.6)	– 2.9	(2.0)	– 0.08
Participated in 2 weeks or more of basic education since RA (%)	433	3.7	(19.4)	433	2.4	(15.8)	1.3	(1.2)	0.07
Participated in 2 weeks or more of vocational education since RA (%)	433	10.5	(32.0)	433	14.6	(35.1)	– 4.1*	(2.4)	– 0.10
Food security and									
Household is food insecure (%)	434	40.2	(48.8)	434	44.4	(49.8)	– 4.2	(3.6)	– 0.07
Food insecurity scale[e]	434	1.70	(2.05)	432	1.87	(2.07)	– 0.18	(0.15)	– 0.07
Economic stressors									
Economic stress scale[f]	431	– 0.15	(0.50)	433	– 0.13	(0.49)	– 0.02	(0.03)	– 0.03

CBRR = priority access to community-based rapid re-housing. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error. SNAP = Supplemental Nutrition Assistance Program. SSDI = Social Security Disability Insurance. SSI = Supplemental Security Income. TANF = Temporary Assistance for Needy Families. WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes only families who responded to both 20-month and 37-month followup surveys; not weighted for survey nonresponse.

[c] Number of months worked for pay includes partial calendar months.

[d] Hours of work per week includes those not currently working (that is, those with 0 hours of work per week).

[e] Food insecurity scale ranges from 0 to 6, with higher values indicating higher food insecurity.

[f] Economic stress scale ranges from – 1 to 1, with higher values indicating higher economic stress.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Exhibit 4-12. CBRR Versus UC: Earnings and Employment

Outcome	CBRR			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Earnings in quarters 11 to 14 after RA (2015Q3$)	557	6,591	(10,587)	553	6,167	(9,966)	424	(629)	0.04
Any employment in quarters 11 to 14 after RA (%)	557	57.7	(49.5)	553	58.7	(49.2)	– 0.9	(3.0)	– 0.02
Number of quarters employed in quarters 11 to 14 after RA	557	1.7	(1.7)	553	1.7	(1.7)	0.0	(0.1)	0.01

CBRR = priority access to community-based rapid re-housing. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

Note: See Chapter 2 and Appendix B for outcome definitions.

Source: Quarterly wage records from the National Directory of New Hires

of assignment to the CBRR group relative to assignment to the UC group on total earnings, the proportion of family heads employed, or the number of quarters employed during the year.

4.8. Summary of the Community-Based Rapid Re-Housing (CBRR) Versus Usual Care (UC) Comparison Across Domains

In the CBRR-versus-UC comparison, 59 percent of families assigned to the CBRR group and 23 percent of families assigned to the UC group received rapid re-housing rental assistance. This contrast in program use did not lead to notable differences in experiences between the CBRR and UC families during the longer term. The vast majority of the evidence—involving dozens of outcomes in five domains—suggests equivalent results for housing stability, family preservation, adult well-being, child well-being, and self-sufficiency, with or without privileged access to rapid re-housing through the CBRR intervention after 7 days in shelter.

It is most striking that, relative to usual care, the study team did not find evidence that assignment to the CBRR intervention affected housing stability at the 37-month followup point. Chapter 6 reports about how the CBRR intervention compares with the other two active interventions: SUB and PBTH.

CHAPTER 5.
IMPACTS OF PROJECT-BASED TRANSITIONAL HOUSING (PBTH) COMPARED WITH USUAL CARE (UC)

This chapter presents estimates of the impact of assignment to the PBTH intervention relative to usual care in the study communities. The goal of the analyses presented in this chapter is to determine the extent to which being offered priority access to a unit in a PBTH program increases families' housing stability and improves other family outcomes 3 years after receiving the offer.

The analysis reported in the *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families* (hereafter, the *Short-Term Impacts* report; Gubits et al., 2015) found that, at 20 months after random assignment, assignment to the PBTH group reduced the proportion of families who reported stays in shelters or places not meant for human habitation in the 6 months before the survey. Assignment to the PBTH group also reduced the proportion of families who had a stay in emergency shelter during months 7 to 18 of the followup period. These findings may have reflected the fact that about 22 percent of families assigned to the PBTH group were using transitional housing at the time of the 20-month survey. In the four other outcome domains, the vast majority of indicators examined at that time revealed little difference between the families in the PBTH group and families in the UC group.

This chapter begins with a brief description of the assistance offered to the families assigned to the PBTH intervention. It then reviews the extent to which families in both the PBTH and UC groups used transitional housing and other housing and services programs available to them in the study sites during the course of the followup period. Then, the core sections of the chapter present the 3-year effects of being assigned to the PBTH group (compared with being assigned to the UC group) on outcomes within each of the study domains: housing stability, family preservation, adult well-being, child well-being, and self-sufficiency. The final section summarizes the 3-year impacts of the PBTH intervention relative to usual care.

5.1. Project-Based Transitional Housing (PBTH) Intervention

The PBTH intervention provides families with priority access to supervised programs in which they stay for a finite period of time (usually limited to no more than 24 months) and during which they are provided case management and a wide array of services identified through an assessment of family needs. Services may be offered directly by case managers or other staff or via referral to other providers. The PBTH intervention was offered to study families in all but one study site and was provided by 46 PBTH programs across the sites.[93]

Transitional housing is intended to prepare families for permanent housing by providing services that help overcome barriers to housing stability and address other psychosocial needs that the family may have. For this study, the team selected transitional housing programs that provide housing primarily in "project-based" facilities or housing units. The study's definition excluded programs that allow for families to "transition in place" in private-market apartments or single-family homes, taking over responsibility for the housing unit's lease toward or at the end of the program of transitional assistance. The study excluded transition-in-place programs to generate a strong contrast between project-based transitional housing and community-based rapid re-housing (CBRR) programs, which also are time limited and use scattered-site housing units in which the family can stay and pay the rent at the end of the CBRR program. The study's PBTH intervention referred a few families to transitional housing programs with scattered-site locations, but, at program completion (or when the family reached the time limit), families were required to relocate to other housing units.

The PBTH programs studied often received funding from federal Supportive Housing Program (SHP) grants, which results in some consistency across PBTH programs. For instance, the

[93] The PBTH intervention was not offered in Boston. Also, the PBTH intervention was very limited in Minneapolis, with only four families randomly assigned to the PBTH group. Further details about the PBTH intervention are provided in Chapter 8 of the *Short-Term Impacts* report (Gubits et al., 2015).

SHP grant limits transitional housing assistance to 24 months, funds a broad range of supportive services, and sets parameters for the way in which programs must calculate participant rent contributions when they choose to require them; however, not all the PBTH programs in the study receive funding from SHP grants. Most PBTH programs have a wide range of funding sources, including private foundation grants and local fund-raising proceeds. Some programs are faith based, and many of those programs are completely privately funded.

All PBTH programs in the study provide only temporary housing assistance. The study team allowed any time limit on tenure but specifically sought programs that offered at least 6 months of assistance. Nearly all programs provided a maximum of 24 months of assistance. Programs offering referrals to permanent housing assistance at the end of the transitional housing period were included in the PBTH intervention for the study, but programs that guaranteed permanent assistance were not included.

5.2. Program Use by Families in the Project-Based Transitional Housing (PBTH) Versus Usual Care (UC) Comparison

Each impact comparison in the study may be thought of as a distinct experiment or test, and this chapter addresses only the comparison between the PBTH group and the UC group, without reference to the families who were randomly assigned to the SUB or CBRR intervention. In total, 707 families took part in the test of the PBTH intervention versus usual care. All these families had both project-based transitional housing and usual care available to them at the point of random assignment and were assigned to one of these two interventions; 368 families were assigned to the PBTH group and 339 families were assigned to the UC group.[94] Of those 707 families, 552 (293 PBTH families and 259 UC families), or 78 percent, responded to the 37-month followup survey and are included in the PBTH-versus-UC impact comparison reported in this chapter. The current section describes the extent to which the 293 PBTH families used transitional housing and other types of homeless and housing assistance during the followup period.

This section also presents parallel information for the 259 included UC families. The data on program use do not distinguish between subtypes of transitional housing and include transition-in-place assistance, so this section uses "transitional housing" rather than " project-based transitional housing" to describe the broader category of assistance.

Exhibit 5-1 shows the use of eight types of homeless and housing assistance programs. The first column shows the percentage of families assigned to the PBTH group who ever used each program type during the followup period. The third row (shaded in the exhibit) shows the use of some type of transitional housing by the families assigned to the PBTH group; 53.2 percent of families in the PBTH group received transitional housing assistance at some point during the followup period—meaning they either followed up on the referral and moved into the PBTH facility or entered another transitional housing program.[95, 96]

The second column shows the percentage of families assigned to the UC group who ever used each program type during the followup period.[97] The shaded row of the second column shows that 34.6 percent of the UC families received transitional housing assistance during the followup period, despite not being given priority access to transitional housing programs. The study team requested that emergency shelter staff not refer UC families to one of the active interventions. Nevertheless, as shown in the exhibit, some families did learn about transitional housing programs in their communities, and these programs had program slots available at some point during the followup period.

Rows one, two, and four through six of the exhibit show participation in other nonshelter types of homeless and housing assistance programs. The seventh row shows participation in any form of permanent subsidy. Any form of permanent subsidy includes the permanent subsidy programs offered to the SUB group, permanent supportive housing, public housing, and project-based vouchers/Section 8 projects. Of the UC families in the PBTH-versus-UC comparison, 35 percent found their way to permanent housing subsidy programs and 18 percent found their way to rapid re-housing, despite the lack of preferential access to those programs through the study.

[94] In the entire study, 746 families were randomly assigned to the UC group, but only 339 of those families had project-based transitional housing available to them when they were randomized. Therefore, only those 339 UC families are part of the PBTH-versus-UC comparison sample. All 368 families randomly assigned to the PBTH group during the course of the study had usual care available to them, so all are part of the PBTH-versus-UC comparison sample.

[95] All percentages, means, and medians in the exhibit are weighted to adjust for survey nonresponse and, hence, as best as possible, represent the full experimental sample of 707 families. The findings here on program use are thus in line with similarly weighted impact estimates provided later in the chapter.

[96] The unweighted number of 37-month respondent PBTH families who used transitional housing during the followup period is 160 families. Of those, 88 families were confirmed by enrollment verification to have used the program to which they were referred by the study. It is not known how many of the other 72 families received project-based transitional housing or some other form of transitional housing.

[97] The percentages in the first six rows of these columns are not mutually exclusive because some families used more than one program type during the followup period.

Exhibit 5-1. PBTH Versus UC: Program Use Since RA

Type of Homeless or Housing Assistance	Percent Ever Used From RA to 37-Month Followup Survey[a]		Number of Months Used From RA to 37-Month Followup Survey, if Ever Used Type of Assistance				Percent Used in Month of Followup Survey Response	
			PBTH		UC			
	PBTH	UC	Mean	Median	Mean	Median	PBTH	UC
Permanent housing subsidies offered to the SUB group[b]	9.6	10.6	14.0	10.5	17.1	17.5	7.4	7.9
Rapid re-housing[c]	13.7	17.8	7.4	6.5	6.9	6.0	0.7	1.8
Transitional housing[d]	53.2	34.6	14.5	13.0	10.9	7.5	9.3	6.2
Permanent supportive housing	11.0	11.6	16.3	14.0	17.8	15.5	7.6	8.3
Public housing	8.3	8.5	17.4	17.5	17.4	17.5	7.1	5.8
Project-based vouchers/Section 8 projects	6.2	7.2	17.5	17.5	18.3	13.5	3.9	5.4
Any permanent housing subsidy[e]	*33.0*	*34.7*	*17.2*	*16.5*	*19.3*	*19.5*	*26.0*	*27.1*
Emergency shelter[f]	83.6	89.7	3.3	2.2	4.4	2.7	3.5	4.3
No use of homeless or housing programs[g]	18.1	26.9	—	—	—	—	61.5	61.5
N	**293**	**259**	**—**	**—**	**—**	**—**	**293**	**259**

PBTH = priority access to project-based transitional housing. UC = usual care.

RA = random assignment.

[a] Percentage of families who ever used a type of assistance program during the period from the month of RA to the month of 37-month followup survey response (median period duration: 38 calendar months). Percentages do not add to 100 because some families used more than one program type during the followup period.

[b] Subsidies offered to the SUB group are housing choice vouchers plus site-specific programs offered to families assigned to the SUB group in Bridgeport, Connecticut, and Honolulu, Hawaii.

[c] Temporary subsidies offered to the CBRR group.

[d] All types of transitional housing, including those offered to the PBTH group.

[e] Includes the types of permanent subsidy offered to the SUB group plus permanent supportive housing, public housing, and project-based vouchers/Section 8 projects.

[f] All families were in emergency shelter at RA. Percentages less than 100 percent for ever used emergency shelter are because of missing data on shelter use.

[g] Indicates no use of the first six program types in this table during any of the followup period and no use of emergency shelter after the first 6 months after RA. No use in the month of followup survey response indicates no use of any of these seven program types.

Notes: Percentages are regression adjusted, controlling for site and randomization ratio. Percentages, means, and medians are weighted for survey nonresponse to represent full comparison sample.

Source: Family Options Study Program Usage Data

The proportions of the PBTH group that used programs other than transitional housing programs are roughly similar to those of the UC group.[98] The ninth row shows the percentages of families in the PBTH and UC groups who used none of the seven types of programs during the followup period *and* did not use emergency shelter from the 7th month after random assignment onward. About 18 percent of PBTH families and 27 percent of UC families fall into this group.

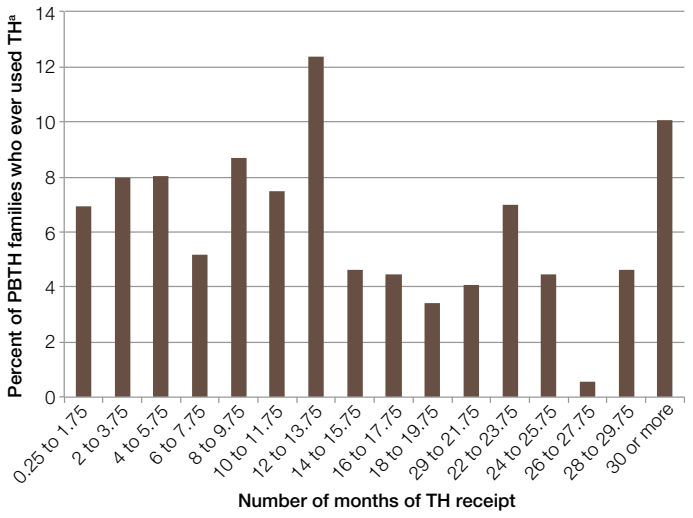
The mean and median numbers of months of use for each program type are also shown in the exhibit (third and fourth columns for PBTH families, fifth and sixth columns for UC families) for *only those families who ever used a given program type*.[99] As one might expect, given that transitional housing was readily available to PBTH families, the number of months of transitional housing use is higher for the families assigned to the PBTH group (median of 13 months) than for the 35 percent of UC families who found their way to transitional housing (median of 8 months) at some point during the followup period. Additional detail about the use of transitional housing assistance by PBTH families is shown in Exhibit 5-2. The exhibit shows that, although the median family who used transitional housing did so for 13 months, about 31 percent used transitional housing for 20 or more months and 10 percent used transitional housing for 30 or more months. So even though nearly all PBTH providers in the study generally limited assistance to 24 months, some families participated for a longer period.

Whereas the previous columns consider all experience between randomization and the survey, the last two columns of Exhibit 5-1 consider the program use as of the month of the 37-month survey. Although most outcomes in the report are expected to be influenced by assistance received during the entire followup period, some outcomes are expected to be particularly strongly influenced by assistance received at the time of the followup survey response. The shaded row of the seventh column shows that transitional housing assistance had ended by the followup

[98] Although proportions that used any permanent housing subsidy are similar in the PBTH and UC groups, Exhibit 5-5 shows that assignment to the PBTH group caused some delay in the use of permanent housing subsidies.

[99] Hence, 0 values are not factored into the means, nor do they pull downward the medians of the various distributions.

Exhibit 5-2. Number of Months of Transitional Housing Receipt During Followup Period by PBTH Families Who Ever Used TH



PBTH = priority access to project-based transitional housing. TH = transitional housing.
[a] Percentages are weighted for survey nonresponse to represent all families in comparison sample.
Note: N = 160.
Source: Family Options Study Program Usage Data

survey for most PBTH families (83 percent) who ever received it and for most UC families (82 percent) who ever received it.[100] In the month of the followup survey response, 9 percent of PBTH families (and 6 percent of UC families) were still in transitional housing. About one-fourth of the families in both groups were receiving some form of permanent housing subsidy in the month of the followup survey. Most PBTH and UC families (62 percent for both groups) were not participating in a homeless or housing program at the time they responded to the followup survey. Thus, differences are expected in the outcomes of PBTH and UC families only to the extent that these outcomes reflect a lasting influence of families having been offered temporary rental assistance to help them leave homelessness.

Exhibit 5-3 provides a more detailed picture of the timing of program use by the families in the PBTH-versus-UC comparison. The top panel shows the proportions of families within the PBTH group who received different types of assistance during each calendar month for the first 32 months after random assignment.[101, 102] It is not surprising that, in the first half of the followup period, program use for PBTH families is dominated by transitional housing. In the second half, the use of transitional housing declines steadily. After month 24, all program use levels off, with only about 36 to 38 percent of families using any type of program in any month. The use of permanent housing subsidies steadily increases throughout the followup period and accounts for more than one-half of monthly program use after month 26 and two-thirds of monthly program use in month 32.

The bottom panel shows the proportions of program use over time for the UC families. Compared with the PBTH group, the UC group used transitional housing much less (the result the study design attempted to achieve) and used rapid re-housing and permanent housing subsidies somewhat more extensively following their initial stay in emergency shelter. Total program use levels off after the first year, with only a little less than 40 percent of UC families using any type of program in any month. Appendix Exhibit H-3 shows additional information about program use in the second half of the followup period, from month 19 after random assignment until the month of the 37-month survey response.

As Exhibits 5-1 and 5-3 make clear, the PBTH families used a range of programs in addition to the program to which they were referred by the study, a pattern that is consistent with the design of the study. Families were not required to use the program to which they were given priority access and were also not forbidden from using other programs that were available to them in their community. The intent of the study was to maximize use of the programs offered to families assigned to the PBTH intervention (in this case, maximize use of the PBTH programs by the PBTH families) and to create the largest possible contrast between the program mixes of different assignment groups (in this case, PBTH versus UC). As shown in the exhibits, the use of transitional housing was different for the PBTH and UC groups. The contrast in use of transitional housing—53.2 percent for PBTH families and 34.6 percent for UC families—is sizable, although smaller than the analogous contrast in either the SUB-versus-UC or CBRR-versus-UC comparisons.

As is conventional in random assignment analyses, the goal in this study is to estimate the intention-to-treat (ITT) impact—that is, the impact of offering a program to families, regardless of whether they actually used that program (or some other

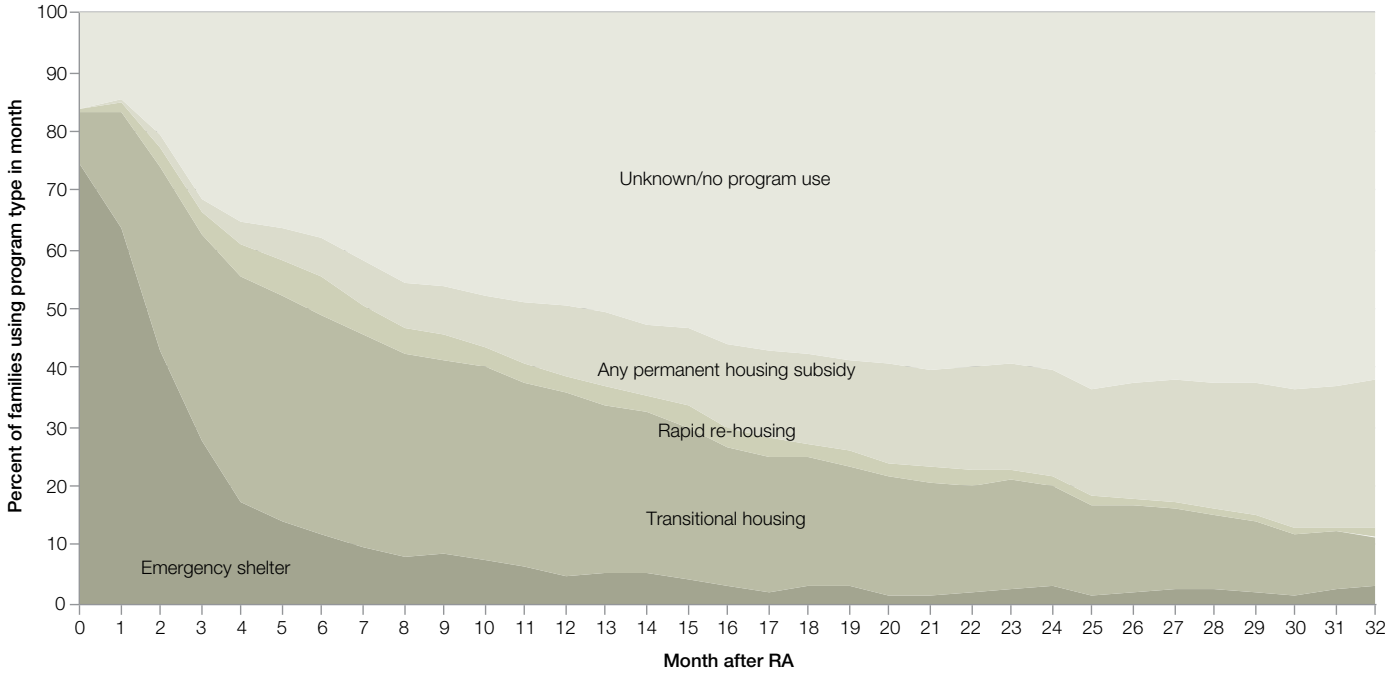
[100] Because 9.3 percent of PBTH families were still using transitional housing in the followup survey month, and because 53.2 percent had used transitional housing at some point during the followup period, it can be calculated that 1 – (9.3/53.2) = 82.5 percent of PBTH families who used transitional housing at some point had stopped using it by the survey month. A similar calculation, 1 – (6.2/34.6), yields 82.1 percent for UC families.

[101] Month 32 is the latest month for which the study team has data for all the families who responded to the 37-month survey.

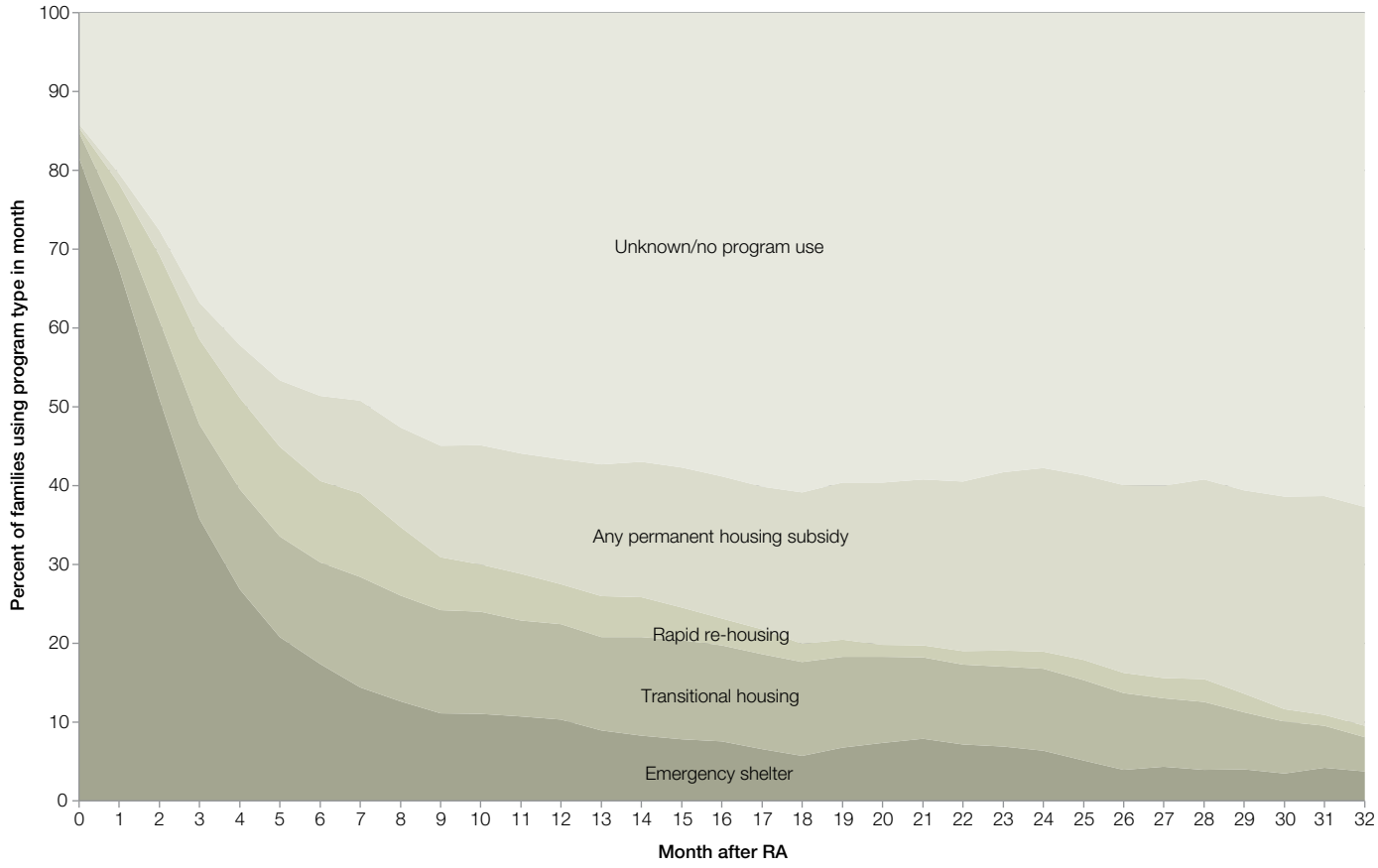
[102] Exhibit 5-3 is closely related to the analysis of the costs of this pairwise comparison presented in Chapter 9. The reader should note that the exhibit does not indicate the two-way flows of families moving into and out of these program types from month to month. Instead, it reflects only the overall usage level in a given month.

Exhibit 5-3. PBTH Versus UC: Program Use in Each Month of Followup Period

Panel A: Program Use of PBTH Families for 32 Months After RA



Panel B: Program Use of UC Families for 32 Months After RA



PBTH = priority access to project-based transitional housing. UC = usual care.
RA = random assignment.
Note: Families who have more than one type of program use in a calendar month are counted fractionally in each type.
Source: Family Options Study Program Usage Data

program). This goal is consistent with the policy option of making a treatment available to a family but without the ability to require a family to use that treatment.

Because not all families randomly assigned to the PBTH group *used* transitional housing and because some families assigned to the UC group *did use* transitional housing, the true ITT impact is likely smaller than it would have been had the gap in transitional housing usage been wider (assuming that transitional housing truly has a nonzero impact on families who use it). In particular, given the relatively small sample size available for analysis, the difference in the use of transitional housing by the PBTH and UC groups is narrow enough that the study may have failed to detect as statistically significant one or more ITT impacts large enough to be of policy importance.

The remainder of the chapter reports estimated impacts in the various outcome domains that—if statistically significant—can be causally attributed to the offer of project-based transitional housing to the families randomly assigned to the PBTH group in contrast with no such directed referral or privileged access being available to families randomly assigned to the UC group.

5.3. Impacts on Housing Stability in the Project-Based Transitional Housing (PBTH) Versus Usual Care (UC) Comparison

Proponents of project-based transitional housing emphasize that most families who become homeless have barriers that make it difficult for them to secure and maintain housing. Thus, housing subsidies alone may be insufficient to ensure housing stability and other desirable outcomes. Family needs may arise from poverty, health, disability, or other problems that led to homelessness to begin with or from the disruptive effects of homelessness on parents and children. Proponents of project-based transitional housing believe that, by addressing these barriers and needs in a supervised residential setting, PBTH programs lay the best foundation for ongoing stability. The services offered by the PBTH programs would be expected to affect stability, adult well-being, and self-sufficiency directly and affect family preservation and child well-being more indirectly. The PBTH-versus-UC comparison offers evidence about whether this approach improves stability and other family outcomes 3 years after random assignment.

The *Short-Term Impacts* report (Gubits et al., 2015) found that assignment to the PBTH group reduced the proportion of families who reported stays in shelters or places not meant for human habitation in the 6 months before the 20-month survey. Assignment to the PBTH intervention also reduced the proportion of families who had a stay in emergency shelter during months 7 to 18 of the followup period. These findings may reflect the fact that about 22 percent of families assigned to the PBTH group were using transitional housing at the time of the 20-month survey compared with only 10 percent of families assigned to the UC group.

Exhibit 5-4 shows the impacts of assignment to the PBTH intervention on homelessness, housing independence, residential moves, and housing quality 3 years after random assignment, compared with usual care.[103] The 37-month analysis finds a difference between the PBTH and UC groups on only a single homelessness measure—the proportion of families who had a stay in emergency shelter during months 21 to 32 after random assignment. Assignment to the PBTH group reduced this proportion relative to assignment to the UC group by 6 percentage points, from 15 to 9 percent. The analysis did not find evidence of impact on any other indicators of homelessness, housing independence, number of moves, or housing quality.

Exhibit 5-5 shows the month-by-month impacts on the proportion of families who had at least 1 night in emergency shelter during the month. This exhibit illustrates that a somewhat lower proportion of the PBTH group was in emergency shelter during most of the followup period compared with the proportion of the UC group.[104] This reduction in shelter use, however, mostly disappears by the end of the followup period. Therefore, the reduction in shelter use observed during months 21 to 32 after random assignment can be attributed largely to a difference during months 21 to 26. The lack of a statistically significant difference in shelter use during the 6 months before the follow-up survey (shown in the fifth row of Exhibit 5-4) is further evidence that the reduction in shelter use observed in earlier months had faded by the end of the third year. These findings support the proposition that reductions in study-defined homelessness and shelter use observed in the short-term survey were a direct consequence of the differential in transitional housing use deliberately induced by the study, rather than a difference in post-program stability.

[103] The homeless outcomes in this study diverge from the homeless definition final rule in that they do not include stays in transitional housing in their definitions of being homeless. Additional impacts on the use of transitional housing during the followup period are provided in Appendix E.

[104] Statistically significant differences appear in 16 of the 32 calendar months (months 2 to 8, 13, 17 to 23, and 25). Because of missing data on baseline stays, less than 100 percent of all PBTH and UC families are observed in shelter during month 0 (the calendar month of random assignment). The difference in the month 0 (significant at the .05 level) should be considered a chance difference. The difference in unobserved initial shelter stays should be increasingly unrelated to differences observed later in the followup period (because the initial shelter stays that are unobserved in the data become increasingly likely to have ended as time elapsed in the followup period).

Exhibit 5-4. PBTH Versus UC: Impacts on Housing Stability at 37 Months

Outcome	PBTH			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Homelessness or doubled up during the followup period									
At least 1 night homeless[b] or doubled up in past 6 months or in shelter in past 12 months (%) **[confirmatory]**[c]	292	40.5	(49.4)	259	40.2	(49.2)	0.3	(4.7)	0.01
At least 1 night homeless[b] or doubled up in past 6 months (%)	292	37.7	(48.9)	259	37.5	(48.5)	0.2	(4.7)	0.00
At least 1 night homeless[b] in past 6 months (%)	293	18.6	(39.9)	259	18.3	(38.3)	0.3	(3.6)	0.01
At least 1 night doubled up in past 6 months (%)	292	29.2	(45.8)	259	31.7	(46.8)	– 2.5	(4.4)	– 0.05
Any stay in emergency shelter in past 6 months (%) [Program Usage Data]	293	7.3	(26.4)	259	6.3	(25.5)	1.1	(2.4)	0.03
Any stay in emergency shelter in months 21 to 32 after RA (%) [Program Usage Data]	293	9.1	(29.4)	259	15.1	(35.8)	– 6.0**	(2.9)	– 0.14
Number of days homeless[b] or doubled up in past 6 months	292	46.8	(72.6)	258	49.3	(74.4)	– 2.5	(6.9)	– 0.03
Number of days homeless[b] in past 6 months	293	14.5	(44.1)	259	16.1	(44.2)	– 1.6	(4.0)	– 0.03
Number of days doubled up in past 6 months	292	34.6	(64.2)	258	35.9	(65.4)	– 1.3	(6.1)	– 0.02
Housing independence									
Living in own house or apartment at followup (%)	293	65.0	(47.5)	259	71.6	(46.0)	– 6.6	(4.2)	– 0.12
Living in own house or apartment with no housing assistance (%)	292	40.0	(49.3)	257	47.1	(49.7)	– 7.2	(4.4)	– 0.13
Living in own house or apartment with housing assistance (%)	292	25.0	(43.2)	257	24.1	(44.0)	0.9	(3.7)	0.02
Number of places lived									
Number of places lived in past 6 months[d]	290	1.6	(1.0)	259	1.6	(1.0)	0.0	(0.1)	– 0.03
Housing quality									
Persons per room	275	1.8	(1.3)	243	1.7	(1.3)	0.0	(0.1)	0.01
Housing quality is poor or fair (%)	273	34.3	(47.2)	243	30.2	(45.4)	4.1	(4.5)	0.08

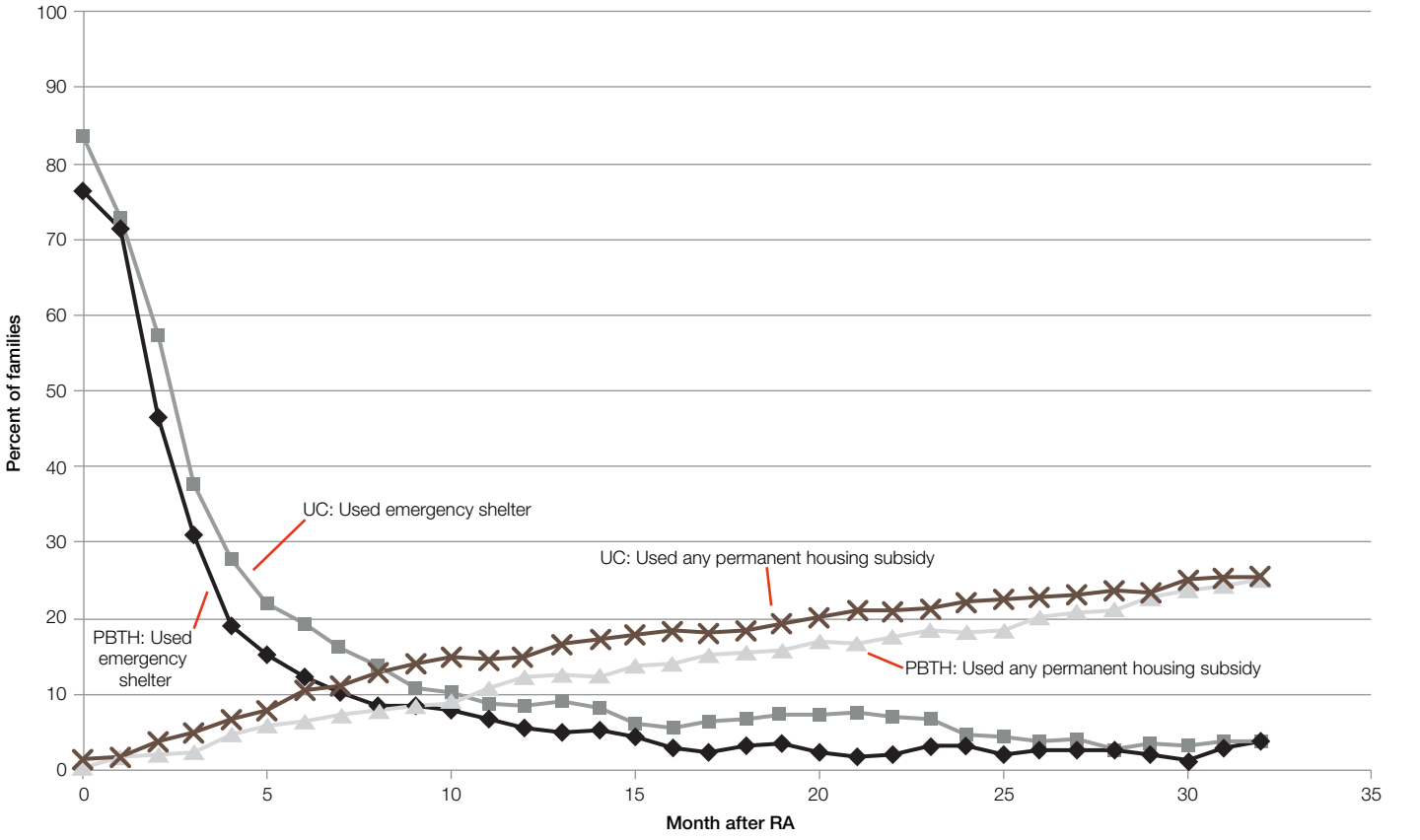
PBTH = priority access to project-based transitional housing. UC = usual care.
ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
[b] The definition of "homeless" in this report includes stays in emergency shelters and places not meant for human habitation. It excludes transitional housing.
[c] After adjustment of multiple comparisons, the impact on the confirmatory outcome is not statistically significant at the .10 level for the PBTH-versus-UC comparison.
[d] The number of places lived in past 6 months is topcoded at 6 places.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.
Sources: Family Options Study 37-month followup survey; Program Usage Data

Exhibit 5-5 also shows month-by-month impacts on the use of any form of permanent housing subsidy for the PBTH and UC families. The exhibit shows that, throughout most of the followup period, smaller proportions of PBTH families received assistance from permanent housing subsidies (including permanent supportive housing programs and mainstream housing programs) compared with proportions of UC families. Families assigned to the PBTH group presumably were pursuing PBTH referrals they received at the time of random assignment and were thus less inclined to seek permanent subsidy assistance than were their counterparts in the UC group. The proportions of the PBTH families using any permanent housing subsidy are about 4 percentage points lower than the corresponding proportions for the UC group in months 6 to 16 (and are statistically significantly different in month 6 and months 8 to 10). The reduction disappears by the end of the followup period, when use of permanent housing subsidies by the PBTH group catches up to that of the UC group.

5.4. Impacts on Family Preservation in the Project-Based Transitional Housing (PBTH) Versus Usual Care (UC) Comparison

Exhibit 5-6 shows the impacts of assignment to the PBTH group relative to impacts of assignment to the UC group regarding family preservation outcomes. Any effects of assignment to the PBTH group on family preservation would be expected to be indirect, arising via effects on housing stability, self-sufficiency, and adult well-being. At 3 years after random assignment, no evidence of effects on family separations from children or from spouses or partners who were with the family at baseline was found. Nor was evidence of effects on reunifications of the much smaller number of family members who were separated from the family at baseline found. No effect was detected on foster care placements.

Exhibit 5-5. PBTH Versus UC: Percent of Families With Any Stay in Emergency Shelter and Any Permanent Housing Subsidy During Month, by Number of Months after RA



PBTH = priority access to project-based transitional housing. UC = usual care.

RA = random assignment.

Notes: Percentages are weighted for survey nonresponse to represent all UC families in the study. Missing data on emergency shelter stays biases the percentages somewhat downward. The baseline stay in emergency shelter does not appear in the data for 18.7 percent of UC respondent families. The missing data rate for subsequent stays in emergency shelter is unknown.

Source: Family Options Study Program Usage Data

Exhibit 5-6. PBTH Versus UC: Impacts on Family Preservation at 37 Months

Outcome	PBTH			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Current or recent separations of family members present at baseline									
Family has at least one child separated in past 6 months (%)	283	20.9	(40.9)	252	18.9	(38.7)	2.0	(3.5)	0.05
Family has at least one foster care placement in past 6 months[b] (%)	286	3.2	(19.3)	255	4.6	(19.4)	– 1.4	(1.8)	– 0.07
Spouse/partner separated in past 6 months, of those with spouse/partner present at RA (%)	82	38.9	(47.3)	80	27.1	(47.1)	11.7	(7.8)	0.20
Reunification of family members reported as separated at baseline									
Family has at least one child reunified, of those families at least one child absent at RA (%)	56	40.6	(49.9)	54	44.7	(48.2)	– 4.1	(11.3)	– 0.07
Spouse/partner reunified, of those with spouse/partner at RA (%)	28	24.9	(47.6)	28	23.6	(35.6)	1.3	(14.0)	0.03

PBTH = priority access to project-based transitional housing. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Foster care placement outcome includes any children (present at baseline) who are placed in foster care or adopted by another family at the time of followup.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey.

Exhibit 5-7 reports impacts on outcomes from the child welfare agency administrative data collected in 5 of the 12 study sites. No effect was detected on either the proportion of family heads with a formal child separation that began after random assignment or on the total days during the followup period of being separated from at least one child.

5.5. Impacts on Adult Well-Being in the Project-Based Transitional Housing (PBTH) Versus Usual Care (UC) Comparison

Adult well-being is a central focus of PBTH programs, and the theory underlying project-based transitional housing suggests that focusing on psychosocial challenges in supervised settings lays the groundwork for later success in independent housing. At 20 months, little evidence indicated that focusing on psychosocial challenges could have a direct effect on psychosocial outcomes (that is, the first step in the theory); the PBTH intervention affected only 1 outcome of 8 in the adult well-being domain—reducing drug abuse. Nearly one-fourth (22 percent) of families assigned to the PBTH group were in transitional housing programs at the 20-month followup survey, and, given median stays of 12 months, others had left only recently. It is thus plausible that additional benefits of intensive services provided in PBTH programs may emerge during the longer term. As shown in Exhibit 5-8, at 37 months, evidence again indicates impact on only one outcome; assignment to the PBTH intervention reduced the proportion of family heads

Exhibit 5-7. PBTH Versus UC: Impacts on Child Welfare Outcomes

Outcome	PBTH			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Had a formal child separation that began after RA (%)	177	14.9	(35.5)	157	16.9	(37.9)	– 2.0	(4.0)	– 6.03
Total days during followup separated from at least one child[b]	177	97.5	(258.2)	157	116.4	(282.8)	– 18.8	(25.7)	– 0.08

PBTH = priority access to project-based transitional housing. UC = usual care.
ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
[b] Includes separations started before and after RA. Length of followup varies by site. Alameda County = 1,075 days. Baltimore = 1,071 days. Kansas City = 1,069 days. Minneapolis = 1,046 days. Phoenix = 1,123 days.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions. Sample limited to five sites where child welfare records were collected (Alameda County, Baltimore, Kansas City, Minneapolis, and Phoenix).
Source: State child welfare agency records

Exhibit 5-8. PBTH Versus UC: Impacts on Adult Well-Being at 37 Months

Outcome	PBTH			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Adult physical health									
Health in past 30 days was poor or fair (%)	291	32.1	(46.0)	258	32.8	(47.8)	– 0.7	(4.1)	– 0.01
Adult mental health									
Goal-oriented thinking[b]	287	4.41	(1.04)	258	4.38	(1.02)	0.03	(0.09)	0.03
Psychological distress[c]	292	6.75	(5.49)	258	6.83	(5.76)	– 0.07	(0.45)	– 0.01
Adult trauma symptoms									
Post-traumatic stress disorder (PTSD) symptoms in past 30 days (%)	291	16.9	(39.2)	256	23.5	(43.2)	– 6.6*	(3.5)	– 0.14
Adult substance use									
Alcohol dependence or drug abuse[d] (%)	293	13.4	(34.4)	258	10.6	(31.2)	2.8	(2.8)	0.07
Alcohol dependence[d] (%)	293	10.4	(30.8)	258	7.4	(25.5)	3.0	(2.5)	0.09
Drug abuse[d] (%)	293	5.3	(23.4)	259	6.1	(23.4)	– 0.8	(2.1)	– 0.03
Experience of intimate partner violence									
Experienced intimate partner violence in past 6 months (%)	292	7.5	(27.0)	258	8.5	(29.6)	– 1.1	(2.4)	– 0.03

PBTH = priority access to project-based transitional housing. UC = usual care.
ITT = intention-to-treat. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
[b] Goal-oriented thinking is measured with a modified version of the State Hope Scale and ranges from 1 to 6, with higher scores indicating higher levels of positive, goal-oriented thinking.
[c] Psychological distress is measured with the Kessler Psychological Distress Scale (K6) and ranges from 0 to 24, with higher scores indicating greater distress.
[d] Alcohol dependence is measured with the Rapid Alcohol Problems Screen (RAPS-4), and drug abuse is measured with six items from the Drug Abuse Screening Test (DAST-10). Both are measured for the 6 months before the 37-month survey.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.
Source: Family Options Study 37-month followup survey.

experiencing symptoms of post-traumatic stress disorder (PTSD) by 7 percentage points relative to a proportion of 24 percent in the UC group. No evidence indicates that assignment to the PBTH group had an effect on the other measures of physical or mental health, intimate partner violence, or substance dependence or abuse relative to usual care.

5.6. Impacts on Child Well-Being in the Project-Based Transitional Housing (PBTH) Versus Usual Care (UC) Comparison

The theory behind project-based transitional housing suggests that effects of assignment to the PBTH group on children may take longer to develop, particularly if the PBTH intervention influences housing stability or adult well-being. In the absence of widespread effects of the PBTH intervention on these outcomes, as shown in previous sections, however, it is unsurprising that the team finds no impact on child well-being. None of the 9 cross-age tests in Exhibit 5-9 and 2 of the 20 age-specific tests in Exhibit 5-10 reach statistical significance, 1 in each direction: young children in families assigned to the PBTH group show lower levels of executive functioning, but older children show more goal-oriented thinking. Given the small number of effects and their inconsistent direction, results are best interpreted as showing little overall impact on child well-being.

5.7. Impacts on Self-Sufficiency in the Project-Based Transitional Housing (PBTH) Versus Usual Care (UC) Comparison

Along with housing stability and adult well-being, self-sufficiency is also a central focus of PBTH programs. The 20-month analysis found no effects of assignment to the PBTH group on any of the self-sufficiency outcomes examined. Exhibit 5-11 shows a significant impact on only 1 of the 20 self-sufficiency outcomes during the 3-year followup period; assignment to the PBTH reduced the number of weeks that family heads reported having participated in school or training programs since random assignment by 3.5 weeks. Families assigned to the UC group in this comparison reported 8.9 weeks in school or training since random assignment and families assigned to the PBTH group reported 5.4 weeks.

Exhibit 5-12 shows impact estimates from administrative data on outcomes for quarters 11 to 14 after the quarter of random assignment. The analysis of administrative data finds no effect of assignment to the PBTH group relative to assignment to the UC group on total earnings, the proportion of family heads employed, or the number of quarters employed during the year.

Simply by chance, the study team would have expected effects on some outcomes. Thus, an effect on only 1 of 23 outcomes is

Exhibit 5-9. PBTH Versus UC: Impacts on Child Well-Being Across Age Groups at 37 Months

Outcome	PBTH			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Child education									
Number of schools attended since RA[b]	340	2.2	(1.0)	301	2.1	(0.9)	0.1	(0.1)	0.05
Grade completion (not held back) (%)	286	86.68	(33.62)	252	91.35	(27.69)	– 4.66	(3.02)	– 0.12
School grades[c]	253	3.0	(0.9)	230	3.1	(0.9)	– 0.0	(0.1)	– 0.03
Child physical health									
Poor or fair health in past 30 days (%)	395	5.9	(21.4)	347	5.9	(22.2)	0.0	(2.2)	0.00
Well-child checkup in past year (%)	395	88.7	(32.1)	346	91.2	(28.2)	– 2.5	(2.9)	– 0.07
Child has regular source of health care (%)	391	88.2	(29.3)	350	90.3	(26.7)	– 2.1	(3.8)	– 0.06
Sleep problems[d]	394	2.17	(1.10)	349	2.28	(1.09)	– 0.11	(0.10)	– 0.08
Child behavioral strengths and challenges									
Behavior problems[e]	375	0.53	(1.19)	325	0.59	(1.29)	– 0.06	(0.12)	– 0.03
Prosocial behavior[f]	375	– 0.26	(1.22)	327	– 0.34	(1.13)	0.07	(0.10)	0.05

PBTH = priority access to project-based transitional housing. UC = usual care.
ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
[b] Number of schools outcome is topcoded at 4 or more schools.
[c] School grades outcome is defined as 1 = mostly Ds or Fs, 2 = mostly Cs, 3 = mostly Bs, 4 = mostly As.
[d] Sleep problems outcome ranges from 1 to 5, with higher values indicating more frequent tiredness upon waking and during the day.
[e] Behavior problems outcome is measured as the standardized Total Difficulties score from the Strengths and Difficulties Questionnaire (SDQ).
[f] Prosocial behavior is measured as the standardized prosocial domain score from the SDQ.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.
Source: Family Options Study 37-month followup survey (parent report)

Exhibit 5-10. PBTH Versus UC: Impacts on Child Well-Being Developmental Outcomes by Age Group at 37 Months

Outcome	PBTH			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Ages 2 to 5 years[b]									
Preschool or Head Start enrollment[c] (%)	118	33.3	(48.3)	104	41.7	(49.1)	– 8.4	(6.6)	– 0.14
Child care or preschool absences in past month[d]	46	0.59	(0.80)	40	0.74	(1.04)	– 0.15	(0.21)	– 0.14
Positive child care or preschool experiences[e]	51	0.77	(0.53)	43	0.83	(0.39)	– 0.06	(0.10)	– 0.13
Positive child care or preschool attitudes[f]	50	4.34	(1.16)	42	4.57	(0.80)	– 0.23	(0.23)	– 0.28
Child care or preschool conduct problems[g] (%)	55	9.0	(33.6)	43	9.9	(29.4)	– 0.9	(5.8)	– 0.03
Ages 2 years to 5 years, 6 months									
Met developmental milestones[h] (%)	99	64.4	(47.7)	95	70.7	(45.3)	– 6.3	(7.3)	– 0.11
Ages 3 years, 6 months to 7 years									
Verbal ability[i]	133	– 0.42	(1.06)	115	– 0.28	(1.10)	– 0.13	(0.17)	– 0.10
Math ability[j]	133	– 0.35	(1.00)	116	– 0.28	(1.12)	– 0.07	(0.17)	– 0.06
Executive functioning[k] (self-regulation)	121	15.51	(15.77)	108	19.76	(16.75)	– 4.25**	(1.86)	– 0.21
Ages 5 to 17 years[l]									
School enrollment[c] (%)	279	95.8	(14.5)	247	99.1	(11.0)	– 3.4	(2.7)	– 0.17
School absences in past month[d,m]	102	0.95	(0.94)	97	1.14	(1.04)	– 0.19	(0.15)	– 0.15
Positive school experiences[e,m]	105	0.54	(0.64)	98	0.38	(0.67)	0.16	(0.10)	0.19
Positive school attitudes[f,m]	105	4.13	(1.09)	98	4.06	(1.14)	0.07	(0.14)	0.05
School conduct problems[g,m] (%)	105	27.7	(45.8)	98	27.3	(46.7)	0.3	(6.9)	0.01
Ages 8 to 17 years									
Anxiety[n]	168	34.88	(7.72)	158	35.81	(6.98)	– 0.93	(0.95)	– 0.09
Fears[o]	171	62.65	(14.68)	158	64.62	(14.21)	– 1.97	(1.58)	– 0.10
Substance use[p] (%)	163	10.00	(32.91)	152	8.62	(29.01)	1.38	(3.79)	0.04
Goal-oriented thinking[q]	161	22.75	(4.98)	150	21.55	(4.73)	1.21*	(0.64)	0.19
School effort in past month[r]	170	2.74	(0.84)	155	2.75	(0.74)	– 0.01	(0.08)	– 0.01
Arrests or police involvement in past 6 months[s] (%)	83	15.65	(36.57)	91	9.31	(26.79)	6.34	(4.82)	0.17

PBTH = priority access to project-based transitional housing. UC = usual care.

ITT = intention-to-treat. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes focal children who were ages 4 years or younger on the September 1 before the 37-month parent survey.

[c] Preschool or Head Start enrollment outcome is defined as enrollment in preschool, center-based child care, or school.

[d] Absences outcome is defined as 0 = no absences in past month, 1 = one to two absences, 2 = three to five absences, 3 = six or more absences.

[e] Positive child care, preschool, or school experiences outcome is defined as – 1 = mostly negative experiences, 0 = both positive and negative experiences, 1 = mostly positive experiences.

[f] Positive child care, preschool, or school attitudes outcome is parent report of how much child likes school and ranges from 1 to 5, with higher values indicating greater like of school.

[g] Child care, preschool, or school conduct problems outcome is defined as 0 = no conduct problems reported to parent, 1 = parent contacted about conduct problems or suspension or expulsion from school or child care center.

[h] Met developmental milestones outcome is defined as scoring above the typical development cutoffs in all domains of the Ages and Stages Questionnaire (ASQ-3).

[i] Verbal ability outcome is the nationally standardized score from the Woodcock-Johnson III (WJ III) letter-word identification test.

[j] Math ability outcome is the nationally standardized score from the WJ III applied problems test.

[k] Executive functioning outcome is the Head Toes Knees Shoulders (HTKS) score and ranges from 0 to 40, with higher scores indicating greater executive functioning.

[l] Includes focal children who were ages 5 to 17 years on the September 1 before the 37-month parent survey and no older than 17 years at the time of the survey.

[m] This parent-reported outcome was collected from only the first 38 percent of parents surveyed due to an error in data collection.

[n] Anxiety (child report) is measured using the A-Trait scale from the State-Trait Anxiety Inventory for Children (STAIC). Scores range from 20 to 60, with higher scores indicating greater anxiety.

[o] Fears outcome (child report) is the score from the Fears Scale and ranges from 33 to 99, with higher scores indicating more fear.

[p] Substance use (child report) is measured with 23 items from the Centers for Disease Control and Prevention 2011 Youth Risk Behavior Survey.

[q] Goal-oriented thinking (child report) is measured with a modified version of the Children's Hope Scale and ranges from 6 to 30, with higher scores indicating higher levels of positive, goal-oriented thinking.

[r] School effort outcome (child report) ranges from 1 to 4, with higher scores indicating greater effort during school day and on homework.

[s] Arrest or police involvement in past 6 months is from parent report.

Notes: Impact estimates and outcome means are regression-adjusted for baseline characteristics and are weighted to adjust for survey non-response.

See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey (parent report); Family Options Study 37-month child survey (child report); ASQ-3; WJ III; HTKS

Exhibit 5-11. PBTH Versus UC: Impacts on Self-Sufficiency at 37 Months

Outcome	PBTH			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Employment status									
Work for pay in week before survey (%)	293	38.3	(49.0)	259	37.7	(48.3)	0.6	(4.1)	0.01
Any work for pay since 20-month survey[b] (%)	259	56.5	(49.5)	221	63.6	(48.7)	– 7.1	(4.4)	– 0.15
Months worked for pay since 20-month survey[b,c]	257	7.1	(8.3)	219	7.8	(8.6)	– 0.7	(0.8)	– 0.09
Any work for pay since RA (%)	293	70.1	(45.0)	259	71.5	(46.1)	– 1.4	(3.8)	– 0.03
Months worked for pay since RA[c]	290	13.3	(13.7)	252	14.3	(14.6)	– 1.0	(1.2)	– 0.07
Hours of work per week at current main job[d]	292	12.6	(18.0)	259	12.2	(16.5)	0.5	(1.5)	0.02
Income sources and amounts									
Annualized current earnings ($)	288	7,429	(12,113)	252	6,367	(9,966)	1062	(962)	0.09
Total family income ($)	290	12,987	(11,654)	247	13,178	(11,338)	– 191	(1,038)	– 0.01
Anyone in family had earnings in past month (%)	293	54.6	(49.9)	259	55.0	(50.0)	– 0.4	(4.3)	– 0.01
Anyone in family received TANF in past month (%)	292	24.9	(43.0)	259	21.1	(40.4)	3.8	(3.8)	0.08
Anyone in family received SSDI in past month (%)	293	8.0	(26.4)	259	9.0	(29.1)	– 1.0	(2.2)	– 0.03
Anyone in family received SSI in past month (%)	292	13.4	(33.7)	259	15.2	(38.6)	– 1.8	(2.5)	– 0.04
Anyone in family received SNAP/Food Stamps in past month (%)	292	82.1	(38.9)	259	86.1	(35.5)	– 4.0	(3.0)	– 0.09
Anyone in family received WIC in past month (%)	292	28.1	(46.0)	259	24.7	(42.8)	3.5	(3.8)	0.07
Education and training									
Participated in 2 weeks or more of any school or training since RA (%)	290	35.8	(48.4)	259	37.7	(48.4)	– 1.8	(4.5)	– 0.03
Number of weeks in school/training programs since RA	289	5.4	(12.3)	254	8.9	(17.3)	– 3.5**	(1.6)	– 0.17
Participated in 2 weeks or more of school since RA (%)	290	9.8	(30.5)	259	12.1	(32.1)	– 2.3	(3.1)	– 0.06
Participated in 2 weeks or more of basic education since RA (%)	290	2.3	(13.0)	259	1.0	(12.4)	1.3	(1.2)	0.07
Participated in 2 weeks or more of vocational education since RA (%)	290	9.5	(30.5)	259	11.6	(31.1)	– 2.1	(2.9)	– 0.05
Food security and									
Household is food insecure (%)	293	46.0	(49.8)	259	47.9	(50.1)	– 1.9	(4.6)	– 0.03
Food insecurity scale[e]	289	1.87	(2.02)	257	1.90	(2.04)	– 0.02	(0.19)	– 0.01
Economic stressors									
Economic stress scale[f]	290	– 0.13	(0.51)	257	– 0.11	(0.47)	– 0.02	(0.04)	– 0.04

PBTH = priority access to project-based transitional housing. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error. SNAP = Supplemental Nutrition Assistance Program. SSDI = Social Security Disability Insurance. SSI = Supplemental Security Income. TANF = Temporary Assistance for Needy Families. WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes only families who responded to both 20-month and 37-month followup surveys; not weighted for survey nonresponse.

[c] Number of months worked for pay includes partial calendar months.

[d] Hours of work per week includes those not currently working (that is, those with 0 hours of work per week).

[e] Food insecurity scale ranges from 0 to 6, with higher values indicating higher food insecurity.

[f] Economic stress scale ranges from – 1 to 1, with higher values indicating higher economic stress.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Exhibit 5-12. PBTH Versus UC: Earnings and Employment

Outcome	PBTH			UC			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Earnings in quarters 11 to 14 after RA (2015Q3$)	349	6,496	(10,179)	314	5,690	(9,365)	806	(759)	0.08
Any employment in quarters 11 to 14 after RA (%)	349	56.1	(49.7)	314	57.1	(49.6)	– 1.0	(3.9)	– 0.02
Number of quarters employed in quarters 11 to 14 after RA	349	1.7	(1.7)	314	1.7	(1.7)	0.0	(0.1)	– 0.01

PBTH = priority access to project-based transitional housing. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

Note: See Chapter 2 and Appendix B for outcome definitions.

Source: Quarterly wage records from the National Directory of New Hires

probably best interpreted as resulting from chance and not as evidence of an effect of assignment to the PBTH intervention. The team therefore concluded that no evidence indicates self-sufficiency effects for assignment to the PBTH group relative to assignment to the UC group at the 3-year followup survey.

5.8. Summary of Project-Based Transitional Housing (PBTH) Versus Usual Care (UC) Comparison Across Domains

For the PBTH-versus-UC comparison, 53 percent of families assigned to the PBTH group and 35 percent of families assigned to the UC group accessed transitional housing during the followup period. This contrast in program use is smaller than for other comparisons of active interventions with usual care.[105]

By 3 years after random assignment, having priority access to project-based transitional housing led to generally equivalent housing stability outcomes as did usual care. By this point, the reduction in emergency shelter use that was observed through most of the followup period had disappeared. In the adult well-being domain, assignment to the PBTH intervention reduced the proportion of family heads experiencing PTSD symptoms relative to usual care. Apart from this beneficial effect, the vast majority of indicators in the adult well-being, family preservation, child well-being, and self-sufficiency domains revealed equivalent results among families who were assigned to the PBTH group and families who were assigned to the UC group.

The general lack of impacts on adult well-being and family self-sufficiency is noteworthy, given the emphasis placed by PBTH programs on delivering help and improvement in these domains. Only 2 of the 28 indicators examined for results in this respect showed any impact from assignment to the PBTH intervention. Overall, evidence did not emerge 3 years after random assignment to the PBTH group that the goals of project-based transitional housing as a distinctive approach to assisting families facing unstable housing situations had been achieved. One potential reason for the lack of statistically significant effects in the PBTH-versus-UC comparison is that services similar to those that the PBTH intervention provided were, in many cases, available to families in emergency shelter. Chapter 6 reports about how the PBTH intervention compares with the other two active interventions: SUB and CBRR.

[105] Although the takeup rate for PBTH programs provides a weaker test of the intervention than might be hoped for, the low takeup of transitional housing on the part of many families assigned to the PBTH group is of policy interest. It is not clear to what extent this low takeup represents families who decline programs or programs that decline families. Qualitative data from a small number of families in this study (80 in all, 19 assigned to the PBTH group) suggest that both processes were important. When families declined offers, the location of programs was often an issue. Families offered permanent housing subsidies and community-based rapid re-housing had more opportunity to live in neighborhoods of their choice that were near jobs, children's schools, and support networks (Fisher et al., 2014).

CHAPTER 6.
IMPACTS OF PERMANENT HOUSING SUBSIDY (SUB) COMPARED WITH COMMUNITY-BASED RAPID RE-HOUSING (CBRR), SUB COMPARED WITH PROJECT-BASED TRANSITIONAL HOUSING (PBTH), AND CBRR COMPARED WITH PBTH

This chapter presents 37-month impact estimates for the three pairwise comparisons of interventions that do not involve usual care. These pairwise comparisons contrast assignment to the SUB, CBRR, and PBTH interventions with each other. In each of these comparisons, the goal is to determine the extent to which, 3 years after study entry, priority access to a particular type of program leads to better, worse, or no different family outcomes than those experienced by families who were eligible for that type of program but were offered priority access to another type of program. The chapter begins with a brief description of the analysis samples for these comparisons. Next, it addresses the SUB-versus-CBRR comparison, first showing how much families in the SUB and CBRR groups used housing and services programs available to them, and then presenting effects on outcomes in the five study domains. The same set of information is then presented in turn for the SUB-versus-PBTH and CBRR-versus-PBTH comparisons.

6.1. Analysis Samples for Pairwise Comparisons

As addressed previously in this report, families were included in comparisons of two interventions only if they passed the initial screening for an available slot for each intervention and were assigned to one of the interventions. This approach ensures that the groups of families being compared are as similar as possible. It also means, however, that the group of families representing each intervention differs, depending on the group with which it is compared. For example, the group of SUB families in the SUB-versus-CBRR comparison overlaps but is not identical to the group of SUB families in the SUB-versus-PBTH comparison.[106] If the group of families representing an intervention were always the same, then the results for any comparison of interventions could be logically deduced from the comparison of each intervention with usual care. Since the groups of families representing an intervention are not always the same, it is not possible to logically deduce the results of the comparisons from the comparisons of each intervention with usual care. Some signs and magnitudes of estimates differ from those suggested by the comparisons with usual care. Thus, this chapter describes the pairwise comparisons of the active interventions with each other.

Exhibit 6-1 shows the number of families who are included in the various pairwise comparisons that comprise the entire study. Each column of the exhibit shows the number of families on both sides of a particular comparison. Each row shows how the number of families representing a particular intervention varies by pairwise comparison.

[106] By definition, usual care was available to all study families. Therefore, the samples of SUB, CBRR, and PBTH families in the comparisons with UC families contain all the families assigned to those interventions. The samples in the three pairwise comparisons of the active interventions with each other are subsets of these larger samples.

Exhibit 6-1. Sample Sizes in the Six Pairwise Comparisons

Assigned Intervention	Sample Size in Pairwise Comparison[a]					
	SUB Versus UC	CBRR Versus UC	PBTH Versus UC	SUB Versus CBRR	SUB Versus PBTH	CBRR Versus PBTH
SUB	501	—	—	362	215	—
CBRR	—	434	—	290	—	180
PBTH	—	—	293	—	201	184
UC	395	434	259	—	—	—
Total	**896**	**868**	**552**	**652**	**416**	**364**

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

[a] Sample sizes are numbers of families who responded to the 37-month followup survey.

Source: Family Options Study 37-month followup survey

6.2. The Permanent Housing Subsidy (SUB) Versus Community-Based Rapid Re-Housing (CBRR) Comparison

The SUB-versus-CBRR comparison contrasts the permanent housing subsidy of the SUB intervention with the temporary rental assistance (usually lasting 7 to 8 months, but potentially renewable for up to 18 months) of the CBRR intervention. Both these interventions provided priority access to the rental subsidy, and both required families to engage in a housing search to locate a suitable private-market rental unit.[107] The supportive services provided in the SUB intervention were limited to assistance with finding housing. The services offered by CBRR providers were also focused on the housing search. In addition to case management and assistance with housing search, CBRR programs provided services such as assistance obtaining public benefits and financial literacy/money management information to most of the families assigned who used the rapid re-housing program to which they received priority access.

The subsidy in both interventions represented a substantial fraction of monthly rent. Beyond the length of the subsidy, a few differences in the administration of the programs are noteworthy. A standard formula set the subsidy amount in SUB programs, but subsidy determination in CBRR programs varied among providers, typically allowing for at least some case manager discretion in setting the subsidy amount. To continue to receive rapid re-housing assistance, families had to have incomes below certain thresholds. Most CBRR programs asked questions about income every 3 months as part of the recertification process to assess continued need for assistance. This frequency was much greater than the annual income recertification that providers of a permanent housing subsidy required.

6.2.1. Program Use by Families in the SUB-Versus-CBRR Comparison

Exhibit 6-2 shows the use of eight types of homeless and housing programs by the 362 SUB families and 290 CBRR families analyzed in the SUB-versus-CBRR comparison.[108] The first column shows the same general pattern of usage for these SUB families as for all SUB families (see Exhibit 3-2 in Chapter 3). Likewise, the proportions of these CBRR families shown in the second column are similar to the proportions of all CBRR families (see Exhibit 4-1 in Chapter 4). The first two columns show that 82 percent of families assigned to the SUB group used the permanent housing subsidies they were offered and 61 percent of CBRR families used rapid re-housing rental assistance at some point during the period of observation. The number of months of program use during the whole followup period (in columns three through six) and the proportions using a particular program in the month of the followup survey response (in columns seven and eight) are also similar to those in the previous exhibits. A large difference between the groups exists in the proportion of families participating in any program during the month of the followup survey, with 75 percent of SUB families participating in some program (most using permanent housing subsidies they were offered) and only 42 percent of CBRR families participating in any type of program.

As expected, because of priority access to permanent housing subsidies, the proportion that ever used any form of permanent subsidy was higher for families assigned to the SUB group (87 percent) than for families assigned to the CBRR group (38 percent). At the 37-month survey, 72 percent of SUB families were using some form of permanent housing subsidy compared with 33 percent of CBRR families. This differential is 15 percentage points narrower than it was at the time of the 20-month survey,

[107] The minimal share (about 8 percent) of SUB families provided with public housing in Honolulu or with project-based vouchers in Bridgeport did not need to engage in housing searches.

[108] The SUB-versus-CBRR comparison sample consists of 435 families assigned to the SUB group and 382 families assigned to the CBRR group. Of those 817 families, 362 SUB families and 290 CBRR families (80 percent) responded to the 37-month followup survey.

Exhibit 6-2. SUB Versus CBRR: Program Use Since RA

Type of Homeless or Housing Assistance	Percent Ever Used From RA to 37-Month Followup Survey[a]		Number of Months Used From RA to 37-Month Followup Survey, if Ever Used Type of Assistance				Percent Used in Month of Followup Survey Response	
	SUB	CBRR	SUB		CBRR		SUB	CBRR
			Mean	Median	Mean	Median		
Permanent housing subsidies offered to the SUB group[b]	82.3	9.8	31.2	32.5	20.7	21.5	67.4	8.4
Rapid re-housing[c]	14.7	60.5	6.1	4.5	8.8	7.5	0.3	2.6
Transitional housing[d]	7.4	19.8	7.3	5.3	9.1	7.5	0.9	4.1
Permanent supportive housing	3.9	11.6	11.4	9.5	16.1	12.0	3.1	8.0
Public housing	1.1	10.9	23.3	24.5	19.4	18.5	1.2	10.0
Project-based vouchers/Section 8 projects	1.1	7.0	11.1	14.5	16.9	17.5	0.6	6.4
Any permanent housing subsidy[e]	*87.4*	*38.4*	*30.3*	*32.5*	*18.7*	*18.5*	*72.3*	*32.6*
Emergency shelter[f]	84.9	90.4	3.0	2.0	4.6	2.3	1.8	2.5
No use of homeless or housing programs[g]	4.5	9.5	—	—	—	—	24.7	58.3
N	**362**	**290**	**—**	**—**	**—**	**—**	**362**	**290**

CBRR = priority access to community-based rapid re-housing. SUB = priority access to permanent housing subsidy.

RA = random assignment.

[a] Percentage of families who ever used a type of assistance program during the period from the month of RA to the month of 37-month followup survey response (median period duration: 38 calendar months). Percentages do not add to 100 because some families used more than one program type during the followup period.

[b] Subsidies offered to the SUB group are housing choice vouchers plus site-specific programs offered to families assigned to the SUB group in Bridgeport, Connecticut, and Honolulu, Hawaii.

[c] Temporary subsidies offered to the CBRR group.

[d] All types of transitional housing, including those offered to the PBTH group.

[e] Includes the types of permanent subsidy offered to the SUB group plus permanent supportive housing, public housing, and project-based vouchers/Section 8 projects.

[f] All families were in emergency shelter at RA. Percentages less than 100 percent for ever used emergency shelter are because of missing data on shelter use.

[g] Indicates no use of the first six program types in this table during any of the followup period and no use of emergency shelter after the first 6 months after RA. No use in the month of followup survey response indicates no use of any of these seven program types.

Notes: Percentages are regression adjusted, controlling for site and randomization ratio. Percentages, means, and medians are weighted for survey nonresponse to represent full comparison sample.

Source: Family Options Study Program Usage Data

when use of permanent housing subsidies had decreased for the SUB group (by 5 percentage points) and had increased for the CBRR group (by 10 percentage points).

6.2.2. Impacts of the SUB Intervention Compared With the CBRR Intervention

The study team hypothesizes that assignment to the SUB intervention relative to assignment to the CBRR intervention will reduce homelessness and improve housing stability. The hypothesis is based on the premise that many of the very poor families who experience homelessness will need long-term rental subsidies to remain stably housed. The magnitude of this expected difference has been unknown before this study, however. Differential effects on more distal outcomes are theorized to depend on the magnitude of the housing stability effect. To the extent that permanent housing subsidies provide greater residential stability or reduce parental stress (stemming from moves or from fear of homelessness) more than temporary subsidies do, the benefits of assignment to the SUB intervention in other areas such as child well-being and family preservation may be larger than the effects of the CBRR intervention. Although assistance from CBRR programs is temporary rather than permanent, its emphasis on restoring families to conventional housing as swiftly as possible leads the team to expect that, relative to assignment to the SUB intervention, assignment to the CBRR intervention will reduce the length of the shelter stay at the time of study entry.

The *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families* (hereafter, the *Short-Term Impacts* report; Gubits et al., 2015) found that, 20 months after random assignment, assignment to the SUB intervention reduced homelessness and doubling up compared with assignment to the CBRR intervention. It also led to having more families living in their own place and experiencing fewer residential moves. In domains other than housing stability, the SUB intervention had a few beneficial impacts compared with the CBRR intervention, but it reduced family income and work for pay. Both interventions reduced the length of the initial shelter stay by the same amount—about one-half month. The remainder of this section presents the impact evidence of how these interventions compare at 3 years after random assignment.

Impacts on Housing Stability in the SUB-Versus-CBRR Comparison

Exhibit 6-3 shows the effect on housing stability of being assigned to the SUB group relative to being assigned to the CBRR group. The first panel of Exhibit 6-3 shows that, relative to assignment to the CBRR intervention, assignment to the SUB

Exhibit 6-3. SUB Versus CBRR: Impacts on Housing Stability at 37 Months

Outcome	SUB			CBRR			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Homelessness or doubled up during the followup period									
At least 1 night homeless[b] or doubled up in past 6 months or in shelter in past 12 months (%) **[confirmatory]**[c]	362	17.2	(37.2)	290	37.6	(48.2)	– 20.4***	(3.6)	– 0.36
At least 1 night homeless[b] or doubled up in past 6 months (%)	362	16.1	(35.9)	290	31.7	(46.8)	– 15.5***	(3.6)	– 0.28
At least 1 night homeless[b] in past 6 months (%)	362	10.0	(29.2)	290	13.8	(33.8)	– 3.8	(2.8)	– 0.09
At least 1 night doubled up in past 6 months (%)	362	11.2	(31.0)	290	26.5	(44.4)	– 15.3***	(3.3)	– 0.29
Any stay in emergency shelter in past 6 months (%) [Program Usage Data]	362	3.8	(18.6)	290	4.6	(20.0)	– 0.8	(1.9)	– 0.02
Any stay in emergency shelter in months 21 to 32 after RA (%) [Program Usage Data]	362	5.2	(22.3)	290	18.0	(37.2)	– 12.8***	(2.9)	– 0.30
Number of days homeless[b] or doubled up in past 6 months	361	19.9	(50.5)	289	44.3	(71.7)	– 24.4***	(5.4)	– 0.28
Number of days homeless[b] in past 6 months	362	10.0	(35.8)	290	13.6	(40.3)	– 3.6	(3.5)	– 0.06
Number of days doubled up in past 6 months	361	12.8	(41.0)	289	32.9	(64.6)	– 20.1***	(4.5)	– 0.27
Housing independence									
Living in own house or apartment at followup (%)	362	82.6	(37.2)	290	71.2	(46.5)	11.4***	(962)	0.09
Living in own house or apartment with no housing assistance (%)	361	15.4	(36.3)	288	38.2	(47.9)	– 22.7***	(1,038)	– 0.01
Living in own house or apartment with housing assistance (%)	361	67.0	(46.8)	288	33.6	(47.3)	33.3***	(4.3)	– 0.01
Number of places lived									
Number of places lived in past 6 months[d]	362	1.3	(0.8)	290	1.5	(1.0)	– 0.1**	(0.1)	– 0.12
Housing quality									
Persons per room	346	1.2	(0.5)	277	1.5	(1.2)	– 0.3***	(0.1)	– 0.25
Housing quality is poor or fair (%)	345	26.9	(44.0)	278	28.2	(45.2)	– 1.3	(3.8)	– 0.02

CBRR = priority access to community-based rapid re-housing. SUB = priority access to permanent housing subsidy.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] The definition of "homeless" in this report includes stays in emergency shelters and places not meant for human habitation. It excludes transitional housing.

[c] After adjustment of multiple comparisons, the impact on the confirmatory outcome is statistically significant at the .01 level for the SUB-versus-CBRR comparison.

[d] The number of places lived in past 6 months is topcoded at 6 places.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Sources: Family Options Study 37-month followup survey; Program Usage Data

intervention caused reductions in six of the nine homelessness and doubled-up measures examined. Relative to assignment to the CBRR intervention, assignment to the SUB intervention reduced the confirmatory outcome of being homeless or doubled up in the past 6 months or in emergency shelter in the past 12 months from 38 to 17 percent. This effect represents a 20-percentage-point reduction, more than one-half of the prevalence in the CBRR group. This reduction appears to be largely driven by a decrease in doubling up—caused by assignment to the SUB group—rather than by a decrease in homelessness. Of families assigned to the SUB group in this comparison, 11 percent spent at least 1 night doubled up in the 6 months before the survey compared with 27 percent of families assigned to the CBRR group, a reduction by more than one-half. The impact estimates for survey measures of homelessness (stays in emergency shelter and places not meant for human habitation) are smaller than those for the doubling-up outcomes and are not statistically significant.

The impact estimates for emergency shelter outcomes based on Program Usage Data tell a mixed story. During months 21 to 32 after random assignment (the last 12 months with data available for all study families), assignment to the SUB group reduced the proportion of families who had a stay in emergency shelter from 18 to 5 percent relative to assignment to the CBRR group. No difference is detected in the proportions of SUB and CBRR groups using emergency shelter during the 6 months before the followup survey (different months relative to random assignment for each family but centered around months 32 to 37). This latter finding in combination with the survey estimates on homelessness suggests that the effect of assignment to the SUB intervention (relative to assignment to the CBRR intervention) on emergency shelter use faded near the end of the 3-year followup period because of a reduction in shelter use over time by CBRR families.

The second panel of Exhibit 6-3 shows that, relative to assignment to the CBRR intervention, assignment to the SUB intervention increases the proportion of families living in their own house or apartment (with or without assistance) at the 37-month followup point from 71 to 83 percent. At 3 years after random assignment, SUB families are much less likely (23 percentage points) than CBRR families to be living in their own place with no housing assistance and much more likely (33 percentage points) to be living in their own place with housing assistance.

The third panel of the exhibit shows that SUB families had greater residential stability than did CBRR families in the months before the 37-month survey, reducing the number of places families lived in the past 6 months by 0.1 places. The bottom panel of the exhibit shows that SUB families were living in less crowded conditions than were CBRR families, with an average of 1.2 persons per room compared with 1.5 persons per room for CBRR families. As at 20 months after random assignment, no difference in housing quality was observed.

Impacts on Family Preservation in the SUB-Versus-CBRR Comparison

Any differential effects of the SUB intervention compared with the CBRR intervention of family preservation would be expected to be indirect, via the substantial differential effects on housing stability. Exhibit 6-4 shows that, compared with assignment to the CBRR group, assignment to the SUB group had no effect in the survey data on family separations or reunifications in the 6 months before the 37-month followup survey.

Exhibit 6-5 shows impacts on outcomes from the child welfare agency administrative data collected in 5 of the 12 study sites. The study team finds an effect on the proportion of family heads with a formal child separation that began after random assignment. Assignment to the SUB group reduced the proportion by 6 percentage points from a mean of 11 percent for those assigned to the CBRR group. This effect contrasts with the effect of close to zero found on the survey measure of the proportion of family heads with a formal child separation that began after random assignment in both the full sample (Exhibit 6-4) and the subsample of the five sites where child welfare administrative data were collected (not shown). The reasons for the discrepancy between the survey and administrative impact estimates are not clear. No effect was detected on the total days separated from at least one child.

Impacts on Adult Well-Being in the SUB-Versus-CBRR Comparison

As with family preservation, any differential effects of the SUB intervention compared with the CBRR intervention on adult well-being would be expected to be indirect, via the substantial differential effects on housing stability. The *Short-Term Impacts* report (Gubits et al., 2015) observed that, compared with assignment to the CBRR group, assignment to the SUB group

Exhibit 6-4. SUB Versus CBRR: Impacts on Family Preservation at 37 Months

Outcome	SUB			CBRR			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Current or recent separations of family members present at baseline									
Family has at least one child separated in past 6 months (%)	353	14.2	(34.9)	288	16.4	(35.7)	– 2.2	(3.1)	– 0.05
Family has at least one foster care placement in past 6 months[b] (%)	356	3.6	(18.8)	288	4.2	(16.5)	– 0.6	(1.7)	– 0.03
Spouse/partner separated in past 6 months, of those with spouse/partner present at RA (%)	89	43.3	(50.1)	77	49.9	(50.1)	– 6.6	(8.3)	– 0.11
Reunification of family members reported as separated at baseline									
Spouse/partner reunified, of those with spouse/partner absent at RA (%)	76	39.4	(49.7)	47	29.6	(47.1)	9.8	(11.0)	0.17
Living in own house or apartment with no housing assistance (%)	40	30.4	(46.4)	22	26.6	(45.6)	3.8	(19.6)	0.08

CBRR = priority access to community-based rapid re-housing. SUB = priority access to permanent housing subsidy.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Foster care placement outcome includes any children (present at baseline) who are placed in foster care or adopted by another family at the time of followup.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Exhibit 6-5. SUB Versus CBRR: Impacts on Child Welfare Outcomes

Outcome	SUB			CBRR			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Had a formal child separation that began after RA (%)	171	5.6	(23.5)	175	11.1	(31.2)	– 5.6*	(3.0)	– 16.93
Total days during followup separated from at least one child[b]	171	42.4	(188.1)	175	47.6	(177.7)	– 5.2	(13.9)	– 0.02

CBRR = priority access to community-based rapid re-housing. SUB = priority access to permanent housing subsidy.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes separations started before and after RA. Length of followup varies by site. Alameda County = 1,075 days. Baltimore = 1,071 days. Kansas City = 1,069 days. Minneapolis = 1,046 days. Phoenix = 1,123 days.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions. Sample limited to five sites where child welfare records were collected (Alameda County, Baltimore, Kansas City, Minneapolis, and Phoenix).

Source: State child welfare agency records

reduced the proportion of families who reported post-traumatic stress disorder symptoms in the month before the 20-month survey and also reduced the incidence of intimate partner violence by more than one-half.

Exhibit 6-6 shows the adult well-being results for the SUB-versus-CBRR comparison for the longer followup period. The 37-month analysis shows no evidence that assignment to the SUB group had differential effects on any measure of physical or mental health, intimate partner violence, or substance dependence or abuse compared with assignment to the CBRR group.

Impacts on Child Well-Being in the SUB-Versus-CBRR Comparison

Exhibit 6-7 shows the effects of assignment to the SUB group relative to assignment to the CBRR group on child well-being outcomes measured across all ages. Given the impact of assignment to the SUB intervention relative to assignment to the CBRR intervention on residential stability at both 20 and 37 months, it is not surprising that the SUB intervention has an effect on school mobility (approximately one fewer school moves since random assignment for every four children in families assigned to the SUB group). Only one other effect (for two out of nine) appears in the child outcomes assessed across age groups, also in the school domain (first panel of Exhibit 6-7)—children in the SUB group had slightly better grades. Because this impact did not appear in the SUB-versus-UC comparison, it is perhaps best thought of as a random variation. No effects were found on child physical health or on behavioral strengths and challenges.

Only 3 of 20 age-specific outcomes shown in Exhibit 6-8 show effects, one for younger children ages 2 to 5 and two for the older 8- to 17-year-old age group. Younger children in the SUB group had more absences from childcare or preschool than did young children in the CBRR group. Older children in the SUB group were less than one-half as likely to use substances (3 versus 8 percent) but reported less goal-oriented thinking (effect size of 0.26) than did children in the CBRR group. Again, these impacts were not evident in the SUB-versus-UC comparison. Of the 5 statistically significant effects, 3 favored the SUB group and 2 favored the CBRR group. Only the impact on school mobility was apparent in the SUB-versus-UC comparison.[109] The others are, therefore, probably best interpreted as random variations.

Exhibit 6-6. SUB Versus CBRR: Impacts on Adult Well-Being at 37 Months

Outcome	SUB			CBRR			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Adult physical health									
Health in past 30 days was poor or fair (%)	362	30.9	(46.3)	289	30.8	(45.5)	0.1	(3.5)	0.00
Adult mental health									
Goal-oriented thinking[b]	357	4.47	(1.06)	287	4.49	(0.99)	– 0.02	(0.08)	– 0.02
Psychological distress[c]	360	6.72	(5.68)	289	6.64	(5.70)	0.08	(0.45)	0.01
Adult trauma symptoms									
Post-traumatic stress disorder (PTSD) symptoms in past 30 days (%)	357	22.4	(41.6)	287	19.1	(38.6)	3.3	(0.1)	– 0.12
Adult substance use									
Alcohol dependence or drug abuse[d] (%)	361	11.4	(32.1)	289	9.6	(30.1)	1.8	(2.5)	0.05
Alcohol dependence[d] (%)	362	8.7	(28.4)	289	7.6	(27.6)	1.2	(2.2)	0.04
Drug abuse[d] (%)	361	3.6	(18.7)	289	3.1	(15.4)	0.5	(1.6)	0.02
Experience of intimate partner violence									
Experienced intimate partner violence in past 6 months (%)	361	7.1	(25.9)	290	8.9	(26.5)	– 1.8	(2.3)	– 0.05

CBRR = priority access to community-based rapid re-housing. SUB = priority access to permanent housing subsidy.
ITT = intention-to-treat. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
[b] Goal-oriented thinking is measured with a modified version of the State Hope Scale and ranges from 1 to 6, with higher scores indicating higher levels of positive, goal-oriented thinking.
[c] Psychological distress is measured with the Kessler Psychological Distress Scale (K6) and ranges from 0 to 24, with higher scores indicating greater distress.
[d] Alcohol dependence is measured with the Rapid Alcohol Problems Screen (RAPS-4), and drug abuse is measured with six items from the Drug Abuse Screening Test (DAST-10). Both are measured for the 6 months before the 37-month survey.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.
Source: Family Options Study 37-month followup survey

[109] This reduction in school mobility is also corroborated by reductions in the average number of places lived by SUB families relative to CBRR families in the 6-month periods before the followup surveys.

Exhibit 6-7. SUB Versus CBRR: Impacts on Child Well-Being Across Age Groups at 37 Months

Outcome	SUB			CBRR			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Child education									
Number of schools attended since RA[b]	417	1.9	(0.9)	325	2.1	(0.9)	– 0.3***	(3.5)	0.00
Grade completion (not held back) (%)	339	91.17	(28.44)	269	92.63	(28.01)	– 1.46	(0.08)	– 0.02
School grades[c]	311	3.1	(0.9)	252	3.0	(0.9)	0.1*	(0.45)	0.01
Child physical health									
Poor or fair health in past 30 days (%)	485	7.4	(24.9)	396	6.4	(23.9)	1.0	(2.3)	0.03
Well-child checkup in past year (%)	482	89.1	(30.3)	395	91.8	(27.7)	– 2.8	(2.4)	– 0.07
Child has regular source of health care (%)	484	90.9	(25.9)	396	94.3	(23.9)	– 3.4	(2.5)	– 0.09
Sleep problems[d]	483	1.98	(1.03)	396	2.05	(1.01)	– 0.07	(0.08)	– 0.05
Child behavioral strengths and challenges									
Behavior problems[e]	458	0.45	(1.28)	378	0.39	(1.20)	0.06	(0.11)	0.03
Prosocial behavior[f]	459	– 0.21	(1.16)	379	– 0.19	(1.16)	– 0.02	(0.10)	– 0.02

CBRR = priority access to community-based rapid re-housing. SUB = priority access to permanent housing subsidy.
ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
[b] Number of schools outcome is topcoded at 4 or more schools.
[c] School grades outcome is defined as 1 = mostly Ds or Fs, 2 = mostly Cs, 3 = mostly Bs, 4 = mostly As.
[d] Sleep problems outcome ranges from 1 to 5, with higher values indicating more frequent tiredness upon waking and during the day.
[e] Behavior problems outcome is measured as the standardized Total Difficulties score from the Strengths and Difficulties Questionnaire (SDQ).
[f] Prosocial behavior is measured as the standardized prosocial domain score from the SDQ.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.
Source: Family Options Study 37-month followup survey (parent report)

Impacts on Self-Sufficiency in the SUB-Versus-CBRR Comparison

The *Short-Term Impacts* report (Gubits et al., 2015) found that, 20 months after random assignment, assignment to the SUB group reduced work for pay, earnings, and family income relative to assignment to the CBRR group. Assignment to the SUB group also decreased economic stress. Exhibit 6-9 shows the effects on self-sufficiency outcomes in the SUB-versus-CBRR comparison at the 3-year followup point. The study team finds that assignment to the SUB intervention caused differential effects on 2 of the 20 outcomes examined. Families assigned to the SUB group worked, on average, nearly 2 months less than families assigned to the CBRR group during the 3-year followup period. Given that this differential is of comparable magnitude to the effect detected at 20 months and that the estimates for impacts on work since the 20-month followup point and at 37 months are small and statistically insignificant, it appears that the reduction in work effort apparent at 20 months faded after that point. At the 37-month followup point, the study team finds no evidence that assignment to the SUB group relative to assignment to the CBRR group affected annualized current earnings or total family cash income or sources of income.

Exhibit 6-10 shows impact estimates from administrative data on outcomes for quarters 11 to 14 after the quarter of random assignment. The analysis of administrative data finds no effect of assignment to the SUB group relative to assignment to the CBRR group on total earnings, the proportion of family heads employed, or the number of quarters employed during the year.

Turning back to Exhibit 6-9, assignment to the SUB group increased the proportion of families who said they participated in 2 or more weeks of school since random assignment (14 percent of SUB families, 8 percent of CBRR families). Because this magnitude is larger than would be expected, given the point estimates in the SUB-versus-UC and CBRR-versus-UC comparisons, it is perhaps best thought of as a random variation. Overall, the study team finds some evidence that assignment to the SUB group decreased work effort relative to assignment to the CBRR group during the entire 3-year followup period, but the team did not find that this effect was still present at the 3-year followup point. The team also did not find evidence of effects on earnings, family income, nonhousing public assistance receipt, food security, or economic stress at the 3-year followup point.

Summary of SUB-Versus-CBRR Comparison Across Domains

For the SUB-versus-CBRR comparison, the study engineered a notable contrast in the mix of program use during the 37-month followup period. At 3 years after random assignment, 82 percent of SUB families had ever used the permanent housing subsidies they were offered compared with only 10 percent of CBRR families in this comparison who used these subsidies. Altogether, 61 percent of CBRR families had ever used rapid re-housing

Exhibit 6-8. SUB Versus CBRR: Impacts on Child Well-Being Developmental Outcomes by Age Group at 37 months

Outcome	SUB			CBRR			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Ages 2 to 5 years[b]									
Preschool or Head Start enrollment[c] (%)	156	37.1	(48.7)	135	28.7	(47.0)	8.4	(5.9)	0.14
Child care or preschool absences in past month[d]	64	0.85	(0.89)	38	0.43	(0.86)	0.42*	(0.24)	0.38
Positive child care or preschool experiences[e]	67	0.79	(0.40)	40	0.86	(0.41)	– 0.07	(0.11)	– 0.14
Positive child care or preschool attitudes[f]	67	4.68	(0.73)	40	4.52	(0.93)	0.16	(0.23)	0.19
Child care or preschool conduct problems[g] (%)	70	11.6	(32.0)	43	6.2	(32.4)	5.3	(9.2)	0.19
Ages 2 years to 5 years, 6 months									
Met developmental milestones[h] (%)	136	67.7	(45.7)	121	75.0	(43.8)	– 7.3	(6.0)	– 0.13
Ages 3 years, 6 months to 7 years									
Verbal ability[i]	175	– 0.11	(1.02)	134	– 0.26	(1.03)	0.14	(0.11)	0.11
Math ability[j]	173	– 0.22	(1.00)	134	– 0.35	(0.86)	0.13	(0.12)	0.11
Executive functioning[k] (self-regulation)	172	14.97	(16.00)	129	15.20	(16.11)	– 0.23	(1.43)	– 0.01
Ages 5 to 17 years[l]									
School enrollment[c] (%)	330	98.0	(13.4)	263	96.6	(19.2)	1.4	(1.6)	0.07
School absences in past month[d,m]	156	0.90	(0.90)	107	0.81	(0.99)	0.09	(0.15)	0.07
Positive school experiences[e,m]	157	0.58	(0.59)	107	0.50	(0.57)	0.08	(0.08)	0.09
Positive school attitudes[f,m]	157	4.29	(1.05)	107	4.10	(1.13)	0.19	(0.14)	0.13
School conduct problems[g,m] (%)	158	22.3	(40.8)	106	26.6	(44.8)	– 4.3	(6.0)	– 0.07
Ages 8 to 17 years									
Anxiety[n]	207	35.56	(7.63)	167	34.80	(7.63)	0.76	(0.84)	0.07
Fears[o]	208	62.45	(14.32)	169	64.36	(14.40)	– 1.91	(1.63)	– 0.10
Substance use[p] (%)	206	2.80	(18.16)	165	8.30	(26.05)	– 5.50**	(2.73)	– 0.15
Goal-oriented thinking[q]	203	21.54	(5.24)	162	23.23	(4.74)	– 1.70***	(0.61)	– 0.26
School effort in past month[r]	208	2.84	(0.76)	165	2.78	(0.83)	0.06	(0.10)	0.06
Arrests or police involvement in past 6 months[s] (%)	117	7.93	(25.35)	94	8.68	(28.05)	– 0.75	(4.11)	– 0.02

CBRR = priority access to community-based rapid re-housing. SUB = priority access to permanent housing subsidy.

ITT = intention-to-treat. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes focal children who were ages 4 years or younger on the September 1 before the 37-month parent survey.

[c] Preschool or Head Start enrollment outcome is defined as enrollment in preschool, center-based child care, or school.

[d] Absences outcome is defined as 0 = no absences in past month, 1 = one to two absences, 2 = three to five absences, 3 = six or more absences.

[e] Positive child care, preschool, or school experiences outcome is defined as – 1 = mostly negative experiences, 0 = both positive and negative experiences, 1 = mostly positive experiences.

[f] Positive child care, preschool, or school attitudes outcome is parent report of how much child likes school and ranges from 1 to 5, with higher values indicating greater like of school.

[g] Child care, preschool, or school conduct problems outcome is defined as 0 = no conduct problems reported to parent, 1 = parent contacted about conduct problems or suspension or expulsion from school or child care center.

[h] Met developmental milestones outcome is defined as scoring above the typical development cutoffs in all domains of the Ages and Stages Questionnaire (ASQ-3).

[i] Verbal ability outcome is the nationally standardized score from the Woodcock-Johnson III (WJ III) letter-word identification test.

[j] Math ability outcome is the nationally standardized score from the WJ III applied problems test.

[k] Executive functioning outcome is the Head Toes Knees Shoulders (HTKS) score and ranges from 0 to 40, with higher scores indicating greater executive functioning.

[l] Includes focal children who were ages 5 to 17 years on the September 1 before the 37-month parent survey and no older than 17 years at the time of the survey.

[m] This parent-reported outcome was collected from only the first 38 percent of parents surveyed due to an error in data collection.

[n] Anxiety (child report) is measured using the A-Trait scale from the State-Trait Anxiety Inventory for Children (STAIC). Scores range from 20 to 60, with higher scores indicating greater anxiety.

[o] Fears outcome (child report) is the score from the Fears Scale and ranges from 33 to 99, with higher scores indicating more fear.

[p] Substance use (child report) is measured with 23 items from the Centers for Disease Control and Prevention 2011 Youth Risk Behavior Survey.

[q] Goal-oriented thinking (child report) is measured with a modified version of the Children's Hope Scale and ranges from 6 to 30, with higher scores indicating higher levels of positive, goal-oriented thinking.

[r] School effort outcome (child report) ranges from 1 to 4, with higher scores indicating greater effort during school day and on homework.

[s] Arrest or police involvement in past 6 months is from parent report.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse.

See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey (parent report); Family Options Study 37-month child survey (child report); ASQ-3; WJ III; HTKS

Exhibit 6-9. SUB Versus CBRR: Impacts on Self-Sufficiency at 37 Months

Outcome	SUB			CBRR			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Employment status									
Work for pay in week before survey (%)	362	36.3	(48.0)	290	36.9	(48.7)	– 0.6	(3.9)	– 0.01
Any work for pay since 20-month survey[b] (%)	336	59.4	(49.3)	271	61.1	(48.6)	– 1.7	(3.9)	– 0.04
Months worked for pay since 20-month survey[b,c]	334	7.0	(7.9)	271	7.4	(8.2)	– 0.4	(0.6)	– 0.05
Any work for pay since RA (%)	362	69.3	(46.4)	290	74.1	(42.0)	– 4.9	(3.5)	– 0.09
Months worked for pay since RA[c]	357	12.4	(13.8)	288	14.1	(13.6)	– 1.7*	(1.0)	– 0.11
Hours of work per week at current main job[d]	362	11.2	(16.4)	289	11.9	(17.2)	– 0.8	(1.4)	– 0.04
Income sources and amounts									
Annualized current earnings ($)	357	6,114	(10,296)	285	6,432	(11,288)	– 318	(828)	– 0.03
Total family income ($)	340	11,097	(9,734)	277	11,998	(9,448)	– 901	(757)	– 0.07
Anyone in family had earnings in past month (%)	362	47.5	(49.9)	290	47.1	(50.1)	0.4	(4.0)	0.01
Anyone in family received TANF in past month (%)	362	27.9	(44.8)	290	32.0	(46.2)	– 4.1	(3.7)	– 0.08
Anyone in family received SSDI in past month (%)	360	7.4	(27.3)	290	10.7	(27.6)	– 3.3	(2.4)	– 0.10
Anyone in family received SSI in past month (%)	362	13.3	(35.1)	290	16.1	(35.9)	– 2.9	(2.7)	– 0.07
Anyone in family received SNAP/Food Stamps in past month (%)	362	79.4	(40.2)	290	82.7	(37.8)	– 3.3	(3.4)	– 0.08
Anyone in family received WIC in past month (%)	362	23.9	(43.0)	290	26.9	(45.3)	– 3.0	(3.4)	– 0.06
Education and training									
Participated in 2 weeks or more of any school or training since RA (%)	361	38.3	(48.7)	290	37.8	(48.6)	0.5	(4.1)	0.01
Number of weeks in school/training programs since RA	358	7.4	(14.3)	283	7.6	(16.9)	– 0.2	(1.2)	– 0.01
Participated in 2 weeks or more of school since RA (%)	361	13.6	(33.4)	290	8.2	(27.1)	5.4**	(2.6)	0.14
Participated in 2 weeks or more of basic education since RA (%)	361	3.0	(17.2)	290	4.5	(21.5)	– 1.5	(1.6)	– 0.09
Participated in 2 weeks or more of vocational education since RA (%)	361	10.3	(31.1)	290	12.0	(33.8)	– 1.7	(2.5)	– 0.04
Food security									
Household is food insecure (%)	362	38.5	(49.0)	290	41.1	(49.3)	– 2.6	(4.0)	– 0.04
Food insecurity scale[e]	360	1.59	(2.03)	290	1.75	(2.05)	– 0.16	(0.16)	– 0.06
Economic stressors									
Economic stress scale[f]	360	– 0.24	(0.45)	287	– 0.20	(0.48)	– 0.04	(0.04)	– 0.07

CBRR = priority access to community-based rapid re-housing. SUB = priority access to permanent housing subsidy.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error. SNAP = Supplemental Nutrition Assistance Program. SSDI = Social Security Disability Insurance. SSI = Supplemental Security Income. TANF = Temporary Assistance for Needy Families. WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes only families who responded to both 20-month and 37-month followup surveys; not weighted for survey nonresponse.

[c] Number of months worked for pay includes partial calendar months.

[d] Hours of work per week includes those not currently working (that is, those with 0 hours of work per week).

[e] Food insecurity scale ranges from 0 to 6, with higher values indicating higher food insecurity.

[f] Economic stress scale ranges from – 1 to 1, with higher values indicating higher economic stress.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Exhibit 6-10. SUB Versus CBRR: Earnings and Employment

Outcome	SUB			CBRR			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Earnings in quarters 11 to 14 after RA (2015Q3$)	426	5,578	(8,907)	373	6,322	(10,414)	– 745	(711)	– 0.08
Any employment in quarters 11 to 14 after RA (%)	426	51.5	(50.0)	373	56.8	(49.6)	– 5.3	(3.6)	– 0.11
Number of quarters employed in quarters 11 to 14 after RA	426	1.6	(1.7)	373	1.6	(1.7)	– 0.1	(0.1)	– 0.05

CBRR = priority access to community-based rapid re-housing. SUB = priority access to permanent housing subsidy.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

Note: See Chapter 2 and Appendix B for outcome definitions.

Source: Quarterly wage records from the National Directory of New Hires

compared with 15 percent of SUB families. In the month of the followup survey response, 72 percent of SUB families were using any form of permanent subsidy compared with 33 percent of CBRR families and use of temporary subsidies had largely ended (less than 3 percent in both groups).

These differences in program participation led to notable improvements in housing stability for families assigned to the SUB group compared with assignment to the CBRR group. Only 5 percent of SUB families compared with 18 percent of CBRR families spent at least 1 night in an emergency shelter during months 21 to 32 after random assignment. After month 32, it appears that the main preventive effect of assignment to the SUB intervention relative to assignment to the CBRR intervention is in the reduction of the proportion of families experiencing doubling up rather than in the reduction of stays in emergency shelter or places not meant for human habitation. Assignment to the SUB group relative to assignment to the CBRR group, reduced the proportion of families who had at least 1 night doubled up in the 6 months before the 37-month survey from 27 to 11 percent. Compared with assignment to the CBRR intervention, the SUB intervention also increased the proportion of families living in their own house or apartment at the time of the followup survey from 71 to 83 percent, reduced crowding, and reduced the number of places where families lived in the past 6 months. No evidence was found that assignment to the SUB group affected either the proportion of families who reported homelessness (using the survey measure of homelessness) or the proportion with an emergency shelter stay (measured by Program Usage Data) during the 6-month period before the survey.

The SUB-versus-CBRR comparison shows that, at 3 years after random assignment, assignment to the SUB intervention instead of to the CBRR intervention had no effect on any of the outcomes examined in the family preservation and adult well-being domains. The study team finds a few effects in the child well-being domain but finds no pattern favoring either the SUB or CBRR intervention. The lower number of schools attended since random assignment due to assignment to the SUB group is perhaps the most credible of these effects, given its consistency with the reduction in the number of schools children attended found in the SUB-versus-UC comparison and the reduction in the number of places families lived found in this SUB-versus-CBRR comparison.

In the self-sufficiency domain, the study team finds some evidence that assignment to the SUB group decreased work effort relative to assignment to the CBRR group during the entire 3-year followup period, but the team did not find evidence that this effect was still present at the 3-year followup point. The team also did not find evidence of effects on earnings, family income, nonhousing public assistance receipt, food security, or economic stress at the 3-year followup point.

Overall, do the families assigned to the SUB group appear to be doing better at 37 months after random assignment than the families assigned to the CBRR group? In some important respects, the answer is "yes." The SUB families, on average, are experiencing less doubling up, are more likely to live in their own place, and are living in less crowded conditions than are CBRR families. Should SUB families, over time, give up the permanent housing assistance to which they were given preferential access by the study—or if increasing numbers of CBRR families find their way to permanent housing subsidies—these differences may shrink in the future.

6.3. The Permanent Housing Subsidy (SUB) Versus Project-Based Transitional Housing (PBTH) Comparison

The SUB-versus-PBTH comparison contrasts the permanent housing subsidy of the SUB intervention with the temporary housing (up to 24 months, with a median stay of 13 months during this followup period) in agency-controlled units paired with intensive supportive services of the PBTH intervention. PBTH programs offer comprehensive case management and provide many supportive services directly. These services are entirely absent from the SUB intervention.

6.3.1. Program Use by Families in the SUB-Versus-PBTH Comparison

Exhibit 6-11 shows the use of eight types of homeless and housing programs by the 215 SUB families and 201 PBTH families analyzed in the SUB-versus-PBTH comparison during the 37-month followup period.[110] The first column shows some modest differences in the general pattern of usage for these SUB families compared with all SUB families (shown in Exhibit 3-2 in Chapter 3).[111] The proportions of these PBTH families shown in the second column are similar to the proportions of all PBTH families (shown in Exhibit 5-1 in Chapter 5). The first

[110] The SUB-versus-PBTH comparison sample consists of 256 families assigned to the SUB group and 240 families assigned to the PBTH group. Of those 496 families, 215 SUB families and 201 CBRR families (84 percent) responded to the 37-month followup survey.

[111] When compared with all SUB families, this subset of SUB families is somewhat less likely to ever use rapid re-housing (6 percent rather than 11 percent).

two columns show that 82 percent of families assigned to the SUB group used the permanent housing subsidies they were offered and 50 percent of families assigned to the PBTH group used transitional housing. The number of months of program use (in columns three through six) and the proportions using the program in the month of the followup survey response (in columns seven and eight) are largely similar to those in the previous exhibits. As a result, a large difference exists in the proportion of families participating in some program during the survey month, with 74 percent of SUB families doing so (most receiving a permanent housing subsidy offered to the SUB group) and less than one-half of PBTH families (39 percent) participating in any program.

As expected, because of priority access to permanent housing subsidies, the proportion that ever used a permanent subsidy was higher for families assigned to the SUB group (87 percent) than for families assigned to the PBTH group (31 percent). At the 37-month survey, 70 percent of SUB families were using some form of permanent housing subsidy compared with 27 percent of PBTH families. This differential is 16 percentage points narrower than it was at the time of the 20-month survey. Use of permanent housing subsidies had decreased for the SUB group (by 5 percentage points) and had increased for the PBTH group (by 11 percentage points).

6.3.2. Impacts of the SUB Intervention Compared With the PBTH Intervention

The SUB and PBTH interventions are based on divergent views about the package of housing assistance and services that homeless families need. The premise of permanent housing assistance as an intervention is that family homelessness is centrally a housing affordability problem. From the perspective of permanent housing subsidy proponents, by addressing this problem with permanent housing assistance, assignment to the SUB intervention should reduce homelessness and improve housing stability relative to assignment to the PBTH intervention. By this means, it may improve family preservation, adult well-being, and child well-being. By reducing the proportion of income that must be devoted to housing costs, it may improve self-sufficiency.

By contrast, the premise for transitional housing as an intervention is that most families who become homeless have additional barriers that make it difficult for them to secure and maintain housing. The services offered in transitional housing address psychosocial problems and barriers to housing stability and attempt to put families on track for better employment and earnings. By this means, proponents of project-based transitional housing expect that assignment to the PBTH intervention will improve long-term housing stability, employment,

Exhibit 6-11. SUB Versus PBTH: Program Use Since RA

Type of Homeless or Housing Assistance	Percent Ever Used From RA to 37-Month Followup Survey[a]		Number of Months Used From RA to 37-Month Followup Survey, if Ever Used Type of Assistance				Percent Used in Month of Followup Survey Response	
	SUB	PBTH	SUB		PBTH		SUB	PBTH
			Mean	Median	Mean	Median		
Permanent housing subsidies offered to the SUB group[b]	82.3	7.2	31.4	33.5	13.1	11.5	65.8	6.5
Rapid re-housing[c]	5.7	12.0	3.7	3.5	9.2	10.5	0.4	0.9
Transitional housing[d]	9.4	49.5	10.9	8.0	14.8	13.0	1.0	7.3
Permanent supportive housing	2.1	11.6	7.2	8.0	15.3	12.5	1.2	8.6
Public housing	1.6	8.2	22.5	20.5	17.9	15.5	1.5	6.9
Project-based vouchers/Section 8 projects	1.7	7.2	15.6	14.5	16.4	13.5	1.2	4.6
Any permanent housing subsidy[e]	*86.6*	*30.9*	*30.8*	*33.5*	*17.3*	*15.5*	*69.7*	*26.7*
Emergency shelter[f]	87.9	83.0	2.6	1.9	3.5	2.3	2.5	5.2
No use of homeless or housing programs[g]	7.1	20.5	—	—	—	—	26.4	60.7
N	**215**	**201**	**—**	**—**	**—**	**—**	**215**	**201**

PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy.

RA = random assignment.

[a] Percentage of families who ever used a type of assistance program during the period from the month of RA to the month of 37-month followup survey response (median period duration: 38 calendar months). Percentages do not add to 100 because some families used more than one program type during the followup period.

[b] Subsidies offered to the SUB group are housing choice vouchers plus site-specific programs offered to families assigned to the SUB group in Bridgeport, Connecticut, and Honolulu, Hawaii.

[c] Temporary subsidies offered to the CBRR group.

[d] All types of transitional housing, including those offered to the PBTH group.

[e] Includes the types of permanent subsidy offered to the SUB group plus permanent supportive housing, public housing, and project-based vouchers/Section 8 projects.

[f] All families were in emergency shelter at RA. Percentages less than 100 percent for ever used emergency shelter are because of missing data on shelter use.

[g] Indicates no use of the first six program types in this table during any of the followup period and no use of emergency shelter after the first 6 months after RA. No use in the month of followup survey response indicates no use of any of these seven program types.

Notes: Percentages are regression adjusted, controlling for site and randomization ratio. Percentages, means, and medians are weighted for survey nonresponse to represent full comparison sample.

Source: Family Options Study Program Usage Data

earnings, education, and adult well-being relative to assignment to the SUB intervention and may improve family preservation and child well-being.

The *Short-Term Impacts* report (Gubits et al., 2015) found that, 20 months after random assignment, assignment to the SUB group reduced homelessness and doubling up compared with assignment to the PBTH group. It also led to cases in which more families lived in their own place and made fewer residential moves. In domains other than housing stability, assignment to the SUB intervention had several beneficial impacts—reduced separations from children, increased reunifications with children, lowered psychological distress, lowered number of schools attended, and decreased food insecurity and economic stress—compared with assignment to the PBTH intervention but reduced family income and work for pay. The remainder of this section presents the impact evidence of how these interventions compare at 3 years after random assignment.

Impacts on Housing Stability in the SUB-Versus-PBTH Comparison

Exhibit 6-12 shows the effect on housing stability of being assigned to the SUB group relative to being assigned to the PBTH group. The effects of the SUB intervention relative to the PBTH intervention 3 years after random assignment are favorable, large, and statistically significant on all homelessness outcomes.[112] Assignment to the SUB group reduced the confirmatory outcome of being homeless or doubled up in the past 6 months or in emergency shelter in the past 12 months from 41 to 17 percent relative to assignment to the PBTH group. This impact represents a reduction of 24 percentage points, more than one-half of the prevalence for the PBTH families. The next three rows show large reductions in the proportions of families experiencing subsequent stays in shelter or places not meant for human habitation and doubling up in the past 6 months. The preventive effect of assignment to the SUB intervention on doubling up was particularly strong; 30 percent of PBTH

Exhibit 6-12. SUB Versus PBTH: Impacts on Housing Stability at 37 Months

Outcome	SUB			PBTH			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Homelessness or doubled up during the followup period									
At least 1 night homeless[b] or doubled up in past 6 months or in shelter in past 12 months (%) **[confirmatory]**[c]	214	16.8	(38.7)	200	41.1	(49.5)	– 24.4***	(4.6)	– 0.43
At least 1 night homeless[b] or doubled up in past 6 months (%)	214	15.7	(37.5)	200	37.8	(48.9)	– 22.1***	(4.6)	– 0.40
At least 1 night homeless[b] in past 6 months (%)	214	9.0	(29.8)	201	20.1	(40.4)	– 11.1***	(3.6)	– 0.25
At least 1 night doubled up in past 6 months (%)	215	11.2	(32.7)	200	29.9	(46.4)	– 18.7***	(4.4)	– 0.36
Any stay in emergency shelter in past 6 months (%) [Program Usage Data]	215	3.9	(20.1)	201	9.1	(28.6)	– 5.2*	(2.7)	– 0.16
Any stay in emergency shelter in months 21 to 32 after RA (%) [Program Usage Data]	215	4.4	(21.1)	201	9.9	(30.0)	– 5.5**	(2.7)	– 0.13
Number of days homeless[b] or doubled up in past 6 months	214	16.3	(51.5)	200	48.6	(72.8)	– 32.3***	(6.7)	– 0.37
Number of days homeless[b] in past 6 months	214	7.0	(34.0)	201	16.7	(43.9)	– 9.7**	(4.0)	– 0.17
Number of days doubled up in past 6 months	215	8.5	(38.9)	200	35.2	(65.0)	– 26.6***	(6.1)	– 0.36
Housing independence									
Living in own house or apartment at followup (%)	215	84.9	(36.6)	201	66.3	(47.3)	18.5***	(4.6)	0.34
Living in own house or apartment with no housing assistance (%)	214	16.3	(36.6)	200	41.0	(49.3)	– 24.7***	(4.6)	– 0.43
Living in own house or apartment with housing assistance (%)	214	68.7	(46.5)	200	25.3	(43.7)	43.4***	(4.5)	0.84
Number of places lived									
Number of places lived in past 6 months[d]	215	1.3	(0.9)	199	1.7	(1.1)	– 0.3***	(0.1)	– 0.25
Housing quality									
Persons per room	208	1.3	(0.7)	188	1.7	(1.2)	– 0.4***	(0.1)	– 0.31
Housing quality is poor or fair (%)	207	28.1	(44.8)	186	32.2	(47.1)	– 4.1	(5.1)	– 0.08

PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy.
ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
[b] The definition of "homeless" in this report includes stays in emergency shelters and places not meant for human habitation. It excludes transitional housing.
[c] After adjustment of multiple comparisons, the impact on the confirmatory outcome is statistically significant at the .01 level for the SUB-versus-PBTH comparison.
[d] The number of places lived in past 6 months is topcoded at 6 places.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.
Sources: Family Options Study 37-month followup survey; Program Usage Data

[112] The homeless outcomes in this study diverge from the homeless definition final rule in that they do not include stays in transitional housing in their definitions of being homeless. Additional impacts on the use of transitional housing during the followup period are provided in Appendix E.

families experienced doubling up in the 6 months before the survey compared with only 11 percent of SUB families. Assignment to the SUB group, relative to assignment to the PBTH group, also reduced the proportions of families who had a stay in emergency shelter during months 21 to 32 after random assignment and during the 6 months before the survey by more than one-half (each by about 5 percentage points).

The second panel of the exhibit shows that assignment to the SUB group increases the proportion of families living in their own house or apartment (with or without assistance) at the time of the followup survey from 66 to 85 percent relative to assignment to the PBTH group. SUB families are much less likely (25 percentage points) than are PBTH families to be living in their own place with no housing assistance and much more likely to be living in their own place *with* housing assistance (41 percentage points).

The third panel of the exhibit shows that SUB families had greater residential stability than did PBTH families in the months before the survey. Assignment to the SUB intervention reduced the number of places families lived in the past 6 months by 0.3 places. Some of this effect is likely because some PBTH families moved out of transitional housing at the end of their program participation.

The bottom panel of the exhibit shows that SUB families were living in less crowded conditions than were PBTH families, with an average of 1.3 persons per room compared with 1.7 persons per room for PBTH families. Compared with assignment to the PBTH group, assignment to the SUB group had no effect on the housing quality that families reported at the time of the 37-month survey.

Impacts on Family Preservation in the SUB-Versus-PBTH Comparison

The *Short-Term Impacts* report (Gubits et al., 2015) found that, at the 20-month followup point, families assigned to the SUB group had fewer separations from children and more reunifications with separated children and separated spouses and partners than did families assigned to the PBTH group. Exhibit 6-13 shows the effects on family preservation in the SUB-versus-PBTH comparison at the 3-year followup point. As at 20 months, assignment to the SUB intervention compared with assignment to the PBTH intervention, reduced the proportion of families who had at least one child separation at 37 months after random assignment. No evidence of effects was found for any of the other family preservation measures from survey data at 37 months. Neither was evidence of effects found for family preservation measures from the five-site administrative data on formal child separations (Exhibit 6-14).

Impacts on Adult Well-Being in the SUB-Versus-PBTH Comparison

Exhibit 6-15 shows effects at 37 months on adult well-being outcomes for the SUB-versus-PBTH comparison. The beneficial effects of assignment to the SUB intervention on mental health found at 20 months were not apparent at 37 months. Assignment to the SUB group also led to equivalent results as for assignment to the PBTH group on measures of physical, intimate partner violence, and substance dependence or abuse.

Exhibit 6-13. SUB Versus PBTH: Impacts on Family Preservation at 37 Months

Outcome	SUB			PBTH			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Current or recent separations of family members present at baseline									
Family has at least one child separated in past 6 months (%)	208	15.2	(35.2)	194	23.3	(41.6)	– 8.1**	(4.0)	– 0.19
Family has at least one foster care placement in past 6 months[b] (%)	210	3.8	(18.0)	195	4.6	(22.1)	– 0.8	(2.0)	– 0.04
Spouse/partner separated in past 6 months, of those with spouse/partner present at RA (%)	65	39.1	(49.7)	56	38.8	(48.9)	0.3	(9.9)	0.00
Reunification of family members reported as separated at baseline									
Family has at least one child reunified, of those families with at least one child absent at RA (%)	47	54.0	(50.5)	37	33.1	(49.2)	21.0	(13.8)	0.37
Spouse/partner reunified, of those with spouse/partner absent at RA (%)	23	26.0	(47.0)	21	22.8	(43.6)	3.2	(15.6)	0.07

PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy.
ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
[b] Foster care placement outcome includes any children (present at baseline) who are placed in foster care or adopted by another family at the time of followup.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.
Source: Family Options Study 37-month followup survey

Exhibit 6-14. SUB Versus PBTH: Impacts on Child Welfare Outcomes

Outcome	SUB			PBTH			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Had a formal child separation that began after RA (%)	138	11.8	(32.1)	144	15.8	(36.8)	– 4.0	(4.2)	– 12.06
Total days during followup separated from at least one child[b]	138	70.4	(218.9)	144	97.8	(253.5)	– 27.5	(24.0)	– 0.11

PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed t-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes separations started before and after RA. Length of followup varies by site. Alameda County = 1,075 days. Baltimore = 1,071 days. Kansas City = 1,069 days. Minneapolis = 1,046 days. Phoenix = 1,123 days.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions. Sample limited to five sites where child welfare records were collected (Alameda County, Baltimore, Kansas City, Minneapolis, and Phoenix).

Source: State child welfare agency records

Exhibit 6-15. SUB Versus PBTH: Impacts on Adult Well-Being 37 Months

Outcome	SUB			PBTH			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Adult physical health									
Health in past 30 days was poor or fair (%)	214	30.4	(45.9)	199	32.6	(46.8)	– 2.2	(4.9)	– 0.04
Adult mental health									
Goal-oriented thinking[b]	210	4.48	(0.99)	195	4.39	(1.08)	0.09	(0.11)	0.08
Psychological distress[c]	214	6.67	(5.78)	200	7.41	(5.50)	– 0.74	(0.57)	– 0.11
Adult trauma symptoms									
Post-traumatic stress disorder (PTSD) symptoms in past 30 days (%)	211	22.9	(41.7)	199	23.1	(40.9)	– 0.2	(4.3)	0.00
Adult substance use									
Alcohol dependence or drug abuse[d] (%)	215	16.3	(35.2)	201	16.9	(35.2)	– 0.6	(3.8)	– 0.02
Alcohol dependence[d] (%)	215	12.6	(31.0)	201	12.7	(30.7)	– 0.2	(3.4)	– 0.01
Drug abuse[d] (%)	215	5.1	(20.1)	201	6.8	(24.7)	– 1.6	(2.5)	– 0.06
Experience of intimate partner violence									
Experienced intimate partner violence in past 6 months (%)	213	9.0	(29.2)	200	10.2	(29.4)	– 1.2	(3.1)	– 0.03

PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy.

ITT = intention-to-treat. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Goal-oriented thinking is measured with a modified version of the State Hope Scale and ranges from 1 to 6, with higher scores indicating higher levels of positive, goal-oriented thinking.

[c] Psychological distress is measured with the Kessler Psychological Distress Scale (K6) and ranges from 0 to 24, with higher scores indicating greater distress.

[d] Alcohol dependence is measured with the Rapid Alcohol Problems Screen (RAPS-4), and drug abuse is measured with six items from the Drug Abuse Screening Test (DAST-10). Both are measured for the 6 months before the 37-month survey.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Impacts on Child Well-Being in the SUB-Versus-PBTH Comparison

Of 9 impact estimates on outcomes, 4 measured across ages (Exhibit 6-16), and 2 of 20 impact estimates on age-specific outcomes (Exhibit 6-17) reached statistical significance, all favoring children in families assigned to the SUB group rather than to the PBTH group. The cross-age impacts are clustered in the school domain: children assigned to the SUB group had fewer school moves, are 7 percentage points more likely to be on track for grade completion, and have higher grades (an average of 0.20 higher on a 4.0 scale). In addition, parents reported fewer behavioral problems for children in SUB families compared with those in PBTH families. Young children ages 3.5 to 7 in the SUB group show higher verbal ability (first panel of Exhibit 6-17) and older children ages 8 to 17 report lower substance use than children in the PBTH group. Some of these effects (higher grades, higher verbal ability, and lower substance abuse) are not observed in the SUB-versus-UC comparison and have magnitudes larger than would be expected from the SUB-versus-UC and PBTH-versus-UC comparisons. These three effects are thus perhaps best thought of as random variations. Overall, the study team finds scattered beneficial effects on child well-being from assignment to the SUB group relative to assignment to the PBTH group.

Exhibit 6-16. SUB Versus PBTH: Impacts on Child Well-Being Across Age Groups at 37 Months

Outcome	SUB			PBTH			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Child education									
Number of schools attended since RA[b]	251	1.9	(0.9)	229	2.1	(1.0)	– 0.2*	(0.1)	– 0.18
Grade completion (not held back) (%)	208	93.87	(22.43)	191	86.76	(33.82)	7.11**	(3.32)	0.19
School grades[c]	188	3.2	(0.8)	171	3.0	(0.9)	0.2**	(0.1)	0.18
Child physical health									
Poor or fair health in past 30 days (%)	299	6.2	(26.2)	263	9.1	(24.6)	– 2.9	(2.9)	– 0.09
Well-child checkup in past year (%)	299	90.3	(29.6)	263	89.3	(31.9)	1.0	(3.1)	0.03
Child has regular source of health care (%)	299	91.6	(27.7)	260	89.2	(29.0)	2.4	(3.7)	0.07
Sleep problems[d]	300	2.05	(1.06)	263	2.19	(1.13)	– 0.14	(0.11)	– 0.10
Child behavioral strengths and challenges									
Behavior problems[e]	279	0.40	(1.21)	250	0.64	(1.25)	– 0.25*	(0.15)	– 0.15
Prosocial behavior[f]	280	– 0.10	(1.03)	250	– 0.29	(1.23)	0.19	(0.13)	0.13

PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Number of schools outcome is topcoded at 4 or more schools.

[c] School grades outcome is defined as 1 = mostly Ds or Fs, 2 = mostly Cs, 3 = mostly Bs, 4 = mostly As.

[d] Sleep problems outcome ranges from 1 to 5, with higher values indicating more frequent tiredness upon waking and during the day.

[e] Behavior problems outcome is measured as the standardized Total Difficulties score from the Strengths and Difficulties Questionnaire (SDQ).

[f] Prosocial behavior is measured as the standardized prosocial domain score from the SDQ.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey (parent report)

Impacts on Self-Sufficiency in the SUB-Versus-PBTH Comparison

The *Short-Term Impacts* report (Gubits et al., 2015) found that, 20 months after random assignment, assignment to the SUB group reduced work for pay, earnings, and family income relative to assignment to the PBTH group. Assignment to the SUB intervention also reduced food insecurity and economic stress, however, relative to assignment to the PBTH intervention. Exhibit 6-18 shows statistically significant effects on 5 of the 20 self-sufficiency outcomes examined in the SUB-versus-PBTH comparison at the 3-year followup survey. The study team did not find an effect on the proportion of family heads working for pay at the time of the 37-month survey or on the proportion with any work for pay since the 20-month survey. Also no detected effect exists on the proportion with any work for pay since random assignment (and the point estimate is minus 2 percentage points), suggesting that the gap in work effort apparent at 20 months has largely disappeared.

Exhibit 6-19 shows impact estimates from administrative data on outcomes for quarters 11 to 14 after the quarter of random assignment. The analysis of administrative data finds no effect of assignment to the SUB group relative to assignment to the PBTH group on total earnings, the proportion of family heads employed, or the number of quarters employed during the year.

The 20-month analysis detected higher overall participation in school or training for SUB families compared with PBTH families. This difference is not found at 37 months, but two other effects are detected at the later time point (Exhibit 6-18): SUB families had a higher average number of weeks in school or training since random assignment (9 weeks) than did PBTH families (6 weeks) and a higher proportion with at least 2 weeks in a school program (16 percent versus 10 percent). These results are surprising, because most PBTH providers incorporated some kind of employment training into their programs (although this training may have been less than 2 weeks).

The fourth and fifth panels of Exhibit 6-18 show that, as it was at 20 months, assignment to the SUB intervention lowered food insecurity and economic stress at 37 months after random assignment. Relative to assignment to the PBTH group, assignment to the SUB group reduced the proportion of families who were food insecure from 47 to 34 percent and reduced the average level of food insecurity by a standardized effect size of 0.24. Likewise, the final row of the exhibit shows that assignment to the SUB group reduced economic stress by a standardized effect size of 0.18.

Exhibit 6-17. SUB Versus PBTH: Impacts on Child Well-Being Developmental Outcomes by Age Group at 37 Months

Outcome	SUB			PBTH			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Ages 2 to 5 years[b]									
Preschool or Head Start enrollment[c] (%)	103	34.8	(49.4)	76	37.5	(48.9)	– 2.7	(7.1)	– 0.04
Child care or preschool absences in past month[d]	40	0.95	(1.04)	33	0.55	(0.79)	0.39	(0.26)	0.35
Positive child care or preschool experiences[e]	41	0.79	(0.43)	36	0.84	(0.55)	– 0.05	(0.11)	– 0.12
Positive child care or preschool attitudes[f]	42	4.62	(0.86)	35	4.76	(0.95)	– 0.14	(0.16)	– 0.16
Child care or preschool conduct problems[g] (%)	44	4.5	(25.5)	38	11.0	(34.3)	– 6.6	(6.4)	– 0.24
Ages 2 years to 5 years, 6 months									
Met developmental milestones[h] (%)	89	68.0	(46.2)	65	69.6	(46.5)	– 1.5	(8.5)	– 0.03
Ages 3 years, 6 months to 7 years									
Verbal ability[i]	120	– 0.16	(1.08)	89	– 0.59	(1.13)	0.43*	(0.22)	0.33
Math ability[j]	120	– 0.24	(1.08)	88	– 0.48	(1.08)	0.24	(0.18)	0.20
Executive functioning[k] (self-regulation)	114	16.72	(16.25)	79	14.14	(15.81)	2.58	(2.21)	0.13
Ages 5 to 17 years[l]									
School enrollment[c] (%)	198	99.2	(12.2)	189	98.4	(14.4)	0.9	(0.9)	0.05
School absences in past month[d,m]	81	0.83	(0.94)	66	0.98	(0.87)	– 0.15	(0.20)	– 0.12
Positive school experiences[e,m]	81	0.58	(0.52)	66	0.54	(0.66)	0.03	(0.10)	0.04
Positive school attitudes[f,m]	80	4.23	(1.06)	66	4.01	(1.18)	0.22	(0.20)	0.15
School conduct problems[g,m] (%)	81	26.5	(44.1)	66	23.6	(44.1)	2.9	(8.3)	0.05
Ages 8 to 17 years									
Anxiety[n]	112	34.83	(6.95)	114	34.31	(7.94)	0.51	(1.32)	0.05
Fears[o]	113	61.89	(14.82)	115	60.86	(15.10)	1.03	(2.12)	0.05
Substance use[p] (%)	109	3.01	(22.91)	107	17.08	(35.83)	– 14.06***	(5.26)	– 0.39
Goal-oriented thinking[q]	106	21.98	(4.74)	106	22.99	(5.13)	– 1.00	(0.74)	– 0.16
School effort in past month[r]	110	2.68	(0.82)	114	2.69	(0.86)	– 0.01	(0.13)	– 0.01
Arrests or police involvement in past 6 months[s] (%)	59	7.57	(28.09)	48	13.43	(33.42)	– 5.87	(8.05)	– 0.15

PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy.

ITT = intention-to-treat. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes focal children who were ages 4 years or younger on the September 1 before the 37-month parent survey.

[c] Preschool or Head Start enrollment outcome is defined as enrollment in preschool, center-based child care, or school.

[d] Absences outcome is defined as 0 = no absences in past month, 1 = one to two absences, 2 = three to five absences, 3 = six or more absences.

[e] Positive child care, preschool, or school experiences outcome is defined as – 1 = mostly negative experiences, 0 = both positive and negative experiences, 1 = mostly positive experiences.

[f] Positive child care, preschool, or school attitudes outcome is parent report of how much child likes school and ranges from 1 to 5, with higher values indicating greater like of school.

[g] Child care, preschool, or school conduct problems outcome is defined as 0 = no conduct problems reported to parent, 1 = parent contacted about conduct problems or suspension or expulsion from school or child care center.

[h] Met developmental milestones outcome is defined as scoring above the typical development cutoffs in all domains of the Ages and Stages Questionnaire (ASQ-3).

[i] Verbal ability outcome is the nationally standardized score from the Woodcock-Johnson III (WJ III) letter-word identification test.

[j] Math ability outcome is the nationally standardized score from the WJ III applied problems test.

[k] Executive functioning outcome is the Head Toes Knees Shoulders (HTKS) score and ranges from 0 to 40, with higher scores indicating greater executive functioning.

[l] Includes focal children who were ages 5 to 17 years on the September 1 before the 37-month parent survey and no older than 17 years at the time of the survey.

[m] This parent-reported outcome was collected from only the first 38 percent of parents surveyed due to an error in data collection.

[n] Anxiety (child report) is measured using the A-Trait scale from the State-Trait Anxiety Inventory for Children (STAIC). Scores range from 20 to 60, with higher scores indicating greater anxiety.

[o] Fears outcome (child report) is the score from the Fears Scale and ranges from 33 to 99, with higher scores indicating more fear.

[p] Substance use (child report) is measured with 23 items from the Centers for Disease Control and Prevention 2011 Youth Risk Behavior Survey.

[q] Goal-oriented thinking (child report) is measured with a modified version of the Children's Hope Scale and ranges from 6 to 30, with higher scores indicating higher levels of positive, goal-oriented thinking.

[r] School effort outcome (child report) ranges from 1 to 4, with higher scores indicating greater effort during school day and on homework.

[s] Arrest or police involvement in past 6 months is from parent report.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse.

See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey (parent report); Family Options Study 37-month child survey (child report); ASQ-3; WJ III; HTKS

Exhibit 6-18. SUB Versus PBTH: Impacts on Self-Sufficiency at 37 Months

Outcome	SUB			PBTH			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Employment status									
Work for pay in week before survey (%)	214	37.6	(47.8)	201	39.6	(49.3)	– 2.0	(4.9)	– 0.04
Any work for pay since 20-month survey[b] (%)	203	61.0	(49.1)	174	59.3	(49.1)	1.8	(5.1)	0.04
Months worked for pay since 20-month survey[b,c]	202	6.9	(7.8)	173	7.2	(8.3)	– 0.3	(0.8)	– 0.04
Any work for pay since RA (%)	214	72.2	(45.2)	201	74.2	(44.2)	– 2.0	(4.3)	– 0.04
Months worked for pay since RA[c]	210	12.5	(13.4)	199	13.6	(13.7)	– 1.1	(1.2)	– 0.07
Hours of work per week at current main job[d]	213	11.7	(15.9)	200	13.4	(18.8)	– 1.7	(1.8)	– 0.09
Income sources and amounts									
Annualized current earnings ($)	209	6,539	(9,835)	198	8,292	(13,045)	– 1,754	(1,217)	– 0.14
Total family income ($)	201	12,107	(10,068)	199	13,337	(12,164)	– 1,230	(1,043)	– 0.09
Anyone in family had earnings in past month (%)	215	45.3	(49.8)	201	53.5	(49.9)	– 8.1	(5.1)	– 0.14
Anyone in family received TANF in past month (%)	215	28.2	(46.0)	200	26.9	(43.7)	1.3	(4.4)	0.03
Anyone in family received SSDI in past month (%)	213	7.0	(25.6)	201	7.0	(25.5)	0.0	(2.4)	0.00
Anyone in family received SSI in past month (%)	215	14.5	(33.7)	200	12.7	(34.8)	1.8	(3.0)	0.04
Anyone in family received SNAP/Food Stamps in past month (%)	215	79.1	(39.7)	200	80.8	(40.1)	– 1.6	(4.1)	– 0.04
Anyone in family received WIC in past month (%)	215	26.3	(44.5)	200	31.5	(46.2)	– 5.2	(4.6)	– 0.10
Education and training									
Participated in 2 weeks or more of any school or training since RA (%)	213	39.8	(49.5)	199	38.7	(48.9)	1.1	(5.1)	0.02
Number of weeks in school/training programs since RA	210	8.5	(15.9)	198	5.6	(12.7)	2.9*	(1.5)	0.14
Participated in 2 weeks or more of school since RA (%)	213	15.9	(35.3)	199	10.2	(31.4)	5.7*	(3.3)	0.15
Participated in 2 weeks or more of basic education since RA (%)	213	1.1	(11.8)	199	1.1	(10.0)	0.0	(1.2)	0.00
Participated in 2 weeks or more of vocational education since RA (%)	213	9.2	(31.7)	199	11.7	(32.1)	– 2.4	(3.1)	– 0.06
Food security									
Household is food insecure (%)	215	34.4	(48.3)	201	47.2	(49.8)	– 12.8***	(4.9)	– 0.22
Food insecurity scale[e]	214	1.42	(1.92)	198	2.00	(2.03)	– 0.58***	(0.20)	– 0.24
Economic stressors									
Economic stress scale[f]	212	– 0.23	(0.46)	199	– 0.12	(0.50)	– 0.11***	(0.05)	– 0.18

PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error. SNAP = Supplemental Nutrition Assistance Program. SSDI = Social Security Disability Insurance. SSI = Supplemental Security Income. TANF = Temporary Assistance for Needy Families. WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes only families who responded to both 20-month and 37-month followup surveys; not weighted for survey nonresponse.

[c] Number of months worked for pay includes partial calendar months.

[d] Hours of work per week includes those not currently working (that is, those with 0 hours of work per week).

[e] Food insecurity scale ranges from 0 to 6, with higher values indicating higher food insecurity.

[f] Economic stress scale ranges from – 1 to 1, with higher values indicating higher economic stress.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Exhibit 6-19. SUB Versus PBTH: Earnings and Employment

Outcome	SUB			PBTH			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Earnings in quarters 11 to 14 after RA (2015Q3$)	241	5,508	(8,486)	230	6,391	(9,810)	– 883	(863)	– 0.09
Any employment in quarters 11 to 14 after RA (%)	241	54.8	(49.9)	230	57.4	(49.5)	– 2.6	(4.6)	– 0.05
Number of quarters employed in quarters 11 to 14 after RA	241	1.6	(1.7)	230	1.7	(1.7)	– 0.1	(0.2)	– 0.04

PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

Note: See Chapter 2 and Appendix B for outcome definitions.

Source: Quarterly wage records from the National Directory of New Hires

Summary of the SUB-Versus-PBTH Comparison Across Domains

For the SUB-versus-PBTH comparison, the randomization resulted in a notable contrast in the mix of program use during the 37-month followup period. At 3 years after random assignment, 82 percent of SUB families had ever used the permanent housing subsidies they were offered (compared with only 7 percent of PBTH families who had ever used these subsidies) and 50 percent of PBTH families had ever used transitional housing (compared with 9 percent of SUB families). In the month of the followup survey response, 70 percent of SUB families were using some type of permanent housing subsidy compared with 27 percent of PBTH families. Of PBTH families, 7 percent were using transitional housing during this month compared with only 1 percent of SUB families.

These differences in program participation led to marked differences between the experiences of SUB families and PBTH families in several areas. The most noteworthy effect of the SUB intervention relative to the PBTH intervention was in its greater prevention of homelessness. Only 17 percent of SUB families compared with 41 percent of PBTH families spent at least 1 night in an emergency shelter, in a place not meant for human habitation, or doubled up in the past 6 months or had a stay in emergency shelter in the 12 months before the survey. This effect was driven by a large reduction (19 percentage points) in the proportion experiencing doubling up. Also, only 4 percent of SUB families compared with 10 percent of PBTH families spent at least 1 night in emergency shelter in months 21 to 32 after random assignment.

Compared with assignment to the PBTH intervention, assignment to the SUB intervention also increased the proportion of families living in their own house or apartment at the time of the followup survey from 66 to 85 percent. The greater stability afforded by the permanent housing subsidies offered to SUB families was evidenced in a reduction in the number of places families lived in the past 6 months and a reduction in the number of schools that children attended since study entry.

The SUB-versus-PBTH comparison yields a handful of statistically significant effects in the family preservation, child well-being, and self-sufficiency domains, almost all of which favor assignment to the SUB group. Among these domains, the most notable effects of assignment to the SUB intervention relative to assignment to the PBTH intervention are an 8-percentage-point reduction in the proportion of families who had a child separation in the past 6 months (from 23 to 15 percent), a decrease in the number of schools children attended, an increase in children's grade completion, and a decrease in the proportion of families who were food insecure (from 47 to 34 percent).

The lower average work effort of SUB families relative to PBTH families found at 20 months is not apparent at 37 months.

Overall, do the families assigned to the SUB group appear to be doing better at 37 months after random assignment than the families assigned to the PBTH group? In many ways, the answer is "yes." The SUB families, on average, are experiencing less homelessness and being doubled up, are more likely to live in their own place, and are living in less crowded conditions than are PBTH families. SUB families are also more food secure, have children who move among schools less and have better grade completion, and have less economic stress. Most of the ways in which SUB families appear to be doing better than PBTH families, with the exception of some of the scattered effects on children's well-being, may fade over time if SUB families give up the permanent housing subsidies to which they had priority access or if increasing numbers of PBTH families find their way to permanent housing subsidies.

6.4. The Community-Based Rapid Re-Housing (CBRR) Versus Project-Based Transitional Housing (PBTH) Comparison

The CBRR-versus-PBTH comparison contrasts having priority access to temporary private-market rental assistance and modest case management of the CBRR intervention with having priority access to temporary, agency-controlled housing paired with intensive supportive services of the PBTH intervention. Although both interventions provide temporary assistance, the length of assistance differs. CBRR program assistance is usually provided for 7 to 8 months and is potentially renewable for up to 18 months. PBTH program assistance provides housing for up to 24 months, with average stays of 13 months during the 3-year followup period. PBTH programs offer comprehensive case management and provide many supportive services directly. Some services beyond assistance with housing search, largely focused on self-sufficiency, were offered to about three-fourths of CBRR families, in general, with lower intensity than services offered to PBTH families. Employment and training services were offered by nearly all PBTH programs (representing 92 percent of families assigned to the PBTH group) but by only a minority of CBRR programs (representing 37 percent of families assigned to the CBRR group), and most PBTH programs offered services that addressed psychosocial challenges (see the *Short-Term Impacts* report [Gubits et al., 2015]). The CBRR case managers typically served about 36 families each, roughly twice as many families as the typical PBTH case manager.

6.4.1. Program Use by Families in the CBRR-Versus-PBTH Comparison

Exhibit 6-20 shows the use of eight types of homeless and housing programs by the 180 CBRR families and 184 PBTH families analyzed in the CBRR-versus-PBTH comparison.[113] The first column shows some differences in the general pattern of usage for these CBRR families compared with all CBRR families (shown in Exhibit 4-1 in Chapter 4). Compared with the proportion among *all* families randomly assigned to the CBRR group, lower proportions of the CBRR families in this pairwise comparison used rapid re-housing (55 compared with 59 percent), a permanent housing subsidy of the type offered to families assigned to the SUB group (7 compared with 10 percent), and any form of permanent subsidy (32 compared with 35 percent). Compared with the proportion among all families assigned to the CBRR group, a higher proportion of CBRR families in this comparison used transitional housing (31 compared with 23 percent), and a higher proportion used no homeless or housing assistance program (including emergency shelter) during the followup period (14 compared with 9 percent).

The proportions of PBTH families using various types of programs shown in the second column are similar to the proportions of all PBTH families shown in Exhibit 5-1 in Chapter 5. The first two columns show that 55 percent of families assigned to the CBRR group used rapid re-housing (whereas only 16 percent of PBTH families did so) and 53 percent of PBTH families used transitional housing (whereas 31 percent of CBRR families did so). The number of months of program use (in columns three through six) and the proportions using the program in the month of the 37-month followup survey response (in columns seven and eight) are largely similar to those in the exhibits in the chapters that address PBTH-versus-UC and CBRR-versus-UC comparisons. By the followup survey month, less than one-half of both groups are participating in any program. Of the CBRR families, 37 percent are participating in some program in the survey month compared with 40 percent of the PBTH families.[114] Only 3 percent of CBRR families were receiving rapid re-housing in the survey month and 9 percent of PBTH families were receiving transitional housing at this point.

Exhibit 6-20. CBRR Versus PBTH: Program Use Since RA

Type of Homeless or Housing Assistance	Percent Ever Used From RA to 37-Month Followup Survey[a]		Number of Months Used From RA to 37-Month Followup Survey, if Ever Used Type of Assistance				Percent Used in Month of Followup Survey Response	
	CBRR	PBTH	CBRR		PBTH		CBRR	PBTH
			Mean	Median	Mean	Median		
Permanent housing subsidies offered to the SUB group[b]	6.7	8.7	24.7	26.5	15.7	10.5	6.8	6.2
Rapid re-housing[c]	54.6	15.8	7.1	6.5	6.8	4.5	2.7	0.4
Transitional housing[d]	30.7	53.4	10.0	6.5	14.0	12.0	5.1	9.1
Permanent supportive housing	9.2	10.7	17.2	15.5	15.9	14.5	7.6	6.8
Public housing	11.5	9.1	16.7	16.5	19.0	20.5	10.1	8.2
Project-based vouchers/Section 8 projects	4.8	6.1	19.2	18.5	16.5	17.5	4.9	3.8
Any permanent housing subsidy[e]	*32.3*	*33.3*	*18.9*	*18.5*	*17.4*	*17.5*	*29.3*	*25.1*
Emergency shelter[f]	88.1	86.5	3.7	2.4	3.2	2.2	2.8	2.0
No use of homeless or housing programs[g]	14.3	16.8	—	—	—	—	60.1	63.4
N	**180**	**184**	**—**	**—**	**—**	**—**	**180**	**184**

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing.

RA = random assignment.

[a] Percentage of families who ever used a type of assistance program during the period from the month of RA to the month of 37-month followup survey response (median period duration: 38 calendar months). Percentages do not add to 100 because some families used more than one program type during the followup period.

[b] Subsidies offered to the SUB group are housing choice vouchers plus site-specific programs offered to families assigned to the SUB group in Bridgeport, Connecticut, and Honolulu, Hawaii.

[c] Temporary subsidies offered to the CBRR group.

[d] All types of transitional housing, including those offered to the PBTH group.

[e] Includes the types of permanent subsidy offered to the SUB group plus permanent supportive housing, public housing, and project-based vouchers/Section 8 projects.

[f] All families were in emergency shelter at RA. Percentages less than 100 percent for ever used emergency shelter are because of missing data on shelter use.

[g] Indicates no use of the first six program types in this table during any of the followup period and no use of emergency shelter after the first 6 months after RA. No use in the month of followup survey response indicates no use of any of these seven program types.

Notes: Percentages are regression adjusted, controlling for site and randomization ratio. Percentages, means, and medians are weighted for survey nonresponse to represent full comparison sample.

Source: Family Options Study Program Usage Data

[113] The CBRR-versus-PBTH comparison sample consists of 232 families assigned to the CBRR group and 239 families assigned to the PBTH group. Of those 471 families, 180 CBRR families and 184 PBTH families (77 percent) responded to the 37-month followup survey.

[114] These proportions of families participating in any program are calculated by subtracting from 100 percent the proportions with no use of programs in the survey month (shown in the exhibit).

6.4.2. Impacts of the CBRR Intervention Compared With the PBTH Intervention

Hypotheses about rapid re-housing and project-based transitional housing arise from divergent views about the needs of families who experience homelessness and the package of housing assistance and services best suited to address these needs. Rapid re-housing attempts to return families quickly to the private rental market, with modest services directed toward housing and self-sufficiency to help them stay there. From the perspective of community-based rapid re-housing proponents, this rapid return to the private rental market should be the primary objective of homeless interventions. Assignment to the CBRR intervention is thus expected to reduce the length of the shelter stay from the time of study entry. The CBRR intervention is also expected to reduce homelessness relative to the PBTH intervention and may improve housing stability, family preservation, adult well-being, child well-being, employment, and earnings. Proponents of project-based transitional housing emphasize that most families who become homeless have additional barriers that make it difficult for them to secure and maintain housing. The services in project-based transitional housing programs are designed to address these barriers and lay the foundation for later housing stability. Consistent with this perspective, project-based transitional housing proponents expect that the PBTH intervention will improve long-term housing stability, employment, earnings, education, and adult well-being relative to assignment to the CBRR intervention and may improve family preservation and child well-being. Because the PBTH intervention addresses barriers to housing stability and attempts to put families on track for better employment and earnings, many project-based transitional housing proponents would expect outcomes in these domains. This section presents the 3-year experimental impact evidence on these divergent expectations.

Impacts on Housing Stability in the CBRR-Versus-PBTH Comparison

Exhibit 6-21 shows the effect on housing stability of being assigned to the CBRR group relative to being assigned to the PBTH group. The exhibit shows significant impacts on only 1 of 14 outcomes examined. The analysis shows no evidence that assignment to the CBRR group relative to assignment to the PBTH group led to differential experiences of homelessness, doubling up, or use of emergency shelter at 37 months after random assignment.

Exhibit 6-21. CBRR Versus PBTH: Impacts on Housing Stability at 37 Months

Outcome	CBRR			PBTH			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Homelessness or doubled up during the follow up period									
At least 1 night homeless[b] or doubled up in past 6 months or in shelter in past 12 months (%) **[confirmatory]**[c]	180	40.1	(49.7)	183	43.2	(49.7)	– 3.1	(6.2)	– 0.06
At least 1 night homeless[b] or doubled up in past 6 months (%)	180	35.6	(48.8)	183	38.4	(49.0)	– 2.8	(6.0)	– 0.05
At least 1 night homeless[b] in past 6 months (%)	180	20.2	(40.5)	184	19.8	(41.0)	0.5	(4.9)	0.01
At least 1 night doubled up in past 6 months (%)	180	30.3	(46.9)	183	28.3	(45.7)	2.0	(5.7)	0.04
Any stay in emergency shelter in past 6 months (%) [Program Usage Data]	180	7.9	(26.9)	184	4.9	(23.8)	3.0	(2.9)	0.09
Any stay in emergency shelter in months 21 to 32 after RA (%) [Program Usage Data]	180	12.8	(33.5)	184	11.2	(31.9)	1.6	(4.0)	0.04
Number of days homeless[b] or doubled up in past 6 months	180	50.4	(75.7)	183	44.7	(71.4)	5.7	(9.1)	0.07
Number of days homeless[b] in past 6 months	180	16.2	(45.8)	184	16.5	(45.8)	– 0.4	(5.3)	– 0.01
Number of days doubled up in past 6 months	180	36.4	(67.2)	183	30.7	(60.7)	5.7	(7.8)	0.08
Housing independence									
Living in own house or apartment at followup (%)	180	66.4	(47.7)	184	68.1	(47.0)	– 1.7	(5.8)	– 0.03
Living in own house or apartment with no housing assistance (%)	179	37.7	(48.9)	184	41.3	(48.9)	– 3.6	(5.4)	– 0.06
Living in own house or apartment with housing assistance (%)	179	29.3	(44.4)	184	26.4	(45.1)	2.9	(5.2)	0.06
Number of places lived									
Number of places lived in past 6 months[d]	180	1.7	(1.1)	181	1.6	(1.1)	0.1	(0.1)	0.07
Housing quality									
Persons per room	168	2.0	(1.6)	175	1.7	(1.3)	0.3	(0.2)	0.25
Housing quality is poor or fair (%)	171	25.2	(44.2)	175	35.4	(48.0)	– 10.1*	(5.4)	– 0.19

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing.
ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
[b] The definition of "homeless" in this report includes stays in emergency shelters and places not meant for human habitation. It excludes transitional housing.
[c] After adjustment of multiple comparisons, the impact on the confirmatory outcome is statistically significant at the .01 level for the SUB-versus-PBTH comparison.
[d] The number of places lived in past 6 months is topcoded at 6 places.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.
Sources: Family Options Study 37-month followup survey; Program Usage Data

The bottom three panels of the exhibit show no statistically significant differences between CBRR and PBTH families in housing independence at the time of the 37-month followup survey or number of residential moves in the 6 months before the survey. Families assigned to the CBRR group were less likely to report poor or fair housing quality than were families assigned to the PBTH group (24 compared with 34 percent).

Impacts on Family Preservation in the CBRR-Versus-PBTH Comparison

Exhibit 6-22 shows the effects on family preservation in the CBRR-versus-PBTH comparison. The study team finds no evidence of differential effects of these interventions on family separations or reunifications in the survey data at 37 months, although the numbers, particularly in the case of reunifications of family members separated at the time of the baseline survey, were too small to yield a strong test. The study team also finds no evidence of effects on measures of formal child separations in the child welfare administrative data from five sites (Exhibit 6-23).

Impacts on Adult Well-Being in the CBRR-Versus-PBTH Comparison

Exhibit 6-24 shows statistically significant effects on 3 of the 8 adult well-being outcomes in the CBRR-versus-PBTH comparison. All three significant effects show the CBRR intervention produced more favorable outcomes than did the PBTH intervention at 37 months after random assignment.

Assignment to the CBRR group led to lower levels of psychological distress than for families assigned to the PBTH group, with an effect size of 0.19. Having priority access to CBRR programs compared with PBTH programs also reduced the number of families who reported drug abuse, from 5.6 to 2.0 percent, and the number reporting either alcohol dependence or drug abuse, from 14.5 to 7.4 percent. These results are surprising, because PBTH programs have an explicit focus on adult well-being. No longer-term differences exist on the remaining five measures of physical and mental health, intimate partner violence, or alcohol dependence.

Exhibit 6-22. CBRR Versus PBTH: Impacts on Family Preservation at 37 Months

Outcome	CBRR			PBTH			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Current or recent separations of family members present at baseline									
Family has at least one child separated in past 6 months (%)	178	16.7	(37.0)	177	20.0	(40.4)	– 3.2	(4.3)	– 0.07
Family has at least one foster care placement in past 6 months[b] (%)	178	5.7	(22.0)	179	2.1	(14.8)	3.6	(2.8)	0.17
Spouse/partner separated in past 6 months, of those with spouse/partner present at RA (%)	62	30.1	(45.0)	44	29.6	(46.2)	0.5	(9.7)	0.01
Reunification of family members reported as separated at baseline									
Family has at least one child reunified, of those families with at least one child absent at RA (%)	46	44.8	(49.8)	33	44.8	(50.6)	0.1	(13.3)	0.00
Spouse/partner reunified, of those with spouse/partner absent at RA (%)	19	14.5	(45.2)	15	43.3	(45.8)	– 28.9	(26.8)	– 0.61

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Foster care placement outcome includes any children (present at baseline) who are placed in foster care or adopted by another family at the time of followup.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Exhibit 6-23. CBRR Versus PBTH: Impacts on Child Welfare Outcomes

Outcome	CBRR			PBTH			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Had a formal child separation that began after RA (%)	101	14.1	(34.7)	98	14.1	(35.2)	0.0	(5.3)	0.04
Total days during followup separated from at least one child[b]	101	57.9	(197.6)	98	106.8	(282.4)	– 48.9	(30.2)	– 0.20

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes separations started before and after RA. Length of followup varies by site. Alameda County = 1,075 days. Baltimore = 1,071 days. Kansas City = 1,069 days. Minneapolis = 1,046 days. Phoenix = 1,123 days.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions. Sample limited to five sites where child welfare records were collected (Alameda County, Baltimore, Kansas City, Minneapolis, and Phoenix).

Source: State child welfare agency records

Exhibit 6-24. CBRR Versus PBTH: Impacts on Adult Well-Being at 37 Months

Outcome	CBRR			PBTH			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Adult physical health									
Health in past 30 days was poor or fair (%)	179	31.8	(47.1)	184	32.8	(46.6)	– 1.0	(5.4)	– 0.02
Adult mental health									
Goal-oriented thinking[b]	177	4.41	(0.98)	183	4.36	(1.07)	0.05	(0.13)	0.04
Psychological distress[c]	179	6.13	(5.62)	184	7.44	(5.82)	– 1.32**	(0.66)	– 0.19
Adult trauma symptoms									
Post-traumatic stress disorder (PTSD) symptoms in past 30 days (%)	179	18.7	(37.5)	183	21.1	(41.8)	– 2.4	(4.7)	– 0.05
Adult substance use									
Alcohol dependence or drug abuse[d] (%)	179	7.4	(28.6)	184	14.5	(36.0)	– 7.1**	(3.4)	– 0.19
Alcohol dependence[d] (%)	179	7.3	(27.8)	184	11.9	(33.2)	– 4.5	(3.1)	– 0.14
Drug abuse[d] (%)	179	2.0	(14.8)	184	5.6	(23.8)	– 3.6*	(2.0)	– 0.13
Experience of intimate partner violence									
Experienced intimate partner violence in past 6 months (%)	180	8.8	(28.5)	184	8.6	(29.8)	0.2	(3.5)	0.01

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing.
ITT = intention-to-treat. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
[b] Goal-oriented thinking is measured with a modified version of the State Hope Scale and ranges from 1 to 6, with higher scores indicating higher levels of positive, goal-oriented thinking.
[c] Psychological distress is measured with the Kessler Psychological Distress Scale (K6) and ranges from 0 to 24, with higher scores indicating greater distress.
[d] Alcohol dependence is measured with the Rapid Alcohol Problems Screen (RAPS-4), and drug abuse is measured with six items from the Drug Abuse Screening Test (DAST-10). Both are measured for the 6 months before the 37-month survey.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.
Source: Family Options Study 37-month followup survey

Impacts on Child Well-Being in the CBRR-Versus-PBTH Comparison

Differential effects of the CBRR and PBTH interventions on child well-being would be expected to be indirect, via effects on housing stability, self-sufficiency, and adult well-being, which were modest.

Exhibit 6-25 shows the cross-age impacts of assignment to the CBRR group rather than to the PBTH group for child well-being. Of nine results examined, two reach statistical significance, both favoring the CBRR group. Children in families assigned to the CBRR group were 9 percentage points more likely to have a regular source of health care than were children in PBTH families (panel 2). They also have lower levels of behavior problems by parental report (0.13 standard deviations, panel 3). Of 20 age-specific results in Exhibit 6-26, 1 reached significance. As shown in panel 3 of Exhibit 6-26, children of ages 8 to 17 in the CBRR group reported less school effort (one-fourth of the distance between "could have tried a little harder" and "tried about as hard as you could," on average) than did children in the PBTH group. Overall, out of 29 results examined, 3 were significant and none showed a clear pattern of effects.

Impacts on Self-Sufficiency in the CBRR-Versus-PBTH Comparison

Exhibit 6-27 shows 1 statistically significant effect on 20 self-sufficiency outcomes examined in the CBRR-versus-PBTH comparison. Compared with assignment to the PBTH group, assignment to the CBRR group led to improvements in food security at the time of the survey (46 percent of PBTH families reported being food insecure compared with 35 percent of CBRR families).[115] This effect is somewhat surprising, because the 37-month analysis provides no evidence that assignment to the CBRR group led to differential effects on work effort or other measures of self-sufficiency when compared with assignment to the PBTH group. Exhibit 6-20 (in a previous section) shows similar levels of receipt of permanent housing subsidies, so it is not apparent that CBRR families have the additional financial resources that would be the expected mechanism by which food security is increased.

Exhibit 6-28 shows impact estimates from administrative data on outcomes for quarters 11 to 14 after the quarter of random assignment. The analysis of administrative data finds no effect of assignment to the CBRR group relative to assignment to the

[115] The improvement in food security is almost identical to the reduction from 45.7 to 33.8 percent (-11.9 percentage points) found in a corrected analysis of the 20-month survey data.

Exhibit 6-25. CBRR Versus PBTH: Impacts on Child Well-Being Across Age Groups at 37 Months

Outcome	CBRR			PBTH			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Child education									
Number of schools attended since RA[b]	206	2.2	(1.0)	212	2.2	(1.0)	0.0	(0.1)	0.01
Grade completion (not held back) (%)	176	91.40	(28.00)	176	88.64	(31.83)	2.76	(3.54)	0.07
School grades[c]	163	3.0	(0.9)	155	3.0	(0.9)	0.0	(0.1)	0.00
Child physical health									
Poor or fair health in past 30 days (%)	244	3.5	(18.9)	248	5.7	(21.5)	– 2.2	(2.7)	– 0.07
Well-child checkup in past year (%)	245	91.7	(29.2)	248	90.3	(29.6)	1.4	(3.3)	0.04
Child has regular source of health care (%)	245	95.4	(20.8)	246	86.1	(31.3)	9.2**	(4.3)	0.25
Sleep problems[d]	244	2.07	(1.02)	247	2.17	(1.08)	– 0.10	(0.11)	– 0.07
Child behavioral strengths and challenges									
Behavior problems[e]	236	0.26	(1.13)	233	0.49	(1.16)	– 0.23*	(0.12)	– 0.13
Prosocial behavior[f]	236	– 0.12	(1.07)	233	– 0.20	(1.17)	0.08	(0.13)	0.05

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing.
ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
[b] Number of schools outcome is topcoded at 4 or more schools.
[c] School grades outcome is defined as 1 = mostly Ds or Fs, 2 = mostly Cs, 3 = mostly Bs, 4 = mostly As.
[d] Sleep problems outcome ranges from 1 to 5, with higher values indicating more frequent tiredness upon waking and during the day.
[e] Behavior problems outcome is measured as the standardized Total Difficulties score from the Strengths and Difficulties Questionnaire (SDQ).
[f] Prosocial behavior is measured as the standardized prosocial domain score from the SDQ.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.
Source: Family Options Study 37-month followup survey (parent report)

PBTH group on total earnings, the proportion of family heads employed, or the number of quarters employed during the year.

Summary of the CBRR-Versus-PBTH Comparison Across Domains

For a number of reasons, the CBRR-versus-PBTH comparison offers a weaker test than do the other pairwise comparisons in the study. The number of families in this comparison sample is the lowest of the pairwise comparisons, and so it provides less statistical power than the other tests.[116] In addition, takeup rates for the programs offered in the assigned interventions offered in the assigned groups—53 percent for PBTH families and 55 percent for CBRR families—are somewhat lower than for other comparisons.

The CBRR-versus-PBTH comparison yields a somewhat enigmatic pattern of effects across the five study domains. Of the eight statistically significant effects found in this comparison, six show more favorable outcomes for assignment to the CBRR intervention and two show more favorable outcomes for assignment to the PBTH intervention. Of the eight outcomes on which statistically significant impacts in this comparison were found, only three had statistically significant impacts detected in any other study comparison (psychological distress, children's behavior problems, and proportion of families who are food insecure). It seems surprising that outcomes on which no impacts were detected in comparisons with the SUB intervention (which had stronger contrasts in program use and clear patterns of impacts) would show differentials in the CBRR-versus-PBTH comparison (which has a weaker contrast in program use). Therefore, the three effects on psychological distress, children's behavior problems, and proportion of families who are food insecure—all of which show favorable impacts of assignment to the CBRR intervention relative to assignment to the PBTH intervention—seem the least likely to be due to chance. Given the relatively few statistically significant results for this comparison, however, the study team hesitates to draw strong conclusions for this comparison.

[116] The smaller comparison sample is, in large part, a result of the greater selectivity of PBTH programs, leading to the absence of the PBTH intervention from the randomization sets of 356 families. See Gubits et al. (2013), Exhibit 3-5, for more information on the relative selectivity of SUB, CBRR, and PBTH programs.

Exhibit 6-26. CBRR Versus PBTH: Impacts on Child Well-Being Developmental Outcomes by Age Group at 37 Months

Outcome	CBRR			PBTH			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Ages 2 to 5 years[b]									
Preschool or Head Start enrollment[c] (%)	75	34.7	(47.9)	79	30.9	(48.1)	3.8	(8.6)	0.06
Child care or preschool absences in past month[d]	24	0.45	(0.93)	29	0.74	(0.82)	– 0.29	(0.36)	– 0.26
Positive child care or preschool experiences[e]	24	0.99	(0.00)	31	0.75	(0.51)	0.23	(0.14)	0.49
Positive child care or preschool attitudes[f]	24	4.57	(0.76)	30	4.41	(1.10)	0.16	(0.32)	0.19
Child care or preschool conduct problems[g] (%)	26	1.6	(0.0)	33	11.8	(36.4)	– 10.2	(10.3)	– 0.37
Ages 2 years to 5 years, 6 months									
Met developmental milestones[h] (%)	59	69.6	(48.3)	69	59.2	(48.8)	10.4	(11.0)	0.18
Ages 3 years, 6 months to 7 years									
Verbal ability[i]	78	– 0.27	(1.13)	85	– 0.43	(0.97)	0.16	(0.22)	0.13
Math ability[j]	75	– 0.41	(0.92)	85	– 0.46	(1.07)	0.05	(0.21)	0.04
Executive functioning[k] (self-regulation)	69	14.35	(16.45)	81	15.46	(15.29)	– 1.12	(2.47)	– 0.05
Ages 5 to 17 years[l]									
School enrollment[c] (%)	171	98.8	(10.8)	169	94.2	(17.0)	4.6	(4.2)	0.24
School absences in past month[d,m]	55	0.79	(0.91)	63	0.96	(0.96)	– 0.17	(0.18)	– 0.13
Positive school experiences[e,m]	54	0.50	(0.57)	66	0.56	(0.61)	– 0.06	(0.15)	– 0.07
Positive school attitudes[f,m]	55	4.08	(1.11)	66	4.14	(1.05)	– 0.05	(0.19)	– 0.04
School conduct problems[g,m] (%)	54	27.1	(45.2)	66	33.8	(47.5)	– 6.6	(9.1)	– 0.11
Ages 8 to 17 years									
Anxiety[n]	109	34.75	(7.13)	103	35.61	(7.45)	– 0.86	(1.17)	– 0.08
Fears[o]	111	64.16	(14.83)	105	63.90	(14.75)	0.26	(1.62)	0.01
Substance use[p] (%)	108	4.74	(23.01)	100	8.84	(31.45)	– 4.09	(4.12)	– 0.11
Goal-oriented thinking[q]	105	22.39	(4.48)	100	22.84	(4.72)	– 0.45	(0.72)	– 0.07
School effort in past month[r]	109	2.42	(0.79)	104	2.69	(0.82)	– 0.27**	(0.12)	– 0.25
Arrests or police involvement in past 6 months[s] (%)	58	13.55	(32.86)	57	16.54	(38.37)	– 2.99	(7.34)	– 0.08

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing.

ITT = intention-to-treat. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes focal children who were ages 4 years or younger on the September 1 before the 37-month parent survey.

[c] Preschool or Head Start enrollment outcome is defined as enrollment in preschool, center-based child care, or school.

[d] Absences outcome is defined as 0 = no absences in past month, 1 = one to two absences, 2 = three to five absences, 3 = six or more absences.

[e] Positive child care, preschool, or school experiences outcome is defined as – 1 = mostly negative experiences, 0 = both positive and negative experiences, 1 = mostly positive experiences.

[f] Positive child care, preschool, or school attitudes outcome is parent report of how much child likes school and ranges from 1 to 5, with higher values indicating greater like of school.

[g] Child care, preschool, or school conduct problems outcome is defined as 0 = no conduct problems reported to parent, 1 = parent contacted about conduct problems or suspension or expulsion from school or child care center.

[h] Met developmental milestones outcome is defined as scoring above the typical development cutoffs in all domains of the Ages and Stages Questionnaire (ASQ-3).

[i] Verbal ability outcome is the nationally standardized score from the Woodcock-Johnson III (WJ III) letter-word identification test.

[j] Math ability outcome is the nationally standardized score from the WJ III applied problems test.

[k] Executive functioning outcome is the Head Toes Knees Shoulders (HTKS) score and ranges from 0 to 40, with higher scores indicating greater executive functioning.

[l] Includes focal children who were ages 5 to 17 years on the September 1 before the 37-month parent survey and no older than 17 years at the time of the survey.

[m] This parent-reported outcome was collected from only the first 38 percent of parents surveyed due to an error in data collection.

[n] Anxiety (child report) is measured using the A-Trait scale from the State-Trait Anxiety Inventory for Children (STAIC). Scores range from 20 to 60, with higher scores indicating greater anxiety.

[o] Fears outcome (child report) is the score from the Fears Scale and ranges from 33 to 99, with higher scores indicating more fear.

[p] Substance use (child report) is measured with 23 items from the Centers for Disease Control and Prevention 2011 Youth Risk Behavior Survey.

[q] Goal-oriented thinking (child report) is measured with a modified version of the Children's Hope Scale and ranges from 6 to 30, with higher scores indicating higher levels of positive, goal-oriented thinking.

[r] School effort outcome (child report) ranges from 1 to 4, with higher scores indicating greater effort during school day and on homework.

[s] Arrest or police involvement in past 6 months is from parent report.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse.

See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey (parent report); Family Options Study 37-month child survey (child report); ASQ-3; WJ III; HTKS

Exhibit 6-27. CBRR Versus PBTH: Impacts on Self-Sufficiency at 37 Months

Outcome	CBRR			PBTH			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Employment status									
Work for pay in week before survey (%)	180	36.6	(48.9)	184	40.4	(48.4)	– 3.8	(5.1)	– 0.07
Any work for pay since 20-month survey[b] (%)	166	59.9	(48.8)	169	59.5	(49.5)	0.3	(5.4)	0.01
Months worked for pay since 20-month survey[b,c]	166	6.5	(7.5)	168	7.8	(8.6)	– 1.3	(0.9)	– 0.16
Any work for pay since RA (%)	180	72.3	(43.4)	184	71.9	(45.4)	0.4	(4.5)	0.01
Months worked for pay since RA[c]	179	13.9	(13.2)	183	14.3	(14.2)	– 0.4	(1.3)	– 0.03
Hours of work per week at current main job[d]	180	12.4	(17.3)	184	12.7	(17.1)	– 0.3	(1.8)	– 0.02
Income sources and amounts									
Annualized current earnings ($)	176	6,808	(10,823)	182	7,535	(11,394)	– 727	(1,221)	– 0.06
Total family income ($)	170	11,161	(9,110)	182	12,906	(10,608)	– 1,745	(1,170)	– 0.13
Anyone in family had earnings in past month (%)	180	50.8	(50.0)	184	54.4	(50.1)	– 3.6	(5.4)	– 0.06
Anyone in family received TANF in past month (%)	180	26.2	(43.1)	184	23.3	(43.1)	2.9	(4.8)	0.06
Anyone in family received SSDI in past month (%)	180	9.6	(26.9)	184	7.5	(27.4)	2.1	(2.9)	0.06
Anyone in family received SSI in past month (%)	180	11.9	(32.2)	184	13.2	(33.2)	– 1.3	(3.4)	– 0.03
Anyone in family received SNAP/Food Stamps in past month (%)	180	80.5	(36.9)	184	85.4	(37.5)	– 5.0	(4.0)	– 0.11
Anyone in family received WIC in past month (%)	180	28.3	(46.2)	184	32.0	(46.4)	– 3.7	(5.2)	– 0.07
Education and training									
Participated in 2 weeks or more of any school or training since RA (%)	180	37.1	(48.9)	183	36.5	(48.5)	0.6	(5.3)	0.01
Number of weeks in school/training programs since RA	176	6.9	(16.6)	182	5.2	(10.7)	1.7	(1.7)	0.08
Participated in 2 weeks or more of school since RA (%)	179	8.6	(27.8)	183	9.6	(30.6)	– 1.0	(3.4)	– 0.03
Participated in 2 weeks or more of basic education since RA (%)	179	1.8	(14.8)	183	3.3	(16.3)	– 1.5	(2.0)	– 0.09
Participated in 2 weeks or more of vocational education since RA (%)	179	6.6	(24.1)	183	9.9	(30.6)	– 3.3	(3.3)	– 0.08
Food security									
Household is food insecure (%)	180	34.6	(47.3)	184	46.2	(50.1)	– 11.6**	(5.5)	– 0.20
Food insecurity scale[e]	180	1.46	(1.86)	182	1.76	(2.04)	– 0.29	(0.21)	– 0.12
Economic stressors									
Economic stress scale[f]	178	– 0.14	(0.51)	183	– 0.13	(0.54)	– 0.01	(0.06)	– 0.02

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error. SNAP = Supplemental Nutrition Assistance Program. SSDI = Social Security Disability Insurance. SSI = Supplemental Security Income. TANF = Temporary Assistance for Needy Families. WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes only families who responded to both 20-month and 37-month followup surveys; not weighted for survey nonresponse.

[c] Number of months worked for pay includes partial calendar months.

[d] Hours of work per week includes those not currently working (that is, those with 0 hours of work per week).

[e] Food insecurity scale ranges from 0 to 6, with higher values indicating higher food insecurity.

[f] Economic stress scale ranges from – 1 to 1, with higher values indicating higher economic stress.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Exhibit 6-28. CBRR Versus PBTH: Earnings and Employment

Outcome	CBRR			PBTH			ITT Impact		Effect size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Earnings in quarters 11 to 14 after RA (2015Q3$)	224	6,233	(10,781)	227	5,254	(9,233)	979	(949)	0.10
Any employment in quarters 11 to 14 after RA (%)	224	54.8	(49.9)	227	51.7	(50.1)	3.1	(4.8)	0.06
Number of quarters employed in quarters 11 to 14 after RA	224	1.6	(1.7)	227	1.5	(1.7)	0.1	(0.2)	0.04

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

Note: See Chapter 2 and Appendix B for outcome definitions.

Source: Quarterly wage records from the National Directory of New Hires

CHAPTER 7.
IMPACTS OF POOLED COMPARISONS

In addition to conducting the six pairwise comparisons, the study team combined assignment groups in various ways to examine additional comparisons. In the design phase of the study, the study team identified four questions as being of interest to HUD.

1. What is the impact of having priority access to any kind of housing subsidy for homeless families (permanent housing subsidy [SUB] + community-based rapid re-housing [CBRR] + project-based transitional housing [PBTH]) compared with the impact of the usual care offered in the community?
2. What is the impact of having priority access to a housing subsidy with heavy services provided to homeless families (PBTH) compared with the impact of having priority access to housing subsidies with light or no services (SUB + CBRR)?
3. What is the impact of assignment to interventions that offer programs that are more costly (SUB + PBTH) compared with the impact of assignment to groups that offer a less costly intervention (CBRR)?
4. What is the impact of having priority access to a housing subsidy that has no time limit (SUB) compared with the impact of having priority access to housing subsidy programs that have time limits (CBRR + PBTH)?

One benefit of pooling the three interventions and usual care in impact comparisons is that it provides larger sample sizes for analysis. A family was included in a pooled comparison if its randomization set included at least one intervention on each side of the impact comparison. For example, a family was included in the SUB + PBTH comparison with CBRR if it had the opportunity to be assigned to the CBRR group and to *either* the SUB or PBTH group.[117] Exhibit 7-1 shows the number of families who are included in the comparisons used to address the preceding questions.

The study team's examination of the impact results from the four pooled comparisons unexpectedly yielded little useful information on the questions posed. Instead, all the estimates appear to be dominated by the relatively large effects of the permanent housing subsidies offered in the SUB assignment group when compared with any of the other assignment groups, no matter how the different randomly assigned interventions are grouped. Therefore, the results of the pooled comparisons are not addressed here in the body of the report; rather, the results are provided in Appendix F, with no additional discussion.

Exhibit 7-1. Sample Sizes in the Four Pooled Comparisons

Assigned Intervention	Sample Size in Pooled Comparison[a]			
	SUB + CBRR + PBTH vs. UC	SUB + CBRR vs. PBTH	SUB + PBTH vs. CBRR	CBRR + PBTHvs. SUB
SUB	501	—	—	463
CBRR	434	—	382	—
PBTH	293	290	—	—
UC	556	—	—	—
		395 (SUB+CBRR)	546 (SUB+PBTH)	491 (CBRR+PBTH)
Total	**1,784**	**685**	**928**	**954**

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

[a] Sample sizes are number of families who responded to the 37-month followup survey.

Source: Family Options Study 37-month followup survey

[117] The randomization sets that provided the opportunity to be assigned to the CBRR group and to either the SUB or PBTH groups were {SUB, CBRR, PBTH, UC}, {SUB, CBRR, UC}, and {CBRR, PBTH, UC}.

CHAPTER 8.
DO CERTAIN INTERVENTIONS WORK BETTER WHEN OFFERED TO FAMILIES WHO FACE GREATER DIFFICULTIES?

Previous chapters of this report have examined which interventions work best, on average, across all families in the study. This chapter asks whether some interventions work better than others for families who have greater needs, measured at the outset of the study.

The theory behind the interventions suggests that some types of programs may be especially effective for families who have two types of needs: psychosocial challenges, such as domestic violence, psychological distress, or disability, and housing barriers, such as lack of employment, lack of income to pay rent, or poor credit histories. Project-based transitional housing programs—with their extensive services—are designed to address families' psychosocial challenges. It is therefore plausible that families facing more of those challenges may benefit, even if families who have fewer psychosocial challenges do no better than UC families. Because addressing these issues is thought to lay the foundation for success in housing, differential benefits of project-based transitional housing for families who have more challenges may extend to other domains. The paucity of effects of assignment to the PBTH intervention, on average, may mask differential effects for families who have greater needs.

In a similar way, although the benefits of assignment to the SUB intervention are substantial across domains, it is possible that not all families need long-term subsidies; families who have relatively few housing barriers may do as well with the less intensive CBRR programs or usual care. Because many PBTH programs provide job training and the SUB programs provide housing despite low incomes caused by poor health or disability, each of those types of programs may be especially successful with families who have both types of needs. Conversely, CBRR programs, with shorter subsidies and fewer services, may benefit families facing fewer psychosocial challenges or housing barriers but may be insufficient for families who have higher levels of needs. The general form of this hypothesis is that the more intensive programs may have larger impacts for families who have greater needs; the less intensive CBRR programs may have larger impacts for families who have fewer needs.

This chapter explores whether, 37 months after random assignment, relative impacts vary depending on these two types of family needs. The study team found no evidence of differential intervention impacts for families who had different levels of need 20 months after random assignment, but it is possible that such impacts would take longer to emerge. To evaluate this possibility, the study team created indices of psychosocial challenges and housing barriers measured at the time of the baseline survey and examined whether the impact of the three interventions relative to each other and to usual care increases as families' scores on these indices increase. Because the interventions are presented to families as packages, the study team considered differential effects across the array of outcomes preselected for inclusion in the executive summary.

Differential impact for any particular outcome could take more than one form. It is possible that one intervention in a pairwise comparison would be superior for that outcome for families who have greater needs and the other would be superior for families who have lower needs. This form may be most likely in a pair in which no average impact is found for that comparison. As an alternative, one intervention in the pair may always be superior for a particular outcome, but its superiority would be less marked for families who have greater or lower needs. This form may be most likely for a pair in which a substantial intervention impact is found, on average.

Patterns in measured impacts by level of need also require subtle statistical interpretation. For each comparison (for example, SUB versus PBTH) and each need index—psychosocial challenges, housing barriers—the study team conducted 18 statistical tests of whether impacts are different for families who have higher or lower needs, 1 for each of the 18 primary outcome measures featured in the analysis. With this number of tests, even if the indexes have no true relationship to impacts, the chance of a statistically significant result on 1 or more tests is very high. A single test has a 10-percent chance of a "false positive" result of this kind. Among 18 statistically independent tests, the odds of at least one "false positive"

when no true relationship is present goes up to 85 percent. To guard against overinterpreting findings in this circumstance, the study team does not credit apparently significant results as evidence of real differences in impact by need level unless 4 or more of the 18 test results show significant findings at the .10 level—something that, with independent tests, has only a .098 (that is, very close to the .10 level used in the balance of the report) chance of occurring absent any true relationship. Thus, for a given need index and comparison, this report discusses only the findings if significant results appear for 4 or more of the 18 tested outcomes. Given the positive dependence among the tests (because all are based on the same sample of families for any given comparison, and outcomes are associated with one another), the study team cannot be sure that every such case has an extremely low likelihood of reflecting only chance differences,[118] but, in exploratory analyses this approach seems a reasonable standard for exercising caution in interpreting statistical results. If the number of statistically significant results exceeds 4 out of 18 for a given comparison, the study team then examined the patterns of results and whether they conform to the hypothesis that the more intensive intervention will have larger impacts for needier families—those with higher levels of challenges or barriers.

8.1. Descriptive Results for Psychosocial Challenges and Housing Barriers

The ***psychosocial challenge index*** is a count of the number of nine potential psychosocial challenges reported by families at the baseline survey just before random assignment. As shown in Exhibit 8-1, the most common challenge, by far, was experiencing domestic violence, affecting one-half of respondents (at some time in adulthood), with having current poor or fair health and being in foster care or an institution as a child affecting more than one-fourth of families. Having psychological distress, a disability, drug or alcohol dependence, and a child with a disability each affected about one-fifth of the respondents. Overall, families experienced an average of 2.2 challenges at study entry.

The ***housing barriers index*** is a count of the number of 15 potential barriers reported by families at the baseline survey. Families reported an average of 6.5 housing barriers. As shown in Exhibit 8-2, both insufficient income to pay rent and inability to pay a security deposit or first and last month's rent were almost universal. Four-fifths of families cited lack of current employment as a barrier, three-fourths cited poor credit history, and two-thirds cited lack of transportation to look for housing.

Exhibit 8-1. Percentage of Adult Respondents Reporting Psychosocial Challenges at the Time of Study Enrollment (for families interviewed at 37 months)

Psychosocial Challenges	Percent
Domestic violence	50.0
Poor or fair health	30.9
In foster care or institution as child	26.9
Severe psychological distress	22.1
Disability	21.6
Post-traumatic stress disorder (PTSD)	21.6
Drug abuse or alcohol dependency	21.2
Child with disability	17.5
Past felony	11.1

Notes: Although psychosocial challenges were measured at baseline, percentages differ slightly from the short-term impacts report because a somewhat different group of families responded to the 37-month survey. Sample reported is the 1,784 families who responded to the 37-month survey.
Source: Family Options Study baseline survey

Exhibit 8-2. Percentage of Adult Respondents Reporting That a Condition Was a Big or Small Problem in Finding a Place To Live at the Time of Study Enrollment (for families interviewed at 37 months)

Housing Barriers	Percent Reporting Big or Small Problem
Not enough income to pay rent	96.4
Inability to pay a security deposit or first/last month's rent	93.3
Not currently employed	79.8
Poor credit history	73.5
Lack of transportation to look for housing	65.5
No reference from past landlords	43.6
Past eviction	39.4
No rent history at all	38.3
Recently moved to a community and no local rent history	32.2
Problems with past landlords	18.6
Three or more children in the household	17.6
Racial discrimination	17.1
Past lease violations	15.9
Someone in the household less than 21 years old	8.6
Teenagers in the household	5.9

Notes: Although housing barriers were measured at baseline, percentages differ slightly from the short-term impacts report because a somewhat different group of families responded to the 37-month survey. Sample reported is the 1,784 families who responded to the 37-month survey.
Source: Family Options Study baseline survey

[118] Positive statistical dependence among the test results, as opposed to total statistical independence, raises the probability of 4 or more statistically significant results among 18 tests above .098 by some amount. Explicit adjustment of test findings for the multiple comparisons involved here would take this dependence into account, but here—and in other exploratory analyses in this report—that extent of protection against "false positive" conclusions is judged to be overly cautious and complex; only when judging impacts on the evaluation's confirmatory outcome (at least 1 night homeless or doubled up in the past 6 months or in shelter in the past 12 months) does the study team apply such strict and explicit checks on the multiple comparison risk involved.

The indices of challenges and barriers were positively correlated,[119] indicating that families who have high levels of challenges were also somewhat more likely to have high levels of barriers, and vice versa. The two indices reflect separate but related measures of the difficulties families face.

8.2. Differential Impacts Depending on Psychosocial Challenges

Exhibit 8-3 shows the estimated size of the impact of each comparison (for example, SUB versus UC) for families who have low and high levels of challenge. Low challenge is set at the 20th percentile of challenge, and high challenge is set at the 80th percentile. The 20th percentile is one challenge (out of nine challenges; that is, more than 20 percent of families reported one or fewer challenges). The 80th percentile is four challenges. The asterisks in the exhibit reflect whether the *variation* in impact by the level of each psychosocial challenge is statistically significant.

For example, the first row considers impacts for the confirmatory outcome of at least 1 night homeless or doubled up in the past 6 months or at least 1 night in shelter in the past 12 months. In the first pair of columns, the impact of assignment to the SUB intervention compared with usual care is estimated to be a reduction of 23.8 percentage points in this outcome for families who have a low challenge level and 17.1 percentage points for families who have a high challenge level. The average effect is very large and significant, as reported previously in Chapter 3, and the impact remains very large and significant for those with low and high challenges. The difference between these two impacts, however, is not significant.

8.2.1. SUB Versus UC

Assignment to the SUB intervention would be expected to have greater impact relative to usual care for families who have higher numbers of psychosocial challenges, even if the SUB programs do not address these challenges directly. Families who have fewer challenges may be able to manage without long-term help; however, no evidence of differential impact was indicated. None of the 18 tests for differences in impact magnitude between low and high challenge levels reached statistical significance. The substantial average differences between assignment to the SUB intervention and usual care shown in previous chapters held across both levels of psychosocial challenges.

8.2.2. CBRR Versus UC

The CBRR intervention, offering short-term subsidies and low-intensity services focused on housing and self-sufficiency, may be insufficient for families who have high levels of psychosocial challenges. It would be expected to work better compared with usual care for families who have fewer challenges. Only 1 of 18 tests was statistically significant—slightly fewer than would be expected by chance alone if no true impact variation occurred. Previous chapters found little impact of assignment to the CBRR intervention relative to usual care on average, and no evidence here indicates that assignment to the CBRR intervention worked better for families who have a lower number of challenges.

8.2.3. PBTH Versus UC

As the intervention that is designed to address psychosocial challenges directly through the provision of intensive services in a supervised facility, PBTH would be expected to have greater impact relative to usual care for families who have higher levels of challenges. Addressing these challenges is thought to lay the foundation for success in housing and self-sufficiency. None of the 18 tests of differential impact, however, reached statistical significance. Previous chapters found little impact of assignment to the PBTH intervention relative to usual care, and no evidence indicates that impact differs depending on the level of psychosocial challenges families face.

8.2.4. SUB Versus CBRR

The SUB intervention, offering priority access to a permanent housing subsidy, would be expected to have greater impact on housing stability than assignment to the CBRR intervention for all families, but especially for those whose psychosocial challenges threaten that stability. To the extent that housing is a platform for families to deal with other challenges they face, the radiating impact of assignment to the SUB intervention observed in earlier chapters may be especially marked for families who have more challenges. With only 1 of 18 statistically significant findings—slightly fewer than would be expected by chance alone—the study team concludes that the impacts families experience from assignment to the SUB intervention compared with assignment to the CBRR intervention do not differ for families who have different levels of challenges.

[119] $r = .23$, $p < .001$ for the sample interviewed at 37 months.

Exhibit 8-3. Impacts at 37 Months Moderated by Baseline Psychosocial Challenges Index

Outcome	SUB vs. UC		CBRR vs. UC		PBTH vs. UC		SUB vs. CBRR		SUB vs. PBTH		CBRR vs. PBTH	
Impact at Low Versus High Challenge	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
Housing stability												
At least 1 night homeless or doubled up in past 6 months or in shelter in past 12 months (%) **[confirmatory]**	– 23.8	– 17.1	3.1	– 0.6	5.7	– 4.2	– 20.7	– 21.5	– 29.2	– 12.8**	0.6	– 4.4
At least 1 night homeless or doubled up in past 6 months (%)	– 19.6	– 16.4	3.2	– 1.9	6.2	– 5.3	– 15.2	– 16.9	– 28.7	– 8.8***	1.7	– 5.5
Number of places lived in past 6 months	– 0.21	– 0.29	0.06	– 0.04	0.00	– 0.05	– 0.16	– 0.13	– 0.40	– 0.14	0.14	0.04
Any stay in emergency shelter in months 21 to 32 after random assignment (%)	– 15.0	– 13.6	– 2.9	– 0.4	– 6.5	– 3.6	– 11.9	– 15.2	– 6.0	– 4.4	2.2	– 0.3
Family preservation												
Family has had at least one child separated in past 6 months[a] (%)	– 4.2	– 2.4	0.2	– 0.8	1.6	1.7	– 2.9	– 1.6	– 7.5	– 8.7	0.1	– 8.8
Spouse/partner separated in past 6 months, of those with spouse/partner present at RA[b] (%)	10.3	17.4	9.1	7.9	6.7	18.3	– 13.5	7.7	– 8.9	25.3**	5.2	– 8.0
Family has no child reunified, of those families with at least one child absent at RA[c] (%) **[limited base]** (%)	– 5.9	– 9.9	– 5.6	– 9.9	2.4	– 1.7	– 18.9	– 11.0	– 18.3	– 21.7	11.5	– 2.1
Adult well-being												
Health in past 30 days was poor or fair (%)	0.7	8.1	– 2.2	8.2**	0.5	– 1.7	– 1.9	3.7	– 5.3	2.8	– 4.0	10.2*
Psychological distress[d]	– 0.92	– 0.41	– 0.36	– 0.23	0.12	– 0.52	– 0.14	0.67	– 0.95	0.33	– 1.46	– 0.07
Alcohol dependence or drug abuse[e] (%)	– 1.6	– 2.7	– 1.0	– 3.7	2.1	4.2	1.3	3.1	– 2.4	1.3	– 5.9	– 11.8
Experienced intimate partner violence in past 6 months (%)	– 3.7	– 4.7	– 3.2	1.3	– 0.6	– 2.0	2.2	– 8.6**	– 4.9	5.2*	– 3.7	7.4*
Child well-being												
Number of schools attended since RA[f]	– 0.18	– 0.12	0.04	0.01	– 0.03	0.17	– 0.23	– 0.32	– 0.17	– 0.26	0.04	0.05
School absences in past month (ages 5 to 17 years)[g]	– 0.14	0.01	– 0.18	– 0.12	– 0.07	– 0.36	0.15	0.00	– 0.21	– 0.10	– 0.29	– 0.05
Poor or fair health (%)	3.0	0.8	1.4	– 2.7	– 0.9	0.7	1.0	0.8	– 1.2	– 3.4	0.5	– 4.8
Behavior problems[h]	– 0.24	– 0.18	– 0.14	– 0.15	0.01	– 0.15	0.02	0.01	– 0.22	– 0.14	– 0.24	– 0.06
Self-sufficiency												
Work for pay in week before the survey (%)	– 2.2	1.9	– 1.0	2.2	1.6	3.8	1.7	– 2.3	– 8.1	0.1	– 9.2	– 1.0
Total family income ($)	– 453	– 1,367	– 982	27	– 37	153	– 1,095	– 1,139	– 953	– 2,534	– 1,922	– 838
Household is food secure (%)	10.9	6.4	6.4	0.9	5.5	– 1.5	– 2.4	6.9	13.0	8.7	5.8	19.0

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

RA = random assignment.

*/**/*** Impact magnitude varies significantly with level of [psychological or housing barriers] challenge at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Measures the percentage of families in which a child who was with the family at baseline was separated from the family in the 6 months before the 37-month survey.

[b] Measures the percentage of families in which a spouse or partner who was with the family at baseline was separated from the family in the 6 months before the 37-month survey.

[c] Percentage of families in which at least one child was separated from the family at baseline where no child was reunited with the family at the time of the 37-month survey.

[d] Psychological distress is measured with the Kessler Psychological Distress Scale (K6) and ranges from 0 to 24, with higher scores indicating greater distress.

[e] Alcohol dependence is measured with the Rapid Alcohol Problems Screen (RAPS-4), and drug abuse is measured with six items from the Drug Abuse Screening Test (DAST-10).

[f] Number of schools outcome is topcoded at 4 or more schools.

[g] Absences outcome is defined as 0 = no absences in past month; 1 = one to two absences; 2 = three to five absences; 3 = six or more absences. This parent-reported outcome was collected from only the first 38 percent of parents surveyed due to an error in data collection.

[h] Behavior problems outcome is measured as the standardized Total Difficulties score from the Strengths and Difficulties Questionnaire (SDQ).

Notes: The low estimate is calculated at the 20th percentile of the moderator in the full sample and the high estimate is calculated at the 80th percentile of the moderator. Impact mean difference estimates are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-Month Followup Survey

8.2.5. SUB Versus PBTH

Because the PBTH intervention offers priority access to programs that address psychosocial challenges more directly than the SUB intervention does, proponents of project-based transitional housing would expect it to be especially beneficial for families who have higher numbers of these challenges. Some evidence supports this proposition. Of the 18 tests for differential impacts by psychosocial challenge level, 4 reached statistical significance, and the direction of differential effects is consistent: the benefit from assignment to the SUB group relative to assignment to the PBTH group is smaller for families who have more challenges than it is for families who have fewer challenges. This degree of contrast suggests more than chance variability in the data and signals that further attention to the 4 specific findings involved is warranted.

In the housing stability domain, assignment to the SUB group rather than to the PBTH group remained beneficial overall, but the benefits were stronger for families who have fewer challenges. Assignment to the SUB group reduced the confirmatory outcome (at least 1 night homeless or doubled up in the past 6 months or in shelter in the past 12 months) by 13 percentage points for families who have more psychosocial challenges and by 29 percentage points for families who have fewer challenges. Results for the associated outcome of at least 1 night homeless or doubled up in the past 6 months were parallel: assignment to the SUB group rather than to the PBTH group led to a reduction of 9 percentage points for families facing more challenges and 29 percentage points for families who face fewer challenges.

In the adult well-being domain, families who have more challenges benefited more from assignment to the PBTH intervention than from assignment to the SUB intervention, but families who have fewer challenges experienced the opposite, benefiting more from assignment to the SUB intervention than from assignment to the PBTH intervention. Assignment to the PBTH intervention rather than to the SUB intervention reduced experiences of intimate partner violence modestly (5 percentage points) for families who have high levels of challenges but increased them by about the same amount for families who have low levels.

The finding of differential impact in the family preservation domain is more difficult to interpret. Assignment to the PBTH intervention rather than to the SUB intervention increased recent separations of spouses and partners among the subset of families who had a partner with the family in shelter at the outset of the study by 9 percentage points for families who have fewer challenges but reduced them by 25 percentage points for families who have more challenges. Separation outcomes are correlated with baseline intimate partner violence overall, but especially for families assigned to the SUB group.[120] It is plausible that the subsidy intervention enabled some family heads to leave abusive relationships who would not have done so with assignment to the PBTH group. Because baseline interpersonal violence is the most prevalent of the psychosocial challenges, these women are more likely to be in the high challenge group.

A caveat here is that none of the differential effects for the SUB-versus-PBTH comparison were found at 20 months. Further, the theory behind project-based transitional housing would lead one to expect this same pattern of findings for the PBTH-versus-UC comparison and the CBRR-versus-PBTH comparison as for the SUB-versus-PBTH comparison. None of the tests for differential impacts in the housing or family preservation domain reach significance for these comparisons, and the nonsignificant results are in different directions. The lack of replication across time points and comparisons suggests that findings may be due to chance. The finding that assignment to the PBTH intervention is more likely to reduce intimate partner violence for families facing more challenges is replicated in the CBRR-versus-PBTH comparison (at 37 months only), however. All these factors led the study team to considerable caution about these results.

If the results in this comparison are accepted as reflecting true differential impact rather than chance findings, what should the conclusion be? Considering the set of 18 outcomes as a whole, even among families facing high levels of challenges, one would prefer the SUB intervention to the PBTH intervention regarding all the housing stability outcomes and regarding other dimensions such as child separations, number of schools children attended, and food security for which the SUB intervention had uniformly more positive impacts than the PBTH intervention across levels of psychosocial challenges. Regarding intimate partner violence, however, assignment to the PBTH intervention was superior to assignment to the SUB intervention for those families who have more psychosocial challenges. Assignment to the PBTH intervention also led to fewer separations of spouses and partners for families who have more challenges.

8.2.6. CBRR Versus PBTH

As the intervention offering intensive social services in a supervised facility, PBTH would be expected to have greater impact relative to the CBRR intervention for families who have

[120] r = .42 between interpersonal violence at baseline and separation at 37 months for SUB families.

more psychosocial challenges. Of 18 results here, 2 reached statistical significance. Both are in the same direction of less favorable impacts for families in the high challenge group who were assigned to the CBRR group rather than to the PBTH group. One of these effects is a greater reduction in intimate partner violence for families who have more challenges who are assigned to the PBTH group rather than to the CBRR group. Because the number of effects is not more than would be expected by chance alone, however, the study team concludes that the size of impacts families experience from assignment to the CBRR intervention compared with assignment to the PBTH intervention does not appear to vary by the level of psychosocial challenges.

8.3. Differential Impacts Depending on Housing Barriers

Exhibit 8-4 illustrates possible differential impacts of interventions based on the number of housing barriers families reported at study entry. It shows the estimated size of the impact for a given policy contrast (for example, the SUB intervention versus usual care) for families who have low and high barriers, again using cutoffs at the 20th and 80th percentiles of barriers. For housing barriers, the 20th percentile is 4.0 barriers and the 80th percentile 8.6 barriers. As in the previous section on psychosocial challenges, the asterisks reflect whether the *variation* in impact by level of housing barriers is statistically significant. Also, as in that section, the study team considers both the number of statistically significant findings and their patterns in interpreting whether results show real evidence.

8.3.1. SUB Versus UC

By providing priority access to permanent housing subsidies, assignment to the SUB intervention would be expected to have greater impact relative to usual care for families who have higher housing barriers, such as lack of income to pay rent or security deposits, lack of employment, or poor credit. Such families may not otherwise be able to access stable housing. No evidence, however, supported this hypothesis. Of the 18 comparisons, 2 were statistically significant—not more than would be expected by chance alone—and they were in opposite directions. The substantial average differences between assignment to the SUB intervention and usual care shown in previous chapters hold across families facing different numbers of housing barriers.

8.3.2. CBRR Versus UC

The CBRR programs offered to families assigned to the CBRR intervention, as the least intensive of the active interventions, would be expected to work best compared with usual care families who have lower barriers to housing. Temporary subsidies may not be sufficient to overcome greater housing barriers. Of 18 tests, 2 were statistically significant, both in the predicted direction, but because 2 does not exceed the number of statistically significant findings expected by chance alone, the study team cannot conclude that the impacts of assignment to the CBRR intervention versus usual care varies with the number of housing barriers.

8.3.3. PBTH Versus UC

The services that PBTH programs provide may directly address housing barriers by helping with job training or restoration of credit. They more generally address issues such as substance abuse or psychological distress that may interfere with employment or create problems with landlords. Thus, assignment to the PBTH intervention would be expected to have greater impact relative to usual care for families who have more housing barriers. Only 2 of the 18 tests conducted reached significance—not more than would be expected by chance alone if no true impact variation occurred—and they are in opposite directions. Previous chapters found little impact of assignment to the PBTH intervention relative to usual care, and no evidence indicates that impact differs depending on the level of housing barriers families face.

8.3.4. SUB Versus CBRR

The permanent and often deeper housing subsidies that the SUB programs provide would be expected to have a greater impact than the temporary and shallower subsidies of the CBRR programs for families who have more housing barriers. Of the 18 tests, 3 reached statistical significance—less than the threshold of 4 for interpretation—and the direction of the effects was not consistent. The study team therefore cannot conclude that the size of impacts families experience from assignment to the SUB intervention compared with assignment to the CBRR intervention differs for families who have different numbers of housing barriers.

8.3.5. SUB Versus PBTH

Because housing subsidies overcome many barriers to housing, proponents of the permanent housing subsidy would expect it to be especially beneficial for families who have more of these barriers. Proponents of project-based transitional housing make the opposite prediction. The 1 statistically significant result out of 18—fewer than would be expected by chance alone—fails to confirm either proposition and is best interpreted as chance.

Exhibit 8-4. Impacts at 37 Months Moderated by Baseline Housing Barriers Index

Outcome	SUB vs. UC		CBRR vs. UC		PBTH vs. UC		SUB vs. CBRR		SUB vs. PBTH		CBRR vs. PBTH	
Impact at Low Versus High Challenge	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**
Housing stability												
At least 1 night homeless or doubled up in past 6 months or in shelter in past 12 months (%) **[confirmatory]**	– 19.3	– 23.1	4.8	– 1.8	– 2.5	5.1	– 19.4	– 21.9	– 22.8	– 23.5	– 0.4	– 2.3
At least 1 night homeless or doubled up in past 6 months (%)	– 16.3	– 20.4	4.7	– 2.7	– 4.7	6.8	– 15.7	– 15.4	– 19.1	– 23.1	4.1	– 6.9
Number of places lived in past 6 months	– 0.17	– 0.32	0.10	– 0.07	– 0.06	0.01	– 0.16	– 0.12	– 0.39	– 0.21	0.13	0.05
Any stay in emergency shelter in months 21 to 32 after random assignment (%)	– 12.0	– 16.7	– 0.2	– 3.5	– 2.8	– 7.5	– 11.1	– 15.4	– 7.6	– 2.9	– 2.2	5.5
Family preservation												
Family has had at least one child separated in past 6 months[a] (%)	– 6.6	– 1.3	– 1.5	0.8	– 5.5	7.9**	– 2.8	– 2.0	– 13.8	– 3.5	– 0.7	– 6.8
Spouse/partner separated in past 6 months, of those with spouse/partner present at RA[b] (%)	7.6	19.0	7.8	5.1	6.9	13.7	– 10.1	– 4.7	– 16.1	16.7*	2.6	– 1.2
Family has no child reunified, of those families with at least one child absent at RA[c] (%) **[limited base]** (%)	– 7.3	– 9.8	– 7.3	– 7.2	– 4.4	1.6	– 12.9	– 19.7	– 22.0	– 19.3	4.6	1.8
Adult well-being												
Health in past 30 days was poor or fair (%)	2.1	4.9	– 3.7	7.5*	– 4.5	2.8	4.8	– 3.9	– 0.2	– 4.8	– 0.4	2.1
Psychological distress[d]	– 1.58	0.02**	– 1.13	0.36**	– 0.29	– 0.15	0.59	– 0.16	– 1.22	0.09	– 0.88	– 1.61
Alcohol dependence or drug abuse[e] (%)	– 2.6	– 2.1	0.5	– 5.2	3.1	2.1	– 2.2	5.2	– 0.2	– 2.0	– 8.1	– 8.9
Experienced intimate partner violence in past 6 months (%)	– 6.0	– 2.8	1.3	– 4.9	0.3	– 2.8	– 6.5	2.0**	– 4.0	1.5	– 1.8	2.1
Child well-being												
Number of schools attended since RA[f]	0.05	– 0.32***	0.06	– 0.01	0.04	0.04	– 0.04	– 0.44***	– 0.13	– 0.29	0.20	– 0.09
School absences in past month (ages 5 to 17 years)[g]	0.08	– 0.15	– 0.22	– 0.14	– 0.07	– 0.25	0.11	0.06	– 0.15	– 0.15	– 0.54	0.08**
Poor or fair health (%)	0.0	3.4	0.1	– 1.1	1.5	– 1.6	0.4	0.7	– 5.6	– 0.1	– 5.2	0.3*
Behavior problems[h]	– 0.25	– 0.22	– 0.24	– 0.15	– 0.05	– 0.07	0.11	– 0.03	– 0.27	– 0.19	– 0.20	– 0.24
Self-sufficiency												
Work for pay in week before the survey (%)	1.0	– 1.8	2.6	– 0.8	1.6	3.8	– 2.9	1.4	– 8.1	– 1.2	– 4.2	– 5.6
Total family income ($)	– 2,039	196	– 1,400	368	– 1,795	1,841*	– 2,695	– 86*	– 952	– 2,053	– 1,381	– 1,663
Household is food secure (%)	10.6	8.3	6.0	2.9	1.1	3.5	2.7	0.6	20.0	6.1	10.1	12.8

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

RA = random assignment.

*/**/*** Impact magnitude varies significantly with level of [psychological or housing barriers] challenge at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Measures the percentage of families in which a child who was with the family at baseline was separated from the family in the 6 months before the 37-month survey.

[b] Measures the percentage of families in which a spouse or partner who was with the family at baseline was separated from the family in the 6 months before the 37-month survey.

[c] Percentage of families in which at least one child was separated from the family at baseline where no child was reunited with the family at the time of the 37-month survey.

[d] Psychological distress is measured with the Kessler Psychological Distress Scale (K6) and ranges from 0 to 24, with higher scores indicating greater distress.

[e] Alcohol dependence is measured with the Rapid Alcohol Problems Screen (RAPS-4), and drug abuse is measured with six items from the Drug Abuse Screening Test (DAST-10).

[f] Number of schools outcome is topcoded at 4 or more schools.

[g] Absences outcome is defined as 0 = no absences in past month; 1 = one to two absences; 2 = three to five absences; 3 = six or more absences. This parent-reported outcome was collected from only the first 38 percent of parents surveyed due to an error in data collection.

[h] Behavior problems outcome is measured as the standardized Total Difficulties score from the Strengths and Difficulties Questionnaire (SDQ).

Notes: The low estimate is calculated at the 20th percentile of the moderator in the full sample and the high estimate is calculated at the 80th percentile of the moderator. Impact mean difference estimates are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-Month Followup Survey

8.3.6. CBRR Versus PBTH

As the intervention offering more intensive services that address housing barriers directly and indirectly, PBTH would be expected to have greater impact relative to the CBRR intervention for families who have higher housing barriers. For families who have fewer barriers, temporary subsidies may suffice. Of 18 tests here, 2 reach statistical significance, both in the predicted direction, but this is not more than would be expected by chance alone. Thus, the study team cannot conclude that the size of the impacts families experience from assignment to the CBRR intervention compared with assignment to the PBTH intervention differ for families who have different numbers of housing barriers.

8.4. Summary

On average, the families in this study reported high numbers of psychosocial challenges and even higher numbers of barriers to housing at the time they entered the study after having spent at least 7 days in an emergency shelter. At the same time, families varied in the number of challenges and barriers they reported. This chapter examined whether any of the interventions works comparatively better for families depending on the difficulties they face.

With one exception, the study team found no statistically convincing evidence that any of the interventions works comparatively better or worse for families who face more psychosocial challenges or housing barriers than for families who face fewer difficulties. The exception was that, for certain outcomes, the benefit from assignment to the SUB intervention relative to assignment to the PBTH intervention is smaller for families who have more psychosocial challenges than it is for families who have fewer challenges. In particular, the ability of assignment to the SUB intervention to produce greater long-run housing stability than assignment to the PBTH intervention was less pronounced (though still present) for families who have a high level of psychosocial challenges at baseline than for families who have a low level of challenges. Consistent with the theory behind project-based transitional housing, assignment to the PBTH intervention actually did more than assignment to the SUB intervention to reduce separations from spouses and partners and intimate partner violence at 37-months for families who have higher levels of psychosocial challenges. (An alternate interpretation is that assignment to the SUB intervention enabled respondents to leave abusive partners.) Still, across the full range of outcomes examined at 37 months, families who have high levels of psychosocial challenge at baseline experienced many benefits of assignment to the SUB intervention compared with assignment to the PBTH intervention regarding additional housing stability outcomes, child separations, children's school mobility and behavior problems, and household food security, where differential impacts by challenge level did not emerge.

The study team cannot completely rule out the possibility of further differential effects related to families' difficulties at baseline—doing so would require larger sample sizes than are available in the study. At this point, however—with the exception of a small subset of outcomes in the SUB-versus-PBTH comparison when considering families who have high psychosocial challenge—the main results in previous chapters about impacts across *all* families provide the study's clearest guidance for policy and practice.

CHAPTER 9. INTERVENTION COSTS

This chapter documents the costs of providing the housing or shelter and supportive services in the programs associated with the interventions—permanent housing subsidies (SUB), community-based rapid re-housing (CBRR), project-based transitional housing (PBTH), and usual care (UC)—in the Family Options Study and the total costs incurred by families in each pairwise comparison. The goal of the 3-year cost analysis was to determine the relative costs of studied interventions taking into account all programs used in the 3 years since random assignment.

For decisionmakers who design and implement policy to address homelessness among families, information about the relative costs of the active interventions and usual care in this study is a critical complement to findings about their relative impacts. To assess the relative costs of the interventions, it is crucial to understand both the cost per month for each program to which families were given priority access and the overall cost to all providers of shelter and housing assistance of giving families priority access to a particular type of program.

This chapter begins by reviewing the concepts and methods used to analyze and describe program costs.[121] Then, Section 9.2 presents estimates of per-family monthly costs for each program type. To estimate the cost of the use of programs of all types, the study team summed monthly cost estimates over observed program use in the 37-month followup period. Section 9.3 presents these estimates of the cost of all program use for families randomly assigned to groups that offered priority access to each program type, or assignment to usual care. Finally, Section 9.4 reports the monthly cost of observed program use at the time of the 37-month followup survey.

The *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families* (hereafter, the *Short-Term Impacts* report; Gubits et al., 2015) reported that the per-family monthly cost of emergency shelter varied considerably by program type. Per-family monthly costs were highest for emergency shelter programs and lowest for rapid re-housing programs (the programs to which families assigned to the CBRR intervention were referred). In the first 20 months after random assignment, the *Short-Term Impacts* report (Gubits et al., 2015) also found that total program use for families assigned to the SUB intervention cost about the same as total program use for families assigned to usual care and slightly more than for families assigned to the CBRR intervention. Costs of program use for SUB families were clearly less than for families assigned to the PBTH group. The nearly equivalent cost of assignment to the SUB group compared with assignment to the UC group in the first 20 months was driven by both decreased time in emergency shelter and decreased use of relatively more costly PBTH programs for families assigned to the SUB group. The costs of total program use for families assigned to the SUB and CBRR interventions were similar because the greater use of SUB programs by families assigned to the SUB intervention was offset by the greater use of transitional housing, emergency shelter, and other programs by CBRR families.

The study team anticipated that costs for families assigned to the SUB intervention, which provides priority access to housing assistance that is not time limited, may begin to outpace costs for families assigned to interventions that offered priority access to time-limited assistance. In Section 9.3, the study team presents a finding that this is indeed the case. Average costs of all program use during the entire 3-year followup period are now about $4,000 more for families assigned to the SUB intervention than for families assigned to each of the other interventions. Assignment to the CBRR intervention now results in average costs during the followup period that are about $4,000 less than assignment to usual care (and also to the SUB intervention) and about $10,000 less than assignment to the PBTH intervention.

9.1. Introduction and Review of Methodology

The objective of the Family Options Study is to provide evidence to support decisions of policymakers, planners, and practitioners who address homelessness among families. Although much of the study is focused on estimating relative effects of three active interventions and usual care, such

[121] Chapter 12 of the *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families* (Gubits et al., 2015) provides additional details about the cost analysis.

estimates are only one input into decisions about homelessness policy. Because of differences in the type of housing or shelter provided, the duration of assistance, and the range and intensity of supportive services offered, the programs associated with each active intervention vary in cost. The extent to which families who are provided priority access to a particular type of program use that assistance or find their way to a different type of assistance (or no assistance of any type) is also fundamental to establishing the relative cost of the interventions studied.

This chapter reports on the costs of providing the housing and services in the programs associated with the three active interventions: SUB, CBRR, and PBTH. First, the chapter presents the unit costs of the programs to which families were given priority access and the costs of emergency shelters from which families were enrolled in the study. These costs represent the ongoing costs of providing assistance to a family at SUB, CBRR, PBTH, and emergency shelter *programs* that participated in the study. The chapter also reports the cost of all use of shelter and housing assistance programs, regardless of how families found their way to those programs, imputed using the unit costs of the study programs. These costs estimate the cost of the SUB, CBRR, PBTH, and UC *interventions* in which families received priority access to a particular program or usual care and then would proceed to access a variety of programs and program types. For this cost concept, the study team imputes costs of all types of shelter or housing assistance reported in the study's Program Usage Data. That cost concept includes the costs of emergency shelter programs to provide information on the cost of continued stays in emergency shelter following families' enrollment in the study and also the costs of any subsequent returns to shelter during the period between random assignment and the 37-month followup survey.

Throughout this chapter, the study team refers to SUB, CBRR, PBTH, and UC *interventions* when referencing the fact that families were randomly assigned to receive priority access to a particular program type (or in the case of usual care, no priority access). When referencing the cost of the programs to which families are given priority access or the shelter programs where families were enrolled in the study, the study team refers to SUB, CBRR, PBTH and emergency shelter *programs*.[122]

This chapter presents analyses for three concepts of cost: (1) per-family monthly program cost, (2) cost of all program use during the 37-month followup period, and (3) monthly cost of all program use at the time of the 37-month followup survey.

1. ***Per-family monthly program cost.*** Per-family monthly program cost is the cost of all resources used to provide shelter or housing and services to a family during the course of a month because they are receiving assistance through a particular SUB, CBRR, PBTH, or emergency shelter program. The study team developed these costs by cataloging and valuing the housing or shelter dimension of each program (capital and operating costs or rent) and also the services dimension (the personnel, space, and materials used to provide services) in each of 81 study programs at the time when study families initially received assistance.

2. ***Cost of all program use during the followup period.*** The second cost measure accounts for costs of *all* programs that families used during the 37-month followup period. Families given priority access to a particular type of program through random assignment nonetheless used multiple programs—both the program type to which they were given priority access and other program types. This cost includes the expense of providing housing or shelter and associated assistance (services) to study families during the time between random assignment and the 37-month followup survey. This cost concept represents the cost to the homeless services and housing assistance system of the SUB, CBRR, and PBTH interventions—priority access to a particular program type—and the cost of program use for usual care.

3. ***Monthly cost of all program use at the 37- month followup survey.*** The monthly cost of all program use at the 37-month followup survey considers the average per-family monthly program cost of programs from which families were receiving assistance at the time of the followup survey. Receiving priority access to one program type may make it more or less likely that the family will use other housing or homeless assistance programs in the medium and long terms. As a result, giving families priority access to a particular program type today can change the cost of assistance they receive months and years into the future. This chapter reports the averages of this point-in-time cost calculated for each of the study's six pairwise comparisons 37 months after random assignment.

[122] The monthly cost of the programs that make up the three active interventions represents the cost of actually providing assistance to families who take up programs associated with the assigned intervention. The monthly cost of emergency shelter programs is not the cost of providing usual care, because usual care includes whatever housing subsidies or supportive services families were able to obtain without receiving priority access to one of the active interventions. Because it was not feasible to determine the extent and costs of any assistance beyond what was provided by the emergency shelter program for *per-family monthly program costs*, the study team reports costs associated with emergency shelter only rather than all costs associated with the usual care. For the *cost of all program use during the 37-month followup period* and the *cost of program use at the time of followup*, the study team does estimate the cost of other program use for families assigned to the UC group.

9.1.1. Cost Data-Collection and Analysis Methodology

This section provides a brief review of the cost data-collection and analysis methodology. Appendix G provides greater detail.

To calculate the costs of the SUB, CBRR, PBTH, and emergency shelter programs, the study team attempted to include all resources that are used to provide the housing or shelter and the services that are part of the programs. Thus, the study team included services provided by partners that are not in the programs' budget, when those services are an integral part of the program—for example, because participants in the program have preferential access to the services. The cost concept also includes the monetary equivalent of in-kind donations of services and materials and includes capital costs incurred for housing and shelter.[123]

The study team collected cost data from more than one-half of the programs that initially agreed to provide the study's interventions. Estimates of per-family monthly costs for each program type are calculated from these data. These estimates are then used to estimate costs for all shelter and housing assistance programs that study families ultimately used (including for programs that did not participate in the study). The study team had two aims in selecting programs to include in the cost analysis. First, programs that served the most study families were selected so that cost estimates would be more likely to reflect assistance study families actually received. Second, costs of programs of each intervention type offered at each site were included, so that cost estimates would reflect variation in the housing or shelter and services provided across programs. Exhibit 9-1 shows the counts of programs used to develop the per-family monthly cost estimates. The programs selected for the cost analysis represent more than 85 percent of study families who accepted a study referral to CBRR and PBTH programs and more than 90 percent of families assigned to the UC group from shelter programs. The issue of selecting programs did not arise for the SUB intervention because administrative data were available for all SUB programs in the study.

For CBRR, PBTH, and emergency shelter programs, the study collected costs at the program level and normalized the costs by the number of families served by the program (as opposed to tying particular housing units or shelter beds and specific supportive services to study families directly). These program-level costs can be thought of as the average cost of providing housing or shelter and services to a typical family served by the program. The primary source for cost data for rapid re-housing, transitional housing, and emergency shelter programs was audited expense statements. Program budgets, staffing lists, partner commitment letters, and program staff estimates of labor and material costs of any services not reflected in expense statements supplemented these statements. Cost data were collected for the program fiscal year that overlapped most closely with the time in which study families actually received assistance from the programs. Because this initial period of assistance was largely completed at the time of the 20-month period, the study team continues to use per-family monthly program cost estimates based on this initial data period for the cost estimates calculated in this chapter. These estimates are the same as those reported in the *Short-Term Impacts* report (Gubits et al., 2015), with adjustments for inflation, where appropriate.

The study team developed program costs for permanent housing subsidies using HUD Public and Indian Housing Information Center (PIC) and Tenant Rental Assistance Certification System data covering Housing Assistance Payments (HAP) costs for all SUB families who received permanent housing subsidies and Financial Data Schedule data for the administrative costs of the Housing Choice Voucher (HCV) program. For costs of a permanent housing subsidy, as in the *Short-Term Impacts* report (Gubits et al., 2015), the study team used cost estimates from HUD administrative data systems for families who were assigned to the SUB intervention and took up the permanent housing subsidies offered to SUB families. For this

Exhibit 9-1. Programs Included in the Estimates of Monthly Costs

Program Type	Number of Programs Used To Produce Cost Estimates
Permanent subsidies offered to the SUB group	10 sites (administrative data)
Rapid re-housing programs offered to the CBRR group	12
Project-based transitional housing programs offered to the PBTH group	24
Emergency shelter programs	45

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy.

Notes: For the 10 sites with the SUB intervention, average costs are calculated from household-level administrative data by site for families who received services from the SUB providers. The SUB intervention was not available to families in Atlanta or Baltimore.

[123] This approach to estimating costs is different from the approaches in previous studies that calculate the costs of homelessness. Many studies in recent decades sought to compare the cost of supportive housing for chronically homeless individuals or families with mainstream healthcare and public safety costs of managing this population in the absence of supportive housing. An introduction to and overview of this literature are provided in Culhane et al. (2007). By contrast, this analysis focuses on the costs incurred, not by other systems or services, but by the programs providing shelter or housing and related services to homeless families. A complete cost-benefit analysis, which is not part of the study design, would include estimates of cost offsets to other systems and of all costs of services that study participants may have received from providers that were not involved with the study, and it would also include an attempt to monetize the benefits associated with differences in impacts.

report, monthly costs are recalculated for the entire 37-month period.[124] Those costs are composed of household-level monthly HAPs and site-level costs of administering the HCV program. The database for the cost calculation for this report includes data from more recent PIC records that cover the period between the 20- and 37-month followup surveys and also data for months 1 to 20 used in the *Short-Term Impacts* report (Gubits et al., 2015). Costs are estimated using the data for the SUB families who are also included in the reports of impacts (400), a slightly smaller sample than was available at 20 months (454).

The cost analysis considered costs in two broad categories:

1. ***Housing or shelter costs*** refer to the rental cost—either observed or estimated—of the space used to provide housing or shelter and program services and to any maintenance or other facility operation costs (including durable items such as furnishings). The rental cost is net of any rent payments made by the family.
2. ***Supportive services costs*** refer to the cost of any services other than housing or shelter provided as an integral part of the program, including case management and any cash or in-kind assistance (for example, meals provided in emergency shelters).

Two other categories of costs are measured and included in the calculation of housing or shelter costs and of services costs. Additional detail is shown for these two types of costs because they provide information on the typical structure of homeless assistance programs:

1. ***Administrative and overhead costs*** include management salaries; legal, accounting, and other professional services; and program support costs, such as insurance premiums and agency and association fees. Administrative and overhead costs are divided among supportive services and housing or shelter costs according to the cost types' relative share of total costs so that they are included in the two broad categories.
2. ***In-kind and partner costs*** include any costs of housing or shelter and supportive services provided to families because they participate in a program. These costs are not provided by the program itself, and, as a result, are not included in program financial statements. Common examples include onsite health or mental health providers funded by an outside agency, community volunteers providing a variety of services, and consumer goods donated to program clients. The importance of these costs varies widely from program to program. When present, they typically are part of the cost of supportive services provided by a program. In some cases, however, housing or shelter costs include the costs of labor, such as handyman services, or of facilities used regularly for program activities that were provided in kind. In other cases, accounting, legal, or administrative services were provided in kind or by partners. In each case, the study team apportioned the cost to the appropriate category.

The study team estimated the cost of all program use since random assignment by multiplying the average site-level per-family monthly program cost for each program type by the number of months of assistance of each respective type provided to each family between random assignment and the family's followup survey, as observed in the Program Usage Data. The imputed cost of all program use during the followup period for each family is then the sum of these monthly costs times months of assistance for each program type.

Program Usage Data measured the number of months each family received seven types of homeless or housing assistance programs: (1) subsidy, (2) rapid re-housing, (3) transitional housing, (4) emergency shelter, (5) permanent supportive housing, (6) public housing, and (7) project-based housing assistance (project-based vouchers or Section 8 projects). (See Chapters 3 through 6 for more information on program use, particularly the respective "Program Use Since Random Assignment" exhibits.)

Translating the number of months of assistance received into the cost of all housing and services programs used since random assignment requires a few assumptions. First, many families accessed shelter or housing and related services from programs not included in the cost data collection. The study team valued all stays at programs that matched a "type" from a study at the site-level average of the per-family monthly program cost. So, assistance from any rapid re-housing program was valued at the sites' average per-family monthly cost for CBRR programs, and assistance from any transitional housing program was valued at the site's average per-family monthly cost for PBTH programs. In a similar way, site-level costs for the SUB intervention are used as a proxy for the costs of housing choice vouchers used by all families in the study, including those not assigned to the SUB intervention.[125]

[124] This recalculation was done to allow for the possibility that changing family incomes or rental market conditions may influence average housing assistance payments for vouchers during the 3-year followup period. The updated monthly program cost estimate for SUB programs ultimately increased by only $10. Monthly assistance costs for other program types may also have changed during the followup period, suggesting that our estimates for subsidies and the SUB intervention are more precise than for other program types and interventions.

[125] Because Atlanta and Baltimore did not offer the SUB intervention, per-family monthly program costs were not calculated in these sites for SUB programs. An additional site (Minneapolis) did not have adequate takeup of project-based transitional housing to support cost data collection. In these sites, the study team uses study-level average per-family monthly program costs as a proxy to allow cost of all program use since random assignment estimates to include the families who found their way to these program types without study assistance.

Three of the program types that families used—permanent supportive housing, public housing, and project-based housing assistance (project-based vouchers or Section 8 projects)—are not associated with study interventions and were not included in the cost data collection. The study team did not collect cost data from these types of programs. Instead, under the assumption that they have similar program and cost structures, the study team used site-level average PBTH per-family monthly program costs as a proxy for the monthly cost of permanent supportive housing. SUB program costs are used as a proxy for the costs of public housing and project-based assistance.

These estimated costs of all program use for each family are then averaged across random assignment outcomes within each of the study's six pairwise comparisons. This chapter reports averages of this amount (calculated using the same nonresponse weights used in the impact analyses) for each of the study's pairwise comparisons. Thus, this estimate provides a total cost of housing or shelter and services that reflects the different mixes of program types used that resulted from a family's being randomly assigned to a group that provided priority access to a particular program type.

For monthly costs of all program use at the followup survey, the study team made the same assumptions to impute the monthly cost of observed program use for that month. The average of the cost of each of the various types of programs families were observed or reported using in the month in which they participated at the time of the followup survey was calculated as the site-level per-family monthly program cost for that intervention. Again, averages were calculated over the study impact sample. This cost concept does not consider the length of program use, but rather averages per-family monthly program costs by the observed point-in-time average frequencies of program use by study families in each intervention group. Observed emergency shelter stays, in particular, may last less than a month.

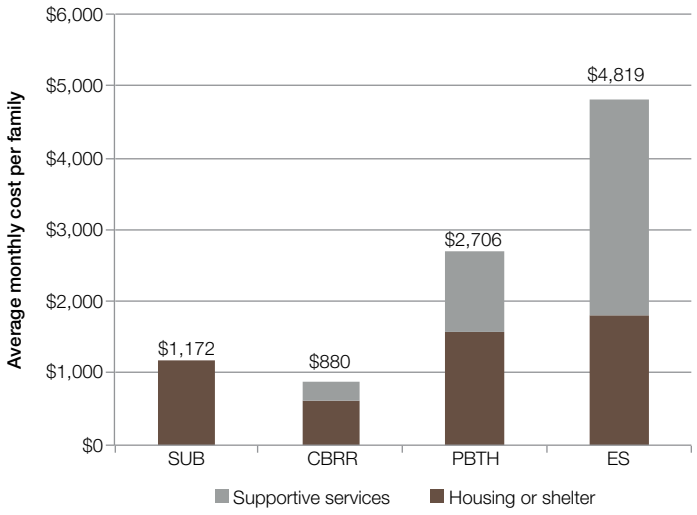
9.2. Per-Family Monthly Costs

This section summarizes per-family monthly costs for SUB, CBRR, PBTH, and emergency shelter programs. The interventions examined in the Family Options Study were intended to vary in both intensity and duration. SUB programs provide a deep housing subsidy of indefinite duration but no supportive services. CBRR programs provide a short-term, typically shallower housing subsidy with some supportive services. PBTH programs provide a place to stay and extensive services support for a relatively long duration. Finally, emergency shelter programs often offer extensive supportive services and a place to stay, typically for a very limited time.

Monthly costs of serving a typical family vary considerably by program type. Exhibit 9-2 presents the average per-family monthly program cost for each type of program. SUB programs, on average, cost slightly less than $1,200 per family per month and consist wholly of the cost of housing, because this intervention provides no supportive services. Unlike the other program types, the study team used newly available data to update the costs for SUB programs, as detailed previously. The monthly cost (adjusted to 2013 dollars) did not change substantially in the interval between the 20- and 37-month followup surveys. The updated estimate is $10 higher than the original. In no study site did costs for SUB programs change by more than 3 percent.[126]

CBRR programs have the lowest per-family monthly program cost among the program types, with a program average of slightly less than $900. Housing costs, on average, make up 72 percent of CBRR program costs. PBTH programs have an average per-family monthly program cost of slightly more than $2,700, with supportive services, on average, constituting 42 percent of PBTH program costs.

Exhibit 9-2. Average Per-Family Monthly Cost of Supportive Services and Housing or Shelter Across Program Types



CBRR = rapid re-housing programs offered to the CBRR group. ES = emergency shelter. PBTH = transitional housing programs offered to the PBTH group. SUB = permanent housing subsidies offered to the SUB group.

Sources: Family Options Study cost data (CBRR, PBTH, and ES); U.S. Department of Housing and Urban Development, Public and Indian Housing Information Center, Tenant Rental Assistance Certification System, and Financial Data Schedule records (SUB)

[126] In Honolulu, where the SUB intervention consisted largely of public housing placement, cost estimates are based on Fair Market Rents (FMRs) and increased by 7 percent.

The results for the costs of all program use during the followup period reported in the next section are greatly influenced by the finding that emergency shelter programs are much more costly than other program types. Emergency shelter programs have the highest per-family monthly program cost for both supportive services and housing or shelter, which, on average, total slightly more than $4,800, four times the per-family monthly cost of SUB programs, more than five times the cost of CBRR programs, and almost twice the cost of PBTH programs. Supportive services make up 63 percent of emergency shelter costs, the highest share among the four program types. The higher monthly cost of housing or shelter for emergency shelter programs reflects both program structure and the approach to classifying costs. Emergency shelters tend to have higher per-family levels of facility staffing and expenditure for maintenance and materials than do PBTH programs or than what is reflected by the rents CBRR and SUB programs pay. In addition, housing or shelter costs include the capital cost value of all physical space provided by the program, including facilities such as classrooms, case management offices, kitchens, and dedicated childcare centers.[127]

Within each study intervention, the study team also found substantial variation in the costs of the individual programs. Exhibit 9-3 shows this variation among per-family monthly program costs for each program type. PBTH and emergency shelter programs have substantial variation, driven largely by variation in supportive services costs but also by variation in capital costs and administrative expenses. For the 24 PBTH programs in the cost analysis, per-family monthly program cost ranges from slightly more than $1,260 to slightly less than $6,300. Per-family monthly program cost for the 45 emergency shelter programs ranges from $1,900 to slightly more than $9,000.

Variation in CBRR and SUB costs across programs is driven largely by housing costs. For the 12 CBRR programs in the cost analysis, per-family monthly program cost ranges from slightly more than $550 to slightly less than $1,400. Across the 10 sites with the SUB intervention, average per-family monthly program cost ranges from $777 to $2,250, largely reflecting differences in the local cost of rental housing.

Differences in the nature of the CBRR, PBTH, SUB, and emergency shelter programs are reflected in the differences in average costs across the programs. Exhibit 9-4 reports summary statistics for the four program types. CBRR and SUB programs provide assistance for private market housing. In both cases, but particularly for SUB programs, the cost of housing assistance is driven by local housing market conditions, as measured by Fair Market Rent (FMR). Even though the CBRR programs provide some supportive services in the form of housing placement and limited case management assistance, CBRR program costs are lower than SUB program costs on a per-month average basis, because CBRR program assistance is sometimes a fixed amount that is less than typical HAPs provided by vouchers in the same site, and, in many cases, the subsidy declines the longer the family receives CBRR program assistance.

PBTH programs and emergency shelters are similar to each other and distinct from CBRR and SUB programs in that they provide a mix of housing or shelter and supportive services. In fact, many PBTH and emergency shelter programs that study team members visited for cost data collection are operated by the same agency; in a number of instances, PBTH and emergency shelter programs are distinguished only by length of stay, and families in both programs receive the same supportive services and live in the same facility. Other emergency shelters are distinct in providing congregate shelter or shared rooms for sleeping,

Exhibit 9-3. Summary Statistics of Per-Family Monthly Program Cost by Program Type

Program Type	Per-Family Monthly Program Cost Summary Statistic							
	Programs	Enrolled Families	Mean ($)	Min ($)	25th pct ($)	Median ($)	75th pct ($)	Max ($)
Permanent subsidies offered to the SUB group	10	400	1,172	777	833	1,101	1,392	2,250
Rapid re-housing programs offered to the CBRR group	12	268	880	563	713	847	977	1,388
Project-based transitional housing programs offered to the PBTH group	24	107	2,706	1,261	1,738	2,352	3,535	6,292
Emergency shelter programs	45	667	4,819	1,888	3,907	4,352	5,786	9,170

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy.

Notes: CBRR, PBTH, and emergency shelter statistics are calculated from program-level cost estimates, weighted by the number of study families who enrolled in the program; SUB statistics are calculated from household-level data. For CBRR, PBTH, and emergency shelter, the number of families is study families who, based on enrollment verification data, enrolled in the programs used to estimate monthly costs; for SUB, the number of families is study families assigned to SUB who are 37-month followup survey respondents and who also have administrative records used to calculate SUB costs.

Sources: Family Options Study cost data (CBRR, PBTH, and ES); U.S. Department of Housing and Urban Development, Public and Indian Housing Information Center, Tenant Rental Assistance Certification System, and Financial Data Schedule records (SUB)

[127] This study's finding of higher monthly costs for family shelter programs than for other homeless assistance program types is consistent with previous estimates reported in HUD's *Costs Associated With First-Time Homelessness for Families and Individuals* (Spellman et al., 2010), which found emergency shelter monthly costs for families were higher than transitional housing costs and higher than the local Fair Market Rent (FMR) in three of four cities. By contrast, shelters serving individuals had costs that, on average, were equal to or substantially lower than transitional housing costs and the FMR.

Exhibit 9-4. Comparison of Cost Summary Statistics Across Program Types

	SUB Programs	CBRR Programs	PBTH Programs	Emergency Shelter Programs
Housing or shelter shares (%)	100	72	58	38
Supportive services share (%)	0	28	42	62
Partner and in-kind share (included in shelter or supportive services cost as relevant) (%)	0	Two sites: 1, 3 Ten sites: 0	8	15
Administrative and overhead cost share (included in both housing and supportive services costs) (%)	9	11	14	16
Per-family monthly program cost ($)	1,172	880	2,706	4,819

CBRR = community-based rapid re-housing. PBTH = project-based transitional housing. SUB = permanent housing subsidy.

Notes: Housing and supportive services shares add to 100. Partner and in-kind share and administrative share are included in housing and supportive services.

Sources: Family Options Study cost data (CBRR, PBTH, and ES); U.S. Department of Housing and Urban Development, Public and Indian Housing Information Center, Tenant Rental Assistance Certification System, and Financial Data Schedule records (SUB)

whereas PBTH (and SUB and CBRR) programs largely provide families with private units. Partner and in-kind resources represent a greater share of costs, on average, for emergency shelter programs than for PBTH programs. In general, the study team finds that PBTH programs relied more than did emergency shelter programs on partner organizations to provide professional services such as counseling or mentoring, whereas emergency shelter programs were more likely to use volunteer and in-kind resources.

9.3. Cost of All Program Use During the Followup Period by Families Assigned to Each Intervention

Having presented costs per month in a given program type in Section 9.2, this section presents estimates of the total cost during the 37-month followup period after being randomly assigned to an intervention that provided priority access to a particular program type. This total cost includes the cost of the program to which priority access was given, if the family used that program, and to other programs of various types that families accessed on their own. These estimates can be thought of as the costs of achieving the relative impacts of the interventions reported in Chapters 3 through 6. Receiving priority access to a particular type of program both increased the rate at which families used that program and affected the rate at which families used other types of shelter and housing assistance programs during the followup period.

These estimates use the per-family monthly program costs, together with the observed patterns of program usage reported in Chapters 3 through 6, to construct estimates of total costs of the mix of homeless or housing assistance programs that served study families assigned to each of the interventions in the period between random assignment and the followup survey.

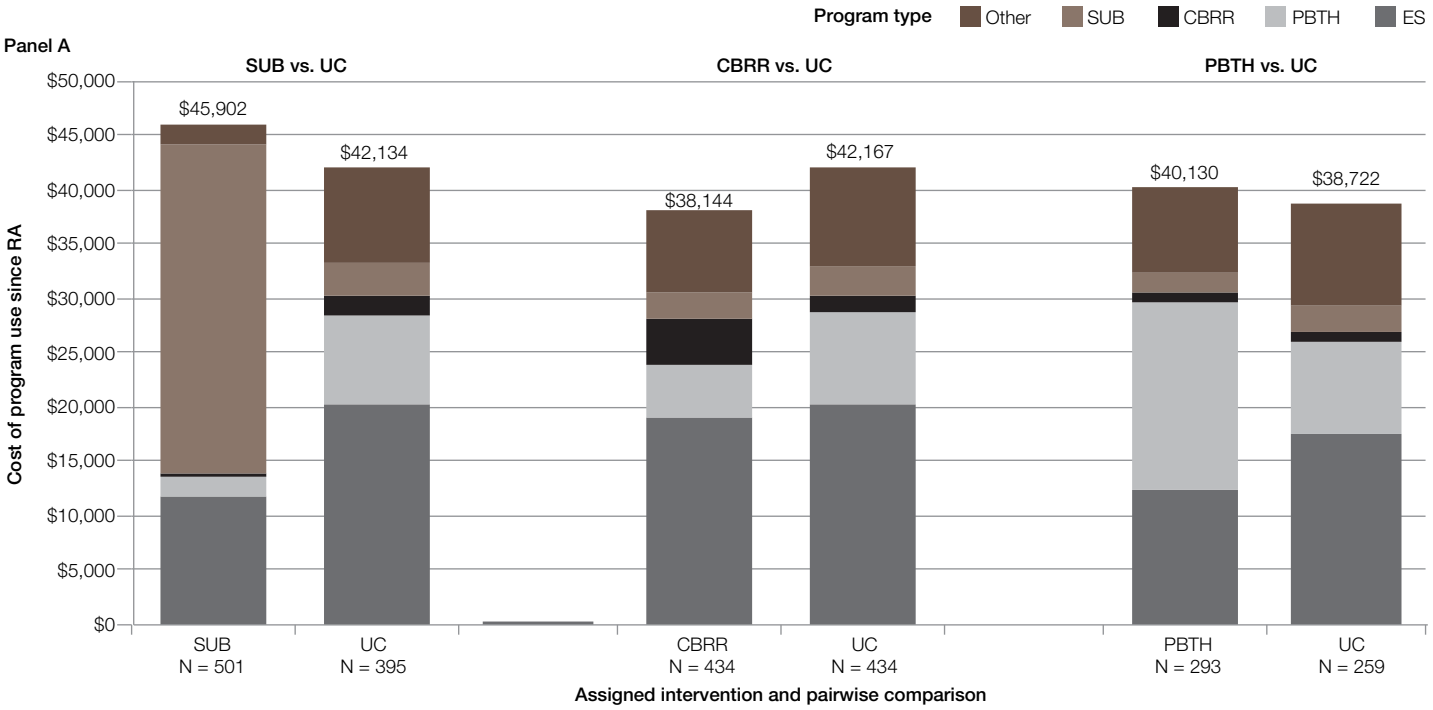
The study team examined these costs of all program use associated with the combination of assistance that the families received for each of the six pairwise comparisons (see Exhibit 1-3 in Chapter 1 for an overview of the pairwise comparisons):

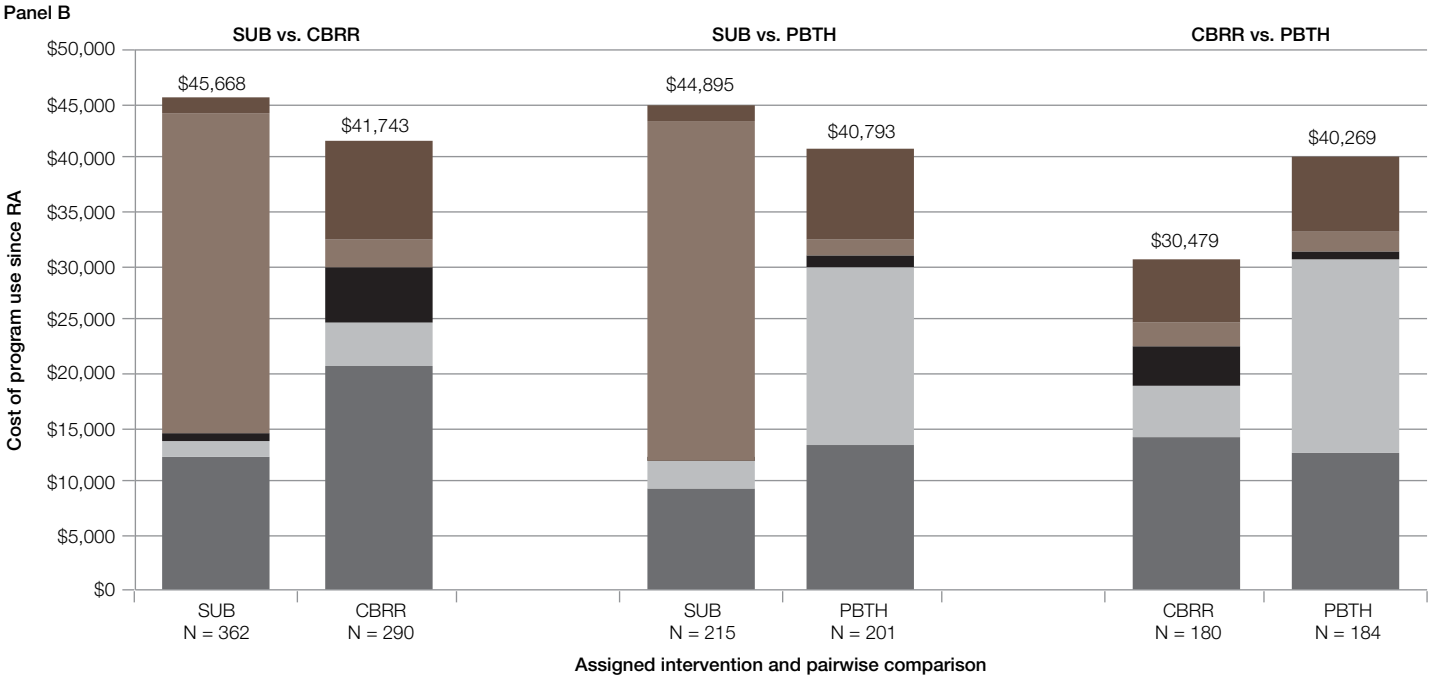
- SUB versus UC.
- CBRR versus UC.
- PBTH versus UC.
- SUB versus CBRR.
- SUB versus PBTH.
- CBRR versus PBTH.

As reported in Chapters 3 through 6, different sets of families took part in each of the study's pairwise comparisons. Exhibit 9-5 presents the average cost of all program use during the followup period for the families in each comparison. Each bar is made up of segments that reflect the cost of the average use of different program types during the followup period. Each segment is the average cost of observed use of the program type by families assigned to the intervention within the pairwise comparison.

Looking across all the pairwise comparisons, whenever families are assigned to the SUB or PBTH interventions, costs of SUB or PBTH program use represent the highest share of the cost of all program use. Substantial emergency shelter costs remain even in these instances, however, and costs of emergency shelter use represent the highest cost share whenever families are not assigned to the SUB or PBTH interventions. This finding illustrates that, when families have been in shelter for 7 or more days, substantial shelter costs are associated with assisting all families up until the time they leave the emergency shelter either to use a program to which they were given priority access or to go somewhere else. Differences also exist across interventions in the incidence of return to shelter during the followup period, the second factor determining the amount of shelter costs within the cost of all program use.

Exhibit 9-5. Cost of Program Use Since RA for Each Intervention Contrast





CBRR = priority access to community-based rapid re-housing. ES = emergency shelter. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

RA = random assignment.

Notes: Averages are for all 37-month survey respondents in each pairwise comparison and are weighted for survey nonresponse to represent full comparison sample. Cost estimates assume a site-specific average cost per month based on the Family Options Study cost data and HUD administrative data. The *other* category refers to other permanent housing subsidies and includes permanent supportive housing, public housing, and project-based assistance (project-based vouchers or Section 8 projects).

Sources: Family Options Study cost data; U.S. Department of Housing and Urban Development, Public and Indian Housing Information Center, Tenant Rental Assistance Certification System, and Financial Data Schedule records (SUB); Family Options Study Program Usage Data

Total costs for the average family in the SUB-versus-UC pairwise comparison are shown in the far left set of stacked bar charts in panel A of Exhibit 9-5. The total cost for the average family assigned to the UC group in the study is $42,134. When the cost includes the cost of *all program use* for each set of families—families assigned to the SUB group versus families assigned to the UC group—the total average cost per family assigned to the SUB group is almost $3,800 more than for families assigned to the UC group. In the first 20 months after random assignment (see the *Short-Term Impacts* report), this difference was only about $500. The *Short-Term Impacts* report discussed the potential for cost of all program use for families assigned to the SUB group to eventually outpace the costs for families assigned to the UC group, and this has happened, with SUB intervention costs now 9 percent higher than UC costs during the entire followup period.

The SUB-versus-UC comparison reveals how assignment to the SUB group compared with assignment to the UC group altered the composition of housing assistance programs used and their associated costs. The average emergency shelter cost for families assigned to the UC group during the full 3-year period was, on average, 1.7 times that of families assigned to the SUB group. UC families also frequently found their way to other permanent housing programs (mostly public housing in this instance, which is assumed to have the same monthly cost as SUB programs) and to relatively costly PBTH programs. The decreased use of programs providing project-based transitional housing, rapid re-housing, and emergency shelter by families assigned to the SUB group outweighs much of the increased use of SUB programs.

In the SUB-versus-CBRR comparison, the cost of program use since random assignment for families assigned to the SUB group is about 9 percent higher, on average, than for families assigned to the CBRR group. Compared with the 20-month findings, the cost ordering changes for only one pairwise comparison—the SUB-versus-PBTH comparison. During the 3-year followup period, average costs of all program use for families assigned to the SUB group are 10 percent higher than for families assigned to the PBTH group, whereas total costs for families assigned to the PBTH group were 10 percent higher at the earlier followup point. Compared with costs of assignment to the PBTH intervention, costs of assignment to the SUB intervention continued to grow with time as families used permanent housing subsidies with no time limit at a much greater rate, while costs associated with taking up PBTH programs came to an end without being fully offset by increases in shelter or other program use.

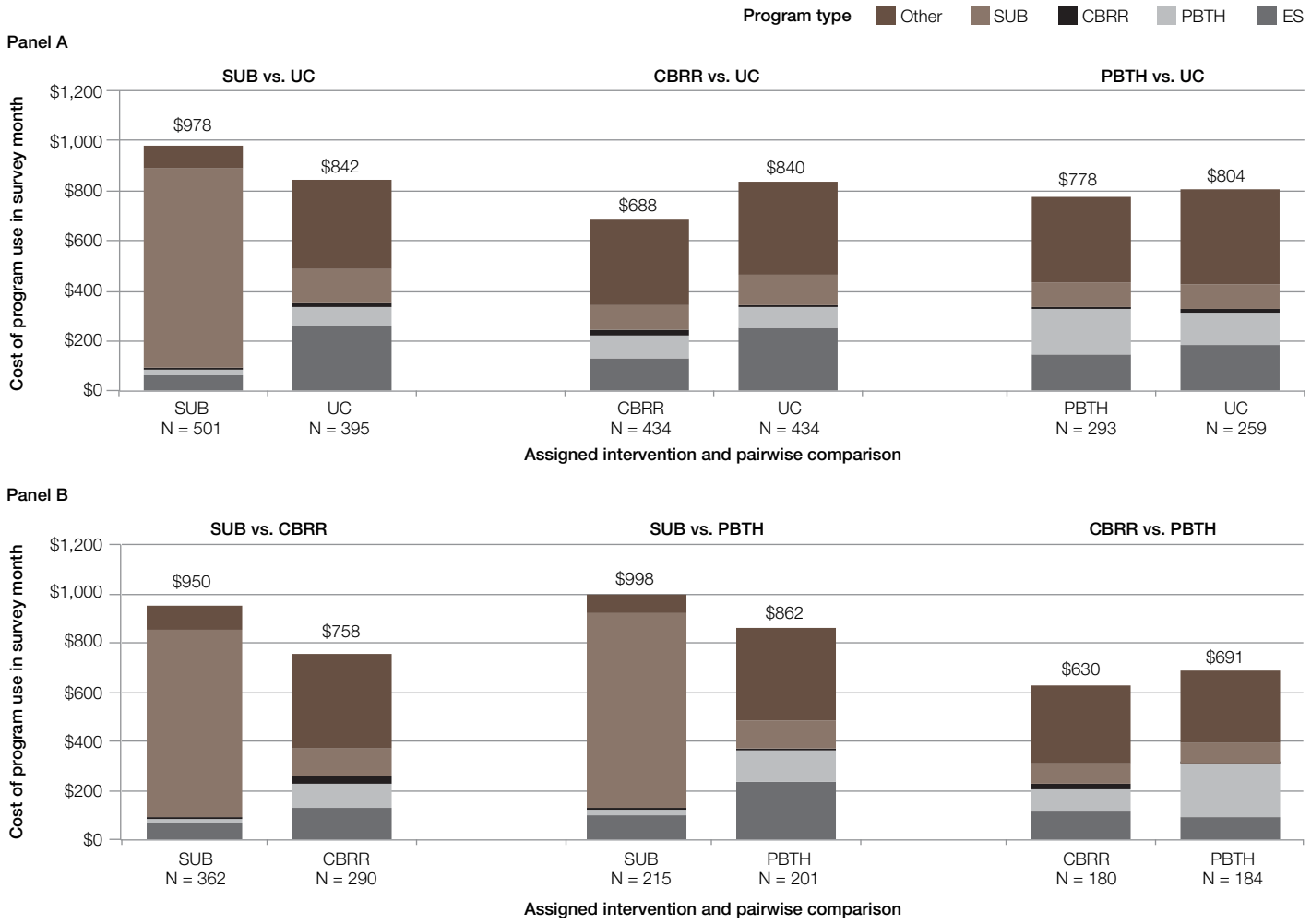
In the other two contrasts containing the PBTH intervention, the high monthly cost of PBTH programs results in a higher average cost of all programs used for families assigned to the PBTH intervention compared with assignment to other interventions. As at 20 months, in each of the three comparisons involving the CBRR intervention, families assigned to the CBRR intervention have the lower average cost of all programs used. For example, in the CBRR-versus-UC comparison, families assigned to the CBRR group used less transitional housing, less emergency shelter than families assigned to the UC group. The largest difference is in the CBRR-versus-PBTH comparison, in which the high cost and greater use of PBTH programs results in a nearly $10,000 difference in average cost of all program use for families assigned to the respective interventions. For the CBRR-versus-UC and SUB-versus-CBRR comparisons, CBRR families have an average cost of all programs used that is $4,000 less than the program costs of those assigned to the other interventions.

9.4. Monthly Cost of All Program Use at the Time of the Followup Survey by Families Assigned to Each Intervention

Exhibit 9-6 shows the monthly costs of all program use in the month of the followup survey for each pairwise comparison. This analysis uses the per-family monthly program cost for each type of program and information about the mix of program types families were using at the time of the 37-month followup survey. As discussed in Chapters 3 through 6, the mix of programs used during the month of the followup survey is different than the mix of program use observed during the entire followup period. For example, in the SUB-versus-UC comparison, among families assigned to the UC group, 23 percent used rapid re-housing during the followup period, but only 2 percent were using rapid re-housing at the time of the survey. In a similar way, 29 percent of UC families in the SUB-versus-UC comparison used transitional housing at some time during the followup period, but only 4 percent were doing so at the time of the survey. Altogether, 38 percent of families assigned to the UC group used a permanent housing subsidy during the followup period, and 31 percent were using a permanent housing subsidy at the time of the survey. The monthly costs at the time of the followup survey provide an indication of how costs for the interventions may diverge in the future due to differing trends in use of the different program types.

Exhibit 9-6 shows that, in contrasts involving the CBRR intervention, costs of program use for families assigned to the CBRR intervention are lower than for families assigned to the SUB intervention (by $192), the UC intervention (by $152), and the PBTH intervention (by $61). This finding reflects the

Exhibit 9-6. Average Per-Family Monthly Costs for Program Use at Time of the Followup Survey, by Comparison



CBRR = priority access to community-based rapid re-housing. ES = emergency shelter. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy.

Notes: Averages are for all 37-month survey respondents in each arm of each pairwise comparison and are weighted for survey nonresponse to represent full comparison sample. Cost estimates assume a site-specific average cost per month based on the Family Options Study cost data and HUD administrative data. The other category refers to other permanent housing subsidies and includes permanent supportive housing, public housing, and project-based assistance (project-based vouchers or Section 8 projects).

Sources: Family Options Study cost data (CBRR, PBTH, and ES); U.S. Department of Housing and Urban Development, Public and Indian Housing Information Center, Tenant Rental Assistance Certification System, and Financial Data Schedule records (SUB); Family Options Study Program Usage Data

differences in the prevalence of shelter use, transitional housing, and permanent housing subsidies during the month of the followup survey.[128]

In all contrasts involving the SUB intervention, the costs of program use during the month of the followup survey are higher for families assigned to the SUB intervention. Compared with costs of program use for families assigned to usual care, costs of program use for families assigned to the SUB intervention ($978) were $136 higher in the month of the followup survey than for families assigned to usual care ($842). The greater incidence of use of programs providing permanent housing subsidies among families assigned to the SUB intervention outweighed the higher cost associated with more frequent use of shelter and PBTH programs by families assigned to usual care. The monthly costs of program use at the time of the followup survey for families assigned to the SUB intervention were $136 higher than for families assigned to the PBTH intervention and were $192 higher than for families assigned to the CBRR intervention. In the month of the 20-month followup survey (see Exhibit 12-20 in the *Short-Term Impacts* report [Gubits et al., 2015]), the average per-family monthly cost of program use for

[128] As noted previously, the study team used the per-family monthly cost estimated for emergency shelters to approximate program costs at the time of the followup survey. In reality, these emergency stays may be shorter or longer than 1 month.

families assigned to the SUB intervention was only $20 more than for families assigned to usual care ($1,086 for families assigned to the SUB intervention and $1,066 for families assigned to usual care). This differential had grown to $136 at the time of the 37-month survey, as shown in Exhibit 9-6 ($978 for families assigned to the SUB intervention and $842 for families assigned to the UC intervention). In the month of the 20-month survey, the cost of program use for families assigned to the SUB intervention was $88 higher than for families assigned to the PBTH intervention and $102 higher than for families assigned to the CBRR intervention.

Costs for families assigned to the PBTH intervention are $26 a month less than costs for UC families in the month of the followup survey. Compared with families assigned to the CBRR intervention, however, families assigned to the PBTH intervention have higher costs of program use in the month of the survey.

It is not clear how expected future costs of homeless or housing assistance will compare across the interventions. It is important to note that families receiving permanent housing assistance, mostly through HCV or public housing programs, will continue to accrue monthly costs indefinitely. Families assigned to usual care or the other interventions, however, may continue to experience greater housing instability than their counterparts assigned to the SUB group. This instability could result in higher future costs from subsequent use of relatively more expensive shelter and transitional housing programs.

CHAPTER 10. CONCLUSIONS

HUD launched the Family Options Study in 2008 to fill a gap in knowledge about which housing and services interventions work best for families experiencing homelessness. Based on the 3-year analysis, this report provides evidence about the relative effects of priority access to permanent housing subsidies (SUB), community-based rapid re-housing (CBRR), and project-based transitional housing (PBTH) compared with one another and with usual care (UC) (in which families had no priority access to any program but were left on their own to find their way out of shelter). After spending at least 7 days in emergency shelter, nearly 2,300 families in 12 sites across the country were randomly assigned to one of these four interventions. Random assignment produced well-matched groups of families, with no systematic differences in baseline characteristics.

Families were free to take up the programs to which they were given priority access or make other arrangements on their own, so families in each group used a mix of programs. Nonetheless, the study generated substantial contrasts in program use during the followup period because the families' program choices were influenced strongly by the particular offer of priority access they received from the study. Random assignment and the subsequent contrasts in program use provide a strong basis for drawing conclusions about the relative impacts of the alternative interventions on several aspects of family well-being 3 years after random assignment.

This chapter begins by describing the questions that guide this 3-year analysis. Then for UC and each of the three active interventions, the chapter describes program use, family outcomes (for UC) or impacts (for active interventions, compared with UC and one another), and program costs. The chapter concludes with implications for theory and policy.

10.1. Questions Addressed in the 3-Year Analysis

The 3-year analysis addresses three primary questions:

1. What programs do families who experience homelessness use during a 3-year period, and how does assignment to an intervention that offers priority access to a particular kind of program affect this program use?
2. At 3 years after random assignment, what are the relative effects of the three active interventions compared with usual care and of the active interventions compared with each other?
3. What are the cumulative costs of the interventions during the 3-years following random assignment?

Longer-term followup is often desirable in assessing the effects of social policy interventions and is especially desirable in the case of the Family Options Study. To evaluate the effects of priority access to temporary programs that can last up to 18 months (CBRR) or 24 months (PBTH), 20 months is not a long enough period. Some families may not have received a full dose of a temporary program by the time of the 20-month followup analysis, and anxieties about the impending end of a program or disruption from having recently moved at the time of the 20-month survey could have depressed families' outcomes in the CBRR and PBTH interventions. To the extent that priority access to a particular type of program strengthens families or sets the foundation for later success, as theorized by proponents of PBTH programs, new findings may emerge at 3 years. In a similar way, increases in incomes observed at 20 months for CBRR families may set families on a positive trajectory of sustained benefit from that intervention. On the other hand, to the extent that the reduction in homelessness seen for PBTH families at 20 months was a temporary consequence of still being in PBTH programs at that time, impacts may fade. This 3-year analysis enables the study team to examine outcomes well after families reach the time limits for these temporary programs. Longer-term analysis is also important to measure impacts that may take longer than 20 months to emerge, such as those on child well-being outcomes.

The *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families* (hereafter, the *Short-Term Impacts* report; Gubits et al., 2015) found that families assigned to all four interventions used a variety of programs. The 3-year analysis updates information about the ways that having priority access to particular interventions affected patterns of use. In the case of permanent housing subsidies, which can last as long as families comply with program requirements, it was not clear at 20 months whether families would successfully renew leases and sustain tenancies. The 3-year analysis

addresses whether families assigned to the SUB group are able to retain the assistance. Emergency shelters, transitional housing programs, and rapid re-housing programs frequently attempt to enroll their families on waiting lists for permanent housing. Longer-term followup can also show whether these programs serve as way stations to permanent housing subsidies.

Finally, the *Short-Term Impacts* report (Gubits et al., 2015) found that, after 20 months, the cost of all the programs used by families assigned to the SUB group was about the same as for families assigned to the UC group. Because the subsidies offered in the SUB programs are permanent, whereas the CBRR and PBTH programs are time limited, there was good reason to expect that the relative costs of interventions may change during a longer followup period. The current report examines these costs cumulatively over an average of 37 months after random assignment.

10.2. Meaning of Intention-to-Treat Impact Estimates

The inherent strength of the experimental research design employed in the Family Options Study is the assurance that the groups that are created through the random assignment process will be similar to each other in all respects except for their priority access to a particular type of homeless or housing assistance program. This assurance means that subsequent differences in outcomes (beyond the bounds of chance sampling variability) reflect the relative impact of those interventions.

The Family Options Study tests for the impacts of three different potential emphases in federal or local assistance policy to homeless families: (1) What impact would priority access to project-based transitional housing (offered to the PBTH group) have on families in shelter who are not able to resolve their episodes of homelessness quickly? (2) How does this policy compare with providing access to community-based rapid re-housing (offered to the CBRR group)? (3) How does it compare to permanent housing subsidies (offered to the SUB group)? In each case, the corresponding policy question is, "What impact would this policy emphasis have on the outcomes of families in shelter relative to usual care or another policy emphasis?"

The 3-year followup data for study participants tell what would happen if each of these ways of targeting offers and access were pursued as federal or local policy—for the families actually studied in the target communities. The pairwise comparisons between active interventions show the impact of offering families priority access to one type of program rather than another. The data also allow for the comparison of each option with the mix of programs that the homeless assistance systems provided at the time of the study (that is, the programs available to the UC group). The pairwise comparisons between active interventions and usual care show the impact of referring a family to a specific type of program compared with the impact of letting families pursue any available assistance on their own.

The analysis in this report measures the impact of having been offered a particular type of program regardless of whether the family involved actually received the program assistance. The findings reflect the real way in which the homeless assistance system interacts with families, in that families are offered assistance rather than mandated to accept the assistance being offered. Whether families participate in a program to which they have gained priority access through their randomly assigned intervention reflects the relative desirability and accessibility of the programs for families within the context of the other options they may choose to pursue on their own.

As the report shows, in the 3 years after random assignment, a substantial number of families did not use the program to which they were given priority access, and some used other programs. The full experimental sample for a given intervention collectively shows how different forms of housing assistance are used when families are given priority access to one particular program type while simultaneously having the freedom to use other forms of assistance available in their communities. Including all the families randomly assigned to the UC group similarly reveals the range of programs used when no priority access is provided. The programs (including the programs offered by the interventions examined in this study) that UC families used exist in communities and would each continue to exist even with a stronger federal or local push for only one of them. Thus, the full-sample comparisons between randomly assigned interventions—known as "intention-to-treat," or ITT, impact estimates—provide the best guide to policymakers in a messy, complex world and are reported here as the main study findings.[129] Exhibit 10-1 displays a summary of the impact findings for the 18 outcomes included in the executive summary.

[129] All this said, evidence of the effects of a particular program type *on families who actually use that approach* (for example, the effect of rapid re-housing on the families who use the CBRR programs) compared with equivalent families who do not use the approach would have high value to the homeless assistance field. Such information is important, not because any federal or local policy action could actually create such a contrast for the population of all shelter-housed families, but because efforts to improve a particular intervention model need to be based on knowledge of what participating in that model actually does for families compared with not participating. This report does not provide such information because some assumptions necessary to calculate these effects do not appear to hold true for the study sample.

Exhibit 10-1. Summary of Statistically Significant Impact Results by Policy Comparison: Executive Summary Outcomes 37 Months After RA

Outcome	Statistically Significant ITT Impact Estimates					
	SUB vs. UC	CBRR vs. UC	PBTH vs. UC	SUB vs. CBRR	SUB vs. PBTH	CBRR vs. PBTH
	Effect Size[a]	Effect Size[a]	Effect Size[a]	Effect Size[a]	Effect Size[a]	Effect Size[a]
Housing stability (intervention goal: lower values)						
At least 1 night homeless[b] or doubled up in past 6 months or in shelter in past 12 months[c] (%) **[confirmatory]**	↓ – 0.37			↓ – 0.36	↓ – 0.43	
At least 1 night homeless[b] or doubled up in past 6 months (%)	↓ – 0.33			↓ – 0.28	↓ – 0.40	
Number of places lived in past 6 months	↓ – 0.20			↓ – 0.12	↓ – 0.25	
Any stay in emergency shelter in months 7 to 18 after RA (%)	↓ – 0.33		↓ – 0.14	↓ – 0.30	↓ – 0.13	
Family preservation (intervention goal: lower values)						
Family has at least one child separated in past 6 months[d] (%)					↓ – 0.19	
Spouse/partner separated in past 6 months, of those with spouse/partner present at RA[e] (%) **[limited base]**	↑[f] 0.23					
Family has no child reunified, of those families with at least one child absent at RA[g] (%) **[limited base]**						
Adult well-being (intervention goal: lower values)						
Health in past 30 days was poor or fair (%)						
Psychological distress[h]	↓ – 0.11					↓ – 0.19
Alcohol dependence or drug abuse in past 6 months[i] (%)						↓ – 0.19
Experienced intimate partner violence in past 6 months (%)	↓ – 0.12					
Child well-being (intervention goal: lower values)						
Number of schools attended since RA[j]	↓ – 0.13			↓ – 0.22	↓ – 0.18	
School absences in past month[k] (ages 5 to 17 years)						
Poor or fair health (%)						
Behavior problems[l]	↓ – 0.13	↓ – 0.12			↓ – 0.15	↓ – 0.13
Self-sufficiency (intervention goal: higher values)						
Work for pay in week before survey (%)						
Total family income ($)						
Household is food secure (%)	↑ 0.17				↑ 0.22	↑ 0.20
Number of families	895	868	551	652	414	363

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment.

[a] Effect size columns show standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] The definition of "homeless" in this report includes stays in emergency shelters and places not meant for human habitation. It excludes transitional housing. Additional impacts on the use of transitional housing are provided in Appendix E.

[c] After adjustment for multiple comparisons, the impact on the confirmatory outcome is statistically significant at the .01 level for the SUB-versus-UC, SUB-versus-CBRR, and SUB-versus-PBTH comparisons.

[d] Percentage of families in which a child who was with the family at baseline became separated from the family in the 6 months before the 37-month survey.

[e] Percentage of families in which a spouse or partner who was with the family at baseline became separated from the family in the 6 months before the 37-month survey.

[f] Assignment to SUB increased spouse/partner separations relative to UC. Separations may have allowed family heads to leave relationships in which they had experienced intimate partner violence.

[g] Percentage of families in which at least one child was separated from the family at baseline and no child was reunited with the family at the time of the 37-month survey.

[h] Psychological distress is measured with the Kessler Psychological Distress Scale (K6) and ranges from 0 to 24, with higher scores indicating greater distress. Impacts shown as standardized effect sizes. Effect sizes were standardized by dividing impacts by standard deviation for the UC group.

[i] Measures evidence of alcohol dependence or drug abuse using responses to the Rapid Alcohol Problems Screen (RAPS-4) and six items from the Drug Abuse Screening Test (DAST-10).

[j] Number of schools outcome is topcoded at 4 or more schools.

[k] Absences outcome is defined as 0 = no absences in past month; 1 = one to two absences; 2 = three to five absences; 3 = six or more absences. This parent-reported outcome was collected from only the first 38 percent of parents surveyed due to an error in data collection.

[l] Behavior problems outcome is measured as the standardized Total Difficulties score from the Strengths and Difficulties Questionnaire, or SDQ.

Notes: This exhibit displays findings that are statistically significant at the .10 level or more. Blank cells indicate that no statistically significant impact was detected. Impact estimates are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Appendix B for outcome definitions.

Sources: Family Options Study 37-month followup survey; Program Usage Data

10.3. Usual Care (UC)

Emergency shelters in this study were the entry points into homeless assistance in each site. Families randomly assigned to the UC group did not receive priority access to any program, although a range of supports were available to them if accessed by the family's own initiative. In fact, UC families typically remained in emergency shelter for some additional time, seeking whatever assistance was available in the community. Thus, the experiences of UC families reflect how the homeless assistance systems work in the 12 communities studied when families in shelter were not given priority access to another homeless or housing assistance program. The study provides valuable information about what types of assistance families use without special offers of assistance and how families who have spent at least 7 days in shelter progress over time.

UC families (that is, families to whom random assignment did not give priority access to any active intervention) spent substantial periods of time in emergency shelter after random assignment. UC families spent an average of 4 months in emergency shelter in the 3 years following random assignment, almost all of it as part of their initial shelter stays. More than one-half (60 percent) of UC families spent less than 3 months in emergency shelter cumulatively, 19 percent spent 3 to 6 months, and 21 percent spent more than 6 months in emergency shelter during the followup period.

Emergency shelters offered a range of supportive services. The shelters studied provided a range of supportive services in primarily congregate settings (dorms or other group living situations). All the shelters offered comprehensive needs assessments, case management, supportive services, and referrals to other programs. Shelters in some instances also offered supportive services such as access to physical health care, employment training, child advocacy, life skills training, mental health care, and parenting services.

UC families participated in homeless and housing assistance programs at fairly high rates and many were able to access and retain permanent housing subsidies. In the 3-year followup period, some families assigned to the UC group did not use any other form of homeless or housing assistance besides shelters, but most did. The study found that, even without having priority access to a permanent housing subsidy during the 37-month follow-up period, more than one-third (37 percent) of UC families were able to obtain some form of permanent subsidy[130] and used it for an average of 19 months. Not only were families assigned to the UC group able to obtain permanent housing subsidies, they also retained the assistance. That is, the study found that most families (82 percent) who obtained a permanent housing subsidy during the followup period were still using that subsidy at the time of the followup survey. Families assigned to the UC group also used other forms of assistance. Slightly less than one-third received transitional housing and 20 percent received rapid re-housing at some point during the followup period. At 3 years after random assignment, 40 percent were still using some form of assistance.

At 3 years after random assignment, UC families had, on average, made modest improvements in circumstances since the 20-month followup point but still experienced substantial housing instability, low incomes, and low rates of employment. Nearly one-fifth of UC families reported at least 1 night homeless in the 6 months before the 37-month survey. This proportion is smaller than that at the 20-month followup point but indicates that families were still experiencing substantial instability. More than one-third (37 percent) of UC families were working in the week before the 37-month survey, a higher proportion than at baseline or at the time of the 20-month followup survey. Median annual cash income from all sources for the calendar year before the survey was about $12,000, less than two-thirds of the federal poverty threshold for a three-person family in the study in the same year (U.S. Census Bureau 2013).

At the 37-month followup point, a substantial number of UC families experienced poor outcomes in the studied domains. Altogether, 17 percent had been separated from a child who was with the family at the time of random assignment, and 3 percent had a child in foster care. Of UC family heads, nearly one-third reported poor or fair health, 11 percent reported alcohol dependence or substance abuse, and 11 percent had experienced intimate partner violence in the past 6 months. Children had attended more than two schools in the past 3 years and parents reported behavior problems well above national averages. At the time of the survey, nearly one-half of UC families (47 percent) were food insecure.

UC families incurred substantial costs. The study found that the emergency shelter programs that the UC families used cost slightly more than $4,800 per family per month. Of this total, 63 percent was for supportive services. Altogether, costs of all the homeless and housing programs and associated services that families assigned to the UC group accessed—whether in a shelter or in active programs—were about $40,000 per family during the 3-year followup period compared with about $30,000 in accumulated costs through 20 months. Further, the

[130] These subsidies include the permanent housing subsidies offered to the SUB group, permanent supportive housing, public housing, and project-based assistance and Section 8 projects.

cost of all program use for families in the UC group, particularly in the month of the 37-month followup survey, was a little more than $800, roughly 20 percent less than the monthly cost of program use at the time of the 20-month survey. Thus, UC families continued to incur costs for housing assistance between months 21 through 37, but the rate of cost accumulation had slowed by the 3-year followup point.

10.4. Permanent Housing Subsidy (SUB)

In most cases, the families assigned to the SUB intervention were given priority access to a housing choice voucher, and they may have been offered housing search assistance (they were not offered ongoing social services). The permanent housing subsidies offered to SUB families are not generally accessible to families while in emergency shelter unless families reach the top of waiting lists for subsidies during that period. Against that circumstance, what does the Family Options Study tell about offering homeless families priority access to permanent housing subsidies?

When permanent housing subsidies are available to families in shelter, they take it up at high rates and continue to use it for a sustained period. SUB programs were the least likely of the active interventions studied to exclude families because of eligibility rules. For example, only 2 percent of families in the study were disqualified from random assignment to the SUB group because of answers to screening questions asked by study staff. Of the families randomly assigned to the SUB group, however, 11 percent were found to be ineligible after random assignment. Altogether during the 3-year followup period, 83 percent of respondent families assigned to the SUB group at some point used the permanent subsidy that was offered.[131] Most families assigned to the SUB group who used their offered permanent subsidy continued using it to the end of the followup period. Among those who ever used their offered permanent housing subsidy, the average duration was 31 months. In addition to the 83 percent of families assigned to the SUB group who used the permanent subsidy to which they had priority access, some families assigned to the SUB group used other forms of permanent subsidy to which they did not have priority access, bringing the total who used any form of permanent subsidy to 88 percent. By the time of the 37-month followup survey, 73 percent were still receiving some form of permanent subsidy. Smaller proportions of families assigned to the SUB group used rapid re-housing (11 percent) and transitional housing (7 percent) at some point during the 3 years, with some overlap among the three groups.[132]

Compared with the CBRR and PBTH interventions and with usual care, assignment to the SUB intervention caused improvements in housing stability 3 years after random assignment. Having priority access to permanent housing subsidies reduced the proportion of families with a stay in shelter or places not meant for human habitation in the 6 months before the 37-month survey by more than one-half when compared with assignment to the PBTH group or with assignment to the UC group. Assignment to the SUB group also led to notable improvements in other aspects of housing stability relative to assignment to the UC group and both of the other groups, reducing the incidence of doubling up, subsequent emergency shelter stays, housing crowding, and number of places families lived during the followup period. Compared with assignment to the CBRR group, however, the study team did not detect an effect of assignment to the SUB group on the proportion of families who reported homelessness in the 6 months before the 37-month followup survey. The study did not find evidence that assignment to the SUB group caused changes in the quality of housing that families reported at the time of the 37-month followup survey compared with assignment to any of the other groups.

The benefits of assignment to the SUB intervention relative to assignment to the PBTH intervention and to usual care extended beyond housing stability at the 3-year followup point. At 3 years after random assignment, the benefits of having priority access to permanent housing subsidies compared with usual care extended beyond housing stability, with reductions in adult psychological distress and in intimate partner violence (a reduction of one-third in this indicator). Assignment to the SUB group increased separations of spouses and partners relative to assignment to the UC group and reduced child separations relative to assignment to the PBTH group. Assignment to the SUB group reduced the number of schools attended by children relative to assignment to all the other groups. Compared with assignment to the UC group, assignment to the SUB group led to improvements in other areas of child well-being, with reductions in behavior and sleep problems and with improvements in prosocial behavior. Relative to assignment to the PBTH group, assignment to the SUB group led to greater school grade completion. Some impacts of the

[131] The takeup rate presented here is the proportion of all survey respondent families assigned to the SUB group who used the permanent housing subsidy assistance that was offered. A voucher "success rate" refers to the proportion of families who were issued a voucher who leased up with a unit. *The Interim Report: Family Options Study* (Gubits et al., 2013) reported a success rate of 94 percent, based on information about voucher issuance collected through the end of random assignment. This rate is higher than the 69-percent success rate found by Finkel and Buron (2001).

[132] For example, the same family may have used permanent housing subsidies and project-based transitional housing at different points during the followup period.

SUB intervention relative to usual care observed at 20 months (for example, reductions in adult alcohol dependence or drug abuse, reductions in separations and foster care placements of children, and increases in children's school attendance) were no longer evident at 37 months, perhaps because more UC families had stabilized in housing. Even if these findings are short term, they should be considered among the benefits of assignment to the SUB group during the full 3-year period.

Compared with assignment to the UC group, assignment to the SUB group reduced labor market engagement in the second half of the followup period. Compared with their counterparts assigned to the UC group, the heads of families assigned to the SUB group worked less during the full 3-year followup period and in the second half of the followup period (in the time from the 20- to the 37-month followup surveys). In the UC group, 64 percent of family heads had worked for pay at some point during the second half of the followup period, but only 58 percent of those in the SUB group had done so. These employment effects were not evident in comparisons of the SUB intervention with the CBRR or PBTH intervention. In comparisons of the SUB intervention with the CBRR and PBTH interventions and usual care, the study did not detect differences in the proportion of family heads in the SUB group who worked in the week before the survey or the proportion of families who had earnings in the month before the survey.

Compared with assignment to the PBTH and UC groups, assignment to the SUB group improved food security. The study did not detect effects of assignment to the SUB group on annual family cash income relative to assignment to any of the other interventions but showed that assignment to the SUB intervention improved family food security relative to assignment to the PBTH intervention and to usual care. Families assigned to the SUB group also reported less economic stress in the 6 months before the 3-year followup survey compared with PBTH and UC families.

During the 3-year followup period, the cost of all program use for families assigned to the SUB group exceeded that of families assigned to the CBRR, PBTH, and UC groups by roughly 9 to 10 percent. On average, SUB programs cost about $1,200 per family per month, which is lower than the corresponding monthly costs for emergency shelter and PBTH programs but higher than the monthly cost for CBRR programs. During the 3-year period, however, SUB families used programs (usually permanent housing subsidies) to a much greater extent than did the families assigned to the other interventions. As a consequence, compared with the average cost of all program use for each of the CBRR, PBTH, and UC groups, the average cost of all program use for families assigned to the SUB group was about $4,000 higher than for families in the other interventions. Assignment to the SUB group costs about 10 percent more (about $4,000), on average, than assignment to the PBTH group and about 9 percent more than assignment to the CBRR or UC groups during the study period. That is, the substantial gains in housing stability and other outcomes associated with assignment to the SUB intervention come at some additional cost. In the month of the 37-month survey, the cost of program use for families assigned to the SUB group was higher than for families assigned to any of the other groups by 15 to 25 percent. This differential in monthly cost of program use is greater than what was observed at the earlier, 20-month followup survey. In the month of the 20-month survey, the cost of program use for SUB families was 2 percent higher than that for UC families and 8 to 9 percent higher than that for PBTH families or CBRR families.

10.5. Community-Based Rapid Re-housing (CBRR)

The CBRR intervention offered priority access to short-term rental assistance lasting up to 18 months (median length of use was 8 months) to rent private-market housing. CBRR programs also offered limited case management services focused on housing and self-sufficiency. CBRR programs typically received funding from the Homelessness Prevention and Rapid Re-Housing Program, or HPRP. What do the findings from the 3-year assessment tell about this intervention?

Takeup of offered rapid re-housing was relatively low. Of families randomly assigned to the CBRR group, 59 percent used rapid re-housing rental assistance during the 37-month followup period, a rate that is much lower than the 83-percent takeup rate for SUB programs in that random assignment group. Qualitative research suggested that the short duration of CBRR programs—or uncertainty about its duration—made some families reluctant to use CBRR programs (Fisher et al., 2014).

Families assigned to the CBRR group were able to use and retain permanent housing subsidies. Families assigned to the CBRR group used multiple forms of permanent housing subsidies during the 3-year followup period (35 percent across all types of permanent subsidy). It does not appear that assignment to the CBRR group led to greater use of permanent housing subsidies compared with assignment to the UC group, but CBRR families began using the permanent housing subsidies later in the followup period than their counterparts in the UC group. By the 37-month followup survey, 30 percent of CBRR families and 31 percent of UC families were using some form of permanent subsidy. The rate of retention of permanent housing subsidies among families who used them was similar for all three groups. About one-fourth of the families assigned to the CBRR group (23 percent) also used transitional housing.

The CBRR intervention resulted in outcomes equivalent to those observed with usual care but was less effective than the SUB intervention in preventing subsequent stays in shelters and doubling up and in improving other aspects of housing stability. The study found that having priority access to community-based rapid re-housing was equivalent to usual care—and was substantially less effective than having priority access to a permanent housing subsidy—in reducing subsequent stays in shelters and doubling up and in improving other aspects of housing stability. Having priority access to rapid re-housing had little impact on outcomes in other domains compared with usual care.

The CBRR intervention has the lowest monthly cost of the active interventions studied, and total costs of all programs used during the 3-year followup period for those assigned to the CBRR group were lower than those of families assigned to the SUB, PBTH, and UC groups. CBRR programs had a lower per-family monthly cost than those of PBTH and SUB programs, averaging about $900. Housing costs comprised, on average, 72 percent of these costs. The total cost of all programs used by CBRR families during the 3 years after random assignment was, on average, about $4,000 less than the cost of program use for SUB and UC families and about $10,000 less than cost of program use for PBTH families.

10.6. Project-Based Transitional Housing (PBTH)

The PBTH intervention offered priority access to housing for up to 24 months, coupled with a wide array of social services. The study focused on transitional housing provided in agency-controlled settings (although some PBTH families were referred to programs with scattered-site units; in all cases, families were required to move from their units when assistance ended). All the PBTH programs studied offered comprehensive case management, assessed family needs, and offered direct services and dedicated referrals to outside providers to address those needs. PBTH programs offered access to employment training, life skills, mental health care, parenting skills, and physical health care. The scope of needs addressed in PBTH programs was similar to that of emergency shelters. During the followup period, 53 percent of families assigned to the PBTH group used that form of assistance for an average duration of 15 months. What lessons does the Family Options Study provide about the PBTH intervention?

Takeup of project-based transitional housing programs was relatively low. PBTH providers were more selective than either SUB or CBRR providers regarding the families they would serve. Nearly one-fourth (23 percent) of families considered for the study did not pass the initial screening for PBTH programs that took place before random assignment, and 18 percent of those who passed and were assigned to the PBTH group were subsequently screened out as ineligible by the transitional housing programs to which they were referred. Of the families assigned to the PBTH group, 53 percent used some form of transitional housing during the 3-year followup period. This low level of takeup reflects a combination of family choices and program eligibility restrictions, with some families deemed ineligible by the programs to which they were offered priority access and some families choosing not to use the PBTH assistance offered. Qualitative interviews suggest that the fixed location of PBTH units may be a barrier to takeup when assigned locations are not close to families' schools, work, transportation, and support networks, or when families perceive the facilities to be in bad neighborhoods (Fisher et al., 2014).

Families assigned to the PBTH group were able to use and retain permanent housing subsidies even without having priority access to that type of assistance. One-third of families assigned to the PBTH group used some form of permanent housing subsidy during the followup period, despite not receiving priority access to that form of assistance. More than one-fourth of families assigned to the PBTH group were still receiving some type of permanent subsidy at the time of the 37-month followup survey. Families assigned to the PBTH group used these other forms of permanent housing subsidies at about the same rate as did families assigned to the UC group, but families assigned to the PBTH group began using permanent housing subsidies later in the followup period than did UC families. Having priority access to transitional housing programs thus did not lead to greater use of permanent housing subsidies than did usual care by the end of the followup period. Some families assigned to the PBTH group also used rapid re-housing programs (14 percent).

Assignment to the PBTH intervention reduced stays in emergency shelter in the final year of the followup period compared with usual care but did not lead to other effects on housing stability and did not lead to effects on other aspects of family well-being. Compared with usual care, assignment to the PBTH intervention reduced the proportion of families who had stays in emergency shelter in months 21 to 32 after random assignment. Program Usage Data show that families assigned to the PBTH group were more likely than UC families to still be using PBTH programs in this period.) The study finds no evidence of other effects of assignment to the PBTH intervention on other indicators of housing stability, housing independence, or housing quality at the 3-year followup survey. The study also does not find evidence that assignment to the PBTH group led to effects on any of the other domains examined compared with assignment to the UC group.

The PBTH programs cost less than emergency shelters on a per-family, per-month basis, and total costs for PBTH families during the 3-year period after random assignment are less than for families assigned to the SUB group and greater than for families assigned to the UC and CBRR groups. PBTH programs cost about $2,700 per family per month, with supportive services constituting 42 percent of these costs. This monthly cost is less than that of emergency shelter but is more than the monthly costs for SUB and CBRR programs. The cost of all program use by PBTH families during the 3-year followup period was lower by $4,100 than the average total cost for SUB families, modestly higher by $1,400 than that for UC families, and substantially higher by $9,800 than that for CBRR families.

Assignment to the PBTH group did not lead to longer-term effects on family well-being. The 3-year analysis does not provide evidence of longer-term effects of assignment to the PBTH group. The study finds no evidence that, despite its inclusion of psychosocial services, assignment to the PBTH intervention led to improvements in family preservation, adult well-being, or child well-being relative to usual care at 37 months. Among families eligible for both the PBTH and CBRR interventions, assignment to the PBTH intervention was less successful than assignment to the CBRR intervention in reducing adult psychological distress, child behavior problems, and family food insecurity.

10.7. Impacts by Level of Family Challenge

Families participating in the Family Options Study experienced numerous psychosocial challenges and housing barriers. The study yielded scant evidence that, during the 37-month followup period, any of the interventions studied works comparatively better for families who had more psychosocial challenges or housing barriers at baseline than for families who faced fewer difficulties. Nor did the reverse pattern occur. As a result, the study's clearest guidance for policy for *all* types of families in the medium term consists of the main study results on overall impacts.

10.8. Implications for Theory

In addition to findings on the effects of priority access to the three active interventions (relative to usual care and relative to each other) and on intervention costs, the Family Options Study is also informative about the various theories underlying the active interventions. This section draws out implications in this area.

Study findings lend support for the underlying theoretical model for permanent housing subsidies. The striking impacts of assignment to the SUB group in reducing subsequent stays in shelters or places not meant for human habitation provide support for the view that homelessness is for many families a housing affordability problem that can be remedied with permanent housing subsidies—without specialized homeless-specific psychosocial services. The larger set of findings on this active intervention also provides some support for the theoretical proposition that resolving homelessness, when that impact can be achieved, has a radiating impact on adult and child well-being and food security compared with usual care.

Few study findings support the theoretical model underlying project-based transitional housing. Project-based transitional housing is intended to address psychosocial challenges and housing barriers by providing social services. The study does not provide evidence that this intervention accomplished that result. Although assignment to the PBTH intervention reduced homelessness at the 20-month followup point and reduced the number of emergency shelter stays through month 32, when compared with usual care, it did not produce effects in other aspects of family well-being.

10.9. Summary of Findings and Implications for Policy

The Family Options Study's random assignment design for measuring intervention impacts is a stronger design than that of other studies of programs for homeless families. Evidence from the study's 3-year followup survey provides important new information about what happens to families who experience homelessness in the absence of any special offers of assistance. It also provides information about the impact of assignment to three particular interventions: SUB, CBRR, and PBTH.

A clear finding from the study is that homelessness is expensive for families and communities. Even without priority access to assistance, families in 12 communities used housing and services programs costing about $40,000, on average, during a period of a little more than 3 years. Despite this considerable public (and in some cases private) investment, many families who had been in shelter for at least 7 days at the outset of the study were still not faring well 3 years later. More than one-third had been homeless or doubled up recently, nearly one-half were food insecure, and incomes averaged less than two-thirds of the poverty threshold. The high cost of homeless services suggests that prevention efforts with low per-family costs—if they were effective—would not need to be tightly targeted to just the families who would otherwise experience homelessness in order to save resources.

The longer-term evidence from the Family Options Study presented in this report indicates that having priority access to deep permanent housing subsidies produces substantial benefits for families. More than one-third of families assigned to the CBRR, PBTH, or UC groups found their way to permanent housing subsidies, but families given priority access to that assistance obtained subsidies sooner. Providing priority access to subsidies costs 9 percent more than not giving families any priority offer during a 3-year followup period, and it suppressed work effort by about 6 percentage points during the second half of that period; however, it had substantial benefits. Assignment to the SUB group reduced by more than one-half most forms of residential instability, improved multiple measures of adult and child well-being, and reduced food insecurity.

The 3-year evidence shows that families randomly assigned to the CBRR group do about as well as families assigned to the UC group but at 9 percent lower costs, mainly because assignment to the CBRR intervention lowers the rate at which families use costly transitional housing programs. Assignment to the PBTH intervention has few advantages over other types of assistance. In addition, the study does not provide appreciable evidence that intervention impacts differ according to the number of families' psychosocial challenges or housing barriers at baseline.

The Family Options Study suggests that families who experience homelessness can successfully use and retain housing vouchers, and that having priority access to deep permanent housing subsidies has considerable benefits at some additional cost. The homeless assistance system does not currently provide immediate access to such subsidies for most families in shelter, although more than one-third of families without priority access nevertheless obtained permanent housing subsidies during a 3-year followup period.

CHAPTER 11. REFERENCES

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APPENDIX A.
DATA SOURCES AND DATA SET CONSTRUCTION

This appendix describes the data sources, data collection procedures, completion rates, and data processing procedures used in the Family Options Study. The study uses data from study families, intervention providers, and administrative data systems (see Exhibit A-1).

Exhibit A-1. Data Sources Used in the Study

Data Source	Collection Process	Data Source Collects or Measures…
From study implementation		
Random assignment enrollment data (n = 2,282)	• Recorded in web-based enrollment and random assignment tool, based on information entered by field interviewer and point-in-time intervention availability	• Name, date of birth, and Social Security number of family head and spouse or partner • Eligibility screening responses • Intervention availability at random assignment • Random assignment result
From study families		
Baseline survey (n = 2,282)	• In-person survey (40 minutes) conducted immediately before random assignment • Completed for the full sample of families randomly assigned	• Demographic characteristics • Preshelter housing • Housing barriers • Homelessness history • Employment • Family composition • Income and income sources • Family head: physical health • Family head: mental health, experiences of trauma, and other psychosocial challenges
6-, 12-, and 27- month tracking surveys (6-month n = 1,671; 12-month n = 1,632; 27-month n = 1,159)	• Telephone survey (10 minutes) conducted 6, 12, and 27 months after random assignment	• Family composition • Current housing status • Use of homeless and housing programs
20-month and 37-month followup adult surveys (20-month n = 1,857; 37-month n = 1,784)	• In-person or telephone survey (60 minutes) conducted at least 18 months after random assignment (July 2012 to October 2013) • In-person or telephone survey (60 minutes) conducted at least 32 months after random assignment (March 2014 to December 2014)	• Current housing status • Experience of homelessness • Use of homeless and housing programs • Housing quality and affordability of current unit • Employment and earnings • Income and income sources • Material hardship • Family composition and preservation • Adult well-being • Child well-being (for up to two focal children) • Receipt of services
20-month and 37-month followup child assessments	• In-person child assessments (50 minutes) conducted for focal children who were ages 3 years, 6 months to 7 years, 11 months • Collection attempted only if family head responded to followup adult survey	• Verbal ability (Woodcock-Johnson III letter-word identification test; 20-month n = 876; 37-month n = 832) • Math ability (Woodcock-Johnson III applied problems test; 20-month n = 846; 37-month n = 833) • Self-regulation (Head Toes Knees Shoulders assessment; 20-month n = 780; 37-month n = 798)
20-month and 37-month followup child survey (20-month n = 930; 37-month n = 1,058)	• In-person or telephone survey (30 minutes) conducted for focal children who were ages 8 to 17 years • Collection attempted only if family head responded to followup adult survey	• Mental health • Experiences of traumatic events • Substance use • School effort • Arrests or police involvement

Exhibit A-1. Data Sources Used in the Study (continued)

Data Source	Collection Process	Data Source Collects or Measures…
From study intervention providers		
Enrollment verification data	• Study team verified (by telephone and e-mail) whether families enrolled in the programs to which they were referred • Conducted from September 2010 to September 2012	• Use of assigned intervention program
Program information	• Study team conducted site visits and staff interviews • Conducted from June 2011 to April 2012	• Provider information • Characteristics of housing assistance • Characteristics of services
Program cost information	• Study team conducted site visits and staff interviews • Collected audited expense statements, program budgets, staffing lists, partner commitment letters, and program staff estimates of costs not reflected in expense statements • Conducted from November 2012 to August 2013	• Overhead costs • Rental assistance costs • Facility operations costs • Supportive services costs • Capital costs
From administrative data systems		
Homeless Management Information System (HMIS)	• Individual-level records collected from community and government administrators of the HMIS (one or more per site)	• Participation in homeless assistance programs covered in HMIS at the site where families enrolled (including emergency shelter, rapid re-housing, transitional housing, and permanent supportive housing)
HUD Public and Indian Housing Information Center (PIC)	• Individual-level data collected from HUD	• Receipt of housing assistance through HUD's Housing Choice Voucher and public housing programs
HUD Tenant Rental Assistance Certification System (TRACS)	• Individual-level data collected from HUD	• Receipt of housing assistance through project-based Section 8 programs
State and local child welfare agency records	• Individual-level data collected from state and local child welfare agencies (use Adoption and Foster Care Analysis and Reporting System definitions)	• Formal foster care placements and adoptions
National Directory of New Hires	• Individual-level data collected from centralized system administered by the U.S. Department of Health and Human Services Office of Child Support Enforcement (OCSE) through agreement between HUD and OCSE	• Quarterly earnings records
From combination of sources		
Program Usage Data	• Combines data from nine sources: enrollment verification; 6-, 12-, 20-, 27- and 37-month surveys; HMIS; HUD PIC; and TRACS	• Participation in seven types of homeless and housing assistance programs (by calendar month after random assignment)

Notes: All surveys conducted with family head collected or updated family contact information for tracking purposes. Additional information about program cost data collection provided in Appendix G. Child assessment and child survey sample sizes are number of nonmissing observations in analysis data and exclude collected data that were not usable for analysis.

A.1. Random Assignment Data

The study team created a secure website to support the enrollment and random assignment of families into the Family Options Study. Local site interviewers used the random assignment website to—

- Document that the adult respondent provided informed consent.
- Enter the personal identifiers for the adult respondent and a spouse/partner, if applicable.
- Check that intervention providers had openings available in their programs, making it possible to conduct random assignment.
- Document that the baseline survey was complete.
- Randomly assign the family to available intervention groups.

The *Interim Report: Family Options Study* provides additional details about the enrollment process.

Family Options Study Sample

The study enrolled 2,282 families across 12 sites between September 2010 and January 2012. Exhibit A-2 shows the timing of sample enrollment and the enrollment numbers by site and intervention group. Of the 2,282 families who enrolled in the study, 1,784 completed the 37-month adult survey.

Exhibit A-2. Sample Enrollment Period and Number of Families Enrolled by Intervention and Site

Site	Enrollment Period	Families Randomly Assigned, by Intervention (N)				Total (N)
		CBRR	PBTH	SUB	UC	
Alameda County	Sep 2010–Jan 2012	56	49	76	77	258
Atlanta	Oct 2010–Jan 2012	73	41	—	75	189
Baltimore	Mar 2011–Jan 2012	20	17	—	21	58
Boston	Feb 2011–Jan 2012	53	—	64	64	181
Connecticut*	Oct 2010–Dec 2011	73	18	47	76	214
Denver	Jan 2011–Jan 2012	8	23	76	65	172
Honolulu	Oct 2010–Jan 2012	44	66	43	65	218
Kansas City	Oct 2010–Jan 2012	30	42	53	50	175
Louisville	Apr 2011–Jan 2012	18	24	32	35	109
Minneapolis	Nov 2010–Jan 2012	52	4	62	63	181
Phoenix	Oct 2010–Dec 2011	62	65	71	81	279
Salt Lake City	Sep 2010–Oct 2011	80	19	75	74	248
Total		**569**	**368**	**599**	**746**	**2,282**

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

* Includes the cities of New Haven and Bridgeport, Connecticut.

Source: Random assignment records

Eligibility Determination

To maximize the likelihood that families would be accepted by the assigned intervention program, the study team conducted screening before random assignment. The study team collected each program's eligibility requirements and developed eligibility screening questions. The study team administered the eligibility screening questions to families after informed consent but before random assignment. For each family, the study team asked only the eligibility screening questions relevant to the programs in that site that had openings available. A family was eligible for random assignment to an intervention if the adult respondent's answers to the screener questions met the eligibility requirements for at least one participating provider of that intervention with an available program slot at the time of random assignment. The screener questions improved the likelihood that families would be eligible for the assigned intervention.[1] The study team retained data on the eligibility screening response. The *Interim Report* provides additional details about eligibility determination.

A.2. Baseline Data Collection

Study enrollment took place in the emergency shelters where the families were staying. Enrollment began in September 2010 and was completed in January 2012. Local field interviewers conducted enrollment. The interviewer informed families about the study. If the family consented to participate in the study, the interviewer then asked eligibility screening questions for programs that had available program slots. If eligible for available interventions,[2] the interviewer then administered the baseline survey using Computer-Assisted Personal Interviewing, or CAPI, software. On average, it took families 40 minutes to complete the baseline survey. The baseline survey covered family composition, demographic characteristics, housing stability, history of homelessness, employment, income, and health. The study team collected baseline survey data in the shelter where the family was staying at the time of random assignment.

In families with only one adult present, that individual was interviewed. For families headed by couples, the study team requested to interview the woman. Two reasons explain this preference: (1) some homeless assistance programs exclude men, and in cases of family separations the children are more likely to remain with the mother; and (2) some outcome measures such as psychological distress have different distributions for men and women in the population at large, so this preference results in having greater homogeneity in the sample.[3]

The covariates, discussed in Appendix C.1, were derived from the baseline survey responses. The *Interim Report* provides further details about the baseline survey and data collection.

[1] After random assignment and referral to a program, families were required to complete the program's regular eligibility determination process, including, in some cases, criminal background checks, drug testing, and income verification.

[2] Initially, families had to eligible for available program slots in at least two active interventions in order to proceed with random assignment. In August 2011, this rule was changed so that families needed only to be eligible for an available program slot in only one active intervention in order to proceed with random assignment.

[3] In the full study sample of 2,282 families, 524 adult baseline respondents of the 626 families headed by couples (84 percent) were women. In the 37-month respondent sample of 1,784 families, 398 baseline adult respondents of the 471 families headed by couples at baseline (85 percent) were women.

A.3. Enrollment Verification Data

The study team collected information from study programs to document enrollment in the assigned intervention. The study team contacted study programs regularly (weekly or monthly) to inquire about the status of families who had been referred to their programs after random assignment. This information is referred to as the enrollment verification data. The study team collected the following information.

- Whether the study family made contact with the program to which they were referred.
- Whether the family was accepted by the program (enrolled).
- Whether the family actually moved into a housing unit using that assistance.
- For families who were accepted by the program but did not move in, the reason for not using the assistance.

The calls were made throughout the enrollment period—September 2011 to January 2012—and continued through September 30, 2012, 9 months after the last family enrolled. These enrollment verification data were used in the Program Usage Data file, discussed in Section A.13. The *Interim Report* provides additional details about the enrollment verification process.

A.4. 6-, 12-, and 27-Month Tracking Surveys

During the followup period the study team conducted brief tracking surveys 6, 12, and 27 months after enrollment. These surveys lasted an average of 10 minutes and collected updated contact information for the adult respondent and secondary contacts. The tracking surveys also collected data on the current living situation, receipt of housing assistance, and family composition for each family. Local site interviewers administered the tracking surveys using CAPI technology. In most sites, the interviewer was the same person who administered the baseline survey. Because the tracking surveys were relatively short, most participants opted to complete the survey by telephone rather than in person.

A.5. 20- and 37-Month Followup Adult Surveys

The 20- and 37-month followup data collection efforts each included an adult survey, child survey, and child assessments. The 20- and 37-month adult surveys collected information on these topics about the adults.

- Housing situation.
- Housing quality and affordability.
- Employment.
- Income source and total family income.
- Education and training.
- Economic hardship.
- Food security.
- Family composition.
- Family separation and reunification.
- Physical health.
- Behavioral health.
- Substance use.
- Service receipt.

The adult survey also asked several questions about the focal children in a parent-on-child module. The parent-on-child module asked about these topics—

- Child education.
- Child health.
- Child behavior.
- Family routines.

The study attempted to complete the 37-month adult survey with all 2,282 family heads, whether or not they completed a survey at 20 months. For families headed by couples, the same adult interviewed at baseline was interviewed at followup. At both 20- and 37-months, the adult survey took an average of 60 minutes to complete.

For the 37-month data collection, a minimum of 31.5 months elapsed between the date of random assignment and the date of the followup survey. The analysis period, during which all impacts were estimated, was thus between 31.5 and 50 months after random assignment for most families (Exhibit A-3).

Exhibit A-3. Length of Time From Random Assignment to the 37-Month Followup Survey

Duration (months)	Number of Families	Percent
31 to 31.99	8	0.5
32 to 32.99	39	2.2
33 to 33.99	99	5.6
34 to 34.99	236	13.2
35 to 35.99	247	13.9
36 to 36.99	210	11.8
37 to 37.99	276	15.5
38 to 38.99	220	12.3
39 to 39.99	125	7.0
40 to 40.99	130	7.3
41 to 41.99	92	5.2
42 to 42.99	43	2.4
43 to 43.99	27	1.5
44 to 44.99	8	0.5
45 to 45.99	11	0.6
46 to 46.99	5	0.3
47 to 47.99	5	0.3
48 to 48.99	1	0.1
49 to 49.99	2	0.1
Median: 37.2 months (1,130.5 days)		
Mean: 37.4 months (1,137.8 days)		
Minimum: 31.6 months (961 days)		
Maximum: 49.9 months (1,518 days)		

Notes: N = 1,784. Percentages are unweighted. Month length is assumed to be 365/12 = 30.42 days. Duration is from random assignment to survey end date.
Source: Family Options Study 37-month followup data

A.6. Focal Child Selection

During the 20-month adult survey,[4] the study team randomly selected up to two focal children per family. For families who completed both the 20- and 37-month adult surveys, the study team attempted the 37-month child data collection with the focal children selected at the 20-month survey. For the 163 37-month respondent families that did not complete the 20-month survey, the survey team selected up to two focal children at the beginning of the 37-month adult survey. This section discusses the focal child selection process and the number of focal children in the 37-month analysis sample.

Focal Child Selection

To analyze impacts on child well-being, the study team selected up to two focal children for each family who completed the adult survey. This section describes the process for selecting focal children at the time of the 20-month survey and additional focal children (for families that did not respond to the 20-month survey) at the time of the 37-month survey. Of the 3,001 focal children selected in the study, 2,794 (93 percent) were selected at the time of the 20-month survey and 207 (7 percent) were selected at the time of the 37-month survey.

The focal child selection process oversampled children who were ages 3 to 17, and with the family at both baseline and followup, in order to maximize the number of children from whom data were directly collected (in the child assessments and child survey). The oversampling criterion of being with the family at baseline was included so that oversampled children would be directly affected by the study's random assignment. Children needed to be with the family at followup for the study team to attempt collection of child assessments or the child survey. (The study did not attempt to locate children separated from the family.)

Two types of children were considered for focal child selection. First, *all children identified at baseline*—those in shelter with the adult at random assignment and those who were "part of the family" but not in shelter with the adult at enrollment—were eligible for focal child selection. If focal child sample selection had been restricted to children identified at baseline, the focal child sample could have been defined before the start of the followup data collection. The study team expanded the focal child selection criteria, however, to include children who were born after random assignment. The study team referred to these children as "newborns." Because newborns could not be identified before the start of the followup data collection, the study team administered the focal child selection screener during the followup survey. To ensure that all newborns had a chance to be selected as focal children, the study team generated a randomly ordered list of all the children identified at baseline plus two slots for up to two newborn children. During the screener section of the survey, the children were screened in the random order for focal child selection.

To be selected as a focal child, each child had to first meet these two criteria.

1. The child was one of the following—
   a. Listed as a child on the household roster from the baseline survey.[5]
   b. Identified as a newborn, by the adult respondent in the focal child screener section.[6]

[4] Gubits et al. (2015) analyzed short-term impacts of the interventions. The study team attempted to contact families for the study's first followup survey beginning in the 18th month after random assignment. The median time from random assignment to the followup survey was 20 months. The followup period reported in Gubits et al. (2015) is thus 20 months, but the followup survey is sometimes referred to as the 18-month survey.

[5] On the baseline survey, the team collected children's ages but not dates of birth, and all children on the household roster were age 17 or younger. The roster included children who the adult respondent thought were part of the family, even if they were not in the shelter with the respondent. All randomly assigned families had at least one child age 15 or younger.

[6] Screener question 1: "Between [random assignment date] and [6 months before today's date] have you (given birth to/fathered) a child?"

2. For those children selected at the 20-month survey, the child had to be at least 12 months of age but younger than 18 years of age, as confirmed in the focal child screener. For those children selected at the 37-month survey, the child had to be at least 30 months of age but younger than 18 years of age.

After the potential child was confirmed eligible for selection based on the first two criteria, the screener determined if the adult respondent was knowledgeable enough about the child's activities in the past 30 days to answer the parent-on-child module. The screener made this determination using the next series of questions, indicating the third criterion for selection eligibility.

3. The child was one of the following—

   a. Living in the same household as the adult respondent "at least half of the time" or "all of the time" at the followup point.[7]

   b. The parent spent time with the child frequently and was at least somewhat familiar with the child's activities.[8,9]

The preceding criteria constitute the minimal selection criteria. If possible, the first focal child would also meet these additional criteria.

4. The child's age at the followup survey was greater than or equal to 3 years, 6 months.

5. The child was living with the parent in the shelter at baseline.

6. The child was living in the same household as the parent "at least half of the time" or "all of the time" at the followup survey.[10]

Potential focal children were then classified into one of three types.

- Type 1: Met all the minimal criteria; was at least 3 years, 6 months of age but younger than 18 years of age; was living in the shelter with the adult respondent at enrollment; and lived with the respondent "at least half of the time" or "all of the time" at the time of the followup survey.
- Type 2: Met the minimal criteria, but did not meet the additional criteria.
- Type 3: Did not meet the minimal criteria.

The focal child selection process worked as follows.

- If the parent had any Type 1 children, the study team randomly selected one as "Focal Child A." Next, if the parent had any other Type 1 or Type 2 children, the study team randomly selected one as "Focal Child B."
- If the parent had no Type 1 children but did have at least one Type 2 child, then the study team did not select a "Focal Child A" but randomly selected one Type 2 child as "Focal Child B." Next, if the parent had any other Type 2 children, the study team randomly selected one as "Focal Child C."
- If the parent had only Type 3 children, a focal child was not selected.

Focal Child A criteria excluded newborns and focal children who were not living with the respondent at least half of the time. This exclusion helped to maximize the number of families in which focal child selection included at least one focal child for whom direct child data collection (child assessments or child survey) was possible.

The focal child screening (confirmation/collection of date of birth and collection of information for other criteria) was performed for each child in turn, following the randomly ordered list, until two focal children were selected. After two focal children were selected, the focal child screening ceased. Therefore, collection of information for screening criteria other than date of birth was not performed for every child in the respondent study families.

Focal Children Sample Sizes

At the 20-month survey, 1,857 families completed the adult survey. Of these families, 1,744 had at least one focal child selected, resulting in a total of 2,784 focal children.[11] About 530 children screened for selection as focal children were living with the family head less than half of the time (out of

[7] The point-in-time question to the parent was, "Do you currently live in the same household as [child name] ...?" It was not a question about the entire period between baseline and followup.

[8] Two criteria had to be satisfied. First, the parent spent "1 or more hours a day" with the child at least a few times a week during the month before the followup survey. Second, during that month, the parent "always," "usually," or "sometimes" knew at least two of the following: (1) how the child spent time when not in school or childcare, (2) which other kids the child spent time with, (3) whether the child had finished her/his schoolwork or studying, and (4) which TV programs the child watched.

[9] Although children who lived with the family less than half of the time were eligible to be selected as focal children if the parent spent time with the child frequently and the parent was at least somewhat familiar with the child's activities, only a few such children were in the sample. Only 60 of the 2,784 focal children selected at the 20-month survey and 15 of the 207 children selected at the 37-month survey were with the family less than half of the time.

[10] This criterion is the same as criterion 3a. The difference is that the minimal criteria accept either 3a or 3b, whereas the additional criteria require 3a.

[11] No focal child was selected in 130 families, mainly because children were no longer residing with the respondent and the respondent did not know enough about the child's activities during the previous 30 days to respond properly and also because the children aged out of the age range by the time of the followup survey.

about 4,200 total children screened). Of those children, the family head was knowledgeable about only 60 of the children. In accordance with the focal child selection protocol, those 60 children were selected as focal children (along with 2,724 other selected focal children who were living with the family head at least half of the time). During analysis, however, it was decided that such a small number of children would not allow for estimates to generalize to the whole group of largely absent children. Therefore, the 60 children were not included in impact analyses. As a result, the 20-month child impact results generalize only to children living with the family head half of the time or more at the time of the adult survey.

All together 2,665 focal children were selected for the 1,784 adult respondents to the 37-month survey. Of those, 207 were newly selected at the 37-month survey because the family had not completed the 20-month survey and 2,458 were selected during the 20-month survey. The study team excluded 156 focal children from the impact analysis because they were not living with the family head at least half of the time when the adult completed the survey.[12] As a result, the 37-month child impact results also generalize only to children living with the family head half of the time or more at the time of the adult survey.

At the 37-month followup survey, the study team selected focal children between ages 18 years and 19 years, 5 months. Parents were asked questions in the parent on child module about the transition to adulthood for these older focal children. The adult respondents reported on whether the focal children had children of their own, were employed, as well as their marital status. Exhibit A-4 shows the focal child sample sizes by age group and intervention group for the 2,665 focal children at the 37-month followup. Details on variations in focal child selection and corresponding child weights are included in Appendix C.3.

Exhibit A-4. Focal Child Sample Distribution, by Site and Intervention Group at 37 Months

Site Name	Intervention Group	Focal Child Age (N)					Total Focal Child Sample (N)
		2 Years to 3 Years, 5 Months	3 Years, 6 Months to 5 Years, 6 Months	5 Years, 7 Months to 7 Years, 11 Months	8 Years to 17 Years, 11 Months	18 Years to 20 Years[a]	
Alameda County	CBRR	7	14	12	19	2	54
	PBTH	6	11	18	20	1	56
	SUB	8	26	23	36	2	95
	UC	5	12	17	39	1	74
	Total	**26**	**63**	**70**	**114**	**6**	**279**
Atlanta	CBRR	2	16	15	46	3	82
	PBTH	3	8	11	33	1	55
	UC	5	13	14	47	6	85
	Total	**10**	**37**	**40**	**125**	**10**	**222**
Baltimore	CBRR	1	2	7	21	0	31
	PBTH	2	4	2	8	0	16
	UC	2	5	4	15	0	26
	Total	**5**	**11**	**13**	**44**	**0**	**73**
Boston	CBRR	5	13	17	26	5	66
	SUB	13	15	17	37	4	86
	UC	7	21	22	30	2	82
	Total	**25**	**49**	**56**	**93**	**11**	**234**
Connecticut[b]	CBRR	6	20	7	37	6	76
	PBTH	3	3	6	9	1	22
	SUB	5	14	7	28	3	57
	UC	5	16	17	38	2	78
	Total	**19**	**53**	**37**	**112**	**12**	**233**

[12] At the time of the 37-month survey, children in families who had not been 20-month respondents were screened for focal child selection. Focal children in families who had been 20-month respondents (and so had been previously selected) were screened to determine whether data collection should be attempted. Data collection was attempted if children were either currently living with the family at least half of the time or if the parent spent time with the child frequently and was at least somewhat familiar with the child's activities. Of 286 children newly screened for focal child selection, 85 were living with the family less than half of the time, and 15 of them were selected as focal children (because the parent was sufficiently knowledgeable about their daily activities). In addition, 141 of the 2,458 focal children previously selected were with their families less than half of the time at 37 months. Among these children, the parent was sufficiently knowledgeable about their daily activities to be asked to provide a parent report. Therefore, of the 156 children excluded for being with the family less than half of the time, some data are available for 56 children (15 newly selected children plus 41 previously selected children).

Exhibit A-4. Focal Child Sample Distribution, by Site and Intervention Group at 37 Months (continued)

Site Name	Intervention Group	Focal Child Age (N)					Total Focal Child Sample (N)
		2 Years to 3 Years, 5 Months	3 Years, 6 Months to 5 Years, 6 Months	5 Years, 7 Months to 7 Years, 11 Months	8 Years to 17 Years, 11 Months	18 Years to 20 Years[a]	
Denver	CBRR	0	3	3	4	0	10
	PBTH	4	7	5	10	0	26
	SUB	5	20	24	42	4	95
	UC	3	21	10	34	1	69
	Total	**12**	**51**	**42**	**90**	**5**	**200**
Honolulu	CBRR	6	17	12	22	3	60
	PBTH	8	15	25	36	2	86
	SUB	8	15	15	19	2	59
	UC	9	20	14	36	4	83
	Total	**31**	**67**	**66**	**113**	**11**	**288**
Kansas City	CBRR	2	5	2	19	1	29
	PBTH	6	6	5	29	2	48
	SUB	5	16	11	34	2	68
	UC	7	8	8	23	1	47
	Total	**20**	**35**	**26**	**105**	**6**	**192**
Louisville	CBRR	2	4	2	9	0	17
	PBTH	0	10	7	10	0	27
	SUB	5	7	10	14	1	37
	UC	4	9	12	20	2	47
	Total	**11**	**30**	**31**	**53**	**3**	**128**
Minneapolis	CBRR	2	16	20	29	3	70
	PBTH	0	1	1	4	0	6
	SUB	7	18	24	27	1	77
	UC	7	15	20	33	2	77
	Total	**16**	**50**	**65**	**93**	**6**	**230**
Phoenix	CBRR	4	19	15	33	1	72
	PBTH	7	11	14	46	5	83
	SUB	5	13	22	46	5	91
	UC	8	11	14	41	4	78
	Total	**24**	**54**	**65**	**166**	**15**	**324**
Salt Lake City	CBRR	5	18	12	43	6	84
	PBTH	2	4	5	10	0	21
	SUB	5	9	19	49	4	87
	UC	6	14	14	33	3	70
	Total	**18**	**45**	**50**	**135**	**13**	**262**
Overall	CBRR	42	147	124	308	30	651
	PBTH	41	80	99	214	12	446
	SUB	66	153	172	332	29	752
	UC	68	165	166	389	28	816
	Grand total	***217***	***545***	***561***	***1,243***	***99***	***2,665***

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

[a] Includes three respondents older than 19 years, 5 months. The respondents were ages 19 years, 6 months; 19 years, 7 months; and 20 years, 0 months. No data collection was conducted on the three respondents over age 19 years, 5 months.

[b] Includes the cities of New Haven and Bridgeport, Connecticut.

Sources: Family Options Study baseline survey; 37-month followup survey

Parent-on-Child Module in the 37-Month Adult Survey

In the parent-on-child module, the adult respondent provided information about school attendance, academic performance, behavior, health, and family routines. All focal children who were the subject of parent reports at 37 months were between the ages of 24 months and 19 years, 5 months at the time of the 37-month parent survey. If a focal child's CAPI-calculated age was 12 months to 5 years, 6 months, the interviewer administered the Ages and Stages Questionnaire (ASQ-3) to the adult as part of the parent-on-child module. If a focal child's CAPI-calculated age was 3 years to 17 years, 11 months, the interviewer administered the Strengths and Difficulties Questionnaire (SDQ).

The ASQ-3 is a family of questionnaires that assess gross and fine motor skills, social development, communication, and problem solving as observed by parents (Squires and Bricker, 2009).[13] The ASQ-3 took an average of 10 minutes to complete. The questionnaire was self-administered for in-person adult surveys. For surveys conducted by phone, the questionnaire was administered to the adult by phone. Details on the component questions of the ASQ-3 and scoring are in Appendix B.4.

The SDQ is a behavioral and personality assessment. The questionnaire addresses child emotional symptoms, conduct problems, hyperactivity, peer problems, and prosocial behavior. Adult respondents completed this questionnaire for focal children between ages 3 years and 17 years, 11 months. Details on the component questions of the SDQ and scoring are in Appendix B.5.

A.7. 20- and 37-Month Followup Child Surveys

The study team administered the 20-month and 37-month followup child surveys to focal children who were between ages 8 years and 17 years, 11 months at the time of the corresponding parent survey. Interviewers administered the survey using CAPI, with surveys lasting 30 minutes on average. Surveys were conducted either in person or by telephone. The child survey asked questions about anxiety using the A-Trait scale from the State-Trait Anxiety Inventory for Children, or STAIC (Spielberger et al., 1973); fears (Ramirez, Masten, and Samsa, 1991); substance use (CDC, 2012); school attendance, effort, and disciplinary problems; and goal-oriented thinking using a modified version of the Children's Hope Scale (Snyder et al., 1997). Details on the component questions and scoring are in Appendix B.

A.8. 20- and 37-Month Followup Child Assessments

The study team administered the 20-month and 37-month child assessment tests to focal children who were between the ages of 3 years, 6 months and 7 years, 11 months at the time of the corresponding parent survey. These assessments were the Woodcock-Johnson III (WJ III) and the Head Toes Knees Shoulders (HTKS) assessments.

The WJ III assessment consisted of two tests. The first was the Letter-Word Identification test and the second was the Applied Problems test (McGrew, Shrank, and Woodcock, 2007). These tests are subtests of educational achievement from the broader WJIII battery of tests measuring verbal and quantitative/analytic skills. The WJ III tests were administered in person and took an average of 30 minutes to complete per child. Details on scoring the WJ III tests are in Appendix B.5.

The HTKS assessment (Pontiz et al., 2007) measures self-regulation, in which children must remember rules and inhibit incorrect responses. HTKS was conducted in person and separately for each focal child. The HTKS took an average of 15 minutes per child to administer. Details on scoring HTKS are in Appendix B.5.

A.9. 20- and 37-Month Followup HOME Inventories

When 20- and 37-month followup surveys were conducted in person in the family's home, interviewers on the study team completed an observation form based on a subset of questions from the Home Observation for Measurement of the Environment (HOME) inventory. The HOME inventory questions used were based on observation-only items about parent-child interactions.[14] The questions on the HOME inventory form asked about interactions between the adult taking the adult survey and each focal child.[15] For purposes of the HOME inventory tool, the interviewer was instructed to explicitly praise each child during the adult survey and observe the adult respondent's reaction. The interviewer praised each focal child up to four times throughout the survey until the adult expressed reaction. The HOME inventory data were not used in analyses in this report.

[13] The interviewers used the ASQ-3 online age calculator to determine which questionnaire to administer.

[14] The full HOME inventory contains three types of items: (1) items asked about during a survey, (2) items either asked about during a survey or observed, and (3) items based only on observation. The form was based on observation-only HOME inventory items that were related to parent-child interactions.

[15] In most cases for in-person surveys, the focal children were present, but, in some cases, they were not and interactions may not have been observed.

A.10. Qualitative Surveys

In 2011, the study team conducted indepth surveys with 80 families (20 families assigned to each intervention) in four sites: Alameda County, California; Bridgeport and New Haven, Connecticut; Kansas City, Missouri; and Phoenix, Arizona. Surveys were administered in person 3 to 10 months after random assignment (6.4 months on average), usually in the respondent's place of residence. The qualitative data collection was designed to collect information to answer the following questions.

1. How do families make housing decisions?
2. What are families' experiences (challenges) navigating the housing service system?
3. What explains separations of parents from children and partners from each other?
4. How do housing situations influence family processes?

A team of two interviewers met with families to conduct indepth surveys, lasting an average of 2 hours. The surveys covered the following topics.

1. Current housing situation, satisfaction with current situation, housing payments, and number of addresses since study enrollment.
2. Subsidy use.
3. Eligibility and takeup of assigned intervention, including reasons for not using the assigned intervention assistance.
4. Service receipt and satisfaction.
5. Household composition—child and spouse separations and reunifications.
6. Family processes and rituals.

The study team audio recorded the surveys and prepared handwritten notes. The team transcribed the survey summaries and coded them using NVivo software. The qualitative data identified factors that influenced the family's housing decisions as they left shelter (Fisher et al., 2014). These qualitative data were used to interpret impact findings presented in *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families*.

A.11. Additional Details About Surveys and Data Collection

This section provides additional details on the surveys and data collection process and results. The following section summarizes the topics covered in each of the aforementioned survey instruments, the household members supplying different data components, and implementation strategies for the 37-month followup data collection. This section also discusses the study team's efforts to maximize response rates, incentives to participate in the study, and a summary of overall response rates.

Implementation of 37-Month Data Collection

The 37-month followup data collection began in March 2014 and concluded in December 2014. Field interviewers conducted the followup surveys. Field managers recontacted 10 percent of all respondents and administered a brief "validation questionnaire" to assure that the survey was done with the correct respondent and that the interviewer followed proper protocols.

The 37-month followup adult survey data collection process included—

1. Locating—reviewing contact history.
2. Adult informed consent—renewing consent for the adult respondent.
3. Adult survey administration—including focal child selection.
   - If no focal child selected, data collection concluded here.
   - If at least one focal child selected then data collection continued.
4. Consent to release information

Focal child data collection steps included—

1. Parental permission—required before interviewers could contact focal children.
2. Child assent—if focal child was ages 8 years to 17 years, 11 months.
3. Child data collection.
   - Parent completes ASQ-3 and SDQ (focal child ages 12 months to 5 years, 6 months).
   - Child assessments with focal child ages 3 years, 6 months to 7 years, 11 months.
   - Child survey with focal child ages 8 years to 17 years, 11 months.
4. HOME inventory by the interviewer.

At the time of the survey, interviewers first renewed consent with the adult sample member. Study participants completed a participation agreement when they enrolled in the study, providing their informed consent to participate in the research study. The team renewed consent with participating families at 37 months

to remind them of the voluntary nature of participation, the study requirements, and risks of participation. The renewed consent form introduced the child data collection component. The interviewer also asked adult respondents for permission to send their and their child's personally identifying information (PII) back to HUD, of which 1,590 adults consented to send their own PII and 1,468 consented to send their child's PII.

When consent was renewed, interviewers administered the adult survey to the respondent. Although the survey instrument was designed to be conducted in person, 797 (44.7 percent) of adult respondents chose to do the survey by phone. In-person surveys were conducted in a variety of locations, both inside and outside the respondent's residence. Local interviewers completed all adult surveys using laptops equipped with CAPI technology.

If at least one focal child was selected for the study, interviewers reviewed the parental permission form with adult respondents after completing the adult survey. Adult respondents could decline study participation for focal children independently of whether they granted permission for another focal child in the family. If the focal child was 12 months to 5 years, 6 months of age, the adult respondent was asked to complete the ASQ-3 and all items in the parent-on-child module of the adult survey pertaining to children in that age range.

If a focal child was age 3 years, 6 months to 7 years, 11 months, the interviewer made an appointment to meet with the adult respondent and the focal child to conduct the child assessments. After obtaining adult permission, interviewers also requested focal child permission to conduct the child assessments. In total, 44 attempts to administer the child assessments were refused by either the adult or focal child. All child assessments were completed in person.

Interviewers directly contacted focal children ages 8 years to 17 years, 11 months to make an appointment to administer the child survey. Before beginning the child survey, interviewers reviewed the child assent form with the respondent and, if assent was granted, proceeded to conduct the survey. Not all focal children decided to participate. In total, 83 attempts to administer the child survey were refused by either the parent or focal child. Like the adult survey, a substantial percentage of the older focal children (45.8 percent) preferred to do the survey by telephone.

Efforts To Improve Response Rates

The study team used a variety of methods to maintain current contact information on study families, with an effort to minimize participant burden. Study families were contacted quarterly. The contacts ranged from a call (3 months and 24 months after random assignment) to a mailing (at 9,15, and 21 months after random assignment) to a more intensive tracking survey (at 6, 12, and 27 months after random assignment).

Incentives

All respondents received an incentive payment in appreciation for their time spent to complete the data collection. Adults who completed the baseline survey received a $35 money order. Each time the adult participant responded to a tracking effort, they received a $15 money order. Adults who completed the 20-month followup survey received a $50 money order. Adults also received a $15 money order on behalf of each child who completed the child assessments or the child survey. Adults who completed the 37-month adult survey received a $50 money order, they also received a $25 money order on behalf of each child who completed the child assessments or child survey at 37 months.

Completion Rates

Exhibit A-5 shows the overall completion rates for each participant data collection effort. The completion rate represents the number of completed surveys as a percentage of the total cases attempted. The analytic response rate is applicable only to the focal child data collection components (child assessment and child survey components).

The final enrollment for the study was 2,282 families, which was the sample base for all the data collection efforts. The 37-month followup adult survey achieved a 78.2 percent completion rate. During the 37-month followup period, 7 adult respondents were confirmed deceased, with 11 others determined deceased prior to the 37-month data collection release.

Child data collection could be done only after an adult survey was completed because focal child selection occurred as part of the adult survey. Further, the adult respondent had to give parental permission before the child data collection could commence. The child completion rates are based on the number of completed child components as a percentage of the focal children selected in households with a completed adult survey. Because an adult survey was completed with only 81 percent of the adult sample at 20-months and 78 percent of the adult sample at 37-months, the child data collection analytic response rates are lower, after adjusting for the households without completed adult surveys.

Exhibits A-6, A-7, and A-8 show the number and percentage of families who responded to study surveys. Among sample families, nearly one-third (32.1 percent) responded to all six survey efforts. Of enrolled families, 71.0 percent of families (1,621 families) completed the 20-month and 37-month surveys.

Exhibit A-5. Overall Family Options Study Survey Completion Rates

	Sample Released (N)	Cases Completed (N)	Completion Rate (%)	Analytic Response Rate (%)
Baseline	2,282	2,282	100	100
6-month tracking	2,282	1,671	73.2	73.2
12-month tracking	2,282	1,632	71.5	71.5
20-month adult	2,282	1,857	81.4	81.4
20-month ASQ-3	577	549	95.1	77.4
20-month HTKS	1,079	780	72.3	58.8
20-month WJ III Letter-Word	1,079	876	81.2	66.1
20-month WJ III Applied Problems	1,079	846	78.4	63.8
20-month child survey	1,128	945	83.8	68.2
27-month tracking	2,282	1,149	50.4	50.4
37-month adult	2,282	1,784	78.2	78.2
37-month ASQ-3	762	672	88.2	68.9
37-month HTKS	1,106	798	72.2	56.4
37-month WJ III Letter-Word	1,106	832	75.2	58.8
37-month WJ III Applied Problems	1,106	833	75.3	58.9
37-month child survey	1,243	1,083	87.1	68.1

ASQ-3 = Ages and Stages Questionnaire. HTKS = Head Toes Knees Shoulders. WJ III = Woodcock-Johnson III.

Sources: Family Options Study baseline survey; 6-month tracking survey; 12-month tracking survey; 20-month adult survey; 20-month child assessments; 20-month child survey; 27-month tracking survey; 37-month adult survey; 37-month child assessments; 37-month child survey

Exhibit A-6. Survey Response Status for Family Options Study Baseline and Followup Surveys

Baseline Survey	20-Month Adult Survey	37-Month Adult Survey	Families (N)	Percent
1	0	0	262	11.5
1	0	1	163	7.1
1	1	0	236	10.3
1	1	1	1,621	71.0
TOTAL			**2,282**	**100**

Notes: 1 = completed. 0 = not completed.

Sources: Family Options Study baseline survey; 20-month followup survey; 37-month followup survey

Exhibit A-7. Total Number of Families Assigned to Each Intervention and Number of Followup Survey Respondents

Intervention	Families Assigned	20-Month Survey		37-Month Survey		Both 20- and 37-Month Surveys	
		Number of Respondents	Response Rate (%)	Number of Respondents	Response Rate (%)	Number of Respondents	Response Rate (%)
SUB	599	530	88.5	501	83.6	467	78.0
CBRR	569	455	80.0	434	76.3	406	71.4
PBTH	368	294	79.9	293	79.6	259	70.4
UC	746	578	77.5	556	74.5	489	65.5
Total	**2,282**	**1,857**	**81.4**	**1,784**	**78.2**	**1,621**	**71.0**

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

Sources: Random assignment records; Family Options Study 20- and 37-month followup surveys

Exhibit A-8. Survey Response Status for Family Options Study Baseline, Followup, and Tracking Surveys

Baseline Survey	6-Month Tracking Survey	12-Month Tracking Survey	20-Month Adult Survey	27-Month Tracking Survey	37-Month Adult Survey	Families	Response Rate (%)
1	0	0	0	0	0	129	5.7
1	0	0	0	0	1	41	1.8
1	0	0	0	1	0	1	0.0
1	0	0	0	1	1	8	0.4
1	0	0	1	0	0	30	1.3
1	0	0	1	0	1	42	1.8
1	0	0	1	1	0	4	0.2
1	0	0	1	1	1	88	3.9
1	0	1	0	0	0	24	1.1
1	0	1	0	0	1	15	0.7
1	0	1	0	1	0	1	0.0
1	0	1	0	1	1	6	0.3
1	0	1	1	0	0	37	1.6
1	0	1	1	0	1	52	2.3
1	0	1	1	1	0	6	0.3
1	0	1	1	1	1	127	5.6
1	1	0	0	0	0	56	2.5
1	1	0	0	0	1	28	1.2
1	1	0	0	1	0	1	0.0
1	1	0	0	1	1	10	0.4
1	1	0	1	0	0	27	1.2
1	1	0	1	0	1	64	2.8
1	1	0	1	1	0	10	0.4
1	1	0	1	1	1	111	4.9
1	1	1	0	0	0	49	2.2
1	1	1	0	0	1	37	1.6
1	1	1	0	1	0	1	0.0
1	1	1	0	1	1	18	0.8
1	1	1	1	0	0	94	4.1
1	1	1	1	0	1	398	17.4
1	1	1	1	1	0	28	1.2
1	1	1	1	1	1	739	32.4
Total						**2,282**	**100**

Notes: 1 = completed. 0 = not completed.
Sources: Family Options Study baseline survey; 6-month tracking survey; 12-month tracking survey; 20-month followup survey; 27-month tracking survey; 37-month followup survey

A.12. Administrative Data

The Family Options Study used two main sources of administrative data: (1) the Homeless Management Information System (HMIS) data from each study site and (2) HUD's Public and Indian Housing Information Center (PIC) and Tenant Rental Assistance Certification System (TRACS) data. Each source of administrative data is described in the following sections.

HMIS Data

An HMIS[16] is the electronic information system designated by the local Continuum of Care (CoC) program to record data on all people served within a CoC's shelter, housing, and service system for individuals and families experiencing homelessness. Agencies collect information directly from people they serve and enter the data into their CoC's HMIS.

Exhibit A-9 shows the HMIS participation rates for the CoCs containing our sample sites based on information reported by communities to HUD in the spring of 2011. HMIS bed participation refers to the percentage of beds that are covered in the HMIS. Thus, for example, data on clients staying in 83 percent of the beds designated for families in emergency shelters in Alameda County that are participating in the study are included in HMIS.

The study team used HMIS records to measure use of emergency shelter, rapid re-housing, transitional housing, and permanent supportive housing (PSH) and the length of time families spent in these housing programs.

[16] See http://www.hudexchange.info/hmis for more information on HMIS.

Exhibit A-9. HMIS Participation Rates for Emergency Shelter and Transitional Housing Providers in the Study Sites, 2011

Study Site	HMIS Bed Participation Rates for All Providers in the CoC (%)		HMIS Bed Participation Rates for Providers in the Study (%)	
	ES	TH	ES	TH
Alameda County	53	93	83	93
Atlanta	86	87	100	85
Baltimore	88	98	100	98
Boston	91	96	86	NA
Connecticut*	94–100	78–100	100	100
Denver	100	100	100	100
Honolulu	96	92	100	100
Kansas City	100	100	100	100
Louisville	80	100	100	100
Minneapolis	84	81	100	68
Phoenix	96	95	100	89
Salt Lake City	100	96	100	96

CoC = Continuum of Care. ES = emergency shelter. HMIS = Homeless Management Information System. NA = not available. TH = transitional housing.
* This study site comprises four CoCs in the New Haven/Bridgeport, Connecticut area; therefore, the figures reported for CoC coverage represent the range of coverage levels in these four CoCs.
Note: All "beds" (that is, program slots) enumerated in this table are considered "beds for families" by the CoCs.
Source: HUD Homeless Data Exchange, or HDX

HMIS data elements supplied by sites were—

- Project entry date.
- Project exit date.
- Project name.
- Project type.

Providers enter a new HMIS record for every new entry into a program. Thus, for people who receive more than one episode of assistance, HMIS contains multiple records per person. Providers ask clients entering programs to provide PII, but clients are not required to comply to receive services. Exhibit A-10 shows the number and percentage of families in the sample that were identified in the site's HMIS. A family is considered matched in the HMIS if at least one program record was found for the head of household in the HMIS data received and time of program use occurred after the random assignment date.

The study team gathered supplementary shelter program-use data for Minneapolis, Minnesota, and Boston, Massachusetts. Hennepin County provided records for emergency shelters that were not covered in the Minneapolis HMIS. The State of Massachusetts Office of Community Development provided records of Emergency Assistance program use that were not covered in the Boston HMIS. In addition, the Connecticut HMIS data were provided by the Bridgeport and New Haven CoCs separately.

Exhibit A-10. HMIS Match Rates With the Family Options Sample by Site Through 37 Months

Site	Original Sample (N)	Sample Families in HMIS (N)	Sample Families in HMIS (%)
Alameda	258	228	88.4
Atlanta	189	180	95.2
Baltimore	58	54	93.1
Boston	181	181	100.0
Connecticut*	214	191	89.3
Denver	172	148	86.0
Honolulu	218	213	97.7
Kansas City	175	170	97.1
Louisville	109	102	93.6
Minneapolis	181	176	97.2
Phoenix	279	275	98.6
Salt Lake City	248	202	81.5
All sites	**2,282**	**2,120**	**92.9**

HMIS = Homeless Management Information System.
*Includes the cities of New Haven and Bridgeport, Connecticut.
Source: HMIS

PIC and TRACS Data Files

The study team used extracts from two HUD administrative data systems, PIC and TRACS. PIC data were used to measure sample members' receipt of housing assistance from one of three programs—public housing, the Housing Choice Voucher program, and project-based voucher assistance.[17] TRACS data were used to track information regarding program entry and exit for project-based Section 8 programs.[18] PIC and TRACS data measure use of the permanent housing subsidies offered to families assigned to the SUB intervention.

[17] HUD Form 50058 describes the full list of variables available in the PIC data and is accessible on line at http://portal.hud.gov/hudportal/documents/huddoc?id=50058.pdf.

[18] Documentation on the TRACS data is accessible on line at http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/mfh/trx/trxdocs.

HUD provided the data in 26 PIC and 26 TRACS quarterly extracts. The quarterly extracts cover the period from March 2009 through June 2015 and cover the effective date period from January 1, 2008, until June 30, 2015. Together, the 52 quarterly extracts contain information on 919 study families.

For families using vouchers, the study team used PIC data to identify the date on which the household began to receive rental assistance, referred to as the lease-up date. The program admission date, effective date of the action, program type code, and program action code were the major variables used from the PIC extracts to determine the timing of new admissions (versus annual reexaminations, interim reexaminations, or other actions).[19]

Depending on the type of action recorded in PIC, the date of program admission is either the same as or earlier than the effective date of action. For new admissions, the date of admission and the effective date of action are normally the same. When they differ, the effective date is considered the better indicator of lease up, because the effective date refers to either the signing of the lease or the actual occupancy of the unit (as opposed to, for instance, the issuance of the voucher to the participant). Among records of actions other than new admissions, some effective dates fell up to a year after the date of random assignment.[20] Therefore, for action types other than new admission, the date of program admission was consistently used as the date of lease up. Exhibit A-11 summarizes the number of sample families who were matched in PIC/TRACS and the number assigned to the SUB intervention matched in PIC/TRACS.

NDNH Data

HUD's Office of Policy Development and Research (PD&R) collected de-identified quarterly wage records from the National Directory of New Hires (NDNH), maintained by the Office of Child Support Enforcement (OCSE) within the Administration for Children and Families at the U.S. Department of Health and Human Services. The NDNH maintains up to eight quarters of quarterly wage data from state workforce agencies and federal agencies.[21] Between June 2015 and March 2016, the study team sent quarterly matching files with family head name and Social Security Number to OCSE. OCSE matched these files to the quarterly wage records, then stripped the PII and replaced with a randomly generated person identification code. In June 2016, the study team sent a pass-through file with several data elements to OCSE, which again removed PII and replaced with the randomly generated person identification code. All data sets were then transferred to PD&R. The study team did

Exhibit A-11. Sample Families in PIC/TRACS Data and Those Assigned to the SUB Intervention in PIC/TRACS Data by Site Through 37 Months

	Sample Families in PIC/TRACS (N)	All Families Assigned to SUB (N)	All Families Assigned to SUB in PIC/TRACS (N)	Percent SUB-Assigned Families in PIC/TRACS
Alameda County	108	76	70	92.1
Atlanta	35	0	0	NA
Baltimore	22	0	0	NA
Boston	122	64	58	90.6
Connecticut*	90	47	42	89.4
Denver	95	76	63	82.9
Honolulu	72	43	30	69.8
Kansas City	78	53	38	71.7
Louisville	45	32	21	65.6
Minneapolis	75	62	45	72.6
Phoenix	89	71	63	88.7
Salt Lake City	88	75	54	72.0
All sites	**919**	**599**	**484**	**80.8**

NA = not available. PIC = Public and Indian Housing Information Center. SUB = priority access to permanent housing subsidy. TRACS = Tenant Rental Assistance Certification System.
*Includes the cities of New Haven and Bridgeport, Connecticut
Source: PIC/TRACS data

[19] An action is the administrative transaction that triggers the completion of the HUD Form 50058 that is submitted to PIC. The 50058 includes 14 action codes: new admission, annual reexamination, interim reexamination, portability move-in, portability move-out, end of participation, other change of unit, Family Self-Sufficiency/Welfare to Work addendum, annual reexamination, issuance of voucher, expiration of voucher, flat rent annual update, annual Housing Quality Standards inspection, and historical adjustment.

[20] This lapse in time might occur, for instance, if the housing authority simply failed to record the new admission but recorded a subsequent action.

[21] Established in accordance with the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, the NDNH database was developed to assist state child support agencies in locating parents and enforcing child support orders. The NDNH contains quarterly wage, new hire, and unemployment information. The Family Options Study used only quarterly wage information.

not have direct access to the data; instead, we sent statistical analysis programs to staff at PD&R, who ran the programs on their servers and produced results. Summary results were then transferred to the study team for analysis and reporting.

OSCE provided HUD with four extracts of de-identified quarterly wage records. Although we anticipated that each extract would contain eight calendar quarters of data, we found that only seven quarters in each extract appeared to have complete data. Each extract contained various other quarters with reported wages, but the number of observations in these quarters was significantly lower than the number of observations in the seven complete quarters. Due to these limitations, the study team decided to use only the seven quarters with complete data from each of the extracts. Across all extracts received from OCSE, complete data for the study sample was collected for 10 calendar quarters, from 2013Q2 to 2015Q3. Details about outcomes constructed with these data are provided in Appendix B.

Child Welfare Agency Administrative Data

To understand what data are available from child welfare agencies, it is helpful to understand the federal reporting requirements of child welfare programs. For children under the care and supervision of the child welfare agency (or adopted under the auspices of the agency), states are required to submit semi-annually de-identified, case-level data to the Adoption and Foster Care Analysis and Reporting System (AFCARS), maintained by the Children's Bureau of the Administration of Children and Families. The de-identified nature of the AFCARS data makes it impossible to link these records to the study sample. Therefore, the study looked to state and local agencies to obtain information on formal out-of-home placements.

Out of the 12 study sites, the study team sought to acquire child welfare data from eight agencies where it was determined feasible. Among those, the following five agencies provided child welfare data.

- Alameda County Department of Social Services (Alameda County site).
- Arizona Department of Child Safety (Phoenix site).
- Maryland Department of Human Resources, Social Services Administration (Baltimore site).
- Minnesota Department of Human Services, Child Safety and Permanency Division (Minneapolis site).
- Missouri Department of Social Services, Children's Division (Kansas City site).

The data obtained from these five agencies used AFCARS reporting definitions to ensure the information collected was—to the extent possible—defined consistently across the five sites. The minimum information requested from each site was—

- Start and end dates of each removal or placement.
- Reason for discharge or placement end.
- Date of termination of parental rights.
- Child date of birth.

Because child welfare data were obtained from only the state—or, in the case of Alameda County, the county—in which an individual was randomly assigned, individuals with children in out-of-home care under the care of another child welfare agency are not considered in the analysis. It is therefore possible that the records collected understate the overall level of formal separations because they miss separations occurring outside the state or county the parent was randomly assigned.

A.13. Program Usage Data File

The study used several types of information to document the types of assistance families received during the followup period. Enrollment verification data, tracking and followup surveys, and administrative data, each described previously in Appendix A, were combined to form a Program Usage Data file, with information about program use for every month starting at the date of random assignment through the date of the adult survey. This section describes how the study team created the Program Usage Data file, which contains data on the full sample of 2,282 families enrolled in the study.[22]

The study team gathered family-level information on program entry dates, program exit dates, and program types using eight data sources collected by the Family Options Study. The data sources are—

1. Enrollment verification data.
2. 6-month tracking survey.
3. 12-month tracking survey.
4. 20-month followup adult survey.
5. 27-month tracking survey.
6. 37-month followup adult survey.
7. HMIS.
8. PIC/TRACS.

[22] For the *Short-Term Impacts* report, the study team prepared program usage data for the 1,857 families who completed the 20-month followup survey. For the current report, the study team entirely recreated program usage data for all 2,282 study families, using data sources available at the time of the earlier report plus a second round of HMIS data collection, six more quarterly extracts of PIC and TRACS records, the 27-month tracking survey, and the 37-month followup survey.

Each data source has information about program use since the date of random assignment. The data sources vary in the amount of time they cover. For example, the administrative data and the 37-month survey cover the full analysis period, but the tracking surveys and enrollment verification cover only part of the period.

The study team considered data from all eight sources when compiling family histories of program use. In many cases, the same instance of program use by a family was recorded in more than one data source. In some of these cases, the multiple data sources were in complete agreement. In other cases, the data sources had discrepant information about entry dates, exit dates, and/or program type.

To resolve conflicting information across data sources, the study team devised a system of decision rules. The fundamental rule for cleaning the data was that two instances of program use could not overlap, forcing the study team to clean dates that indicated the family was in two or more programs simultaneously. The study team ranked the data sources in the order believed to contain the most to least reliable program use information. Perceived reliability of the data sources varied by data item—program entry date, exit date, and type. Exhibit A-13 summarizes the reliability ratings.

The study team considered the program entry date from the enrollment verification data most reliable because the team collected these data directly from the participating program

Exhibit A-12. Program Types and Their Data Sources in the Program Usage Data

Program Type	Data Sources
Emergency shelter	• HMIS records[a] • 6-, 12-, 20-, 27-, and 37-month surveys
Permanent housing subsidies offered to the SUB group[b]	• HUD PIC and TRACS records • Enrollment verification records (for referred program) • 6-, 12-, 20-, 27-, and 37-month surveys
Rapid re-housing	• HMIS records • Enrollment verification records (for referred program) • 6-, 12-, 20-, 27-, and 37-month surveys
Transitional housing[c]	• HMIS records • Enrollment verification records (for referred program) • 6-, 12-, 20-, 27-, and 37-month surveys
Permanent supportive housing	• HMIS records • 6-, 12-, 20-, 27-, and 37-month surveys
Public housing	• HUD PIC and TRACS records • 6-, 12-, 20-, 27-, and 37-month surveys
Project-based vouchers or Section 8 projects	• HUD PIC and TRACS records • 6-, 12-, 20-, 27- and 37-month surveys

SUB = priority access to permanent housing subsidy.

HMIS = Homeless Management Information System. HUD = U.S. Department of Housing and Urban Development. PIC = Public and Indian Housing Information Center. TRACS = Tenant Rental Assistance Certification System.

[a] The study team collected HMIS records covering homeless assistance programs in the 12 study communities. The HMIS data thus cover program use only in the 12 communities and do not cover program use outside the site jurisdiction determined at baseline. Altogether, 12.3 percent of families (219 families) interviewed for the 37-month interview were residing in a different state from the address indicated at baseline. The proportion of families interviewed in different states varied by site from 5.2 percent in Boston to 28.5 percent in Kansas City.

[b] Subsidies offered to the SUB group are housing choice vouchers plus site-specific programs offered to families assigned to SUB group in Bridgeport, Connecticut, and Honolulu, Hawaii. The site-specific non-housing choice voucher programs were public housing in Honolulu, Hawaii, and project-based vouchers in Bridgeport, Connecticut. In other sites, these programs are coded separately.

[c] The transitional housing program type represents both project-based and scattered-site varieties of transitional housing, including transition-in-place units.

Exhibit A-13. Data Source Reliability by Program Use Data Item

Program Use Data Item	Higher Reliability	Lower Reliability
Program entry date	Enrollment verification HMIS; PIC/TRACS	20- and 37-month followup surveys; tracking surveys
Program exit date	HMIS; PIC/TRACS	20- and 37-month followup surveys; tracking surveys; tracking surveys; enrollment verification
Program type	Enrollment verification HMIS; PIC/TRACS	20- and 37-month followup surveys; tracking surveys

HMIS = Homeless Management Information System. HUD = U.S. Department of Housing and Urban Development. PIC = Public and Indian Housing Information Center. TRACS = Tenant Rental Assistance Certification System.

Sources: Enrollment verification data; 6-month tracking survey; 12-month tracking survey; 20-month followup survey; 27-month tracking survey, 37-month followup survey, HMIS; PIC/TRACS

specifically about the study families. The administrative data—HMIS and PIC/TRACS—were also treated as highly reliable, second to the enrollment verification. The administrative data are maintained by communities and HUD. Program entry date information from the tracking surveys and 20- and 37-month followup surveys was considered less reliable because of recall error. If entry date information was available only in the surveys, the study team considered program entry dates closest to survey dates as more reliable than other older entry dates because they would have lower recall error.

The study team considered the program exit date from the administrative data to be most reliable. The exit date from the enrollment verification data was considered least reliable because data were not collected for a long enough period to record an exit date. The tracking surveys also contained missing exit date information if the family was in a housing program at the time of those surveys and could suffer from recall error. The 37-month followup information on exit dates covered the full study period but could still suffer from recall error.

The study team considered the program type data from the enrollment verification as the most reliable because these providers were involved in the study to represent an intervention program type. Program type data from administrative sources were considered to also be highly reliable, second to the enrollment verification data. The study team worked closely with the HMIS administrators to accurately code programs. Data from PIC/TRACS were also considered highly reliable because data are maintained by HUD. Program type information in the 20- and 37-month followup and tracking surveys were considered to be least reliable because of recall error and likely lack of knowledge of the program type beyond the name of the program.

Basing its analysis on these and other site-specific rules, the study team manually determined which records and information were preserved that most accurately reflected the program use history of a family. These data were converted into the Program Usage Data file, which contained one record per family. The Program Usage Data file contained a series of monthly indicator binary variables reflecting the period from the month of random assignment through either the month of the 37-month survey date (for 37-month survey respondents) or through the month of the 1,129th day after the date of random assignment (for 37-month survey nonrespondents).[23] The study team prepared a separate set of indicator variables for several program types: emergency shelter, transitional housing, rapid re-housing, permanent housing subsidies offered to the SUB group, PSH, public housing, and Section 8 projects/project-based vouchers. An indicator variable was set equal to 1 to indicate that the study family used a particular program type at least 1 day during the month, or it was set equal to 0 to indicate no use of that program type in that month. The Program Usage Data file was constructed to complement the outcomes reported in the 20- and 37-month followup adult surveys. Therefore, information provided by administrative data beyond the month of the 37-month followup survey response was not incorporated into the file.

These data are known to miss at least some program use. The baseline stay in emergency shelter does not appear in the data for 18.3 percent of survey respondent families. The missing data rate for subsequent stays in emergency shelter is unknown. The study team expects that HMIS records on community-based rapid re-housing, transitional housing, and permanent housing to be at least as complete as the baseline emergency shelter records (at least 82 percent). Because the data on these three program types also rely on the program usage files compiled from multiple sources including enrollment verification (for the referred program) and up to five self-reports (three tracking interviews and two followup interviews), the study team expects the vast majority of program spells of these types to be captured in the data.

The data on use of subsidy, public housing, and project-based vouchers or Section 8 projects should be essentially complete because they are based on HUD administrative records. Additional detail about the construction of outcomes based on the Program Usage Data is provided in Appendix B.

[23] The median survey start date for 37-month survey respondents is 1,129 days after the date of random assignment.

APPENDIX B. CONSTRUCTION OF OUTCOMES

This appendix describes how the study team constructed outcome measures from the 37-month followup survey and administrative data. It supplements information in Chapter 2. The section is organized by outcome domain: housing stability, family preservation, adult well-being, child well-being, and self-sufficiency.

B.1. Measures of Housing Stability

Homelessness during followup period. The study team developed seven measures related to homelessness experienced during the 37-month followup period.

- **At least 1 night homeless or doubled up during past 6 months.** This binary variable is constructed from responses to Questions A9 and A11. It measures the percentage of study families who reported spending at least 1 night during the 6 months before the 37-month followup survey either homeless (residing in a shelter or institution or staying in a place not meant for human habitation, such as the street, car, abandoned building, or train station) or living with a friend or relative because they could not find or afford a place of their own. The survey item explicitly excluded transitional housing.
- **At least 1 night homeless during past 6 months.** This binary variable is constructed from responses to Question A9. It measures the percentage of families who reported having spent at least 1 night in a shelter or place not meant for human habitation in the 6 months before the 37-month followup survey. This outcome does not include stays in transitional housing.
- **At least 1 night doubled up during past 6 months.** This binary variable is constructed from responses to Question A11. It measures the percentage of families who reported spending at least 1 night in the 6 months before the 37-month followup survey living with a friend or relative because they could not find or afford a place of their own.
- **Any stay in emergency shelter in past 6 months.** This binary variable is constructed using Program Usage Data and is primarily taken from the Homeless Management Information System (HMIS) but also uses survey data. This measure is the percentage of families who spent at least 1 night in emergency shelter in the 6 months before the 37-month followup survey.
- **Any stay in emergency shelter in months 21 to 32 after random assignment.** This binary variable is constructed using Program Usage Data. Families with program usage records that indicate a stay in emergency shelter in the period from 21 to 32 months after random assignment are coded as 1. The time period is the latest 1-year period for which survey data are available for all families in the impact analysis sample. HMIS records were the source of most (92 percent) of the data for emergency shelter stays. The tracking and followup surveys also provided information on stays in emergency shelter.
- **Number of days homeless or doubled up in the past 6 months.** This continuous variable is constructed from responses to Questions A10a1 to A10a3 and A12a1 to A12a3. The outcome measures the total number of days spent homeless or doubled up in the 6 months before the 37-month followup survey. This outcome does not reflect stays in transitional housing.
- **Number of days homeless during past 6 months.** This continuous variable is constructed from responses to Questions A10a1 to A10a3. The outcome measures the average number of days spent in shelters or places not meant for human habitation in the 6 months before the 37-month followup survey. It is measured from survey data. This outcome does not reflect stays in transitional housing.
- **Number of days doubled up during past 6 months.** This continuous variable is constructed from responses to Questions A12a1 to A12a3. The outcome measures the average number of days spent living with friends or relatives in the 6 months prior to the survey. It is measured from survey data.

Confirmatory outcome. The study team constructed a single composite binary outcome for the 37-month followup point. This outcome is defined as "at least one return to homelessness"

in the year before the 37-month survey measured from both the followup survey and Program Usage Data.

- At least 1 night spent staying in a shelter or a place not meant for human habitation or doubled up during the past 6 months at the time of the survey (measured from survey data) OR any stay in emergency shelter in the 12 months prior to the date of the survey (measured from Program Usage Data).

If either of the two binary outcomes were coded as 1, the composite confirmatory outcome was also coded as 1. The lengths of time in the reference periods for this outcome (6 months for survey component, 12 months for Program Usage Data) are the same as for the confirmatory outcome in *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families*.

Housing independence. The study team used data from the adult survey to construct three outcomes pertaining to the type of living arrangements at the time of the followup survey, number of places lived, and housing quality. All these measures are from the followup survey.

- **Living in own house or apartment at time of survey.** This binary variable is constructed from responses to Question A4a, which asks if the respondent is currently living in a house or apartment that he or she owns or rents. The interviewer instructed the respondent not to include his or her parent's or guardian's home or apartment. Survey respondents are considered to have *independent housing* if they rented or owned their own housing at the time of the survey. (Housing owned or rented by a "boyfriend/girlfriend, fiancé or significant other" is not counted as living in the respondent's own house or apartment). This outcome measures the percentage of families who reported living in their own house or apartment, either with or without housing assistance.

- **Living in own house or apartment at time of survey with no housing assistance.** This binary variable is based on responses to Question A4a about living situation and Questions A7 and A8 about receipt of housing assistance at the time of the 37-month followup survey. The outcome is assigned a value of 1 for respondents who answered Question A4a to indicate they were living in a house or apartment that they own or rent and who answered no to Questions A7 and A8 about whether they received housing assistance. This outcome measures the percentage of families who reported living in their own house or apartment at the time of the survey and were not receiving housing assistance.

- **Living in own house or apartment at time of survey with housing assistance.** This binary variable is constructed from responses to Question A4a about living situation and Questions A7 and A8 about receipt of housing assistance at the time of the 37-month followup survey. The outcome is assigned a value of 1 for respondents who answered Question A4a to indicate they were living in a house or apartment that they own or rent and who answered yes to Questions A7 and A8 about whether they received housing assistance. This outcome measures the percentage of families who reported living in their own house or apartment at the time of the survey and were receiving housing assistance to help pay the rent.

Number of places lived. The study team also measured an outcome related to housing instability during the followup period using the parent survey.

- **Number of places lived in the past 6 months.** This continuous variable is constructed from responses to Question A13. The outcome measures the number of places the family lived in the 6 months before the survey. The variable is top-coded at six places. A value of 7 means that the adult respondent reporting having lived in six or more places in the 6 months before the survey.

Housing quality. The housing domain also includes two outcomes measuring the quality of sample members' housing at the time of the 37-month followup survey.

- **Persons per room.** This continuous variable is based on responses to Question B7 (number of rooms not including kitchens, bathrooms, and hallways) and Questions B1A_1 to B1A_14 and B3a and B3b (number of persons living with the adult respondent). The outcome was constructed by dividing the number of people by the number of rooms. Housing situations with more than one person per room are considered crowded.

- **Housing quality is poor or fair.** This binary variable is based on responses to Question B8. Respondents were asked to rate the condition of their current house or apartment as either excellent, good, fair, or poor. This outcome measures the percentage of families self-reporting that the condition of their housing at the time of the survey was fair or poor.

B.2. Measures of Family Preservation

The study team collected detailed information about the composition of the study families and changes in family composition that occurred during the followup period. The study team collected names and ages of family members with the adult respondent in shelter at the time of enrollment and of family members who were not with the adult respondent at enrollment but whom the adult respondent considered to be part of the family. Then, at the 37-month followup survey, the study team collected

information on the whereabouts of all family members reported at baseline and about new family members who had joined the family since the previous survey. This section describes the outcomes constructed from these data.

- **Family has at least one child separated in past 6 months.** This binary variable is constructed from items in Section D of the 37-month followup survey and from information gathered from Section E of the baseline survey. This variable measures the percentage of families for whom a child who had been with the family in shelter was separated from the family at any time in the 6 months before the 37-month followup survey. This outcome includes both formal (that is, with the involvement of a child welfare agency) and informal separations from the family, and both ongoing and new separations in this period. The outcome is based on children who are less than 18 years, 6 months at the time of followup in order to exclude children who had reached the legal age of adulthood before the separation. The time period for this outcome, 6 months before the survey, thus included at least some time before the children reached adulthood.
- **Family has at least one foster care placement in the past 6 months.** This binary variable is constructed from items in Section D of the 37-month followup survey. It measures the percentage of families who reported that a child was in a formal foster care placement or adopted by another family at any time in the 6 months prior to the 37-month survey. It includes both new and ongoing foster care placements. This outcome excludes informal arrangements in which a child may have stayed with friends or family members but includes adoptions of children by another family.
- **Spouse/partner separated in past 6 months, of those with a spouse/partner present at random assignment.** This binary variable is constructed from items in Section D of the 37-month followup survey and Section E of the baseline survey. This outcome measures the percentage of respondent families in which a spouse or partner who had been present at baseline (458 families) became separated in the 6 months before the 37-month followup survey. The outcome includes both new and ongoing separations.

The team also constructed the following two family reunification outcomes that measure the return of family members who had been reported as separated from the family at baseline.

- **Family has at least one child reunified, of those families with at least one child absent at random assignment.** This binary variable is constructed from Section D of the 37-month followup survey and Section E of the baseline survey. It measures the percentage of families in which a child who had been living apart from the family at baseline had rejoined the family at the time of the 37-month follow-up survey. This outcome is measured only for respondent families in which a child was separated from the family at the time of random assignment (339 families).
- **Spouse or partner reunified, of those spouse or partner absent at random assignment.** This binary variable is taken from Section D of the 37-month followup survey and Section E of the baseline survey. It measures the percentage of families in which a spouse or partner who was separated from the family at baseline had rejoined the family at the time of the 37-month followup survey. This outcome is measured only for respondent families in which a spouse or partner was separated from the family at the time of random assignment (175 families).

B.3. Measures of Adult Well-Being

The study team used the adult survey to construct the following outcomes measuring several aspects of well-being for the adult respondent: adult physical health, adult behavioral health, adult trauma symptoms, adult substance abuse, and experience of intimate partner violence.

Adult physical health in past 30 days was poor or fair. This binary variable is constructed from responses to Question E1. The outcome measures the percentage of families in which the adult respondent reported poor or fair health in the 30 days before the survey. Response options were excellent, very good, good, fair, or poor. The outcome value is 1 if respondents rated health as fair or poor.

Goal-oriented thinking. The adult survey collected six items of the State Hope Scale (Snyder et al., 1996) in Questions E2a to E2f. Participants respond to each item using a 6-point scale.

1 = definitely false.

2 = mostly false.

3 = somewhat false.

4 = somewhat true.

5 = mostly true.

6 = definitely true.

The items are—

1. If I should find myself in a jam, I could think of many ways to get out of it.
2. At the present time, I am energetically pursuing my goals.
3. There are lots of ways around any problem that I am facing now.
4. Right now I see myself as being pretty successful.

5. I can think of many ways to reach my current goals.
6. At this time, I am meeting the goals that I have set for myself.

The study team created a score for the State Hope Scale if the respondent answered at least four of the six items. For each respondent, the analysts averaged the responses given. This process yields measures ranging from 1 to 6 with higher scores indicating greater hope. The adult State Hope Scale measures Snyder's cognitive model of hope which defines hope as "a positive motivational state that is based on an interactively derived sense of successful (a) agency (goal-directed energy), and (b) pathways (planning to meet goals)" (Snyder, Irving, and Anderson, 1991: 287).

Psychological distress. This continuous variable is the Kessler 6 (K6) Psychological Distress Scale (Kessler et al., 2003). It is derived from six survey items (Questions E31 to E36). The respondents were asked how much of the time in the past 30 days they had felt each of six measures of distress—

1. Nervous?
2. Hopeless?
3. Restless or fidgety?
4. So depressed that nothing could cheer you up?
5. That everything was an effort?
6. Worthless?

Responses options were—

1 = all of the time.

2 = some of the time.

3 = a little of the time.

4 = none of the time.

The study team created a score for each respondent if the respondent answered at least four of the items (imputing values for missing items with the mean value of the nonmissing items). Scores were reversed such that a response of all of the time = 4, most of the time = 3, some of the time = 2, a little of the time = 1, and none of the time = 0. The scores were summed, creating a continuous indicator of psychological distress. The score ranges from 0 to 24 with higher values indicating greater psychological distress.

Exhibit 2-9 in Chapter 2 reports the percent of family heads reporting symptoms of serious psychological distress. That measure was derived from the continuous distress scale using a cutoff of 13 (scores of 13 and over were coded to indicate serious psychological distress). This score was the optimal cutoff point for the general population sample in the Kessler et al. (2003) validation study.

Post-traumatic stress disorder (PTSD) symptoms. This binary outcome is constructed from responses to Questions E4a to E4q. It measures the presence of PTSD symptoms in adult respondents in the 30 days before to the survey. These questions are the Posttraumatic Stress Diagnostic Scale (PDS) assessment that is designed to aid in the detection and diagnosis of PTSD. The PDS assessment parallels *DSM-IV®* diagnostic criteria for a PTSD diagnosis and may be administered repeatedly over time to help monitor changes in symptoms.

Respondents were asked to report on how much each of the following items had bothered them in the 30 days prior to the survey.

Subset 1.

E4a. Repeated, disturbing memories, thoughts, or images of a stressful experience?

E4b. Repeated, disturbing dreams of a stressful experience?

E4c. Suddenly acting or feeling as if stressful experiences were happening again (as if you were reliving it)?

E4d. Feeling very upset when something reminded you of a stressful experience?

E4e. Having physical reactions (for example, heart pounding, trouble breathing, or sweating) when something reminded you of a stressful experience?

Subset 2.

E4f. Avoid thinking about or talking about the stressful experiences or avoid having feelings related to it?

E4g. Avoid activities or situations because they remind you of a stressful experience?

E4h. Trouble remembering important parts of the stressful experience?

E4i. Loss of interest in things that you used to enjoy?

E4j. Feeling distant or cut off from other people?

E4k. Feeling emotionally numb or being unable to have loving feelings for those close to you?

E4l. Feeling as if your *future* will somehow be *cut short*?

Subset 3.

E4m. Trouble falling or staying asleep?

E4n. Feeling *irritable* or having *angry* outbursts?

E4o. Having difficulty concentrating?

E4p. Being *"super alert"* or watchful on guard?

E4q. Feeling *jumpy* or easily startled?

Responses options were—

1 = not at all.

2 = a little bit.

3 = moderately.

4 = quite a bit.

5 = extremely.

The PTSD outcome was created if the respondent answered at least 12 of the 17 items. The first step in scoring the responses was to assess if the respondent was symptomatic on each item. Responses of 3 = moderately, 4 = quite a bit, or 5 = extremely to any of the items indicate the respondent is symptomatic and receive a value of 1. If a respondent answered 1 = not at all or 2 = a little bit to an item they were assessed as not symptomatic and received a value of 0.

The 17 items were then divided into subscales.

- Subscale B: sum of 5 items in Subset 1: a–e.
- Subscale C: sum of 7 items in Subset 2: f–l.
- Subscale D: sum of 5 items in Subset 3: m–q.

To receive a value of 1 for the PTSD binary variable, the respondent had to be symptomatic on one or more items in subscale B, three or more items in subscale C, *and* on two or more items in subscale D. This measure of PTSD was also collected at baseline and serves as a covariate scored in the same manner (see Appendix C).

Adult substance abuse. The study team measured three outcomes related to substance abuse in the 6 months before the survey. The first is a binary variable indicating alcohol dependence, the second is a binary variable indicating drug abuse, and the third is a binary variable indicating alcohol dependence or drug abuse.

Alcohol dependence. This outcome is constructed from responses to Questions E5 through E8 in the 37-month followup survey, which asked the following four items in the Rapid Alcohol Problems Screen (RAPS-4; Cherpitel, 2000).

E5. Do you sometimes take a drink in the morning when you first get up?

E6. During the past 6 months, has a friend or family member ever told you about things you said or did while you were drinking that you could not remember?

E7. During the past 6 months, have you had a feeling of guilt or remorse after drinking?

E8. During the past 6 months, have you failed to do what was normally expected of you because of drinking?

An affirmative answer to any of the items indicates an alcohol problem.

The Rapid Alcohol Problems Screen is a five-item instrument, derived from other screens, that is designed to maximize sensitivity while maintaining good specificity. The RAPS-4, a further refinement of the five-item instrument, asks if an individual felt guilt after their drinking (Remorse), could not remember things said or did after drinking (Amnesia), failed to do what was normally expected after drinking (Perform), or had a morning drink (Starter).

Drug abuse. This outcome is constructed from responses to Questions E10a through E10h. The survey instrument included six items regarding use of illegal drugs, all of which are part of the short version of the Drug Abuse Screening Test, or DAST-10 (Skinner, 1982; Yudko, Lozhkina, and Fouts, 2007). The following six items were asked of respondents in relation to the 6 months before the survey date.[1]

E10a. Have you used more than one drug at a time?

E10b. Have you had "blackouts" or "flashbacks" as a result of drug use?

E10e. Have you ever not spent time with your family or missed work because of drug use?

E10f. Have you engaged in illegal activities in order to obtain drugs?

E10g. Have you ever experienced withdrawal symptoms as a result of heavy drug intake?

E10h. Have you had medical problems as a result of drug use (for example memory loss, hepatitis, convulsions, bleeding?)

An affirmative answer to any of these six items indicates a drug problem.

Alcohol dependence or drug abuse. If the respondent is determined to have an alcohol problem or a drug problem, the outcome alcohol dependence or drug abuse is assigned a value of 1. This outcome measures the percentage of families in which the adult respondent displayed evidence of alcohol dependence or drug abuse in the 6 months before the survey.

Experienced intimate partner violence in the past 6 months prior to survey. This binary variable is based on responses to Question E11. E11 asks if, in the past 6 months, the adult respondent has been physically abused or threatened with

[1] Respondents were also asked about two additional items related to drug use that are not used in the DAST-10 and were not used to create the drug abuse outcome. E10c asked, "Have your friends or relatives known or suspected that you used drugs?" and E10d asked, "Have you ever lost friends because of drugs?"

violence by a person with whom she/he was romantically involved, such as a spouse, boy/girlfriend, or partner. The outcome measures the percentage of adult respondents reporting experience of intimate partner violence in the 6 months prior to the survey.

B.4. Measures of Child Well-Being

The study team used information reported by the parent about the focal children to construct the following child well-being outcomes across all age groups.

Child Outcomes Across All Age Groups

Child Education

- **Number of schools attended since random assignment.** This continuous variable is based on responses to Question F12a. The number of schools is top-coded at four or more schools. The values of the outcome are—

  1 = one school.

  2 = two schools.

  3 = three schools.

  4 = four or more schools.

- **Grade completion—not held back.** This binary variable is based on responses to Question F12b From the parent survey and defined for children who have been in school at any time since random assignment and who are less than age 18 at the time of the 37-month survey. The outcome measures the percentage of these children who have not repeated a grade level and have not been prevented from moving on to the next grade level since random assignment.

- **School grades.** This continuous outcome was constructed using responses to Question F12c. The parent was asked to describe the child's grades in the most recently completed school term. The outcome uses a 4-point scale with the following values.

  1 = mostly Ds and Fs.

  2 = mostly Cs.

  3 = mostly Bs.

  4 = mostly As.

Health

- **Poor or fair health.** This binary outcome is based on responses to Question F18, which asks the parent to assess the child's health at the time of the 37-month followup survey. Allowable responses were excellent, very good, good, fair, or poor. The outcome has a value of 1 if responses were poor or fair.

- **Well-child checkup in past 12 months.** This binary outcome is based on responses to Question F19. Parents are asked whether outcome measures the percentage of focal children who received a physical examination or well-child checkup in the year prior to the 37-month followup survey.

- **Child has regular source of health care.** This binary outcome is based on responses to Question F18a. This outcome measures the percentage of focal children who had a regular provider of health care at the time of the 37-month followup survey, based on the parent's report.

- **Sleep problems.** This continuous variable is based on responses to Questions F26i, F26j, and F26k. The parent is asked to report on the frequency of two indicators of sleep problems—tiredness on waking and tiredness during the day. The allowable responses are—

  1 = almost always.

  2 = most days.

  3 = sometimes.

  4 = rarely.

  5 = almost never.

  The questions are worded as follows.

  Would you say that…

  [CHILD] has difficulty waking up in the morning?

  [CHILD] has difficulty waking up on school days?

  [CHILD] is tired during the day?

  To create the outcome, the study team reverse-coded the response options (for example, almost never = 1; almost always = 5). The value of the outcome thus ranges from 1 to 5 with higher values indicating greater frequency of these sleep problems.

Behavioral Strengths and Challenges

- **Behavioral problems.** This continuous variable is based on the Strengths and Difficulties Questionnaire (SDQ). The SDQ is a behavioral and personality assessment with a battery of items about the behavioral strengths and difficulties of children. The total problem score measures emotional symptoms, conduct problems, hyperactivity, and peer problems. The outcome is measured using responses to Questions F21 (for 3-year-olds), F22 (4- to 10-year-olds), and F23 (11- to 17-year-olds) on the parent survey. Parents indicated whether a series of statements were not true, somewhat true, or certainly true for the child during the 6 months before the survey. The reported scores are standardized by age and gender, so that children can be compared with their peers in a national sample. Higher scores indicate greater behavior problems.

- **Prosocial behavior.** This continuous variable is measured as the nationally standardized prosocial score from the SDQ.

  The SDQ test was administered to parents during the parent survey, asking about all focal children between ages 3 years and 17 years, 11 months. Parents were asked the same questions for all focal children, although the wording of some questions varied depending on the age group: 3-year-olds (Question F21a–y), 4- to 10-year-olds (Question F22a–y), and 11- to 17-year-olds (Question F23a–y).

  The SDQ contains 25 questions split into five sections: emotional symptoms, conduct problems, hyperactivity, peer problems, and prosocial. Each section asks a set of five descriptions related to the aforementioned section headings. The responses to the descriptions are 1 = not true, 2 = somewhat true, and 3 = certainly true. The items from each section follow.

- Emotional symptoms—
  - Often unhappy, depressed, or tearful.
  - Often complains of headaches, stomach-aches, or sickness.
  - Many worries or often seems worried.
  - *For children ages 11 to 17*: Nervous in new situations; easily loses confidence. *For children ages 3 to 10*: Nervous or clingy in new situations; easily loses confidence.
  - Many fears; easily scared.
- Conduct problems—
  - *For children ages 4 to 17*: Often lies or cheats. *For children age 3*: Often argumentative with adults.
  - Often loses temper.
  - Generally well behaved; usually does what adults request.
  - *For children ages 11 to 17*: Often fights with other youth or bullies them. *For children ages 3 to 10*: Often fights with other children or bullies them.
  - *For children ages 4 to 17*: Steals from home, school, or elsewhere. *For children age 3*: Can be spiteful to others.
- Hyperactivity—
  - Easily distracted; concentration wanders.
  - Restless, overactive; cannot stay still for long.
  - Constantly fidgeting or squirming.
  - *For children ages 4 to 17*: Thinks things out before acting. *For children age 3*: Can stop and think things out before acting.
  - *For children ages 4 to 17*: Good attention span; sees work through to the end. *For children age 3*: Good attention span; sees tasks through to the end.
- Peer problems—
  - Generally liked by other youth/children.
  - *For youth ages 11 to 17*: Would rather be alone than with other youth. *For children ages 3 to 10*: Rather solitary; prefers to play alone.
  - Has at least one good friend.
  - Picked on or bullied by other youth/children.
  - Gets along better with adults than with other children.
- Prosocial—
  - Considerate of other people's feelings.
  - *For children ages 11 to 17*: Shares readily with other youth; for example, shares books, games, and food. *For children ages 3 to 10*: Shares readily with other children; for example, shares toys, treats, and pencils.
  - Helpful if someone is hurt, upset, or feeling ill.
  - Kind to younger children.
  - Often offers to help others (parents, teachers, other children).

  The descriptions are more often worded with negative valence—"not true" = 0 points, "somewhat true" = 1 point, and "certainly true" = 2 points—such that more negative behaviors or tendencies are given more points. Some questions are worded with positive valence, however, such as "Generally liked by other children." Questions of a positive valence are scored so that "not true" is given 2 points, "somewhat true" is given 1 point, and "certainly true" is given 0 points. This scoring arrangement is such that higher scores for the Total Difficulties score indicate more negative behavior.

  Each of the five sections is given an individual score ranging from 0 to 10. Only the first four sections are included in the overall Total Difficulties score; the prosocial scale is excluded. The Total Difficulties score has a range from 0 to 40. To compute a total score, at least two-thirds (three of five) of the questions within each domain had to be answered. If one or two items were missing within a domain, the average score of those items was multiplied by 5 to impute the total score for that domain. If more than three items in any domain were missing, both the domain score and the total problems score were counted as missing. The scores were also standardized by age and gender.

Child Outcomes for Specific Age Groups

Ages 2 to 5 Years[2]

- **Preschool or Head Start enrollment.** This binary variable measures whether a child within the specified age range (2 to 5 years) was enrolled in preschool or center-based childcare at the time of the 37-month followup survey and is based on responses to Questions F10a and F11_2 on the parent survey.[3] The adult respondent was first asked about the number of different childcare arrangements or schools the child had been in for at least 10 hours a week at the time of the 37-month survey (F10a). If the child had at least one arrangement, the respondent was then asked to describe the type of care from the following list.

  – Family-based care in someone's home with other children.

  – Preschool- or center-based care.

  – Childcare provided in my home.

  If the response was preschool- or center-based care, then the indicator for preschool or Head Start enrollment was coded as yes.

- **Child care or preschool absences in past month.** This variable is treated as continuous based on responses to Question F13 for children ages 1 year, 6 months to 17 years, 11 months. Respondents were asked to report on the number of days the child missed school in the month prior to the survey (or the past month of school if the survey is conducted during the summer [F6_4]). The outcome is measured using a scale of 0 to 3: 0 = no absences, 1 = 1 to 2 absences, 2 = 3 to 5 absences, 3 = 6 or more absences.

- **Positive child care or school experiences.** This variable is based on responses to F17, in which parents assess the child's childcare or school experiences, using these ratings—

  1 = mostly positive.

  0 = both positive and negative.

  -1 = mostly negative.

- **Positive child care or preschool attitudes.** This continuous variable is constructed from responses to Question F16 in which the parent assesses the child's attitude toward school or childcare. The question is worded as follows.

  How much does your child like school/childcare? The response options were—

  1 = not at all.

  2 = not very much.

  3 = some.

  4 = pretty much.

  5 = very much.

- **Child care or preschool conduct problems.** This binary variable is based on responses to Questions F14 and F16. The outcome measures whether or not the parent reports having been contacted by the child's school or childcare provider regarding the child's conduct problems or if the child was suspended or expelled. The outcome uses the following values.

  0 = no calls to parent.

  1 = parent got reports of bad conduct or suspension/expulsion.

Ages 2 Years to 5 Years, 6 Months

- **Met developmental milestones.** This outcome is defined as scoring above the typical developmental cutoffs in all five domains of the Ages and Stages Questionnaire (ASQ-3). This binary variable indicates if the child passed all five domains in the ASQ-3 corresponding to his or her age. The study used 9 versions of the ASQ-3 for children ages 23 to 66 months. In the 20-month data collection, the ASQ-3 was collected for focal children less than 3 years, 6 months. In order to capture the same set of children at the later followup point, the outcome was collected for focal children up to age 5 years, 6 months.

The ASQ-3 is a developmental assessment for children of ages from 1 month to 5 years, 6 months. At 37 months, the study team administered the test to the parents, asking about all focal children up to age 5 years, 6 months. The test was typically administered directly after the parent survey.

The study team administered 9 versions of the test across the age groups.

- The 24-month test for focal children ages 23 months through 25 months, 15 days.
- The 27-month test for focal children ages 25 months and 16 days through 28 months, 15 days.
- The 30-month test for focal children ages 28 months and 16 days through 31 months, 15 days.
- The 33-month test for focal children ages 31 months and 16 days through 34 months, 15 days.

[2] This age group includes focal children who were ages 4 years or younger on the September 1 prior to the 37-month survey. These children had thus not reached 5 years of age (typical school age) in the school year corresponding to the 37-month survey.

[3] Although this enrollment outcome is named differently than the school enrollment outcome for children ages 5 to 17 years, the two outcomes are defined identically. For this younger group, enrollment is overwhelmingly in preschool or center-based childcare. For the older group, enrollment is overwhelmingly in school.

- The 36-month test for focal children ages 34 months and 16 days through 38 months, 30 days.
- The 42-month test for focal children ages 39 months through 44 months, 30 days.
- The 48-month test for focal children ages 45 months through 50 months, 30 days.
- The 54-month test for focal children ages 51 months through 56 months, 30 days.
- The 60-month test for focal children ages 57 months through 66 months, 30 days.

The test is structured the same for each version of the test, although the questions differ. Each test has six sections: (1) communication, (2) gross motor, (3) fine motor, (4) problemsolving, (5) personal-social, and (6) overall. The first five sections have six questions that can be answered "yes," "sometimes," or "not yet." The last section—Overall—has between 8 and 10 open-ended questions that are not included in the final score.

Each "yes" answer receives 10 points, "sometimes" answer receives 5 points, and "not yet" answer receives 0 points. The scores for each section range from 0 to 60. A raw score was calculated separately for each of the five sections. A section is scored when at least four of the six questions in the section are answered. When all six questions are answered, the scores from those six available answers are summed together. When a section has four or five answers, the missing scores are assigned a value derived from the average of the available scores, and all six scores are summed.

The ASQ-3 has national norms for scores for each domain by each age version and a raw score that can be used as a diagnostic cutoff point for the domain set at two standard deviations below the mean. Scores greater than the cutoff are considering "passing," whereas scores at or below the cutoff may indicate the potential presence of a developmental delay in that domain and can be used for making a referral for a more comprehensive assessment. The team calculated *z*-scores for each domain by subtracting the domain raw score from the national domain mean (for the appropriate age version) and dividing by the national domain standard deviation. For the outcome measure, raw scores in each domain were compared with the cutoff scores and scores above the cutoff were counted as passing. The outcome then was whether children passed all valid domains. If children were missing one of the five domains, they were still included in the outcome and were assessed on whether they passed all four nonmissing domains.

A small number (19 of 697, or 2.7 percent) of cases had discrepancies between the age of the child in our survey and the version of the ASQ-3 administered. In 15 of the 19 cases, the structure of the ASQ-3 survey allowed for imputation of scores, resulting in a final missing data rate of less than 1 percent (0.6 percent) because of age-version discrepancies (details about imputation and missing data are available on request).

Ages 3 Years, 6 Months to 7 Years

- **Verbal ability.** This outcome is measured as the nationally standardized score from the Woodcock-Johnson III (WJ III) Letter-Word Identification test.
- **Math ability.** This outcome is measured as the nationally standardized score from the WJ III Applied Problems test.

The study team administered two tests from the WJ III tests of achievement to eligible sample children ages 3 to 7 years—the Letter-Word Identification test, with 76 possible questions, and the Applied Problems test, with 63 possible questions. The interviewers began tests at Question1 regardless of age. Interviewers did not calculate final raw scores in the field because it is subject to error. The analysis team independently calculated raw scores.

For both the Letter-Word Identification and Applied Problems tests, the study team calculated raw scores based on a series of rules. First, children were allowed to refuse the test either at the beginning or during the test. Refusals were coded as missing test scores. The raw score was a sum of all the correct answers, starting at Question 1, until the child answered six consecutive questions incorrectly. Each question was weighted the same, with a value of "1" indicating a correct response and a value of "0" indicating an incorrect response.

Exhibit B-1 shows the final distribution of the number of children who completed the WJ III tests.

Exhibit B-1. Children's Completion Rates at 37 Months for WJ III Letter-Word Identification and Applied Problems Tests

WJ III Test Distribution	N	Percent
Total children completed WJ III	850	100.0
Both tests (letter-word identification and applied problems) completed	815	95.9
Only letter-word identification test completed	17	2.0
Only applied problems test completed	18	2.1

WJ III = Woodcock-Johnson III.
Source: Family Options Study Child Assessment Data

The study team entered raw scores into the WJ III Compuscore software to calculate *z*-scores that are age and gender adjusted.[4] Raw scores were entered into "Woodcock-Johnson III Test of Academic Achievement—Form A" for "Standard Battery" tests 1 and 10, where test 1 is the Letter-Word Identification test and test 10 is the Applied Problems test.

The study team exported the key information into an Excel file and entered raw scores into the WJ III Compuscore software that converts raw scores into the *z*-scores used in report analyses. Data from the Excel file were copied and pasted rather than entered manually into Compuscore to reduce data entry error. Within the Compuscore software, the following information was entered: first name, gender, study identification number and date of birth, and date of testing. On exporting data from the Compuscore software, the "Norm Basis" of age and the "Standard Set" of scores were selected for inclusion in the export, resulting in a comma-delimited file that includes, among the standard set of scores, the *z*-score of each test for each child.

- **Executive functioning (self-regulation).** This outcome is measured with the score on the Head Toes Knees Shoulders (HTKS) assessment.

HTKS is a development assessment testing inhibitory control, attention, and working memory. The study team administered this test directly to focal children ages 3 years, 6 months to 7 years, 11 months. All children were given the same test, regardless of age.

The test consists of 20 questions divided into two parts. The test began with a demonstration of the exercise in which the children were instructed to touch their toes when they were told to "touch your head" and to touch their head when told to "touch your toes," in effect doing the opposite of what they were told. After some practice and repeated reminders to make sure that the children understood the instructions, the assessment began. The first 10 questions instructed the children to "touch your head" or "touch your toes." The responses to "touch your head" would be for the child to touch his or her toes (the correct response), to motion toward touching his or her head and then correct him/herself and touch his or her toes (a self-corrected response), or to touch his or her head (the incorrect response). Each correct response received 2 points, each self-corrected response received 1 point, and each incorrect response received 0 points. If a child had 6 or more incorrect responses in the first 10 questions, the test was discontinued.

Children who answered 5 or fewer of the 10 questions incorrectly moved to the second set of 10 questions. For the second part, children were instructed to touch their knees when told to "touch your shoulders" and to touch their shoulders when told to "touch your knees." This principle of doing the opposite of what is told was the same for this part of the test—the only change was the body part touched. The children were taken through a second demonstration in which they practiced touching their knees when told to touch their shoulders and touching their shoulders when instructed to touch their knees. After practice and only one reminder, the second set of 10 questions began.

In the second set of 10 questions, children received all four instructions—touching the head when instructed to touch the toes and vice versa and touching the shoulders when instructed to touch the knees and vice versa, adding to the complexity of the test. The scoring was the same, with correct responses receiving 2 points, self-corrected responses receiving 1 point, and incorrect responses receiving 0 points.

Missing values were imputed if two-thirds of the overall questions children were administered were nonmissing. The scores assigned to these missing values were the average from the answered items multiplied by the total number of trials each child was eligible for, so that, if a child were administered 10 trials, the imputation would be the average score of the answered items times 10. Children could receive a total score of between 0 and 40 points from the 20 questions.

Ages 5 to 17 Years[5]

In this age group, the last four outcomes about school-aged children (school absences, school experiences, school attitudes, and school conduct problems) were collected from only the first 38 percent of parents surveyed due to an error in data collection. The parallel outcomes for younger, preschool-aged children were collected from all parents. Because of the discrepancy in data collection between the two age groups, these outcomes are analyzed separately by age group.

- **School enrollment.** This binary variable is based on responses to Questions F6, F8, and F9. The adult respondent was asked about enrollment of children ages 5 to 17 years in school (ages 5 to 17). If the respondent answered yes or volunteered information that the child is homeschooled or on summer/school vacation *and* the response to the child's highest grade or year of school completed was *not* that they were currently in any form of childcare or preschool (F8),

[4] Reference the WJ III technical manual for details about the *z*-score (McGrew, Shrank, and Woodcock, 2007).

[5] This age group includes focal children who were ages 5 to 17 years on the September 1st prior to the 37-month parent survey and no older than 17 years at the time of the survey. These children were thus typical school age in the school year corresponding to the 37-month survey.

then enrollment was indicated as yes. Also, if the respondent indicated that the child's highest grade or year of school that he or she ever completed was the 12th grade and the child received a high school diploma, then school enrollment was also indicated as yes.

- **School absences in past month.** This variable is treated as continuous based on responses to Question F13 for children ages 5 to 17 years. Respondents were asked to report on the number of days the child missed school in the month prior to the survey (or the past month of school if the survey is conducted during the summer [F6_4]). The outcome is measured using a scale of 0 to 3: 0 = no absences, 1 = 1 to 2 absences, 2 = 3 to 5 absences, 3 = 6 or more absences.

- **Positive school experiences.** This variable is based on responses to F17, in which parents assess the child's school experiences, using these ratings—

  1 = mostly positive.

  0 = both positive and negative.

  -1 = mostly negative.

- **Positive school attitudes.** This continuous variable is constructed from responses to Question F16 in which the parent assesses the child's attitude toward school. The question is worded as follows.

  How much does your child like school/childcare? The response options were—

  1 = not at all.

  2 = not very much.

  3 = some.

  4 = pretty much.

  5 = very much.

- **School conduct problems.** This binary variable is based on responses to Questions F14 and F16. The outcome measures whether or not the parent reports having been contacted by the child's school regarding the child's conduct problems or if the child was suspended or expelled. The outcome uses the following values.

  0 = no calls to parent.

  1 = parent got reports of bad conduct or suspension/expulsion.

Ages 8 to 17 Years

The study team collected information from children and youth ages 8 to 17 years on the child survey from which several outcome measures were constructed. The outcomes are described in this section.

- **Anxiety.** Question A1 on the child survey is used to create an indicator of anxiety. Question A1 is the A-Trait scale from the State-Trait Anxiety Inventory for Children, or STAIC (Spielberger et al., 1973). Scores range from 20 to 60, with higher scores indicating greater anxiety. The scale is proprietary, so only a partial list is shown here. Respondents reported on the frequency with which they felt several items using these response options—

  1 = hardly ever.

  2 = sometimes.

  3 = often.

  Examples of the items are—

  – I worry about making mistakes.

  – I have trouble deciding what to do.

  – I worry about things that may happen.

- **Fears.** This outcome is based on responses to Questions B1 to B33 of the child survey. Respondents reported on the extent to which they had fears using these response options.

  1 = not at all.

  2 = some.

  3 = a lot.

  Questions B1 to B33 asked about the following fears: spiders, getting sick, being robbed, having no friends, dogs, what will happen in the future, having no place to live, something bad happening to people in my family, snakes, getting bad grades, people fighting, being teased, what other people think of me, being hit by a car or truck, drug dealers, being alone, flunking school, gangs, being lost, rats, that other children/tweens will not want to play/spend time with me, police, having no place to sleep, dying, nightmares, being hungry, having no food to eat, being sent to the principal, guns, fire, losing my favorite stuff, I worry about my parents, I worry about my brothers and sisters, I worry about myself. This outcome is measured using the Fears Scale (Ramirez, Masten, and Samsa, 1991). The response scores were summed, yielding total scores ranging from 33 to 99, with higher scores indicating greater fear.

- **Substance use.** This outcome has values of 0 to 2 and is based on responses to Questions D6 to D23 on the child survey. The outcome is measured with 23 items from the Centers for Disease Control and Prevention 2011 Youth Risk Behavior Survey. This outcome measures whether the child had used tobacco, alcohol, or marijuana in the past 30 days or had ever used other substances (cocaine, inhalants, steroids—ages 8 to 17—or ecstasy, meth, heroin, controlled prescription drugs, or injected drugs—ages 13 to 17 only).

- **Goal-oriented thinking.** This outcome is measured using responses to Questions G1 to G6 on the child survey. These items are a modified version of the Children's Hope Scale (Snyder et al., 1997) which measures positive, goal-oriented thinking. Scores range from 6 to 30 with higher scores indicating greater hope. Respondents indicated how frequently they felt six items using these response options—

  1 = none of the time.

  2 = a little of the time.

  3 = a lot of the time.

  4 = most of the time.

  5 = all of the time.

  The six items were—

  1. You think you are doing pretty well.
  2. You can think of many ways to get the things in life that are most important to you.
  3. You are doing just as well as other kids your age.
  4. When you have a problem, you can come up with lots of ways to solve it.
  5. You think the things you have done in the past will help you in the future.
  6. Even when others want to quit, you know you can find ways to solve the problem.

- **School effort in past month.** This outcome is constructed from responses to Questions E4 and E5. Respondents were asked two questions about their school effort in the month before the child survey. The outcome measure ranges from 1 to 4, with higher scores indicating greater effort at school and on homework.

  Response options were—

  1 = could have done a lot better.

  2 = could have done a little better.

  3 = did about as well as you could.

  4 = did very well; could not have done better.

  The questions are worded—

  In the last month, how hard have you worked on your homework?

  In the last month, how hard have you tried to work during the school day?

- **Arrests or police involvement in past 6 months.** This binary outcome is constructed from responses from the parent to Questions F24 and F25 on the parent survey. Parents were asked whether the child had been arrested in the 6 months before the adult survey and whether the focal child had had any problems that involved the police contacting the parent in the 6 months before the adult survey.

B.5. Measures of Self-Sufficiency

The impact analysis examines effects of the four interventions on several outcomes related to self-sufficiency of sample members. These outcomes pertain to employment status (adult respondent), income sources (family), participation in education and training (adult respondent), food security (family), and economic hardship (family).

Employment status. Adult respondents reported on work activity in the week before the 37-month followup survey. If they had completed the 20-month survey, they were asked if they had worked since the month of their 20-month survey response. If they had not completed the 20-month survey, they were asked whether they had worked at any time since random assignment. Those who had worked since the 20-month survey/random assignment answered questions about the number of jobs held since the 20-month survey/random assignment and the number of months worked since the 20-month survey/random assignment. Sample members who reported having worked for pay in the week before the 37-month followup survey were asked to provide details about the number of hours worked per week and earnings at the main job. The study team used this information to construct six outcomes.

- **Work for pay in the week before the survey.** This binary variable is based on responses to Question C1. This outcome measures the percentage of survey respondents who reported working for pay in the week prior to the 37-month followup survey.
- **Any work for pay since 20-month survey.** This binary variable is based on responses to Question C2. This outcome measures the percentage of survey respondents who reported working for pay at any time since the date of their 20-month survey. It is defined only for families who responded to both 20-month and 37-month followup surveys.
- **Months worked for pay since 20-month survey (includes partial months).** This binary variable is based on responses to Question C2. This outcome is a count of the months worked since random assignment, including partial months. It is defined only for families who responded to both 20-month and 37-month followup surveys.
- **Any work for pay since random assignment.** This binary variable is based on responses to Question C2 in the 37-month survey and (for 20-month respondents) Question C2 in the 20-month survey. This outcome measures the percentage of survey respondents who reported working for pay at any time since random assignment.

- **Months worked for pay since random assignment (includes partial months).** This continuous variable is based on responses to Question C4 in the 37-month survey and (for 20-month respondents) Question C4 in the 20-month survey. This outcome is a count of the months worked since random assignment, including partial months. Respondents who reported that they had not worked since random assignment were assumed to have worked 0 months since random assignment.
- **Hours of work per week at current main job.** This continuous variable is based on responses to Question C5.[6] For adult respondents who had more than one job in the week prior to the 37-month survey, the main job is defined as the job at which she or he usually worked the most number of hours per week. For adult respondents who said they did not work in the week before the survey, the number of hours worked was assumed to be 0.

Income sources and amounts. Question C12 on the 37-month followup survey asked whether the respondent or anyone in the respondent's family received income from various sources or various types of government assistance in the past month. The study team constructed outcomes that measure the percentage of families who reported receiving income from each of the following sources in the month prior to the survey.

- Earnings.
- Temporary Assistance for Needy Families (TANF).
- Social Security Disability Insurance (SSDI).
- Supplemental Security Income (SSI).
- Supplemental Nutrition Assistance Program (SNAP).
- Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

The study team also constructed two other outcomes related to income.

- **Annualized earnings from the main job.** This continuous variable is based on responses to Questions C6 through C11 about wages paid at the main job. The outcome measures the annualized value of current earnings from the main job reported at the time of the 37-month survey. This value usually represents either the product of the reported hourly wage and usual hours per week multiplied by 52 weeks or the reported usual weekly earnings multiplied by 52 weeks. By construction, the measure ignores any seasonality in earnings. For adult respondents who said they did not work in the week before the survey, the annualized earnings are assumed to be 0.
- **Total family income.** Adult respondents were asked in Questions C13 through C19 to estimate total annual income for the family from all sources for the most recently completed calendar year preceding the 37-month followup survey (2013 for all respondents). The study team used responses to these questions to construct a continuous outcome variable measuring total annual family income for the family.

Education and training. The study team used the adult survey to construct five outcomes pertaining to participation in education and training activities during the followup period. Adult respondents indicated whether they had participated in any education or training activities since random assignment, and, if so, how many weeks they spent in such programs. For up to six programs reported, sample members reported on the type of program, using the following response options.

1 = regular high school, directed to high school (HS) diploma.

2 = preparation for a general educational development (GED) exam.

3 = 2-year college directed toward a degree.

4 = 4-year college directed toward a degree.

5 = graduate courses.

6 = college courses not directed toward a degree.

7 = vocational education outside a college (business or technical schools, employer or union-provided training, or military training in vocational but not military skills).

8 = nonvocational adult education not directed toward a degree (basic education, literacy training, English as a second language).

9 = job search assistance, job finding, orientation to the world of work.

The study team used this information to construct the following education and training outcomes.

- **Participated in any school or training lasting 2 weeks or more since random assignment.** This binary variable is constructed from responses to Question C24. This outcome measures the percentage of families in whom the adult respondent reported having participated in any type of school or training lasting 2 or more weeks since random assignment.
- **Number of weeks in school or training programs since random assignment.** This continuous variable is based on responses to Question C27.

[6] If the respondent reported having more than one job, the interviewers instructed the respondent to provide the number of hours worked at the main job. The main job was defined as the job at which the respondent usually worked the most number of hours per week.

- **Participated in 2 weeks or more of school since random assignment.** This binary variable is based on responses to Question C26. School or academic training is defined as regular high school directed toward a high school diploma, preparation for a GED exam, 2-year college, 4-year college, or graduate courses.
- **Participated in 2 weeks or more of basic education since random assignment.** This binary variable is constructed from responses to Question C26. Basic education is defined as nonvocational adult education such as basic education, literacy training, or English as a second language) not directed toward a degree.
- **Participated in 2 weeks or more of vocational education or training since random assignment.** This binary variable is constructed from responses to Question C26. Vocational education or training is defined as vocational education outside a college such as business or technical schools, employer- or union-provided training, or military training in vocational skills (not military skills).

Food security. The study team collected information about food security on the adult survey in Questions C28 through C32.

C28a. The first statement is "We couldn't afford to eat balanced meals." Was that often, sometimes, or never true for you in the last 30 days?

C28b. The second statement is: "The food that I bought just didn't last, and I didn't have money to get any more." Was that often, sometimes, or never true for you in the last 30 days?

C29. In the past 30 days, did you or other adults in your household ever cut the size of your meals or skip meals because there wasn't enough money for food? (Yes/No)

C30. In the last 30 days, did you ever eat less than you felt you should because there wasn't enough money to buy food? (Yes/No)

C31. In the last 30 days, were you ever hungry but didn't eat because you couldn't afford enough food? (Yes/No)

C32. In the last 30 days, did you or other adults in your household ever not eat for a whole day because there wasn't enough money for food? (Yes/No)

These six items are the same six items that were asked in the followup survey of the *Effects of Housing Vouchers on Welfare Families* study (Mills et al., 2006). Five of these six items are included in the U.S. Department of Agriculture (USDA) "short form" measure of food security.[7] Item C32 is included in the 18-item U.S. Household Food Security Survey Module, but not in the "short-form" measure. The excluded item from the "short-form" measure is an item that would be asked after C29: "In the last 30 days, how many days did this happen?" (__ days).

Items C30 and C31 were asked only of family heads if the response to item C29 was "Yes." If a family head responded "No" to item C29, responses of "No" were imputed for items C30 and C31 for the purposes of creating food security items (and so were not considered missing).

Household is food insecure. The first outcome is a binary variable that equals 1 if a household was "food insecure" according to criteria used by the USDA. Survey respondents were asked a series of questions used by USDA and the U.S. Census Bureau to measure food security. Two or more affirmative answers to these questions meant that a household was considered "insecure" at the time of the followup survey. (Responses to C28a and C28b of either "often true" or "sometimes true" were considered affirmative answers.)

Food insecurity scale. This outcome measures the food insecurity level of each family based on responses to the USDA food security questions included on the followup survey. The outcome was defined as the total number of affirmative answers to the six items. The food insecurity scale ranges from 0 to 6, with higher values indicating greater food insecurity.

Economic stress. The study team also measured the economic hardship reported by each family at the time of the 37-month followup survey on a measure derived from Pearlin and Schooler (1978). Questions 33a through 33d asked the adult respondents to report on the frequency with which the family experienced four items related to economic hardship in the 6 months before the survey. The response options were (1 = never; 2 = once in a while; 3 = fairly often; and 4 = very often). The question was worded as follows.

How often does it happen that you do not have enough money to afford—

- The kind of medical care your family should have?
- The kind of clothing your family should have?
- The leisure activities your family wants?
- Your rent?

[7] See Nord, Andrews, and Carlsen (2005). Our assessment of food insecurity is based on two USDA "short form" metrics, which are scores assigned to households based on answers to six survey questions.

Question C34 asked how the family's finances usually work out at the end of the month, with these possibly response codes—

1 = some money left over.

2 = just enough money to make ends meet.

3 = not enough money to make ends meet.

For both questions, higher values indicate higher economic stress. The economic stress outcome is calculated for cases in which four of the five items (Question 33a through 33d and Question 34) are nonmissing. For Questions 33a through 33d, the responses were recoded into a scale ranging from less economically stressed to more economically stressed where 1 = -1, 2 = -0.33, 3 = 0.33, 4 = 1. For Question 24, responses were recoded as 1 = -1, 2 = 0, 3 = 1. The nonmissing recoded responses were then averaged. The economic stress scale ranges from -1 to 1, with higher values indicating higher economic stress. The outcome, expressed as an economic stress scale, measures the extent of hardship using the responses about the frequency with which the family said they experienced an inability to afford medical care the family needed, clothing the family needed, leisure activities the family wanted, or rent. The economic stress scale also takes into account the adult respondent's assessment of the family's monthly finances; that is, whether they usually have some money left over at the end of the month, barely enough to make ends meet, or not enough to make ends meet.

B.6. Measures of Earnings and Employment From NDNH Data

The study team defined various earnings and employment outcomes using data from the National Directory of New Hires (NDNH). This section provides details of the steps required to clean and prepare the data for analysis and the definition of outcomes generated from the NDNH data.

Data Cleaning and Processing

Prior to creating the final outcomes, the study team undertook a variety of cleaning and other data preparation steps. OSCE provided HUD with four extracts (pulled from the NDNH database June 2015, October 2015, January 2016, and March 2016) of de-identified quarterly wage records. The extracts contain indicators for person, state, quarter, and firm, as well as the date when OCSE processed the record.[8] We found several instances of multiple records for a given person, at the same firm, in a single state and quarter in the same extract. In these cases, we used only the record with the most recent processed date, under the assumption that more recent data would have the most recently updated information.[9] After removing these duplicate records, the study team aggregated records in each extract to the person, state, and quarter level. We then merged the data in the extracts together to create a single file at the person, state, and quarter level. When quarters overlapped, we kept data in the most recent extract (again, under the assumption that more recent data would have more recently updated information). Finally, we summed across state to produce a file at the person-quarter level.

At this point, we implemented various data cleaning rules. We observed a handful of records with quarterly earnings greater than $25,000. Based on the study sample of homeless families, the study team decided that such observations likely do not represent actual wages, but instead are the result of data entry errors. As a result, quarterly earnings greater than $25,000 were recoded to missing values and excluded from analysis. On the other side of the wage scale, the study team observed a number of very low quarterly earnings. The team reasoned that earnings below some minimum threshold likely do not reflect meaningful employment, but rather a one-time payment or other data anomaly. We selected a minimum threshold of $58 (equal to the earnings a worker would receive by working a single 8-hour day at the federal minimum wage of $7.25/hour), and recoded earnings below this threshold to $0.

Any individuals without a record in the aggregate person-quarter file was deemed to have zero earnings for that quarter. We adjusted wages to constant 2015Q3 dollars according to the Consumer Price Index for All Urban Consumers, or CPI-U, produced by the U.S. Bureau of Labor Statistics. Finally, we considered an individual to be "employed" in a given quarter if they have positive earnings in that quarter (after all the adjustments to earnings described in this section).

Defining Outcomes

We defined outcomes using reference periods based on time since random assignment (rather than on calendar time). Because participants in the Family Options Study were randomly assigned between 2010Q3 and 2012Q1, different families have different intervals relative to random assignment of collected data. For the earliest enrolled families, data are available in quarters 11 to 20 after random assignment (using the convention that the calendar quarter in which random assignment took place is quarter "0"). For the latest enrolled families, data are available in quarters 5 to 14 after random assignment.

[8] Firms were identified with a randomly generated numeric code. This code allowed the study team to understand when different records contained information from the same employer.

[9] Some records were missing a firm code. Because we could not be certain whether these records had been updated by a more recent record (through match on person, firm, state, and quarter), these records were always kept.

The study team decided to define outcomes for the sample for the entire period 11 to 14 quarters after random assignment (rather than defining outcomes for each quarter). This interval provides for complete data for the entire sample, and contains exactly four quarters of observations to smooth out seasonal effects. Three outcomes were defined.

1. **Earnings in quarters 11 to 14 after RA (2015Q3$).** This outcome is the sum of quarterly earnings during the 11th to 14th quarters after the quarter of random assignment. Amounts are in 2015, Quarter 3 dollars.
2. **Any employment in quarters 11 to 14 after RA.** This outcome indicates whether the individual was employed (that is, had positive earnings) in any of the four quarters in the period.
3. **Number of quarters employed in quarters 11 to 14 after RA.** This outcome measures the number of quarters in the period in which the individual was employed (this outcome could have a value of 0 to 4).

Impacts were estimated for six comparisons: SUB versus UC, CBRR versus UC, PBTH versus UC, SUB versus CBRR, SUB versus PBTH, and CBRR versus PBTH. Due to limitations designed to protect the confidentiality of NDNH data, the study team used only indicators for the site randomization ratio as a covariate for estimating impacts.

B.7. Measures of Formal Child Separations From Child Welfare Agency Records

The study collected child welfare agency records for families in five sites. The coverage periods for these data go through November or December of 2014. To determine the length of the followup period for each site, the study team used the minimum followup duration in each site, which was the date of the last random assignment until the end of the coverage period. A followup end date was then calculated for each family head by adding the length of the followup period to their date of random assignment. For example, the followup period for a family randomly assigned on January 1, 2011 in Baltimore would end on December 6, 2013—1070 days (or 35 months) after random assignment.[10]

The notion of an out-of-home spell is a key construct in the child welfare literature used to measure the length of time a child is separated from his or her parent. It begins with the day the child is removed from his or her parent and ends when the child returns to the parent's custody, is placed with a permanent caregiver through legal guardianship or adoption, reaches the age of majority, or some other permanent living arrangement. Defined as a continuous period a child is under the care of the child welfare agency, one spell can include multiple out-of-home placements. Additionally, a child who subsequently reenters out-of-home care after exiting out-of-home care will have multiple spells.

The definition of an out-of-home spell in the Family Options Study differs somewhat from the definition commonly found in the literature. Although entrance to the spell is the same, in the study definition, spells end only when a child is reunified with his or her family or when the child reaches his or her 18th birthday. The spell does not end when the child leaves out-of-home care because of adoption or guardianship. Using this spell definition and consistent followup periods within site, we defined two outcomes for the family head based on the child welfare agency data.

1. **Had a formal child separation that began after random assignment.** This outcome indicates whether the head has any child separation in the administrative data that begins after random assignment during the site-specific followup period. It does not include separations that began prior to random assignment.
2. **Total days during followup separated from at least one child.** This outcome measures the total number of days during the site-specific followup period when the family head was separated from at least one child, as measured in the administrative data. This measure includes all formal separations started either before or after random assignment.

B.8. Program Use Outcomes

The study team used the Program Usage Data to create the outcomes reported in the report's program use exhibits. The study team created each type of program use outcome for each of seven program types: (1) permanent housing subsidies offered to the SUB group, (2) rapid re-housing rental assistance, (3) transitional housing, (4) permanent supportive housing (PSH), (5) public housing, (6) project-based vouchers/Section 8 projects, and (7) emergency shelter.

- **Ever used a particular program type.** These series of binary variables were coded as 1 if any monthly binary indicator from the calendar month of random assignment to the calendar month of the 37-month followup survey response indicated use of the program type.

[10] The followup periods are Alameda County=1,075 days, Baltimore=1,071 days, Kansas City=1,069 days, Minneapolis=1,046 days, and Phoenix=1,123 days.

- **Used a particular program type in the survey month.** These series of binary variables were coded as 1 if the monthly binary indicator from the calendar month of the 37-month followup survey response indicated use of the program type.
- **Number of months of use of a particular program type.** These continuous variables were defined using assumptions about how families use the various homeless and housing programs. Because the monthly indicator variables in the Program Usage Data are coded as 1 if a particular program was used *at least 1 night* of a particular calendar month, simply counting the number indicator variables equal to 1 would systematically inflate measures of program use. The study team assumed—
  - Entry to all program types could happen at any time during the month.
  - Exits from transitional housing and PSH could happen at any time during the month.
  - Exits from SUB, CBRR, public housing, and project-based vouchers/Section 8 projects always happened at the end of the month, because assistance is provided in monthly increments.

These assumptions were developed and confirmed with practitioners in the field. In addition, the study team assumed all stays in the followup survey month (for all program types) extended to the end of the month, because the end of the observation "window" was an artifact of data collection. A single "stay" of a program type was identified in the data by month indicators before and after a stay with no use of that particular program type. Using these assumptions as a basis for correcting counts meant—

For stays longer than 1 month—

- Subtracting 1 month from counts of calendar months for emergency shelter, transitional housing, and PSH stays.
- Subtracting 1/2 month for stays in SUB, CBRR, public housing, and project-based vouchers/Section 8 projects.

For stays that lasted a single calendar month—

- Stays for transitional housing, and PSH were shortened to 1/4 month (1/4 month is the expected length assuming that entry and exit are equally likely at any point in the month).
- Stays for SUB, CBRR, public housing, and project-based vouchers/Section 8 projects were shortened to 1/2 month (1/2 month is the expected length assuming that entry is equally likely at any point in the month and that exit occurs at the end of the month).

In the Program Usage Data prepared for the *Short-Term Impacts* report, emergency shelter stays were processed using the same assumptions as transitional housing and PSH. In the new Program Usage Data prepared for this report, durations in emergency shelter are based on entry and exit dates in the source data for emergency shelter (92 percent of which was from HMIS records), rather than on adjusted counts of monthly dummy variables for emergency shelter use. Durations in days are converted into durations in months by multiplying day durations by (12/365). Therefore, the measures of numbers of months of emergency shelter use in this report are prepared in a different manner than the duration measures for all other program types. As emergency shelter is the program type most likely to have stays of less than a month, it is the program type where the method of adjusted counts of monthly dummy variables is most likely to be biased upward (when a family has short stays in shelter in consecutive months). Given the high monthly costs of emergency shelter, basing emergency shelter durations on actual entry and exit dates is particularly important to guard against upward bias in program cost estimates.

Appendix E shows impact estimates for additional program use outcomes. The outcomes that measure any use of a particular program type (or types) during months 0 to 32 or months 7 to 32 are coded as 1 if any monthly binary indicator during the relevant time period indicated use of the program type (or types). The outcomes that measure number of months of emergency shelter or transitional housing during months 0 to 32, number of months of emergency shelter during months 0 to 32, and number of months of transitional housing during months 0 to 32 are created in a nearly identical manner to the number of months outcomes described previously. The only difference is how transitional housing stays that include the 32nd month after random assignment are counted. If the 33rd month indicator showed use of the transitional housing, then it was assumed that the transitional housing stay continued through the end of the 32nd month. If the 33rd month indicator showed no use of transitional housing, then it was assumed that the stay ended at some point during the month. For transitional housing stays of more than 1 month that included the 32nd month, either a full month in the 32nd month was counted (if the stay continued to the 33rd month) or 1/2 month in the 32nd month was counted (if the stay did not continue to the 33rd month). For single-calendar-month transitional housing stays in the 32nd month, either 1/2 month in the 32nd month was counted (if the stay continued to the 33rd month) or 1/4 month in the 32nd month was counted (if the stay did not continue to the 33rd month). The durations in emergency shelter stays are measured with entry and exit dates in the source data.

Appendix I shows impacts on the length of the baseline stay in emergency shelter (for families with a baseline stay in the

Program Usage Data). These lengths of stay begin at random assignment and are based on exit dates in the source data, rather than on adjusted counts of monthly dummy variables. This outcome construction differs from that used in the *Short-Term Impacts* report, when the length of baseline stay in emergency shelter was based on adjusted counts of monthly dummy variables.

APPENDIX C.
ANALYSIS METHODS

This appendix provides details about the impact estimation used in the report, including covariates used in the impact models, imputation of missing data, family/adult weights, child weights, and the multiple comparisons adjustment for confirmatory hypothesis tests.

C.1. Methodology

This report presents separate impact estimates for each of the 6 pairwise comparisons of a single assignment group to another assignment group, plus 4 additional comparisons of pooled assignment groups to a single assignment group (see Exhibit 1-1 and Chapters 3 through 6). The four assignment groups are (1) SUB, in which families have priority access to a permanent housing subsidy; (2) CBRR, in which families have priority access to community-based rapid re-housing; (3) PBTH, in which families have priority access to project-based transitional housing; or (4) UC, in which families do not have priority access to any particular program. All 10 comparisons have been analyzed separately using the same basic estimation model.

Pooled Comparisons

- What is impact of having priority access to any kind of housing subsidy for homeless families (SUB + CBRR + PBTH) compared with the impact of usual care (UC)?
- What is the impact of having priority access to a housing subsidy with heavy services on homeless families (PBTH) compared with the impact of having priority access to a housing subsidy with light or no services (SUB + CBRR)?
- What is the impact of having priority access to interventions that are more costly (PBTH + SUB) compared with the impact assignment to a group that offers a less-costly intervention (CBRR)?
- What is the impact of having priority access to a housing subsidy with no time limit (SUB) compared with the impact of having priority access to interventions that offer a time-limited housing subsidy (PBTH + CBRR)?

The explanation of the estimation model begins with some terminology that describes how random assignment was implemented in this study. Enrollment and random assignment was a multistep process. The PBTH, CBRR, and (in some sites) SUB interventions had multiple service providers in each site. Before random assignment, the number of slots currently available at all providers for each of the interventions was assessed. An intervention was deemed *available* if at least one slot at one provider of that intervention in the site was currently available. After an intervention was determined to be available, the interviewer asked the family a series of questions to assess provider-specific eligibility for the available interventions and programs. A family was considered *eligible* for a particular intervention if the household head's responses to the eligibility questions showed that the family met the eligibility requirements for at least one provider of that intervention that currently had an available slot. For example, some programs required that families have a source of income that would allow for them to pay rent on their own within a designated period of time. The study team thus asked families if they wanted to be considered for programs with such an income requirement. Other programs required families to pay a monthly program fee, and the screening question asked if families wanted to be considered for programs with this type of requirement.

Other programs required participants to demonstrate sobriety, pass criminal background checks, or agree to participate in case management or other services. The study team asked screening questions for these questions that ascertained families' willingness to be considered for programs with these requirements.

To undergo random assignment, a family needed to be eligible for at least one available intervention in addition to UC.[1] Based on this approach to random assignment, each family has a *randomization set*.

[1] Altogether, 183 of the screened families were not eligible for any available interventions besides UC. These families were not enrolled in the study.

The set of interventions to which it was possible for a family to be assigned was determined by considering both the availability of the intervention *and* the assessed eligibility of the family. In the study, each family has one of seven possible randomization sets. These sets are {PBTH, SUB, CBRR, UC}, {PBTH, SUB, UC}, {PBTH, CBRR, UC}, {SUB, CBRR, UC}, {PBTH, UC}, {SUB, UC}, and {CBRR, UC}.

The randomization set of each family determines the pairwise comparisons in which the family is included. A family is included in the pairwise comparisons of its assigned intervention with the other interventions in its randomization set. For example, families assigned to the PBTH intervention with randomization set {PBTH, SUB, UC} are included in these two pairwise comparisons: PBTH versus UC; and SUB versus PBTH.

Impact Estimation Model for Family and Adult Outcomes

For each pairwise comparison, the study team estimated impacts for the sample of families who (1) had both interventions in their randomization set and (2) were randomly assigned to one of the two interventions. The team used multivariate regression to increase the precision of our impact estimates and to adjust for any chance imbalances between assignment groups on background characteristics (Orr, 1999).

Consider two interventions q and r (for example, PBTH versus SUB), where the second option (r) is treated as the base case. Then, the impact on an outcome Y (for example, at least 1 night homeless or doubled up during past 6 months, working for pay in week before survey, or adult psychological distress) of intervention q relative to intervention r is estimated through Equation 1 for those families who had both options q and r as possible assignments, and were assigned to one of them. The estimation equation was—

$$(1)\ Y_i = \alpha_{q,r} + T_{q,i}\delta_{q,r} + X_i\beta_{q,r} + \sum_{k=1}^{13} I_{k,i}\phi_{q,r,k} + e_i,$$

where

Y_i = outcome Y for family i,

$T_{q,i}$ = indicator variable that equals 1 if family i was assigned to intervention q,

$\delta_{q,r}$ = average impact of being assigned to intervention q relative to being assigned to intervention r,

X_i = a vector of background characteristics[2] of family i,

$I_{k,i}$ = indicator variable for "site-RA regime"[3] k for family i,

e_i = residual for family i (assumed mean-zero and i.i.d. [independently and identically distributed]),

$\alpha_{q,r}$ = a constant term, and

$\beta_{q,r}$ = other regression coefficients.

The estimate of the impact parameter $\delta_{q,r}$ is the *intention-to-treat*, or ITT, estimate. For the pairwise comparisons, it is an estimate of the average effect of being offered intervention q rather than intervention r. The average effect is taken over all families in the q,r comparison, regardless of whether families actually participated in the intervention to which they were assigned.

This model assumes that the true impact of intervention q relative to intervention r is homogeneous across sites. The impact parameter is thus implicitly a weighted average of the point estimates of site-level impacts, with each site-level impact weighted by the number of families in the site.

A slight modification of this model is used to estimate impacts in the pooled comparisons. In that modification, additional site-RA regime covariates are included, and q represents being offered one of two or three interventions rather than a single intervention.

Standard Errors

The model described previously was estimated using weighted least squares, or WLS, and heteroskedasticity-consistent standard errors, also known as robust standard errors (that is, Huber-Eicker-White robust standard errors; see Greene, 2003; Huber, 1967; and White 1980, 1984). Heteroskedastic residuals would arise if some types of families have higher variability in their outcomes (even conditional on covariates) than other families or if the different interventions themselves influence this variability. Furthermore, this study uses the linear probability model for binary outcomes, rather than a logit or probit model, because of the ease of interpretation of least squares parameter estimates. The linear probability model, however, induces heteroskedasticity (Angrist and Pischke, 2008). To address this potential heteroskedasticity, robust standard errors were estimated and used in tests of statistical significance. These standard errors are appropriate for making

[2] These background characteristics are listed in Appendix C.

[3] Of the 12 sites, 10 had a single random assignment regime during the 15-month study enrollment period. The remaining 2 sites changed random assignment probabilities a single time each, creating 14 site-RA regime groups. The equation includes 13 indicator variables and omits 1. These indicator variables are included so that the impact estimate is based on within-site comparisons.

inferences about intervention effects for the sites in this study. The standard errors do not take into account variability in site-level effects, however, and so are not appropriate for generalizing results to other sites.

Adult Survey Nonresponse Weights

The adult survey achieved a 78-percent response rate at the 37-month followup. Nonresponse raises two concerns. First, nonresponse to a followup survey used to measure outcomes presents a challenge to the internal validity of the study if the intervention groups (that is, PBTH, SUB, CBRR, and UC) have different patterns of nonresponse.

Second, followup survey nonresponse can threaten the generalizability of results to the entire enrolled sample if survey nonrespondents differ from respondents, even if they do so *symmetrically* across randomization arms. To address both of these issues, the analysis team prepared a set of weights based on family characteristics measured in the baseline survey that attempt to adjust for adult survey nonresponse for each pairwise comparison.[4] The weights were used in estimating impacts on all family and adult outcomes.

Impact Estimation Model for Child Well-Being Outcomes

The estimation model for impacts on child well-being outcomes differs from the model described previously in two respects. First, the standard errors are modified to accommodate the fact that some child well-being impact regressions include two children from the same family. To allow for correlation between impacts on children in the same family, the model estimates the robust standard errors clustered within family. Second, to address the process by which individual child observations came to be included in impact regressions, the weighting strategy includes more steps. The child weights are the product of three components.

1. The adult survey nonresponse weight.
2. The inverse probability of being selected as a focal child.
3. A child nonresponse (to child assessment or child survey) weight (conditional on the parent being an adult survey respondent).

The aim of the analysis is to represent equally all children in all study families. Therefore, the focal children from families with more children receive more weight in the analysis of child well-being than the focal children from families with fewer children.

Impact Estimation Model for Moderator Analysis

The moderator analysis presented in Chapter 8 presents evidence on whether the study interventions are more effective for families with different levels of psychosocial needs or housing barriers. The estimation model for the moderator analysis is—

$$(2)\quad Y_i = \alpha_{q,r} + T_{q,i}\delta_{q,r} + M_i\gamma_{q,r} + \left(T_{q,i} \times M_i\right)\pi_{q,r} + X_i\beta_{q,r} + \sum_{k=1}^{13} I_{k,i}\phi_{q,r,k} + e_i,$$

where all terms appearing in Equation 1 have the same definition,

M_i = potential moderator index variable (either psychosocial challenges or housing barriers) for family i,

$\pi_{q,r}$ = change in impact of being assigned to intervention q relative to being assigned to intervention r associated with a one-unit change in M index, and

$\gamma_{q,r}$ = other regression coefficient.

The potential moderator index variable, M, is entered in the model both alone and interacted with treatment, T.

The test of statistical significance of the $\pi_{q,r}$ coefficient serves as the test for whether impacts differ significantly according to the M index. Standard errors and weights for family, adult, and child outcomes are the same as in the main impact estimation.

C.2. Covariates

Covariates in the impact models improved the precision of the estimates. Because individuals were randomly assigned to control and treatment groups, the addition of these covariates does not affect the expected value of the estimate. All covariates had to be characteristics that were known (or determined) before randomization. In selecting covariates, the study team considered (1) the importance of the variable in predicting the outcomes of interest, (2) the extent of variation on the variable for the sample, and (3) the completeness of the data.

A full set of covariates measured in the baseline survey was included in the impact models for housing stability, adult well-being, and self-sufficiency outcomes. Because of smaller sample sizes, more-limited sets of covariates were included in the impact models for family preservation and child outcomes. The superscript "a" indicates those covariates included in the impact model for family preservation outcomes. The superscript "b" indicates those covariates included in the impact model for child outcomes.

[4] The construction of weights to address survey nonresponse is discussed in Little (1986).

Continuous Variables

- Age of family head at baseline (linear), age squared (quadratic).
- Number of children with family in shelter.
- Annualized current earnings.
- Family income (linear categories: ≥ $0 to < $5,000; $5,000 to < $10,000; $10,000 to < $15,000; $15,000 to < $20,000; $20,000 to < $25,000; ≥ $25,000; and income categories squared).
- Total years stayed with family or friends because of economic necessity in past 5 years as an adult.
- Total years previously homeless in your life before entering the current shelter.

Binary Variables

- Race/ethnicity (categories: White; Black or African-American; Asian, Native Hawaiian, or other Pacific Islander; Hispanic or Latino; other).
- Gender.
- Marital status (categories: divorced; married; single/never married; widowed).
- Children of a certain age group (categories: family has a child younger than age 1; family has a child between age 1 and 5 years; family has a child between age 13 and 17 years).
- Children not with family in shelter at baseline (categories: any child; two or more children).
- Number of children with family in shelter (categories: one child; two children; three children; four or more children).
- Have a spouse or partner that is with the family in shelter at baseline.
- Have a spouse or partner that is not with the family in shelter at baseline.
- Pregnant at baseline.
- Any health problems (has self-reported poor health; has diabetes; has anemia; has high blood pressure; has heart disease; had a stroke; has hepatitis/liver problems; has arthritis, rheumatism, joint problems; has chest infection, cold, cough, bronchitis; has pneumonia; has tuberculosis; has cancer; has problems walking, a lost limb, or other mobility impairment; has gonorrhea, syphilis, herpes, chlamydia, other sexually transmitted diseases; is HIV (Human Immunodeficiency Virus) positive; has AIDS (Acquired Immune Deficiency Syndrome); uses drugs intravenously; has other medical condition).
- Severe psychological distress at baseline.
- Post-traumatic stress disorder (PTSD) symptoms at baseline.
- A child family member has a disability or an adult family member has a disability that limits or prevents work for pay.
- Family head has a disability that limits or prevents working for pay.
- Substance abuse problems (drug or alcohol).
- Highest level of education (categories: less than a high school diploma; high school diploma; more than a high school diploma or general educational development).
- Working for pay at baseline.
- Ever worked for pay.
- Unemployment (categories: no work in the past 6 months; no work in the past 24 months).
- Receipt of various types of public assistance at baseline (categories: any health insurance—Medicaid, state health insurance, State Children's Health Insurance Program; Supplemental Nutrition Assistance Program, or SNAP; Supplemental Security Income (SSI) or Social Security Disability Income (SSDI); Temporary Assistance for Needy Families, or TANF; unemployment insurance; Special Supplemental Nutrition Program for Women, Infants, and Children).
- Family income is under $5,000.
- Owned or rented own house or apartment before entering shelter.
- Number of months since family had a regular place to stay and months squared.
- Previously stayed with family or friends because of economic necessity.
- Previously experienced homelessness.
- Past evictions, lease violations, or problems with a landlord.
- Ever convicted of a felony.
- Ever been in foster care as a child (foster home, group home, or any other kind of institution).
- Ever homeless as a child.
- Ever experienced intimate partner violence in adulthood.

- Ineligible families (categories: 1 to 7, indicating the family was not eligible for an available treatment group).
- Site location × random assignment regime interaction terms (categories: Alameda County; Atlanta; Baltimore; Boston; Connecticut; Denver; Honolulu; Kansas City; Louisville-1; Louisville-2; Minneapolis; Phoenix; Salt Lake City-1; Salt Lake City-2).

Binary Variables for Child Outcomes Only

- Focal child age.
- Focal child gender.

Additional Covariates for Pooled Comparisons and Selected Outcomes

In addition to including these sets of covariates, the impact models for the pooled comparisons (SUB + CBRR + PBTH versus UC, SUB + CBRR versus PBTH, SUB + PBTH versus CBRR, and CBRR + PBTH versus SUB) included interaction terms between site/random assignment regime and randomization set (to correctly control for differing random assignment ratios across sites and assignment groups).

Finally, a few outcomes included one or two additional covariates to control for closely related baseline variables (when these baseline variables were not already included in the main covariate set).

- Outcome: anyone in family had earnings in past month; extra covariate: anyone in family had earnings at baseline.
- Outcomes: anyone in family received SSI in past month, anyone in family received SSDI in past month; extra covariate: anyone in family received SSI at baseline.
- Outcome: adult health in past 30 days was poor or fair; extra covariates: adult health in past 30 days was poor, adult health in past 30 days was fair.
- Outcomes: alcohol dependence or drug abuse, alcohol dependence, drug abuse; extra covariates: drug abuse at baseline, behavioral health problem at baseline.
- Outcomes: goal-oriented thinking, psychological distress, PTSD symptoms in past 30 days; extra covariate: behavioral health problem at baseline.

C.3. Missing Data and Imputations

Although respondents were asked to complete all questions from the baseline survey, some data in the Family Options Study remained missing. Overall, most covariates used in the imputation models had no missing data. Only eight of the covariates had more than 1 percent missing data and no covariates had more than 5 percent missing. To account for missing data on covariates, the study team used a single stochastic imputation using SAS's PROC MI to impute missing covariate values.[5] This method assigns values to missing variables using a regression model that predicts the value of the missing variable based on other characteristics of the sample member and the responses of other study participants who are similar. The characteristics used in the imputation include all covariates used in the impact model.

C.4. Family/Adult Weights

The study achieved a 78.2-percent response rate for the 37-month followup survey. Nonresponse raises two concerns. First, nonresponse to a followup survey used to measure outcomes presents a challenge to the internal validity of the study if the intervention groups (that is, SUB, CBRR, PBTH, and UC) have different patterns of nonresponse. Second, followup survey nonresponse can threaten the generalizability of results to the entire enrolled sample if survey nonrespondents differ from respondents, even if they do so *symmetrically* across randomization arms. Appendix D provides analysis of nonresponse to the 37-month followup survey.

To address both of these issues, the study team prepared 10 sets of weights that adjusted for adult survey nonresponse to the 37-month survey—1 set for each pairwise and pooled comparison.[6] The weights were used in the impact regressions for the outcomes in this report that are defined at the family level and at the adult respondent level. These weights were constructed by, (1) for each intervention group within a pairwise comparison (or each side of a pooled comparison), separately regressing a dummy variable for survey response on the same baseline characteristics included in the impact model and using the results to generate a propensity to respond for each family;[7] (2) for each intervention group within a pairwise comparison (or each side of a pooled comparison), dividing each group into

[5] Single stochastic imputation adds a random error term to every imputed value so that the data do not have artificially low variability. This varying component is randomly drawn from a distribution with the same variance as the observed values.

[6] The construction of weights to address survey nonresponse is discussed in Little (1986).

[7] The purpose of the nonresponse regressions was purely predictive, rather than inferential, which implied that the number of covariates in the model was not of concern (as it was in the impact regressions). Thus, rather than using single stochastic imputation to address missing covariate values for the nonresponse regressions, all missing values were imputed as the value "0". Then, in addition to the impact model baseline covariates, the regression models also included dummy variables that indicated when values for covariates were missing.

quintiles based on its modeled propensity; (3) within each intervention group-quintile, the total number of sample families in the quintile divided by the number of respondent families in the quintile calculated the weights for respondents. This last step raises the representation of respondent families to the level of the full sample in the weighted data, thereby restoring the composition of the analysis data to that of the full sample on the factors used to estimate propensities to respond.

C.5. Child Weights

The study team prepared 50 sets of weights to be used for estimating impacts on child outcomes in the 37-month data—5 sets for each of the 10 pairwise and pooled comparisons. The 5 sets of weights correspond to the 5 types of data used to construct child outcomes.

1. Parent-report survey data (from the 37-month adult survey).
2. Ages and Stages Questionnaire (ASQ-3) data.
3. Woodcock-Johnson III (WJ III) assessment data.
4. Head Toes Knees Shoulders (HTKS) assessment data.
5. Child survey data.

The weights for the parent-reported outcomes were calculated as—

$$CWPR_{ij} = FamilyNonResponseWeight_{i} \times ChildSelectionWeight_{ij},$$

where—

$CWPR_{ij}$ = the child weight for parent-reported outcomes for child j in family i.

$FamilyNonResponseWeight_{i}$ = the family/adult nonresponse weight for family i (described in Section C.3).

$ChildSelectionWeight_{ij}$ = the inverse probability of being selected as a focal child for child j in family i. (The focal child selection process is described in Appendix A, Section A.6.)[8]

The weights for other types of outcomes were calculated as—

$$CW[data\ source]_{ij} = CWPR_{ij} \times ChildNonResponseWeight[data\ source]_{ij},$$

where—

$CW[data\ source]_{ij}$ = the child weight for [data source] (either ASQ-3, WJ III, HTKS, or child survey) for child j in family i.

$ChildNonResponseWeight[data\ source]_{ij}$ = the child nonresponse weight for [data source] for child j in family i.

The child nonresponse weights were calculated in a three-step process: (1) for each intervention group within a pairwise comparison (or each side of a pooled comparison), separately regressing a dummy variable for unit response to the questionnaire, assessment, or survey on a limited set of predictors[9] and using the results to generate a propensity to respond for each child to the particular instrument; (2) for each intervention group within a pairwise comparison (or each side of a pooled comparison), dividing the group into quintiles based on its modeled propensity; (3) within each intervention group-quintile, calculating the nonresponse weight for the respondents the *weighted* total number of focal children in the quintile divided by the *weighted* number of respondent children in the quintile, where the weights were the child selection weights (inverse probability of focal child selection). The construction of the child weights from family nonresponse weights, focal child selection weights, and child nonresponse weights implies that, for all child outcomes, the respondent samples are weighted to represent all the appropriately aged children in all study families.[10]

[8] Section A.6 notes that after two focal children were selected for a family, the focal child screening ceased. Therefore, collection of information for screening criteria other than date of birth was not performed for every child in the study families. For "nonscreened" children, the study team used other information collected in the survey about whether each child was currently living with the family to determine ex-post eligibility for selection (to calculate selection probabilities for selected children). It was assumed that children currently living with the family would be eligible for focal child selection (if age was in targeted range), and it was assumed that children not currently living with the family would be ineligible (regardless of age). The assumption of ineligibility for *unscreened* children not currently living with the family was based on the fact that most *screened* children who were not currently living with the family did not meet the extra criteria necessary for eligibility: for 89 percent of these children, the parent either did not regularly spend time with the child or was not at least somewhat familiar with the child's activities.

[9] The relatively small sample sizes for each collection instrument necessitated a smaller set of predictor variables than that used to create family/adult nonresponse weights. The predictors included: child's age, child's gender, parent respondent's age, parent respondent's gender, parent's race/ethnicity (categories: White; Black or African-American; Asian, Native Hawaiian or other Pacific Islander; Hispanic or Latino; other), children not with family in shelter at baseline (categories: any child; two or more children), children of a certain age group (categories: family has a child younger than 1 year, a child ages 1 to 5 years, a child ages 13 to 17 years), parent's substance abuse problems (drug or alcohol), parent ever convicted of a felony, family income category, family income under $5,000, number of children with the family at baseline, whether the adult respondent has a spouse or partner at baseline (either in shelter or not in shelter), parent had previously experienced homelessness, parent working for pay at baseline, and site location × random assignment regime interaction terms.

[10] An implicit assumption in this weighting method is that, within an adult survey response propensity quintile, the distribution of numbers and ages of children in the families who did not respond at all to the 37-month adult survey is the same as that of the families who did respond to the 37-month adult survey.

C.6. Partial Paired *t*-Test for Differences in Means Between Followup Waves

Chapter 2 presents statistical tests for a few outcomes for differences between the 20-month mean UC group value and the 37-month mean UC group value. Because the respondent samples at the two followup waves are not identical, the appropriate statistical test is the partial paired t-test, where "partial" refers to the partially overlapping samples for the two means.[11] The variance of the difference between the two sample means is—

Let $\bar{x}_1$ denote the estimated mean from the first sample of size n_1. Let $\bar{x}_2$ denote the proportion from the second sample of size n_2. We are interested in testing the difference between the two sample means. We can write the estimated variance of the difference between the two sample mean as

$$v(\bar{x}_1 - \bar{x}_2) = v(\bar{x}_1) + v(\bar{x}_2) - 2\mathrm{cov}(\bar{x}_1, \bar{x}_2).$$

Under simple random sampling, the variance of the difference can be written as

$$v(\bar{x}_1 - \bar{x}_2) = v(\bar{x}_1) + v(\bar{x}_2) - \frac{2\rho_{x_1x_2} m\sqrt{v(\bar{x}_1)v(\bar{x}_2)}}{\sqrt{n_1 n_2}}.$$

$v(\bar{x}_1)$ is the estimated variance of the first mean based on a sample of n_1 units, $v(\bar{x}_2)$ is the estimated variance of the second proportion based on n_2 units, and m is the number of families who are in the analysis samples at both followup waves (that is, the "overlap"). The correlation ($\rho_{x_1x_2}$) is estimated based on the overlap.

The square root of the variance gives the standard error of the difference in the two means, which can be used in a statistical test recognizing that we have overlapping samples and they are not independent.

$$H_o : \bar{x}_2 - \bar{x}_1 = 0 \quad vs \quad H_a : \bar{x}_2 - \bar{x}_1 \neq 0.$$

Test Statistic is—

$$t = \frac{(\bar{x}_2 - \bar{x}_1) - 0}{SE(\bar{x}_2 - \bar{x}_1)}.$$

The *p*-value of the observed value of *t* is calculated from the *t*-distribution with *n*–2 degrees of freedom.

C.7. Multiple Comparisons Adjustment for Confirmatory Hypothesis Tests

Statement of the Problem

Simply stated, the multiple comparisons problem is that, as the number of hypothesis tests conducted grows, the likelihood of finding a statistically significant impact somewhere among the tested outcomes simply by chance increases far above the desired risk level for producing false positive results. This multiple comparisons problem is particularly salient for the Family Options Study because the number of hypothesis tests performed is extremely large (a total of 840 tests).

Because the study design is based on four intervention groups, the study examines impacts in six pairwise comparisons and four pooled comparisons. For each of these comparisons, the study looks at five outcome domains (housing stability, self-sufficiency, adult well-being, child well-being, and family preservation), with each domain containing several outcome variables.

The multiple arms, multiple domains, and multiple outcomes cumulatively generate an extremely large number of hypothesis tests in the main impact analysis (10 comparisons × 84 outcomes in the 5 outcome domains = 840 tests).

Given this large number of tests, the probability of finding an impact, even in the case of no true impacts, is quite large, well above the nominal 10-percent level. In particular, the probability of finding at least one significant impact at the .10 level in *k* independent tests when all true impacts are 0 is given by Equation 3.

(3) $Prob(\min p \leq .10 \mid all\ true\ impacts = 0) = 1 - 0.90^k$.

Thus, if 10 independent tests are performed, then the probability of finding at least one significant impact at the .10 level—often taken as the litmus test for a "successful" intervention—when all true impacts are equal to 0 is $1–0.90^{10}=0.65$; that is, about two-thirds of the time one would conclude an unsuccessful intervention is successful. When 20 independent tests are performed, the probability is 0.88; that is, nearly 9 times out of 10. In fact, with hundreds of tests, it is nearly certain to spuriously detect a "successful" intervention, even if the intervention was not truly "successful" for any outcome.[12]

This probability of finding at least one significant impact (or more generally, rejecting at least one null hypothesis) when all

[11] This test is described in Kish (1965).

[12] Although the study team does not expect the hundreds of hypothesis tests performed in this report to be independent, the likelihood of at least one spurious finding of statistical significance will still be extremely high.

true impacts equal 0 (or more generally, when all null hypotheses are true) in a "family" of k tests is called the familywise error rate (FWER). In general, the FWER decreases as the k test statistics used become more correlated (that is, the outcome measures tested become more closely related), leading to somewhat less risk of false positive conclusions than indicated in the previous numerical estimates. Many multiple comparison adjustment procedures have been devised to keep the FWER at or below the desired level (such as 0.05 or 0.10), some of which take account of correlation among outcomes.

Study Response to the Problem

The study team took two steps to address the multiple comparisons problem.

Adjust the standard of evidence used to declare a subset of individual impact estimates statistically significant. The study team divided the hypothesis tests into a small set of 7 "confirmatory" tests and a much larger set of 833 "exploratory" tests. The team then used a multiple comparisons procedure to adjust the results of the 7 confirmatory tests to maintain the integrity of the statistical inferences made at the confirmatory level.

1. **Prespecify impacts to present in the executive summary.** The study team prespecified the impacts on 18 key outcomes in the 6 pairwise comparisons (for 108 total impact estimates) to present in the executive summary before seeing the results. This step was taken to prevent the selective presentation of statistically significant results in the executive summary.

The first step hinges on the definition and implications of *confirmatory hypothesis tests*. Following Schochet (2009), the team defined *confirmatory hypothesis tests* as those tests that "assess how strongly the study's prespecified central hypotheses are supported by the data," (Schochet, 2009: 549). Statistically significant findings from confirmatory hypothesis tests are considered definitive evidence of a nonzero intervention impact, effectively ending debate on whether the intervention achieved an impact in the study sites. All other hypothesis test results are deemed *exploratory*. For these tests, statistically significant impacts constitute suggestive evidence of *possible* intervention effects.

Before beginning analysis, HUD determined that the housing stability domain is the most important outcome domain for the study. Therefore, the study team designated seven hypothesis tests related to housing stability as confirmatory. These hypothesis tests were conducted for—

- The six pairwise policy comparisons and one pooled comparison (PBTH + SUB + CBRR versus UC).
- A single composite outcome indicating a stay in emergency shelter or a place not meant for human habitation or an experience of doubling up. This outcome was constructed from two binary outcomes within the housing stability domain.
  1. At least 1 night spent in emergency shelter or a place not meant for human habitation or doubled up during the past 6 months at the time of the followup survey (from the adult survey).
  2. Any stay in emergency shelter in the past 12 months at the time of the followup survey (from Program Usage Data, largely based on Homeless Management Information System, or HMIS, records).

The six pairwise comparisons were included to assess the relative effectiveness of the interventions in contributing to housing stability (thereby addressing the study's first research question stated in Section 1.4). The study team also included the pooled comparison of PBTH + SUB + CBRR versus UC because it provided evidence on whether a housing subsidy of any type improved housing stability. Using two sources of data to construct this outcome enabled the study team to measure housing stability as robustly as possible and made use of all available data on return to homelessness.

Implementing the Multiple Comparisons Procedure

The p-values on the seven impact coefficients were adjusted to account for the presence of seven confirmatory tests. The team chose the Westfall-Young resampling method as the procedure to control the FWER at a .10 level for the seven tests.[13] This procedure was chosen for the additional statistical power (relative to Bonferroni-type methods) it was expected to provide in tests of a binary outcome variable.

The Westfall-Young resampling method involves reassigning each study family to the interventions in its randomization set (using the original assignment probabilities in effect for the family at random assignment) many times to form many sample replicates. For each replicate, the seven impacts on the confirmatory outcome were recalculated, as follows.

In notation, let—

A, B, C, D, E, F, G = seven impact estimates on the confirmatory outcome.

[13] Westfall-Young methods are described in Westfall, Tobias, and Wolfinger (2011).

$p_A^{raw}, p_B^{raw}, p_C^{raw}, p_D^{raw}, p_E^{raw}, p_F^{raw}, p_G^{raw}$ = *p*-values from *t*-tests of impact estimates. These values are the "raw," unadjusted *p*-values for each impact estimate.

The impact estimates were then placed in the order of their raw *p*-values.

IMPACT1, *IMPACT2*, *IMPACT3*, *IMPACT4*, *IMPACT5*, *IMPACT6*, *IMPACT7* = the impact estimates in order of their raw *p*-values. *IMPACT1* is the impact estimate with the smallest raw *p*-value and *IMPACT7* is the impact estimate with the largest raw *p*-value.

$p_{IMPACT1}^{raw}, p_{IMPACT2}^{raw}, p_{IMPACT3}^{raw}, p_{IMPACT4}^{raw}, p_{IMPACT5}^{raw}, p_{IMPACT6}^{raw}, p_{IMP}^{raw}$ = raw *p*-values in order from smallest to largest.

Then, some large number *R* (the study used 20,000) permutation replicates were formed. Within each replicate sample, study families were reassigned to the interventions in their randomization sets using the original probabilities. For each replicate, the seven impacts were estimated, producing seven *p*-values.

Next, the adjusted *p*-values were calculated as follows—

$$p_{\text{IMPACT1}}^{adj} = \frac{Number\ of\ replicates\ where\ \min\ \{p_{\text{IMPACT1}}^{rep},\cdots,p_{\text{IMPACT7}}^{rep}\} < p_{\text{IMPACT1}}^{raw}}{R}$$

$$p_{\text{IMPACT2}}^{adj} = \max\left\{p_{\text{IMPACT1}}^{adj}, \frac{Number\ of\ replicates\ where\ \min\ \{p_{\text{IMPACT2}}^{rep},\cdots,p_{\text{IMPACT7}}^{rep}\} < p_{\text{IMPACT2}}^{raw}}{R}\right\}$$

$$p_{\text{IMPACT3}}^{adj} = \max\left\{p_{\text{IMPACT2}}^{adj}, \frac{Number\ of\ replicates\ where\ \min\ \{p_{\text{IMPACT3}}^{rep},\cdots,p_{\text{IMPACT7}}^{rep}\} < p_{\text{IMPACT3}}^{raw}}{R}\right\}$$

$$p_{\text{IMPACT4}}^{adj} = \max\left\{p_{\text{IMPACT3}}^{adj}, \frac{Number\ of\ replicates\ where\ \min\ \{p_{\text{IMPACT4}}^{rep},\cdots,p_{\text{IMPACT7}}^{rep}\} < p_{\text{IMPACT4}}^{raw}}{R}\right\}$$

$$p_{\text{IMPACT5}}^{adj} = \max\left\{p_{\text{IMPACT4}}^{adj}, \frac{Number\ of\ replicates\ where\ \min\ \{p_{\text{IMPACT5}}^{rep},p_{\text{IMPACT6}}^{rep},p_{\text{IMPACT7}}^{rep}\} < p_{\text{IMPACT5}}^{raw}}{R}\right\}$$

$$p_{\text{IMPACT6}}^{adj} = \max\left\{p_{\text{IMPACT5}}^{adj}, \frac{Number\ of\ replicates\ where\ \min\ \{p_{\text{IMPACT6}}^{rep},p_{\text{IMPACT7}}^{rep}\} < p_{\text{IMPACT6}}^{raw}}{R}\right\}$$

$$p_{\text{IMPACT7}}^{adj} = \max\left\{p_{\text{IMPACT6}}^{adj}, \frac{Number\ of\ replicates\ where\ p_{\text{IMPACT7}}^{rep} < p_{\text{IMPACT7}}^{raw}}{R}\right\}$$

where p_{IMPACT}^{rep} is the *p*-value for an impact estimate in a particular replicate.

Exhibit C-1 shows the unadjusted and adjusted *p*-values for the study's seven confirmatory hypothesis tests.

Exhibit C-1. Confirmatory Hypothesis Tests in 37-Month Analysis

Pairwise or Pooled Comparison	ITT Impact on "at Least 1 Night Homeless[a] or Doubled Up (past 6 months) or in Shelter (past 12 months)" (%)		*p*-Value (unadjusted)	*p*-Value (adjusted for multiple comparisons)
	Impact	(SE)		
SUB vs. UC	– 21.1	(3.0)	< 0.0001	< 0.0001
CBRR vs. UC	1.9	(3.6)	0.6057	0.9416
PBTH vs. UC	0.3	(4.7)	0.9480	0.9480
SUB vs. CBRR	– 20.4	(3.6)	< 0.0001	< 0.0001
SUB vs. PBTH	– 24.4	(4.6)	< 0.0001	< 0.0001
CBRR vs. PBTH	– 3.1	(6.2)	0.6127	0.9416
SUB + CBRR + PBTH vs. UC	– 8.6	(2.6)	0.0008	0.0041

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. SE = standard error.

[a] The definition of "homeless" in this report includes stays in emergency shelters and places not meant for human habitation. It excludes transitional housing.

Notes: Impact estimates are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Appendix B for outcome definition.

Sources: Family Options Study 37-month followup survey; Program Usage Data

APPENDIX D.
ANALYSIS OF 37-MONTH SURVEY NONRESPONSE

D.1. Introduction

The impact estimates in this report are based on outcome measures derived largely from the 37-month adult followup survey. This appendix analyzes the extent to which survey nonresponse influenced these estimates. Not all study families completed the followup survey, which successfully gathered information for 1,784 of the 2,282 families who enrolled in the study. This appendix addresses whether, in light of this nonresponse, impact estimates are (1) internally valid in the sense that the families in the sides of each impact comparison remain comparable and (2) likely valid for the entire study sample after weighting to account for nonresponse.[1]

Balance in Impact Comparison Groups After Nonresponse

The Family Options Study randomly assigned families to study interventions so that differences in outcomes among families who received different interventions would be attributable to assignment to the intervention. The *Interim Report: Family Options Study* presented evidence confirming that random assignment successfully produced equivalent samples when comparing the treatment groups within each of the six pairwise impact comparisons in the study. This equivalence testing was conducted on all families participating in the study, however. It is possible that whether a family responded to the followup survey was influenced by the treatment to which they were assigned in ways that could disrupt this balance. This possibility, in turn, is indicative of whether families in each side of the impact comparisons are comparable—sometimes referred to as the study's "internal validity." We assess the extent to which nonresponse affected internal validity by addressing the following two questions.

1. What were the response rates for the Family Options Study 37-month followup survey, and how did they vary between assignment groups in pairwise comparison samples?
2. Did the analysis sample remain balanced for each impact comparison after nonresponse?

Respondents Versus Nonrespondents

Survey nonresponse may also be related to participant characteristics such that families who respond to the survey are not comparable with families who do not. If this difference was the case, and if the study findings differ on the same characteristics that relate to survey respondents, then the study findings may not be applicable to the entire sample including nonrespondents. To assess the extent to which findings are likely applicable to nonrespondents in addition to respondents, we address the two following questions.

1. Do respondents and nonrespondents have systematic differences in observable baseline characteristics?
2. How were the main results of this report affected by the use of nonresponse analysis weights?

Overview of Findings

In general, the analysis presented in this appendix (1) indicates that the impact results in the Family Options Study remain internally valid after survey nonresponse and (2) provides nondefinitive evidence that the impact results may be applicable to the entire study sample. We find that response rates do vary based on the treatment to which families were assigned. Response rates were slightly lower for families assigned to usual care (UC) compared with those for the three active interventions. Response rates for the UC group ranged from 73.1 to 76.4 percent, depending on the impact comparison. The permanent housing subsidy (SUB) group had the highest response rate: 83.6 percent (for all SUB families. These differences indicate the importance of our second analysis assessing internal validity—a comparison of baseline characteristics for each side of each impact comparison. Here we find that, although nonresponse patterns somewhat degraded the baseline equivalence samples as reported in the *Interim Report* for comparisons involving the priority access to community-based rapid re-housing (CBRR) group, omnibus test results including all our comparison characteristics suggest no systematic differences between sides of the impact comparisons, with the exception of the CBRR-versus-UC comparison.

[1] This appendix parallels Appendix D from *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families*. The tabulations here are based on response to the 37-month followup survey whereas the appendix to the *Short-Term Impacts* report was based on response to the 20-month followup survey.

Turning to our analysis relevant to the applicability of study findings to the entire baseline sample, we find some evidence that baseline characteristics do predict survey response, which suggests that respondents and nonrespondents may be systematically different. This finding in part motivates the use of survey nonresponse weights, as described in Appendix C, Section C.3. In this appendix, we present estimates calculated *without* the nonresponse weights for the study's headline outcomes. Substantive differences between impact estimates calculated with and without the nonresponse weights would indicate that impacts for nonrespondents (which cannot be estimated) may differ from those estimated in the study for respondents. The estimates did not vary substantially from the weighted estimates. Although not definitive, this finding serves as evidence that the impact results may be applicable to the entire study sample.

D.2. Balance in Impact Comparison Groups After Nonresponse

This section presents two analyses that address the threat to the internal validity of the study's impact findings of survey nonresponse. To assess the extent to which the groups in each impact comparison remain comparable after nonresponse, this section first reports and compares response rates for each treatment group of each impact comparison. Next, the section presents an analysis of the balance on baseline characteristics for each impact comparison within the analysis sample of 37-month survey respondents.

Survey Nonresponse

What were response rates for the Family Options Study 37-month followup survey, and how did the rates vary between pairwise comparison samples? Exhibit D-1 reports the number of respondents to the followup survey by impact comparison. Results based on raw response rates for each impact comparison suggest that, relative to assignment to UC, assignment to the CBRR, project-based transitional housing (PBTH), or SUB group increased the propensity to respond to the followup survey. Participants assigned to SUB were most likely to respond to the followup survey, with an overall response rate of 83.6 percent. For each impact comparison, the study team tests for a statistically significant difference between the two assignment groups in the response rates. The team found a statistically significant difference in the response rates of the two groups in two of the six pairwise comparisons (SUB versus UC and SUB versus CBRR) and in two of the four pooled comparisons. In these cases, it is particularly relevant to test for differences in baseline characteristics across the sides of the comparisons.

Equivalence at Baseline of Analysis Sample by Impact Comparison

Did the analysis sample remain balanced for each impact comparison after nonresponse? The second step in the analysis of the comparability of both sides of each impact comparison is a comparison of baseline characteristics. If the balance in observable characteristics between groups at baseline remained after nonresponse, survey nonresponse was not related to observable characteristics and therefore was unlikely to be related to unobservable characteristics. In that case, impact estimates remained a valid comparison of the effect of receiving different interventions on the particular outcome for the survey respondent population.

Exhibit D-2 lists the baseline characteristics that are compared within each impact comparison. These characteristics were the same baseline characteristics used to demonstrate baseline equivalence in the *Interim Report*, and were chosen because they were either major demographic characteristics or they were baseline measures in the study's five outcome domains.

This section reports results from statistical tests performed to determine both if groups being compared differed on the each of the baseline characteristics described previously and if the combined set of characteristics suggested the groups differed (an omnibus F-test). As a review of the baseline equivalence findings of the full baseline sample, the *Interim Report* reported

Exhibit D-1. Survey Nonresponse Incidence by Impact Comparison—37-Month Adult Survey

	Baseline Families	Adult Surveys Completed	Response Rate (%)	Chi sq
Pairwise comparisons	**2,282**	**1,784**	**78.2**	
SUB versus	599	501	83.6	***
UC	540	395	73.1	
CBRR versus	569	434	76.3	
UC	575	434	75.5	
PBTH versus	368	293	79.6	
UC	339	259	76.4	
SUB versus	435	362	83.2	***
CBRR	382	290	75.9	
SUB versus	256	215	84.0	
PBTH	240	201	83.8	
CBRR versus	232	180	77.6	
PBTH	239	184	77.0	
Pooled comparisons				
SUB + CBRR + PBTH	1,536	1,228	79.9	***
versus UC	746	556	74.5	
SUB + PBTH	674	546	81.0	
versus CBRR	494	382	77.3	
SUB + CBRR	488	395	80.9	
versus PBTH	363	290	79.9	
CBRR + PBTH	622	491	78.9	**
versus SUB	551	463	84.03	

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

Note: Significantly different response rates are indicated for *p*-value *** < .01 and ** < .05.

Sources: Family Options Baseline Survey; 37-month adult survey

Exhibit D-2. Characteristics Examined in Baseline Equivalency Testing

Baseline Characteristic at the Time of Random Assignment	
Age of household head	Previously homeless (before current spell)
Gender	Previously lived in doubled up housing
Marital status	Number of barriers in finding housing[a]
Race/ethnicity	Household head has a child under 18 living elsewhere
Educational attainment	Number of major life challenges faced[b]
Number of adults in family	
Number of children in family	
Worked for pay in past week	
Previously convicted of a felony	
Family annual income	

[a] Barriers to finding housing were reported by adult respondent as "big problems" in finding housing. The maximum number of barriers was 19. The 19 possible barriers were (1) not having enough income to pay rent, (2) inability to pay a security deposit or first/last month's rent, (3) lack of transportation to look for housing, (4) poor credit history, (5) racial discrimination, (6) not being currently employed, (7) no rent history at all, (8) recently moved to community and no local rent history, (9) no reference from past landlords, (10) a past eviction, (11) problems with past landlords, (12) past lease violations, (13) having problems with police, (14) having a criminal record or background, (15) having a felony drug record, (16) having three or more children in the household, (17) having teenagers in the household, (18) having someone in the household under 21 years old, and (19) having someone in the household who has a disability.

[b] The seven major life challenges measured were (1) psychological distress, (2) post-traumatic stress disorder, (3) felony conviction, (4) experience of domestic violence, (5) childhood separation (foster care, group home, or institutionalization), (6) self-reported medical condition, and (7) substance abuse.

Source: Family Options baseline survey—reproduced from Exhibit 4-9 of *Interim Report: The Family Options Study*

statistically significant differences in the SUB-versus-UC and CBRR-versus-UC comparisons in educational attainment and in the PBTH-versus-CBRR group in age of household head. Only the CBRR-versus-UC comparison had a *p*-value of the omnibus F-test that indicated statistically significant differences in the two groups at the .05 level. This result suggested an "unlucky" division of families into the CBRR and UC interventions. Differences in means and percentages for individual variables, however, were not substantively large.

As reported in Exhibit D-3, slightly different results emerge for baseline equivalency testing for the sample of survey respondents as compared with the results for the full baseline sample of study participants. Specifically, analyzing the baseline characteristics of 37-month respondents detects additional characteristics with significant differences for a number of pairwise comparisons. However, the omnibus F-test statistic continues to be significant in the CBRR-versus-UC comparison only and observed characteristics differences remain small in magnitude.

For the sample of survey respondents, differences across groups within the pairwise impact comparison are observed for educational attainment in the SUB-versus-UC, CBRR-versus-UC, CBRR-versus-PBTH, and two of the grouped comparisons. Age differed across samples in the SUB-versus-CBRR and SUB + PBTH-versus-CBRR comparisons. An omnibus F-test continued to indicate the responding samples differed on observable baseline characteristics for the CBRR-versus-UC comparison, with statistically significant differences for educational attainment, number of children, and income. Three baseline characteristics are also individually statistically different across groups for the CBRR-versus-PBTH comparison, although the omnibus F-test was not statistically significant. Each of the other pairwise and pooled comparisons also had either one or two characteristics that had a statistically significant difference across groups.

Taken together, these comparisons indicate that, although nonresponse patterns somewhat degraded the baseline equivalence samples as reported in the *Interim Report* for comparisons involving the CBRR intervention, omnibus tests results including all our comparison characteristics suggests no systematic differences between sides of the impact comparisons, with the exception of the CBRR-versus-UC comparison. Recall that this comparison was found to have an "unlucky" draw with statistically significant but relatively small-in-magnitude difference in baseline characteristics for the entire study sample. Exhibits D-4 through D-13 report the summary statistics for baseline characteristics for each side of each comparison—which, together, is the information summarized in Exhibit D-3.

Exhibit D-3. Summary of Equivalence Testing in Impact Comparisons, 37-Month Adult Survey

Pairwise Impact Comparison	Number of Characteristics With Significant Differences (out of 15; $\alpha = 0.10$)	Characteristic(s) With Significant Difference	*p*-Value of Omnibus F-test
SUB versus UC	1	Educational attainment	0.852
CBRR versus UC	3	Educational attainment, number of children, income	0.002
PBTH versus UC	1	Worked for pay	0.283
SUB versus CBRR	2	Average age, child living elsewhere	0.570
SUB versus PBTH	1	Child living elsewhere	0.478
CBRR versus PBTH	3	Educational attainment, number of adults, ever doubled up	0.295
SUB + CBRR + PBTH versus UC	2	Educational attainment	0.235
SUB + PBTH versus CBRR	2	Average age, ever doubled up	0.304
SUB + CBRR versus PBTH	1	Educational attainment	0.135
CBRR + PBTH versus SUB	2	Race/ethnicity, child living elsewhere	0.689

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-4. Equivalence at Baseline of Analysis Sample for SUB Versus UC Impact Comparison, 37-Month Adult Survey

Characteristic	SUB	UC	Difference	Significance Level	Stars
Number of families	501	395			
Age of household head at RA (percent)					
Less than 21 years old	0.08	0.10	– 0.02	0.79	
21–24 years	0.22	0.21	0.01		
25–29 years	0.23	0.24	– 0.01		
30–34 years	0.19	0.16	0.03		
35–44 years	0.20	0.21	– 0.01		
45 years and older	0.08	0.09	0.00		
Mean age (years)	30.47	30.79	– 0.32	0.67	
Gender (percent)					
Female	0.93	0.92	0.01	0.56	
Male	0.07	0.08	– 0.01		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.74	0.70	0.04	0.17	
Married or marriage-like situation	0.26	0.30	– 0.04		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.37	0.38	– 0.02	0.84	
White, not Hispanic	0.21	0.22	– 0.01		
Hispanic	0.24	0.23	0.01		
Other	0.19	0.17	0.02		
Educational attainment (percent)					
Less than high school diploma	0.34	0.41	– 0.07	0.08	*
High school diploma/GED	0.39	0.33	0.06		
More than high school diploma	0.26	0.25	0.01		
Number of adults in family (percent)					
1 adult	0.73	0.69	0.04		
2 or more adults	0.27	0.31	– 0.04	0.20	
Number of children in family (percent)					
1 child	0.44	0.43	0.00	0.93	
2 children	0.32	0.33	– 0.01		
3 children	0.15	0.15	– 0.01		
4 children or more	0.09	0.08	0.02		
Missing data	0.01	0.01	0.00		
Worked for pay past week (percent)	0.13	0.14	– 0.02	0.30	
Ever convicted of a felony (percent)	0.12	0.11	0.00	0.82	
Family annual income (percent)					
Less than $5,000	0.32	0.34	– 0.02	0.96	
$5,000–9,999	0.32	0.29	0.03		
$10,000–14,999	0.16	0.17	– 0.01		
$15,000–19,999	0.07	0.08	0.00		
$20,000–24,999	0.04	0.04	0.00		
$25,000 or more	0.05	0.05	0.00		
Missing data	0.03	0.02	0.01		
Ever been homeless before (percent)	0.62	0.66	– 0.04	0.23	
Ever been doubled up before (percent)	0.84	0.87	– 0.03	0.26	
Major barrier to finding housing[a]	0.45	0.45	0.00	0.92	
Child under 18 living elsewhere (percent)	0.24	0.23	0.01	0.63	
Number of major life challenges[b]	1.60	1.60	0.00	0.75	
F-test on all characteristics except site	F value =	0.745	F-test *p*-value =	0.852	

SUB = priority access to permanent housing subsidy. UC = usual care.

GED = general educational development. RA = random assignment.

* .10 level. ** .05 level. *** .01 level.

[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.

[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.

Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).

Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-5. Equivalence at Baseline of Analysis Sample for CBRR Versus UC Impact Comparison, 37-Month Adult Survey

Characteristic	CBRR	UC	Difference	Significance Level	Stars
Number of families	434	434			
Age of household head at RA (percent)					
Less than 21 years old	0.09	0.09	0.00	0.13	
21–24 years	0.18	0.21	– 0.02		
25–29 years	0.24	0.22	0.01		
30–34 years	0.18	0.15	0.04		
35–44 years	0.24	0.23	0.01		
45 years and older	0.06	0.11	– 0.05		
Mean age (years)	30.62	31.25	– 0.62	0.77	
Gender (percent)					
Female	0.92	0.93	– 0.01	0.51	
Male	0.08	0.07	0.01		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.75	0.75	0.00	0.87	
Married or marriage-like situation	0.25	0.25	0.00		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.50	0.43	0.06	0.24	
White, not Hispanic	0.18	0.20	– 0.02		
Hispanic	0.18	0.22	– 0.04		
Other	0.15	0.15	0.00		
Educational attainment (percent)					
Less than high school diploma	0.30	0.38	– 0.08	0.01	**
High school diploma/GED	0.41	0.32	0.08		
More than high school diploma	0.29	0.29	0.00		
Number of adults in family (percent)					
1 adult	0.72	0.73	– 0.01		
2 or more adults	0.28	0.27	0.01	0.76	
Number of children in family (percent)					
1 child	0.40	0.43	– 0.03	0.05	*
2 children	0.31	0.32	– 0.01		
3 children	0.14	0.16	– 0.02		
4 children or more	0.15	0.08	0.06		
Missing data	0.01	0.01	0.00		
Worked for pay past week (percent)	0.18	0.21	– 0.02	0.44	
Ever convicted of a felony (percent)	0.10	0.11	– 0.01	0.65	
Family annual income (percent)					
Less than $5,000	0.29	0.33	– 0.04	0.09	*
$5,000–9,999	0.32	0.25	0.07		
$10,000–14,999	0.19	0.17	0.02		
$15,000–19,999	0.09	0.09	0.00		
$20,000–24,999	0.03	0.06	– 0.03		
$25,000 or more	0.06	0.07	– 0.01		
Missing data	0.02	0.03	– 0.01		
Ever been homeless before (percent)	0.62	0.63	– 0.01	0.78	
Ever been doubled up before (percent)	0.88	0.86	0.02	0.36	
Major barrier to finding housing[a]	0.42	0.47	– 0.05	0.15	
Child under 18 living elsewhere (percent)	0.21	0.22	– 0.01	0.74	
Number of major life challenges[b]	1.46	1.66	– 0.19	0.44	
F-test on all characteristics except site	F value =	1.890	F-test *p*-value =	0.002	

CBRR = priority access to community-based rapid re-housing. UC = usual care.

GED = general educational development. RA = random assignment.

* .10 level. ** .05 level. *** .01 level.

[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.

[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.

Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).

Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-6. Equivalence at Baseline of Analysis Sample for PBTH Versus UC Impact Comparison, 37-Month Adult Survey

Characteristic	PBTH	UC	Difference	Significance Level	Stars
Number of families	293	259			
Age of household head at RA (percent)					
Less than 21 years old	0.10	0.06	0.04	0.38	
21–24 years	0.15	0.16	– 0.01		
25–29 years	0.26	0.22	0.05		
30–34 years	0.19	0.21	– 0.02		
35–44 years	0.21	0.25	– 0.04		
45 years and older	0.09	0.10	– 0.01		
Mean age (years)	30.95	32.31	– 1.36	0.58	
Gender (percent)					
Female	0.90	0.93	– 0.03	0.27	
Male	0.10	0.07	0.03		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.68	0.68	0.00	0.94	
Married or marriage-like situation	0.32	0.32	0.00		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.41	0.42	– 0.01	0.96	
White, not Hispanic	0.19	0.18	0.01		
Hispanic	0.15	0.14	0.01		
Other	0.25	0.26	– 0.01		
Educational attainment (percent)					
Less than high school diploma	0.37	0.41	– 0.04	0.59	
High school diploma/GED	0.36	0.33	0.03		
More than high school diploma	0.27	0.26	0.01		
Number of adults in family (percent)					
1 adult	0.68	0.67	0.01		
2 or more adults	0.32	0.33	– 0.01	0.85	
Number of children in family (percent)					
1 child	0.40	0.42	– 0.02	0.48	
2 children	0.29	0.27	0.02		
3 children	0.19	0.20	– 0.01		
4 children or more	0.12	0.10	0.03		
Missing data	0.00	0.01	– 0.01		
Worked for pay past week (percent)	0.17	0.23	– 0.06	0.07	*
Ever convicted of a felony (percent)	0.10	0.15	– 0.04	0.11	
Family annual income (percent)					
Less than $5,000	0.29	0.30	– 0.01	0.61	
$5,000–9,999	0.26	0.23	0.03		
$10,000–14,999	0.18	0.17	0.01		
$15,000–19,999	0.13	0.10	0.03		
$20,000–24,999	0.05	0.07	– 0.02		
$25,000 or more	0.05	0.07	– 0.01		
Missing data	0.03	0.06	– 0.02		
Ever been homeless before (percent)	0.61	0.65	– 0.04	0.36	
Ever been doubled up before (percent)	0.83	0.84	– 0.02	0.62	
Major barrier to finding housing[a]	0.44	0.45	– 0.01	0.79	
Child under 18 living elsewhere (percent)	0.23	0.24	– 0.01	0.70	
Number of major life challenges[b]	1.69	1.64	0.04	0.89	
F-test on all characteristics except site	F value =	1.062	F-test *p*-value =	0.380	

PBTH = priority access to project-based transitional housing. UC = usual care.

GED = general educational development. RA = random assignment.

* .10 level. ** .05 level. *** .01 level.

[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.

[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.

Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).

Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-7. Equivalence at Baseline of Analysis Sample for SUB Versus CBRR Impact Comparison, 37-Month Adult Survey

Characteristic	SUB	CBRR	Difference	Significance Level	Stars
Number of families	362	290			
Age of household head at RA (percent)					
Less than 21 years old	0.08	0.12	– 0.03	0.46	
21–24 years	0.21	0.19	0.02		
25–29 years	0.23	0.23	0.00		
30–34 years	0.19	0.19	0.01		
35–44 years	0.19	0.22	– 0.02		
45 years and older	0.09	0.06	0.03		
Mean age (years)	30.56	30.13	0.43	0.07	*
Gender (percent)					
Female	0.94	0.92	0.02	0.27	
Male	0.06	0.08	– 0.02		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.75	0.76	0.00	0.98	
Married or marriage-like situation	0.25	0.24	0.00		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.39	0.44	– 0.06	0.32	
White, not Hispanic	0.22	0.23	– 0.01		
Hispanic	0.24	0.20	0.04		
Other	0.16	0.13	0.03		
Educational attainment (percent)					
Less than high school diploma	0.36	0.33	0.03	0.77	
High school diploma/GED	0.40	0.42	– 0.02		
More than high school diploma	0.25	0.25	0.00		
Number of adults in family (percent)					
1 adult	0.73	0.71	0.02		
2 or more adults	0.27	0.29	– 0.02	0.54	
Number of children in family (percent)					
1 child	0.44	0.42	0.03	0.51	
2 children	0.32	0.32	0.00		
3 children	0.13	0.12	0.02		
4 children or more	0.10	0.13	– 0.04		
Missing data	0.00	0.01	0.00		
Worked for pay past week (percent)	0.14	0.16	– 0.02	0.39	
Ever convicted of a felony (percent)	0.11	0.11	0.01	0.79	
Family annual income (percent)					
Less than $5,000	0.33	0.30	0.03	0.61	
$5,000–9,999	0.32	0.33	– 0.02		
$10,000–14,999	0.17	0.19	– 0.02		
$15,000–19,999	0.06	0.08	– 0.02		
$20,000–24,999	0.05	0.02	0.02		
$25,000 or more	0.06	0.05	0.00		
Missing data	0.01	0.01	0.00		
Ever been homeless before (percent)	0.63	0.64	– 0.01	0.89	
Ever been doubled up before (percent)	0.84	0.88	– 0.04	0.14	
Major barrier to finding housing[a]	0.46	0.41	0.05	0.22	
Child under 18 living elsewhere (percent)	0.25	0.19	0.06	0.09	*
Number of major life challenges[b]	1.61	1.49	0.12	0.65	
F-test on all characteristics except site	F value =	0.938	F-test *p*-value =	0.570	

CBRR = priority access to community-based rapid re-housing. SUB = priority access to permanent housing subsidy.

GED =general educational development. RA = random assignment.

* .10 level. ** .05 level. *** .01 level.

[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.

[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.

Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).

Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-8. Equivalence at Baseline of Analysis Sample for SUB Versus PBTH Impact Comparison, 37-Month Adult Survey

Characteristic	SUB	PBTH	Difference	Significance Level	Stars
Number of families	215	201			
Age of household head at RA (percent)					
Less than 21 years old	0.07	0.09	– 0.02	0.46	
21–24 years	0.24	0.17	0.07		
25–29 years	0.21	0.26	– 0.05		
30–34 years	0.19	0.20	– 0.01		
35–44 years	0.19	0.19	0.00		
45 years and older	0.10	0.08	0.02		
Mean age (years)	30.82	30.58	0.24	0.73	
Gender (percent)					
Female	0.93	0.90	0.03	0.28	
Male	0.07	0.10	– 0.03		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.69	0.68	0.01	0.80	
Married or marriage-like situation	0.31	0.32	– 0.01		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.35	0.37	– 0.02	0.31	
White, not Hispanic	0.20	0.24	– 0.04		
Hispanic	0.22	0.15	0.07		
Other	0.23	0.24	– 0.01		
Educational attainment (percent)					
Less than high school diploma	0.29	0.31	– 0.02	0.86	
High school diploma/GED	0.43	0.40	0.02		
More than high school diploma	0.28	0.28	0.00		
Number of adults in family (percent)					
1 adult	0.67	0.68	– 0.01		
2 or more adults	0.33	0.32	0.01	0.88	
Number of children in family (percent)					
1 child	0.42	0.40	0.02	0.35	
2 children	0.34	0.31	0.03		
3 children	0.17	0.19	– 0.02		
4 children or more	0.07	0.10	– 0.04		
Missing data	0.01	0.00	0.01		
Worked for pay past week (percent)	0.18	0.13	0.05	0.15	
Ever convicted of a felony (percent)	0.14	0.11	0.03	0.36	
Family annual income (percent)					
Less than $5,000	0.29	0.30	– 0.01	0.56	
$5,000–9,999	0.31	0.28	0.03		
$10,000–14,999	0.17	0.18	– 0.01		
$15,000–19,999	0.07	0.12	– 0.05		
$20,000–24,999	0.06	0.05	0.01		
$25,000 or more	0.05	0.04	0.01		
Missing data	0.05	0.03	0.02		
Ever been homeless before (percent)	0.64	0.60	0.04	0.35	
Ever been doubled up before (percent)	0.84	0.82	0.02	0.66	
Major barrier to finding housing[a]	0.45	0.45	0.00	0.98	
Child under 18 living elsewhere (percent)	0.28	0.20	0.08	0.07	*
Number of major life challenges[b]	1.59	1.74	– 0.15	0.70	
F-test on all characteristics except site	F value =	0.995	F-test *p*-value =	0.478	

PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy.

GED = general educational development. RA = random assignment.

* .10 level. ** .05 level. *** .01 level.

[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.

[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.

Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).

Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-9. Equivalence at Baseline of Analysis Sample for CBRR Versus PBTH Impact Comparison, 37-Month Adult Survey

Characteristic	CBRR	PBTH	Difference	Significance Level	Stars
Number of families	180	184			
Age of household head at RA (percent)					
Less than 21 years old	0.07	0.09	– 0.03	0.60	
21–24 years	0.16	0.13	0.03		
25–29 years	0.28	0.25	0.03		
30–34 years	0.22	0.21	0.00		
35–44 years	0.22	0.22	0.00		
45 years and older	0.06	0.10	– 0.04		
Mean age (years)	30.73	31.51	– 0.77	0.33	
Gender (percent)					
Female	0.91	0.91	– 0.01	0.80	
Male	0.09	0.09	0.01		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.66	0.73	– 0.08	0.11	
Married or marriage-like situation	0.34	0.27	0.08		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.47	0.43	0.03	0.86	
White, not Hispanic	0.16	0.17	– 0.01		
Hispanic	0.12	0.14	– 0.02		
Other	0.26	0.26	0.01		
Educational attainment (percent)					
Less than high school diploma	0.29	0.41	– 0.11	0.05	**
High school diploma/GED	0.39	0.29	0.10		
More than high school diploma	0.32	0.30	0.01		
Number of adults in family (percent)					
1 adult	0.63	0.73	– 0.09		
2 or more adults	0.37	0.27	0.09	0.05	*
Number of children in family (percent)					
1 child	0.40	0.41	– 0.01	0.78	
2 children	0.29	0.27	0.02		
3 children	0.14	0.17	– 0.03		
4 children or more	0.16	0.15	0.01		
Missing data	0.01	0.00	0.01		
Worked for pay past week (percent)	0.23	0.21	0.02	0.62	
Ever convicted of a felony (percent)	0.11	0.10	0.01	0.81	
Family annual income (percent)					
Less than $5,000	0.27	0.28	– 0.01	0.93	
$5,000–9,999	0.29	0.26	0.03		
$10,000–14,999	0.20	0.18	0.02		
$15,000–19,999	0.11	0.13	– 0.02		
$20,000–24,999	0.04	0.05	– 0.02		
$25,000 or more	0.07	0.06	0.01		
Missing data	0.03	0.04	– 0.01		
Ever been homeless before (percent)	0.63	0.61	0.01	0.79	
Ever been doubled up before (percent)	0.91	0.83	0.07	0.04	**
Major barrier to finding housing[a]	0.45	0.43	0.02	0.69	
Child under 18 living elsewhere (percent)	0.28	0.22	0.06	0.18	
Number of major life challenges[b]	1.33	1.68	– 0.35	0.25	
F-test on all characteristics except site	F value =	1.130	F-test *p*-value =	0.295	

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing.

GED = general educational development. RA = random assignment.

* .10 level. ** .05 level. *** .01 level.

[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.

[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.

Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).

Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-10. Equivalence at Baseline of Analysis Sample for SUB + CBRR + PBTH Versus UC Impact Comparison, 37-Month Adult Survey

Characteristic	SUB, CBRR, PBTH	UC	Difference	Significance Level	Stars
Number of families	1,228	556			
Age of household head at RA (percent)					
Less than 21 years old	0.09	0.09	0.00	0.52	
21–24 years	0.19	0.20	– 0.01		
25–29 years	0.24	0.23	0.01		
30–34 years	0.19	0.16	0.03		
35–44 years	0.22	0.23	– 0.01		
45 years and older	0.08	0.10	– 0.02		
Mean age (years)	30.64	31.22	– 0.59	0.90	
Gender (percent)					
Female	0.92	0.93	– 0.01	0.50	
Male	0.08	0.07	0.01		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.73	0.73	0.00	0.96	
Married or marriage-like situation	0.27	0.27	0.00		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.42	0.42	0.00	0.73	
White, not Hispanic	0.19	0.19	0.00		
Hispanic	0.20	0.21	– 0.02		
Other	0.19	0.17	0.02		
Educational attainment (percent)					
Less than high school diploma	0.34	0.39	– 0.06	0.02	**
High school diploma/GED	0.39	0.33	0.06		
More than high school diploma	0.27	0.28	0.00		
Number of adults in family (percent)					
1 adult	0.71	0.71	0.00		
2 or more adults	0.29	0.29	0.00	0.98	
Number of children in family (percent)					
1 child	0.41	0.44	– 0.03	0.26	
2 children	0.31	0.31	– 0.01		
3 children	0.15	0.15	0.00		
4 children or more	0.12	0.08	0.03		
Missing data	0.00	0.01	0.00		
Worked for pay past week (percent)	0.16	0.19	– 0.03	0.15	
Ever convicted of a felony (percent)	0.11	0.11	– 0.01	0.64	
Family annual income (percent)					
Less than $5,000	0.30	0.33	– 0.03	0.46	
$5,000–9,999	0.30	0.26	0.04		
$10,000–14,999	0.18	0.17	0.00		
$15,000–19,999	0.09	0.08	0.01		
$20,000–24,999	0.04	0.06	– 0.02		
$25,000 or more	0.06	0.06	0.00		
Missing data	0.03	0.03	– 0.01		
Ever been homeless before (percent)	0.62	0.64	– 0.02	0.39	
Ever been doubled up before (percent)	0.85	0.85	0.00	0.92	
Major barrier to finding housing[a]	0.44	0.46	– 0.02	0.33	
Child under 18 living elsewhere (percent)	0.23	0.22	0.00	0.88	
Number of major life challenges[b]	1.57	1.66	– 0.09	0.72	
F-test on all characteristics except site	F value =	1.169	F-test *p*-value =	0.235	

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

GED = general educational development. RA = random assignment.

* .10 level. ** .05 level. *** .01 level.

[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.

[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.

Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).

Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-11. Equivalence at Baseline of Analysis Sample for SUB + PBTH Versus CBRR Impact Comparison, 37-Month Adult Survey

Characteristic	SUB, PBTH	CBRR	Difference	Significance Level	Stars
Number of families	546	382			
Age of household head at RA (percent)					
Less than 21 years old	0.09	0.10	– 0.01	0.49	
21–24 years	0.18	0.18	0.00		
25–29 years	0.24	0.24	0.00		
30–34 years	0.20	0.19	0.01		
35–44 years	0.20	0.23	– 0.03		
45 years and older	0.09	0.06	0.03		
Mean age (years)	30.88	30.44	0.44	0.05	**
Gender (percent)					
Female	0.93	0.92	0.01	0.50	
Male	0.07	0.08	– 0.01		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.75	0.74	0.01	0.75	
Married or marriage-like situation	0.25	0.26	– 0.01		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.40	0.47	– 0.06	0.26	
White, not Hispanic	0.20	0.19	0.01		
Hispanic	0.21	0.18	0.02		
Other	0.19	0.16	0.03		
Educational attainment (percent)					
Less than high school diploma	0.37	0.31	0.06	0.11	
High school diploma/GED	0.36	0.41	– 0.05		
More than high school diploma	0.27	0.28	– 0.02		
Number of adults in family (percent)					
1 adult	0.73	0.70	0.04		
2 or more adults	0.27	0.30	– 0.04	0.22	
Number of children in family (percent)					
1 child	0.43	0.40	0.04	0.38	
2 children	0.31	0.32	– 0.01		
3 children	0.15	0.13	0.01		
4 children or more	0.11	0.15	– 0.04		
Missing data	0.00	0.01	0.00		
Worked for pay past week (percent)	0.16	0.18	– 0.01	0.62	
Ever convicted of a felony (percent)	0.11	0.11	0.00	1.00	
Family annual income (percent)					
Less than $5,000	0.32	0.29	0.02	0.88	
$5,000–9,999	0.30	0.32	– 0.02		
$10,000–14,999	0.18	0.19	– 0.01		
$15,000–19,999	0.08	0.09	0.00		
$20,000–24,999	0.05	0.03	0.02		
$25,000 or more	0.06	0.06	0.00		
Missing data	0.02	0.02	0.00		
Ever been homeless before (percent)	0.63	0.63	0.00	0.95	
Ever been doubled up before (percent)	0.84	0.88	– 0.04	0.06	*
Major barrier to finding housing[a]	0.45	0.42	0.03	0.42	
Child under 18 living elsewhere (percent)	0.24	0.22	0.02	0.47	
Number of major life challenges[b]	1.63	1.45	0.18	0.40	
F-test on all characteristics except site	F value =	1.114	F-test *p*-value =	0.304	

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. GED = general educational development. RA = random assignment.

* .10 level. ** .05 level. *** .01 level.

[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.

[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.

Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).

Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-12. Equivalence at Baseline of Analysis Sample for SUB + CBRR Versus PBTH Impact Comparison, 37-Month Adult Survey

Characteristic	SUB, CBRR	PBTH	Difference	Significance Level	Stars
Number of families	395	290			
Age of household head at RA (percent)					
Less than 21 years old	0.07	0.10	– 0.03	0.51	
21–24 years	0.20	0.15	0.05		
25–29 years	0.25	0.26	– 0.01		
30–34 years	0.20	0.19	0.01		
35–44 years	0.21	0.21	– 0.01		
45 years and older	0.08	0.09	– 0.01		
Mean age (years)	30.78	30.98	– 0.20	0.55	
Gender (percent)					
Female	0.92	0.90	0.01	0.56	
Male	0.08	0.10	– 0.01		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.68	0.69	– 0.01	0.78	
Married or marriage-like situation	0.32	0.31	0.01		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.40	0.41	0.00	0.90	
White, not Hispanic	0.18	0.19	– 0.01		
Hispanic	0.17	0.15	0.02		
Other	0.25	0.25	0.00		
Educational attainment (percent)					
Less than high school diploma	0.29	0.37	– 0.08	0.09	*
High school diploma/GED	0.41	0.36	0.05		
More than high school diploma	0.30	0.27	0.03		
Number of adults in family (percent)					
1 adult	0.66	0.68	– 0.02		
2 or more adults	0.34	0.32	0.02	0.58	
Number of children in family (percent)					
1 child	0.41	0.40	0.01	0.41	
2 children	0.32	0.29	0.03		
3 children	0.16	0.19	– 0.03		
4 children or more	0.11	0.12	– 0.01		
Missing data	0.01	0.00	0.01		
Worked for pay past week (percent)	0.21	0.17	0.03	0.28	
Ever convicted of a felony (percent)	0.13	0.10	0.02	0.35	
Family annual income (percent)					
Less than $5,000	0.28	0.29	– 0.01	0.62	
$5,000–9,999	0.30	0.26	0.04		
$10,000–14,999	0.18	0.18	0.00		
$15,000–19,999	0.08	0.13	– 0.04		
$20,000–24,999	0.05	0.05	0.00		
$25,000 or more	0.06	0.05	0.01		
Missing data	0.04	0.03	0.00		
Ever been homeless before (percent)	0.64	0.61	0.02	0.56	
Ever been doubled up before (percent)	0.87	0.82	0.04	0.11	
Major barrier to finding housing[a]	0.45	0.44	0.01	0.79	
Child under 18 living elsewhere (percent)	0.28	0.23	0.05	0.12	
Number of major life challenges[b]	1.47	1.69	– 0.22	0.38	
F-test on all characteristics except site	F value =	1.293	F-test *p*-value =	0.135	

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. GED = general educational development. RA = random assignment.

* .10 level. ** .05 level. *** .01 level.

[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.

[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.

Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).

Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-13. Equivalence at Baseline of Analysis Sample for CBRR + PBTH Versus SUB Impact Comparison, 37-Month Adult Survey

Characteristic	CBRR, PBTH	SUB	Difference	Significance Level	Stars
Number of families	491	463			
Age of household head at RA (percent)					
Less than 21 years old	0.11	0.08	0.03	0.36	
21–24 years	0.18	0.22	– 0.05		
25–29 years	0.24	0.23	0.02		
30–34 years	0.19	0.19	0.00		
35–44 years	0.21	0.20	0.01		
45 years and older	0.07	0.08	– 0.01		
Mean age (years)	30.32	30.39	– 0.07	0.22	
Gender (percent)					
Female	0.91	0.93	– 0.02	0.16	
Male	0.09	0.07	0.02		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.73	0.74	– 0.01	0.69	
Married or marriage-like situation	0.27	0.26	0.01		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.41	0.37	0.05	0.08	*
White, not Hispanic	0.23	0.21	0.02		
Hispanic	0.18	0.24	– 0.06		
Other	0.18	0.18	– 0.01		
Educational attainment (percent)					
Less than high school diploma	0.32	0.35	– 0.02	0.77	
High school diploma/GED	0.41	0.40	0.02		
More than high school diploma	0.26	0.26	0.01		
Number of adults in family (percent)					
1 adult	0.70	0.72	– 0.02		
2 or more adults	0.30	0.28	0.02	0.43	
Number of children in family (percent)					
1 child	0.41	0.44	– 0.03	0.71	
2 children	0.32	0.32	0.00		
3 children	0.15	0.14	0.00		
4 children or more	0.12	0.10	0.03		
Missing data	0.00	0.01	0.00		
Worked for pay past week (percent)	0.15	0.14	0.01	0.64	
Ever convicted of a felony (percent)	0.11	0.12	– 0.01	0.52	
Family annual income (percent)					
Less than $5,000	0.30	0.32	– 0.02	0.57	
$5,000–9,999	0.31	0.31	0.00		
$10,000–14,999	0.19	0.17	0.01		
$15,000–19,999	0.10	0.07	0.03		
$20,000–24,999	0.04	0.05	– 0.01		
$25,000 or more	0.05	0.06	– 0.01		
Missing data	0.02	0.03	– 0.01		
Ever been homeless before (percent)	0.62	0.63	– 0.01	0.76	
Ever been doubled up before (percent)	0.86	0.84	0.01	0.57	
Major barrier to finding housing[a]	0.43	0.46	– 0.03	0.38	
Child under 18 living elsewhere (percent)	0.20	0.25	– 0.05	0.05	**
Number of major life challenges[b]	1.59	1.61	– 0.02	0.66	
F-test on all characteristics except site	F value =	0.854	F-test *p*-value =	0.700	

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. GED = general educational development. RA = random assignment.

* .10 level. ** .05 level. *** .01 level.

[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.

[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.

Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).

Sources: Family Options Baseline Survey; 37-month followup survey

D.3. Respondents Versus Nonrespondents

This section provides evidence regarding whether the impacts estimated on the sample of 37-month survey respondents are applicable to the entire study population, including nonrespondents. We present results of two analyses. The first assesses whether respondents and nonrespondents have systematic differences in observable baseline characteristics. The second compares unweighted impact estimates with the weighted impact estimates presented in the body of the report.

Do Respondents Differ From Nonrespondents on Baseline Characteristics?

Do respondents and nonrespondents to the 37-month adult survey have systematic differences in observable baseline characteristics? Exhibit D-14 summarizes the results of tests from exhibits D-16 to D-19 comparing baseline characteristics of 37-month respondents and nonrespondents for each intervention. For SUB and PBTH the joint F-test on all characteristics in a regression indicated that the set of baseline characteristics were not jointly significant in predicting nonresponse. Consistent with the results discussed previously, six baseline characteristics differed for families assigned to CBRR that responded to the survey from those that did not, with a correspondingly large test statistic for the omnibus F-test. For families assigned to UC, two baseline characteristics had statistically significant average differences, with an 0.08 *p*-value of the joint omnibus F-test.

Exhibit D-15 summarizes the results of tests from exhibits D-20 to D-29 comparing 37-month respondents and nonrespondents. Among the pairwise comparison samples, comparisons containing CBRR had two or three baseline characteristic averages that had differences for response as opposed to nonresponse that were statistically significant, whereas the other three pairwise comparison samples had one differing characteristic. Meanwhile, omnibus F-tests indicated that baseline characteristics were generally predictive of nonresponse across the comparison samples, with all but two meeting a .10 *p*-value threshold. Taken together, these tests suggest that respondents seemed to systematically differ from nonrespondents.

The magnitude of these statistically significant differences is reported in Exhibits D-16 through D-29. When differences were statistically significant relative to nonrespondents, participants who responded to the followup survey were more often more educated, less likely to have a child living elsewhere, and more often had been doubled up before.

Exhibit D-14. Summary of Equivalence Testing of 37-Month Respondents Versus Nonrespondents, by Assigned Intervention

RA Result	Number of Baseline Characteristics With Significant Differences Between Respondents and Nonrespondents (out of 15; $\alpha = 0.10$)	Characteristic(s) With Significant Difference	*p*-Value of Omnibus F-test
SUB	0	None	0.76
CBRR	6	Marital status, race/ethnicity, educational attainment, felony conviction, doubled up, major challenges	0.00
PBTH	3	Age, gender, prior homeless, child elsewhere	0.43
UC	2	Children, ever homeless	0.08

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.
RA = random assignment.
Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-15. Summary of Baseline Equivalence Testing of 37-Month Respondents Versus Nonrespondents, by Impact Comparison

Pairwise Impact Comparison sample (response and nonresponse compared for both treatment groups)	Number of characteristics with significant differences (out of 15; $\alpha = 0.10$)	Characteristic(s) With Significant Difference	*p*-Value of Omnibus F-test
SUB versus UC	1	Educational attainment	0.47
CBRR versus UC	3	Educational attainment, number of children, annual income	0.04
PBTH versus UC	1	Worked for pay	0.19
SUB versus CBRR	2	Age, child elsewhere	0.00
SUB versus PBTH	1	Child elsewhere	0.31
CBRR versus PBTH	3	Educational attainment, number of adults, doubled up	0.03
SUB + CBRR + PBTH versus UC	1	Educational attainment	0.00
SUB + PBTH versus CBRR	2	Age, doubled up	0.00
SUB + CBRR versus PBTH	1	Educational attainment	0.01
PBTH + CBRR versus SUB	2	Race/ethnicity, child elsewhere	0.00

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.
Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-16. Equivalence at Baseline of Analysis Sample for Respondents Versus Nonrespondents for SUB, 37-Month Adult Survey

Characteristic	Respondents	Nonrespondents	Difference	Significance Level	Stars
Number of families	501	98	84%		
Age of household head at RA (percent)					
Less than 21 years old	0.08	0.08	0.00	0.79	
21–24 years	0.22	0.17	0.05		
25–29 years	0.23	0.26	– 0.03		
30–34 years	0.19	0.23	– 0.05		
35–44 years	0.20	0.18	0.02		
45 years and older	0.08	0.07	0.01		
Mean age (years)	30.47	30.39	0.08	0.90	
Gender (percent)					
Female	0.93	0.90	0.04	0.20	
Male	0.07	0.10	– 0.04		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.74	0.70	0.04	0.45	
Married or marriage-like situation	0.26	0.30	– 0.04		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.37	0.29	0.08	0.14	
White, not Hispanic	0.21	0.30	– 0.09		
Hispanic	0.24	0.20	0.04		
Other	0.19	0.21	– 0.03		
Educational attainment (percent)					
Less than high school diploma	0.34	0.42	– 0.08	0.36	
High school diploma/GED	0.39	0.35	0.05		
More than high school diploma	0.26	0.23	0.03		
Number of adults in family (percent)					
1 adult	0.73	0.68	0.05		
2 or more adults	0.27	0.32	– 0.05	0.34	
Number of children in family (percent)					
1 child	0.44	0.50	– 0.06	0.61	
2 children	0.32	0.26	0.06		
3 children	0.15	0.16	– 0.02		
4 children or more	0.09	0.08	0.01		
Missing data	0.01	0.00	0.01		
Worked for pay past week (percent)	0.14	0.10	0.04	0.31	
Ever convicted of a felony (percent)	0.11	0.12	– 0.01	0.81	
Family annual income (percent)					
Less than $5,000	0.32	0.34	– 0.02	0.25	
$5,000–9,999	0.32	0.29	0.03		
$10,000–14,999	0.16	0.14	0.02		
$15,000–19,999	0.07	0.04	0.03		
$20,000–24,999	0.04	0.10	– 0.06		
$25,000 or more	0.05	0.07	– 0.02		
Missing data	0.03	0.02	0.01		
Ever been homeless before (percent)	0.62	0.62	– 0.01	0.92	
Ever been doubled up before (percent)	0.84	0.84	0.01	0.85	
Major barrier to finding housing[a]	0.45	0.44	0.01	0.88	
Child under 18 living elsewhere (percent)	0.24	0.32	– 0.07	0.12	
Number of major life challenges[b]	1.60	1.85	– 0.25	0.30	
F-test on all characteristics except site	F value =	0.812	F-test p-value = 0.761		

SUB = priority access to permanent housing subsidy.
GED = general educational development. RA = random assignment.
* .10 level. ** .05 level. *** .01 level.
[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.
[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.
Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).
Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-17. Equivalence at Baseline of Analysis Sample for Respondents Versus Nonrespondents for CBRR, 37-Month Adult Survey

Characteristic	Respondents	Nonrespondents	Difference	Significance Level	Stars
Number of families	434	135	76%		
Age of household head at RA (percent)					
Less than 21 years old	0.09	0.07	0.02	0.83	
21–24 years	0.18	0.21	– 0.03		
25–29 years	0.24	0.21	0.02		
30–34 years	0.18	0.21	– 0.03		
35–44 years	0.24	0.24	0.00		
45 years and older	0.06	0.04	0.02		
Mean age (years)	30.62	30.36	0.26	0.81	
Gender (percent)					
Female	0.92	0.88	0.04	0.15	
Male	0.08	0.12	– 0.04		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.75	0.68	0.07	0.10	*
Married or marriage-like situation	0.25	0.32	– 0.07		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.50	0.37	0.13	0.05	**
White, not Hispanic	0.18	0.23	– 0.05		
Hispanic	0.18	0.19	– 0.01		
Other	0.15	0.21	– 0.07		
Educational attainment (percent)					
Less than high school diploma	0.30	0.42	– 0.12	0.03	**
High school diploma/GED	0.41	0.33	0.07		
More than high school diploma	0.29	0.24	0.05		
Number of adults in family (percent)					
1 adult	0.72	0.67	0.05		
2 or more adults	0.28	0.33	– 0.05	0.25	
Number of children in family (percent)					
1 child	0.40	0.50	– 0.10	0.12	
2 children	0.31	0.30	0.01		
3 children	0.14	0.09	0.05		
4 children or more	0.15	0.10	0.05		
Missing data	0.01	0.01	– 0.01		
Worked for pay past week (percent)	0.18	0.20	– 0.02	0.68	
Ever convicted of a felony (percent)	0.10	0.16	– 0.06	0.04	**
Family annual income (percent)					
Less than $5,000	0.29	0.31	– 0.02	0.40	
$5,000–9,999	0.32	0.31	0.01		
$10,000–14,999	0.19	0.13	0.06		
$15,000–19,999	0.09	0.08	0.01		
$20,000–24,999	0.03	0.07	– 0.04		
$25,000 or more	0.06	0.07	– 0.01		
Missing data	0.02	0.01	0.00		
Ever been homeless before (percent)	0.62	0.64	– 0.01	0.79	
Ever been doubled up before (percent)	0.88	0.79	0.09	0.01	**
Major barrier to finding housing[a]	0.42	0.35	0.08	0.12	
Child under 18 living elsewhere (percent)	0.21	0.28	– 0.07	0.11	
Number of major life challenges[b]	1.46	1.85	– 0.39	0.00	***
F-test on all characteristics except site	F value =	1.915	F-test p-value = 0.002		

CBRR = priority access to community-based rapid re-housing.
GED = general educational development. RA = random assignment.
* .10 level. ** .05 level. *** .01 level.
[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.
[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.
Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).
Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-18. Equivalence at Baseline of Analysis Sample for Respondents Versus Nonrespondents for PBTH, 37-Month Adult Survey

Characteristic	Respondents	Nonrespondents	Difference	Significance Level	Stars
Number of families	293	75	80%		
Age of household head at RA (percent)					
Less than 21 years old	0.10	0.05	0.04	0.19	
21–24 years	0.15	0.17	– 0.02		
25–29 years	0.26	0.23	0.04		
30–34 years	0.19	0.28	– 0.09		
35–44 years	0.21	0.24	– 0.03		
45 years and older	0.09	0.03	0.07		
Mean age (years)	30.95	30.75	0.20	0.75	
Gender (percent)					
Female	0.90	0.83	0.08	0.06	*
Male	0.10	0.17	– 0.08		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.68	0.63	0.06	0.36	
Married or marriage-like situation	0.32	0.37	– 0.06		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.41	0.35	0.06	0.62	
White, not Hispanic	0.19	0.25	– 0.06		
Hispanic	0.15	0.16	– 0.01		
Other	0.25	0.24	0.01		
Educational attainment (percent)					
Less than high school diploma	0.37	0.33	0.04	0.74	
High school diploma/GED	0.36	0.36	0.00		
More than high school diploma	0.27	0.31	– 0.04		
Number of adults in family (percent)					
1 adult	0.68	0.61	0.06		
2 or more adults	0.32	0.39	– 0.06	0.31	
Number of children in family (percent)					
1 child	0.40	0.40	0.00	1.00	
2 children	0.29	0.28	0.01		
3 children	0.19	0.20	– 0.01		
4 children or more	0.12	0.12	0.00		
Missing data	0.00	0.00	0.00		
Worked for pay past week (percent)	0.17	0.28	– 0.11	0.03	**
Ever convicted of a felony (percent)	0.10	0.16	– 0.06	0.16	
Family annual income (percent)					
Less than $5,000	0.29	0.27	0.02	0.83	
$5,000–9,999	0.26	0.24	0.02		
$10,000–14,999	0.18	0.19	0.00		
$15,000–19,999	0.13	0.12	0.01		
$20,000–24,999	0.05	0.08	– 0.03		
$25,000 or more	0.05	0.04	0.01		
Missing data	0.03	0.07	– 0.03		
Ever been homeless before (percent)	0.61	0.55	0.07	0.29	
Ever been doubled up before (percent)	0.83	0.81	0.01	0.80	
Major barrier to finding housing[a]	0.44	0.41	0.03	0.68	
Child under 18 living elsewhere (percent)	0.23	0.32	– 0.09	0.09	*
Number of major life challenges[b]	1.69	1.45	0.24	0.42	
F-test on all characteristics except site	F value =	1.029	F-test *p*-value =	0.428	

PBTH = priority access to project-based transitional housing.
GED = general educational development. RA = random assignment.
* .10 level. ** .05 level. *** .01 level.
[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.
[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.
Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).
Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-19. Equivalence at Baseline of Analysis Sample for Respondents Versus Nonrespondents for UC, 37-Month Adult Survey

Characteristic	Respondents	Nonrespondents	Difference	Significance Level	Stars
Number of families	556	190	75%		
Age of household head at RA (percent)					
Less than 21 years old	0.09	0.04	0.04	0.28	
21–24 years	0.20	0.19	0.00		
25–29 years	0.23	0.28	– 0.05		
30–34 years	0.16	0.17	– 0.01		
35–44 years	0.23	0.24	– 0.01		
45 years and older	0.10	0.07	0.02		
Mean age (years)	31.22	31.38	– 0.15	0.22	
Gender (percent)					
Female	0.93	0.92	0.02	0.46	
Male	0.07	0.08	– 0.02		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.73	0.67	0.06	0.13	
Married or marriage-like situation	0.27	0.33	– 0.06		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.42	0.40	0.02	0.77	
White, not Hispanic	0.19	0.23	– 0.03		
Hispanic	0.21	0.22	– 0.01		
Other	0.17	0.15	0.01		
Educational attainment (percent)					
Less than high school diploma	0.39	0.42	– 0.02	0.84	
High school diploma/GED	0.33	0.33	0.00		
More than high school diploma	0.28	0.26	0.02		
Number of adults in family (percent)					
1 adult	0.71	0.67	0.05		
2 or more adults	0.29	0.33	– 0.05	0.23	
Number of children in family (percent)					
1 child	0.44	0.41	0.03	0.02	**
2 children	0.31	0.26	0.06		
3 children	0.15	0.16	– 0.01		
4 children or more	0.08	0.17	– 0.08		
Missing data	0.01	0.01	0.00		
Worked for pay past week (percent)	0.19	0.14	0.05	0.13	
Ever convicted of a felony (percent)	0.11	0.09	0.02	0.36	
Family annual income (percent)					
Less than $5,000	0.33	0.33	0.00	0.18	
$5,000–9,999	0.26	0.30	– 0.04		
$10,000–14,999	0.17	0.14	0.04		
$15,000–19,999	0.08	0.11	– 0.02		
$20,000–24,999	0.06	0.06	– 0.01		
$25,000 or more	0.06	0.06	0.00		
Missing data	0.03	0.00	0.03		
Ever been homeless before (percent)	0.64	0.56	0.08	0.06	*
Ever been doubled up before (percent)	0.85	0.84	0.02	0.56	
Major barrier to finding housing[a]	0.46	0.42	0.04	0.32	
Child under 18 living elsewhere (percent)	0.22	0.25	– 0.03	0.43	
Number of major life challenges[b]	1.66	1.52	0.14	0.66	
F-test on all characteristics except site	F value =	1.378	F-test *p*-value =	0.085	

UC = usual care.

GED = general educational development. RA = random assignment.

* .10 level. ** .05 level. *** .01 level.

[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.

[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.

Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).

Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-20. Equivalence at Baseline of Analysis Sample for Respondents Versus Nonrespondents for SUB Versus UC Impact Comparison, 37-Month Adult Survey

Characteristic	Respondents	Nonrespondents	Difference	Significance Level	Stars
Number of families	896	243	79%		
Age of household head at RA (percent)					
Less than 21 years old	0.09	0.06	0.03	0.79	
21–24 years	0.22	0.20	0.01		
25–29 years	0.23	0.27	– 0.04		
30–34 years	0.17	0.20	– 0.03		
35–44 years	0.21	0.20	0.01		
45 years and older	0.09	0.07	0.02		
Mean age (years)	30.61	30.51	0.11	0.67	
Gender (percent)					
Female	0.93	0.92	0.01	0.56	
Male	0.07	0.08	– 0.01		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.72	0.69	0.03	0.17	
Married or marriage-like situation	0.28	0.31	– 0.03		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.37	0.33	0.04	0.84	
White, not Hispanic	0.21	0.27	– 0.06		
Hispanic	0.24	0.22	0.02		
Other	0.18	0.18	0.00		
Educational attainment (percent)					
Less than high school diploma	0.37	0.42	– 0.05	0.08	*
High school diploma/GED	0.37	0.35	0.02		
More than high school diploma	0.26	0.23	0.03		
Number of adults in family (percent)					
1 adult	0.71	0.67	0.04		
2 or more adults	0.29	0.33	– 0.04	0.20	
Number of children in family (percent)					
1 child	0.43	0.44	– 0.01	0.93	
2 children	0.32	0.27	0.05		
3 children	0.15	0.15	0.00		
4 children or more	0.09	0.13	– 0.04		
Missing data	0.01	0.00	0.01		
Worked for pay past week (percent)	0.15	0.12	0.04	0.30	
Ever convicted of a felony (percent)	0.11	0.11	0.00	0.82	
Family annual income (percent)					
Less than $5,000	0.33	0.35	– 0.02	0.96	
$5,000–9,999	0.31	0.31	0.00		
$10,000–14,999	0.17	0.15	0.02		
$15,000–19,999	0.07	0.07	0.00		
$20,000–24,999	0.04	0.07	– 0.02		
$25,000 or more	0.05	0.05	0.00		
Missing data	0.03	0.01	0.02		
Ever been homeless before (percent)	0.63	0.59	0.05	0.23	
Ever been doubled up before (percent)	0.86	0.85	0.01	0.26	
Major barrier to finding housing[a]	0.45	0.42	0.02	0.92	
Child under 18 living elsewhere (percent)	0.24	0.27	– 0.04	0.63	
Number of major life challenges[b]	1.60	1.68	– 0.08	0.75	
F-test on all characteristics except site	F value =	0.996	F-test *p*-value =	0.474	

SUB = priority access to permanent housing subsidy. UC = usual care.
GED = general educational development. RA = random assignment.
* .10 level. ** .05 level. *** .01 level.
[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.
[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.
Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).
Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-21. Equivalence at Baseline of Analysis Sample for Respondents Versus Nonrespondents for CBRR Versus UC Impact Comparison, 37-Month Adult Survey

Characteristic	Respondents	Nonrespondents	Difference	Significance Level	Stars
Number of families	868	276	76%		
Age of household head at RA (percent)					
Less than 21 years old	0.09	0.06	0.03	0.13	
21–24 years	0.19	0.20	– 0.01		
25–29 years	0.23	0.25	– 0.02		
30–34 years	0.16	0.19	– 0.03		
35–44 years	0.23	0.24	– 0.01		
45 years and older	0.09	0.06	0.03		
Mean age (years)	30.94	30.72	0.22	0.77	
Gender (percent)					
Female	0.93	0.91	0.02	0.51	
Male	0.07	0.09	– 0.02		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.75	0.68	0.07	0.87	
Married or marriage-like situation	0.25	0.32	– 0.07		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.46	0.40	0.06	0.24	
White, not Hispanic	0.19	0.22	– 0.03		
Hispanic	0.20	0.19	0.01		
Other	0.15	0.19	– 0.04		
Educational attainment (percent)					
Less than high school diploma	0.34	0.42	– 0.07	0.01	**
High school diploma/GED	0.37	0.33	0.04		
More than high school diploma	0.29	0.25	0.04		
Number of adults in family (percent)					
1 adult	0.72	0.68	0.05		
2 or more adults	0.28	0.32	– 0.05	0.76	
Number of children in family (percent)					
1 child	0.42	0.47	– 0.05	0.05	*
2 children	0.31	0.26	0.05		
3 children	0.15	0.12	0.03		
4 children or more	0.11	0.14	– 0.02		
Missing data	0.01	0.01	0.00		
Worked for pay past week (percent)	0.19	0.18	0.02	0.44	
Ever convicted of a felony (percent)	0.10	0.12	– 0.02	0.65	
Family annual income (percent)					
Less than $5,000	0.31	0.31	0.00	0.09	*
$5,000–9,999	0.28	0.30	– 0.01		
$10,000–14,999	0.18	0.13	0.05		
$15,000–19,999	0.09	0.11	– 0.02		
$20,000–24,999	0.05	0.07	– 0.02		
$25,000 or more	0.07	0.08	– 0.01		
Missing data	0.02	0.01	0.02		
Ever been homeless before (percent)	0.63	0.60	0.03	0.78	
Ever been doubled up before (percent)	0.87	0.82	0.05	0.36	
Major barrier to finding housing[a]	0.45	0.39	0.05	0.15	
Child under 18 living elsewhere (percent)	0.22	0.28	– 0.06	0.74	
Number of major life challenges[b]	1.56	1.66	– 0.10	0.44	
F-test on all characteristics except site	F value =	1.498	F-test *p*-value =	0.038	

CBRR = priority access to community-based rapid re-housing. UC = usual care.
GED = general educational development. RA = random assignment.
* .10 level. ** .05 level. *** .01 level.
[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.
[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.
Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).
Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-22. Equivalence at Baseline of Analysis Sample for Respondents Versus Nonrespondents for PBTH Versus UC Impact Comparison, 37-Month Adult Survey

Characteristic	Respondents	Nonrespondents	Difference	Significance Level	Stars
Number of families	552	155	78%		
Age of household head at RA (percent)					
Less than 21 years old	0.08	0.05	0.03	0.38	
21–24 years	0.16	0.20	– 0.04		
25–29 years	0.24	0.25	0.00		
30–34 years	0.20	0.21	– 0.01		
35–44 years	0.23	0.25	– 0.02		
45 years and older	0.10	0.05	0.05		
Mean age (years)	31.59	31.06	0.52	0.58	
Gender (percent)					
Female	0.92	0.86	0.06	0.27	
Male	0.08	0.14	– 0.06		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.68	0.62	0.06	0.94	
Married or marriage-like situation	0.32	0.38	– 0.06		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.41	0.34	0.08	0.96	
White, not Hispanic	0.18	0.25	– 0.06		
Hispanic	0.15	0.19	– 0.04		
Other	0.25	0.23	0.02		
Educational attainment (percent)					
Less than high school diploma	0.39	0.41	– 0.02	0.59	
High school diploma/GED	0.35	0.32	0.03		
More than high school diploma	0.26	0.27	– 0.01		
Number of adults in family (percent)					
1 adult	0.67	0.59	0.08		
2 or more adults	0.33	0.41	– 0.08	0.85	
Number of children in family (percent)					
1 child	0.41	0.39	0.02	0.48	
2 children	0.28	0.30	– 0.01		
3 children	0.19	0.15	0.04		
4 children or more	0.11	0.15	– 0.04		
Missing data	0.00	0.01	0.00		
Worked for pay past week (percent)	0.20	0.21	– 0.01	0.07	*
Ever convicted of a felony (percent)	0.12	0.14	– 0.02	0.11	
Family annual income (percent)					
Less than $5,000	0.30	0.30	0.00	0.61	
$5,000–9,999	0.24	0.28	– 0.03		
$10,000–14,999	0.18	0.15	0.03		
$15,000–19,999	0.11	0.10	0.01		
$20,000–24,999	0.06	0.08	– 0.02		
$25,000 or more	0.06	0.06	0.00		
Missing data	0.05	0.03	0.01		
Ever been homeless before (percent)	0.63	0.53	0.10	0.36	
Ever been doubled up before (percent)	0.83	0.83	0.00	0.62	
Major barrier to finding housing[a]	0.45	0.46	– 0.02	0.79	
Child under 18 living elsewhere (percent)	0.23	0.28	– 0.05	0.70	
Number of major life challenges[b]	1.67	1.48	0.19	0.89	
F-test on all characteristics except site	F value =	1.233	F-test *p*-value =	0.188	

PBTH = priority access to project-based transitional housing. UC = usual care.

GED = general educational development. RA = random assignment.

* .10 level. ** .05 level. *** .01 level.

[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.

[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.

Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).

Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-23. Equivalence at Baseline of Analysis Sample for Respondents Versus Nonrespondents for SUB Versus CBRR Impact Comparison, 37-Month Adult Survey

Characteristic	Respondents	Nonrespondents	Difference	Significance Level	Stars
Number of families	652	165	80%		
Age of household head at RA (percent)					
Less than 21 years old	0.10	0.08	0.01	0.46	
21–24 years	0.20	0.17	0.03		
25–29 years	0.23	0.24	– 0.01		
30–34 years	0.19	0.24	– 0.05		
35–44 years	0.20	0.20	0.00		
45 years and older	0.08	0.06	0.02		
Mean age (years)	30.37	30.42	– 0.05	0.07	*
Gender (percent)					
Female	0.93	0.90	0.03	0.27	
Male	0.07	0.10	– 0.03		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.75	0.68	0.08	0.98	
Married or marriage-like situation	0.25	0.32	– 0.08		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.41	0.28	0.13	0.32	
White, not Hispanic	0.22	0.29	– 0.07		
Hispanic	0.22	0.19	0.03		
Other	0.14	0.24	– 0.09		
Educational attainment (percent)					
Less than high school diploma	0.35	0.39	– 0.05	0.77	
High school diploma/GED	0.40	0.36	0.05		
More than high school diploma	0.25	0.25	0.00		
Number of adults in family (percent)					
1 adult	0.73	0.68	0.04		
2 or more adults	0.27	0.32	– 0.04	0.54	
Number of children in family (percent)					
1 child	0.43	0.54	– 0.11	0.51	
2 children	0.32	0.26	0.06		
3 children	0.13	0.11	0.02		
4 children or more	0.11	0.08	0.03		
Missing data	0.00	0.01	0.00		
Worked for pay past week (percent)	0.15	0.12	0.03	0.39	
Ever convicted of a felony (percent)	0.11	0.15	– 0.04	0.79	
Family annual income (percent)					
Less than $5,000	0.32	0.35	– 0.02	0.61	
$5,000–9,999	0.33	0.26	0.06		
$10,000–14,999	0.18	0.13	0.05		
$15,000–19,999	0.07	0.07	0.00		
$20,000–24,999	0.04	0.10	– 0.06		
$25,000 or more	0.05	0.08	– 0.03		
Missing data	0.01	0.01	0.00		
Ever been homeless before (percent)	0.63	0.62	0.01	0.89	
Ever been doubled up before (percent)	0.86	0.80	0.06	0.14	
Major barrier to finding housing[a]	0.44	0.39	0.05	0.22	
Child under 18 living elsewhere (percent)	0.22	0.33	– 0.10	0.09	*
Number of major life challenges[b]	1.55	1.92	– 0.36	0.65	
F-test on all characteristics except site	F value =	1.920	F-test *p*-value =	0.002	

CBRR = priority access to community-based rapid re-housing. SUB = priority access to permanent housing subsidy.
GED = general educational development. RA = random assignment.
* .10 level. ** .05 level. *** .01 level.
[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.
[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.
Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).
Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-24. Equivalence at Baseline of Analysis Sample for Respondents Versus Nonrespondents for SUB Versus PBTH Impact Comparison, 37-Month Adult Survey

Characteristic	Respondents	Nonrespondents	Difference	Significance Level	Stars
Number of families	416	80	84%		
Age of household head at RA (percent)					
Less than 21 years old	0.08	0.04	0.04	0.46	
21–24 years	0.20	0.24	– 0.03		
25–29 years	0.24	0.26	– 0.02		
30–34 years	0.19	0.24	– 0.05		
35–44 years	0.19	0.18	0.01		
45 years and older	0.09	0.05	0.04		
Mean age (years)	30.70	29.98	0.73	0.73	
Gender (percent)					
Female	0.91	0.88	0.04	0.28	
Male	0.09	0.13	– 0.04		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.69	0.70	– 0.01	0.80	
Married or marriage-like situation	0.31	0.30	0.01		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.36	0.21	0.15	0.31	
White, not Hispanic	0.22	0.34	– 0.12		
Hispanic	0.19	0.18	0.01		
Other	0.24	0.28	– 0.04		
Educational attainment (percent)					
Less than high school diploma	0.30	0.38	– 0.07	0.86	
High school diploma/GED	0.42	0.35	0.07		
More than high school diploma	0.28	0.28	0.01		
Number of adults in family (percent)					
1 adult	0.68	0.63	0.05		
2 or more adults	0.32	0.38	– 0.05	0.88	
Number of children in family (percent)					
1 child	0.41	0.44	– 0.03	0.35	
2 children	0.32	0.25	0.07		
3 children	0.18	0.21	– 0.03		
4 children or more	0.08	0.10	– 0.02		
Missing data	0.00	0.00	0.00		
Worked for pay past week (percent)	0.16	0.23	– 0.07	0.15	
Ever convicted of a felony (percent)	0.13	0.14	– 0.01	0.36	
Family annual income (percent)					
Less than $5,000	0.30	0.34	– 0.04	0.56	
$5,000–9,999	0.30	0.29	0.01		
$10,000–14,999	0.18	0.14	0.04		
$15,000–19,999	0.09	0.08	0.02		
$20,000–24,999	0.06	0.08	– 0.02		
$25,000 or more	0.05	0.04	0.01		
Missing data	0.04	0.05	– 0.01		
Ever been homeless before (percent)	0.62	0.56	0.06	0.35	
Ever been doubled up before (percent)	0.83	0.85	– 0.02	0.66	
Major barrier to finding housing[a]	0.45	0.48	– 0.03	0.98	
Child under 18 living elsewhere (percent)	0.24	0.25	– 0.01	0.07	*
Number of major life challenges[b]	1.66	1.59	0.07	0.70	
F-test on all characteristics except site	F value =	1.118	F-test *p*-value =	0.306	

PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy.
GED = general educational development. RA = random assignment.
* .10 level. ** .05 level. *** .01 level.
[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.
[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.
Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).
Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-25. Equivalence at Baseline of Analysis Sample for Respondents Versus Nonrespondents for CBRR Versus PBTH Impact Comparison, 37-Month Adult Survey

Characteristic	Respondents	Nonrespondents	Difference	Significance Level	Stars
Number of families	364	107	77%		
Age of household head at RA (percent)					
Less than 21 years old	0.08	0.03	0.05	0.60	
21–24 years	0.14	0.18	– 0.03		
25–29 years	0.27	0.22	0.04		
30–34 years	0.21	0.24	– 0.03		
35–44 years	0.22	0.28	– 0.06		
45 years and older	0.08	0.05	0.03		
Mean age (years)	31.12	31.36	– 0.24	0.33	
Gender (percent)					
Female	0.91	0.84	0.07	0.80	
Male	0.09	0.16	– 0.07		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.70	0.62	0.08	0.11	
Married or marriage-like situation	0.30	0.38	– 0.08		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.45	0.39	0.06	0.86	
White, not Hispanic	0.16	0.24	– 0.08		
Hispanic	0.13	0.16	– 0.03		
Other	0.26	0.21	0.05		
Educational attainment (percent)					
Less than high school diploma	0.35	0.36	– 0.01	0.05	**
High school diploma/GED	0.34	0.36	– 0.03		
More than high school diploma	0.31	0.27	0.04		
Number of adults in family (percent)					
1 adult	0.68	0.59	0.09		
2 or more adults	0.32	0.41	– 0.09	0.05	*
Number of children in family (percent)					
1 child	0.40	0.41	– 0.01	0.78	
2 children	0.28	0.35	– 0.07		
3 children	0.16	0.16	0.00		
4 children or more	0.15	0.08	0.07		
Missing data	0.00	0.00	0.00		
Worked for pay past week (percent)	0.22	0.28	– 0.06	0.62	
Ever convicted of a felony (percent)	0.11	0.14	– 0.03	0.81	
Family annual income (percent)					
Less than $5,000	0.27	0.22	0.05	0.93	
$5,000–9,999	0.27	0.28	– 0.01		
$10,000–14,999	0.19	0.18	0.01		
$15,000–19,999	0.12	0.12	0.00		
$20,000–24,999	0.05	0.10	– 0.06		
$25,000 or more	0.07	0.06	0.01		
Missing data	0.03	0.04	0.00		
Ever been homeless before (percent)	0.62	0.54	0.08	0.79	
Ever been doubled up before (percent)	0.87	0.79	0.08	0.04	**
Major barrier to finding housing[a]	0.44	0.37	0.07	0.69	
Child under 18 living elsewhere (percent)	0.25	0.31	– 0.06	0.18	
Number of major life challenges[b]	1.51	1.47	0.04	0.25	
F-test on all characteristics except site	F value =	1.556	F-test *p*-value =	0.033	

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing.
GED = general educational development. RA = random assignment.
* .10 level. ** .05 level. *** .01 level.
[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.
[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.
Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).
Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-26. Equivalence at Baseline of Analysis Sample for Respondents Versus Nonrespondents for SUB + CBRR + PBTH Versus UC Impact Comparison, 37-Month Adult Survey

Characteristic	Respondents	Nonrespondents	Difference	Significance Level	Stars
Number of families	1,784	498	78%		
Age of household head at RA (percent)					
Less than 21 years old	0.09	0.06	0.03	0.52	
21–24 years	0.19	0.19	0.00		
25–29 years	0.24	0.25	– 0.01		
30–34 years	0.18	0.21	– 0.03		
35–44 years	0.22	0.23	– 0.01		
45 years and older	0.08	0.06	0.03		
Mean age (years)	30.82	30.81	0.01	0.90	
Gender (percent)					
Female	0.93	0.89	0.04	0.50	
Male	0.07	0.11	– 0.04		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.73	0.67	0.06	0.96	
Married or marriage-like situation	0.27	0.33	– 0.06		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.42	0.36	0.06	0.73	
White, not Hispanic	0.19	0.24	– 0.05		
Hispanic	0.20	0.20	0.00		
Other	0.18	0.19	– 0.01		
Educational attainment (percent)					
Less than high school diploma	0.35	0.41	– 0.05	0.02	**
High school diploma/GED	0.37	0.34	0.03		
More than high school diploma	0.27	0.26	0.02		
Number of adults in family (percent)					
1 adult	0.71	0.66	0.05		
2 or more adults	0.29	0.34	– 0.05	0.98	
Number of children in family (percent)					
1 child	0.42	0.45	– 0.03	0.26	
2 children	0.31	0.27	0.04		
3 children	0.15	0.15	0.01		
4 children or more	0.11	0.12	– 0.02		
Missing data	0.01	0.01	0.00		
Worked for pay past week (percent)	0.17	0.17	0.00	0.15	
Ever convicted of a felony (percent)	0.11	0.13	– 0.02	0.64	
Family annual income (percent)					
Less than $5,000	0.31	0.32	– 0.01	0.46	
$5,000–9,999	0.29	0.29	0.00		
$10,000–14,999	0.18	0.14	0.03		
$15,000–19,999	0.09	0.09	0.00		
$20,000–24,999	0.05	0.08	– 0.03		
$25,000 or more	0.06	0.06	– 0.01		
Missing data	0.03	0.02	0.01		
Ever been homeless before (percent)	0.63	0.59	0.03	0.39	
Ever been doubled up before (percent)	0.85	0.82	0.03	0.92	
Major barrier to finding housing[a]	0.45	0.40	0.04	0.33	
Child under 18 living elsewhere (percent)	0.23	0.28	– 0.06	0.88	
Number of major life challenges[b]	1.60	1.66	– 0.06	0.72	
F-test on all characteristics except site	F value =	2.146	F-test *p*-value =	0.000	

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

GED = general educational development. RA = random assignment.

* .10 level. ** .05 level. *** .01 level.

[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.

[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.

Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).

Sources: Family Options Baseline Survey; 37-month followup survey

Exhibit D-27. Equivalence at Baseline of Analysis Sample for Respondents Versus Nonrespondents for SUB + PBTH Versus CBRR Impact Comparison, 37-Month Adult Survey

Characteristic	Respondents	Nonrespondents	Difference	Significance Level	Stars
Number of families	928	240	79%		
Age of household head at RA (percent)					
Less than 21 years old	0.09	0.07	0.02	0.49	
21–24 years	0.18	0.18	0.01		
25–29 years	0.24	0.23	0.00		
30–34 years	0.20	0.24	– 0.04		
35–44 years	0.21	0.22	– 0.01		
45 years and older	0.08	0.06	0.02		
Mean age (years)	30.70	30.70	0.00	0.05	**
Gender (percent)					
Female	0.93	0.87	0.05	0.50	
Male	0.07	0.13	– 0.05		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.74	0.65	0.09	0.75	
Married or marriage-like situation	0.26	0.35	– 0.09		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.43	0.33	0.10	0.26	
White, not Hispanic	0.20	0.29	– 0.09		
Hispanic	0.20	0.17	0.03		
Other	0.18	0.22	– 0.04		
Educational attainment (percent)					
Less than high school diploma	0.35	0.38	– 0.03	0.11	
High school diploma/GED	0.38	0.37	0.01		
More than high school diploma	0.27	0.26	0.02		
Number of adults in family (percent)					
1 adult	0.72	0.65	0.06		
2 or more adults	0.28	0.35	– 0.06	0.22	
Number of children in family (percent)					
1 child	0.42	0.49	– 0.07	0.38	
2 children	0.31	0.30	0.01		
3 children	0.14	0.13	0.02		
4 children or more	0.13	0.09	0.04		
Missing data	0.00	0.00	0.00		
Worked for pay past week (percent)	0.17	0.17	0.00	0.62	
Ever convicted of a felony (percent)	0.11	0.15	– 0.04	1.00	
Family annual income (percent)					
Less than $5,000	0.30	0.30	0.00	0.88	
$5,000–9,999	0.31	0.26	0.05		
$10,000–14,999	0.18	0.16	0.02		
$15,000–19,999	0.09	0.09	0.00		
$20,000–24,999	0.04	0.09	– 0.05		
$25,000 or more	0.06	0.07	– 0.01		
Missing data	0.02	0.03	– 0.01		
Ever been homeless before (percent)	0.63	0.60	0.03	0.95	
Ever been doubled up before (percent)	0.86	0.81	0.04	0.06	*
Major barrier to finding housing[a]	0.44	0.40	0.04	0.42	
Child under 18 living elsewhere (percent)	0.23	0.32	– 0.08	0.47	
Number of major life challenges[b]	1.56	1.74	– 0.18	0.40	
F-test on all characteristics except site	F value =	1.989	F-test *p*-value =	0.001	

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. GED = general educational development. RA = random assignment.

* .10 level. ** .05 level. *** .01 level.

[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.

[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.

Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).

Source: Family Options Baseline Survey; 18-month followup survey

Exhibit D-28. Equivalence at Baseline of Analysis Sample for Respondents Versus Nonrespondents for SUB + CBRR Versus PBTH Impact Comparison, 37-Month Adult Survey

Characteristic	Respondents	Nonrespondents	Difference	Significance Level	Stars
Number of families	685	166	80%		
Age of household head at RA (percent)					
Less than 21 years old	0.08	0.03	0.05	0.51	
21–24 years	0.18	0.20	– 0.02		
25–29 years	0.25	0.23	0.02		
30–34 years	0.20	0.24	– 0.05		
35–44 years	0.21	0.25	– 0.05		
45 years and older	0.09	0.05	0.04		
Mean age (years)	30.87	31.02	– 0.15	0.55	
Gender (percent)					
Female	0.91	0.86	0.05	0.56	
Male	0.09	0.14	– 0.05		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.68	0.65	0.03	0.78	
Married or marriage-like situation	0.32	0.35	– 0.03		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.40	0.31	0.09	0.90	
White, not Hispanic	0.19	0.27	– 0.08		
Hispanic	0.16	0.17	– 0.01		
Other	0.25	0.25	0.00		
Educational attainment (percent)					
Less than high school diploma	0.33	0.37	– 0.05	0.09	*
High school diploma/GED	0.39	0.36	0.03		
More than high school diploma	0.28	0.27	0.01		
Number of adults in family (percent)					
1 adult	0.66	0.61	0.06		
2 or more adults	0.34	0.39	– 0.06	0.58	
Number of children in family (percent)					
1 child	0.41	0.42	– 0.01	0.41	
2 children	0.30	0.30	0.00		
3 children	0.17	0.18	– 0.01		
4 children or more	0.11	0.10	0.02		
Missing data	0.00	0.00	0.00		
Worked for pay past week (percent)	0.19	0.25	– 0.06	0.28	
Ever convicted of a felony (percent)	0.12	0.13	– 0.02	0.35	
Family annual income (percent)					
Less than $5,000	0.28	0.29	0.00	0.62	
$5,000–9,999	0.28	0.28	0.00		
$10,000–14,999	0.18	0.14	0.04		
$15,000–19,999	0.10	0.09	0.01		
$20,000–24,999	0.05	0.10	– 0.05		
$25,000 or more	0.06	0.05	0.00		
Missing data	0.04	0.04	– 0.01		
Ever been homeless before (percent)	0.63	0.54	0.08	0.56	
Ever been doubled up before (percent)	0.85	0.81	0.04	0.11	
Major barrier to finding housing[a]	0.44	0.42	0.02	0.79	
Child under 18 living elsewhere (percent)	0.26	0.28	– 0.02	0.12	
Number of major life challenges[b]	1.56	1.51	0.06	0.38	
F-test on all characteristics except site	F value =	1.676	F-test *p*-value =	0.013	

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. GED = general educational development. RA = random assignment.

* .10 level. ** .05 level. *** .01 level.

[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.

[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.

Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).

Source: Family Options Baseline Survey; 18-month followup survey

Exhibit D-29. Equivalence at Baseline of Analysis Sample for Respondents Versus Nonrespondents for PBTH + CBRR Versus SUB Impact Comparison, 37-Month Adult Survey

Characteristic	Respondents	Nonrespondents	Difference	Significance Level	Stars
Number of families	954	219	81%		
Age of household head at RA (percent)					
Less than 21 years old	0.09	0.07	0.02	0.36	
21–24 years	0.20	0.18	0.02		
25–29 years	0.24	0.25	– 0.01		
30–34 years	0.19	0.24	– 0.05		
35–44 years	0.20	0.20	0.00		
45 years and older	0.08	0.05	0.02		
Mean age (years)	30.35	30.34	0.01	0.22	
Gender (percent)					
Female	0.92	0.88	0.04	0.16	
Male	0.08	0.12	– 0.04		
Marital status (percent)					
Single (never married/widowed/separated/divorced)	0.73	0.69	0.04	0.69	
Married or marriage-like situation	0.27	0.31	– 0.04		
Race/ethnicity (percent)					
Black/African American, not Hispanic	0.39	0.26	0.13	0.08	*
White, not Hispanic	0.22	0.30	– 0.08		
Hispanic	0.21	0.19	0.02		
Other	0.18	0.25	– 0.07		
Educational attainment (percent)					
Less than high school diploma	0.33	0.38	– 0.05	0.77	
High school diploma/GED	0.40	0.35	0.05		
More than high school diploma	0.26	0.26	0.00		
Number of adults in family (percent)					
1 adult	0.71	0.67	0.04		
2 or more adults	0.29	0.33	– 0.04	0.43	
Number of children in family (percent)					
1 child	0.42	0.50	– 0.08	0.71	
2 children	0.32	0.26	0.06		
3 children	0.14	0.14	0.01		
4 children or more	0.11	0.10	0.01		
Missing data	0.01	0.00	0.00		
Worked for pay past week (percent)	0.14	0.16	– 0.01	0.64	
Ever convicted of a felony (percent)	0.11	0.15	– 0.04	0.52	
Family annual income (percent)					
Less than $5,000	0.31	0.33	– 0.02	0.57	
$5,000–9,999	0.31	0.27	0.04		
$10,000–14,999	0.18	0.15	0.03		
$15,000–19,999	0.08	0.08	0.01		
$20,000–24,999	0.04	0.09	– 0.05		
$25,000 or more	0.05	0.06	– 0.01		
Missing data	0.02	0.03	0.00		
Ever been homeless before (percent)	0.63	0.63	0.00	0.76	
Ever been doubled up before (percent)	0.85	0.81	0.04	0.57	
Major barrier to finding housing[a]	0.44	0.41	0.03	0.38	
Child under 18 living elsewhere (percent)	0.22	0.31	– 0.08	0.05	**
Number of major life challenges[b]	1.60	1.85	– 0.25	0.66	
F-test on all characteristics except site	F value =	2.024	F-test *p*-value =	0.001	

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. GED = general educational development. RA = random assignment.

* .10 level. ** .05 level. *** .01 level.

[a] Barriers to finding housing were reported by family heads as "big problems" in finding housing. The maximum number of barriers is 19.

[b] The seven major life challenges measured are: psychological distress, post-traumatic stress disorder, felony conviction, experience of domestic violence, childhood separation (foster care, group home, or institutionalization), medical condition, and substance abuse.

Notes: Each row reports the proportion of each group with the characteristic. Chi-square tests are used to test for significant differences in the proportions between groups for all characteristics except mean age, for which a *t*-test is used. The F-test is of the joint significance of all listed characteristics in a regression predicting assignment group. The regression also includes site indicators (which are not included in the joint test).

Sources: Family Options Baseline Survey; 37-month followup survey

Unweighted Impact Estimates

How were the main results of this report affected by the use of nonresponse analysis weights? As discussed in Appendix C, the study team used nonresponse weights to produce all estimates in this report. This methodology is motivated in part by the finding in the previous section that for most impact comparisons, respondents and nonrespondents differed systematically on a number of baseline characteristics. Survey nonresponse weights adjust impact estimates such that the analysis sample reflects the observable characteristics of the baseline sample. This adjustment represents a "correction," however, only insofar as impacts vary with observable participant characteristics. The impact models also controlled for observable baseline characteristics. Together, these measures adjust the impact estimates to reflect potential differences between the groups in each comparison that could have been induced by nonresponse. In this section, we look for evidence of such variation by comparing the study's headline impact estimates to estimates that do not use survey nonresponse weights. The results are also presented for completeness for readers interested in the unadjusted estimates.

Exhibit D-30 presents these unadjusted estimates, which are comparable to Exhibit ES-7 in the executive summary. Changes

Exhibit D-30. Executive Summary Impact Estimates, Estimated Without Nonresponse Weights

Outcome	Mean	ITT Impact Estimates					
	All UC Group	SUB vs. UC	CBRR vs. UC	PBTH vs. UC	SUB vs. CBRR	SUB vs. PBTH	CBRR vs. PBTH
Housing stability (intervention goal: lower values)							
At least 1 night homeless[a] or doubled up in past 6 months or in shelter in past 12 months[b] (%) **[confirmatory]**	38.3	– 20.9***	1.4	1.1	– 19.9***	– 25.7***	– 3.0
At least 1 night homeless[a] or doubled up in past 6 months (%)	34.4	– 18.2***	1.6	1.4	– 16.4***	– 23.8***	– 3.1
Number of places lived in past 6 months	1.58	– 0.23***	0.05	– 0.04	– 0.16**	– 0.33***	0.09
Any stay in emergency shelter in months 7 to 18 after RA (%)	17.1	– 14.1***	– 2.6	– 6.2**	– 11.9***	– 6.0**	1.8
Family preservation (intervention goal: lower values)							
Family has at least one child separated in past 6 months[c] (%)	15.6	– 2.7	– 0.1	2.1	– 0.7	– 7.3*	– 3.6
Spouse/partner separated in past 6 months, of those with spouse/partner present at RA[d] (%) **[limited base]**	38.4	12.9**	7.1	9.9	– 7.2	1.2	– 1.9
Family has no child reunified, of those families with at least one child absent at RA[e] (%) **[limited base]**	67.3	– 6.6	– 3.8	1.6	– 5.3	– 17.2	– 5.3
Adult well-being (intervention goal: lower values)							
Health in past 30 days was poor or fair (%)	31.0	2.7	0.8	– 2.7	– 1.2	– 2.2	– 0.8
Psychological distress[f]	0.00	– 0.13**	– 0.02	– 0.03	– 0.06	– 0.10	– 0.27**
Alcohol dependence or drug abuse in past 6 months[g] (%)	11.4	– 2.3	– 1.9	2.1	1.9	0.5	– 6.4*
Experienced intimate partner violence in past 6 months (%)	10.8	– 4.5**	– 1.8	– 2.1	– 1.8	– 0.9	– 0.6
Child well-being (intervention goal: lower values)							
Number of schools attended since RA[h]	2.08	– 0.15**	0.04	0.05	– 0.23***	– 0.16	0.03
School absences in past month (ages 5 to 17 years)[i]	0.98	– 0.04	– 0.09	– 0.16	– 0.02	– 0.11	– 0.23
Poor or fair health (%)	5.8	1.1	– 0.8	– 0.4	0.8	0.7	– 0.7
Behavior problems[j]	0.58	– 0.22***	– 0.21**	– 0.11	0.00	– 0.20	– 0.21*
Self-sufficiency (intervention goal: higher values)							
Work for pay in week before survey (%)	37.8	– 0.7	0.5	0.0	0.1	– 1.5	– 3.6
Total family income ($)	12,117	– 853	– 758	– 234	– 409	– 1,324	– 1,850
Household is food secure (%)	53.4	8.9***	3.5	2.2	3.2	13.0***	11.6**
Number of families	**556**	**895**	**868**	**551**	**652**	**414**	**363**

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed t-test (not adjusted for multiple comparisons).

[a] The definition of "homeless" in this report includes stays in emergency shelters and places not meant for human habitation. It excludes transitional housing. Additional impacts on the use of transitional housing are provided in Appendix E.

[b] After adjustment for multiple comparisons, the impact on the confirmatory outcome is statistically significant at the .01 level for the SUB-versus-UC, SUB-versus-CBRR, and SUB-versus-PBTH comparisons.

[c] Percentage of families in which a child who was with the family at baseline became separated from the family in the 6 months before the 37-month survey.

[d] Percentage of families in which a spouse or partner who was with the family at baseline became separated from the family in the 6 months before the 37-month survey.

[e] Percentage of families in which at least one child was separated from the family at baseline and no child was reunited with the family at the time of the 37-month survey.

[f] Psychological distress is measured with the Kessler 6 (K6) scale and ranges from 0 to 24, with higher scores indicating greater distress. Impacts shown as standardized effect sizes. Effect sizes were standardized by dividing impacts by standard deviation for the UC group.

[g] Measures evidence of alcohol dependence or drug abuse using responses to the Rapid Alcohol Problems Screen (RAPS-4) and six items from the Drug Abuse Screening Test (DAST-10).

[h] Number of schools outcome is topcoded at 4 or more schools.

[i] Absences outcome is defined as 0 = no absences in past month; 1 = one to two absences; 2 = three to five absences; 3 = six or more absences. This parent-reported outcome was collected from only the first 38 percent of parents surveyed due to an error in data collection.

[j] Behavior problems outcome is measured as the standardized Total Difficulties score from the Strengths and Difficulties Questionnaire, or SDQ.

Notes: Impact estimates are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Appendix B for outcome definitions.

Sources: Family Options Study 37-month followup survey; Program Usage Data

to coefficient signs, magnitudes, and statistical significance are minimal. In every case, the 95-percent confidence intervals associated with impact coefficients estimated without nonresponse weights included the coefficient estimates in the main weighted specification, with intervals largely overlapping. Changes of sign (that is, from positive to negative) were limited to coefficients that were both close in magnitude to zero and estimated as statistically insignificant. Changes in statistical significance were minor.

APPENDIX E.
IMPACTS ON USE OF TRANSITIONAL HOUSING

This appendix contains impacts on nine additional outcomes related to use of transitional housing as well as emergency shelter during the 37-month followup period. These outcomes more closely measure the impact of random assignment to contrasting interventions on homelessness as defined in the McKinney-Vento Homeless Assistance Act and *Opening Doors: Federal Strategic Plan to Prevent and End Homelessness*. That Act includes residence in a transitional housing program as one type of homelessness. The additional outcomes are—

1. Any use of emergency shelter or transitional housing in months 0 to 32 after random assignment (percentage of families).
2. Any use of emergency shelter during months 0 to 32 after random assignment (percentage of families).
3. Any use of transitional housing in months 0 to 32 after random assignment (percentage of families).
4. Number of months using emergency shelter or transitional housing in months 0 to 32 after random assignment.
5. Number of months using emergency shelter in months 0 to 32 after random assignment.
6. Number of months using transitional housing in months 0 to 32 after random assignment.
7. Any use of emergency shelter or transitional housing in months 7 to 32 after random assignment (percentage of families).
8. Any use of emergency shelter in months 7 to 32 after random assignment (percentage of families).
9. Any use of transitional housing in months 7 to 32 after random assignment (percentage of families).

The new outcomes are measured with Program Usage Data. They differ from outcomes in the analyses of housing stability provided in Chapters 3 through 6, which did not consider use of transitional housing, either separately or in conjunction with the use of emergency shelter.

This appendix includes six exhibits, one for each pairwise comparison: (1) priority access to permanent housing subsidy (SUB) versus usual care (UC), (2) priority access to community-based rapid re-housing (CBRR) versus UC, (3) priority access to project-based transitional housing (PBTH) versus UC, (4) SUB versus CBRR, (5) SUB versus PBTH, and (6) CBRR versus PBTH. For comparisons involving PBTH (Exhibits E-3, E-5, and E-6), impacts on the use of transitional housing in part reflects takeup of the assigned intervention encouraged and facilitated for the PBTH group—but not the other group included in the comparison—by the study design.

Exhibit E-1. SUB Versus UC: Impacts on Use of ES and TH in Months 0 to 32 After RA

Outcome	SUB			UC			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Any use of ES or TH during months 0 to 32										
Any use of emergency shelter or transitional housing during months 0 to 32 after RA (%)	501	85.6	(36.3)	395	91.9	(25.3)	– 6.3	***	(2.1)	– 0.20
Any use of emergency shelter during months 0 to 32 after RA (%)	501	84.5	(37.4)	395	88.5	(29.9)	– 4.0	*	(2.3)	– 0.11
Any use of transitional housing during months 0 to 32 after RA (%)	501	7.0	(26.2)	395	28.4	(44.2)	– 21.3	***	(2.7)	– 0.41
Number of months of ES and TH during months 0 to 32										
Number of months of emergency shelter and transitional housing use during months 0 to 32 after RA	501	3.0	(4.5)	395	7.0	(8.0)	– 4.0	***	(0.5)	– 0.43
Number of months of emergency shelter use during months 0 to 32 after RA	501	2.5	(3.0)	395	3.9	(5.2)	– 1.4	***	(0.2)	– 0.26
Number of months of transitional housing use during months 0 to 32 after RA	501	0.5	(3.2)	395	3.1	(6.5)	– 2.6	***	(0.4)	– 0.33
Any use of ES or TH during months 7 to 32										
Any use of emergency shelter or transitional housing during months 7 to 32 after RA (%)	501	15.7	(36.5)	395	47.9	(50.1)	– 2.2	***	(3.0)	– 0.56
Any use of emergency shelter during months 7 to 32 after RA (%)	501	13.8	(34.1)	395	36.7	(48.6)	– 22.9	***	(2.9)	– 0.41
Any use of transitional housing during months 7 to 32 after RA (%)	501	4.4	(21.4)	395	23.9	(41.7)	– 19.4	***	(2.5)	– 0.39

SUB = priority access to permanent housing subsidy. UC = usual care.

ES = emergency shelter. ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error. TH = transitional housing.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Appendix B for outcome definitions.

Source: Family Options Study Program Usage Data

Exhibit E-2. CBRR Versus UC: Impacts on Use of ES and TH in Months 0 to 32 After RA

Outcome	CBRR			UC			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Any use of ES or TH during months 0 to 32										
Any use of emergency shelter or transitional housing during months 0 to 32 after RA (%)	434	92.8	(24.6)	434	91.9	(26.5)	0.9		(1.9)	0.03
Any use of emergency shelter during months 0 to 32 after RA (%)	434	90.4	(28.6)	434	89.4	(30.5)	0.9		(2.1)	0.03
Any use of transitional housing during months 0 to 32 after RA (%)	434	21.7	(41.6)	434	27.8	(44.9)	– 6.1	**	(3.0)	– 0.12
Number of months of ES and TH during months 0 to 32										
Number of months of emergency shelter and transitional housing use during months 0 to 32 after RA	434	5.9	(7.4)	434	7.0	(8.0)	– 1.1	**	(0.5)	– 0.12
Number of months of emergency shelter use during months 0 to 32 after RA	434	3.7	(4.6)	434	4.0	(5.1)	– 0.3		(0.3)	– 0.05
Number of months of transitional housing use during months 0 to 32 after RA	434	2.1	(5.5)	434	3.0	(6.6)	– 0.8	**	(0.4)	– 0.11
Any use of ES or TH during months 7 to 32										
Any use of emergency shelter or transitional housing during months 7 to 32 after RA (%)	434	43.8	(49.6)	434	48.6	(50.0)	– 4.8		(3.6)	– 0.08
Any use of emergency shelter during months 7 to 32 after RA (%)	434	35.7	(47.7)	434	38.0	(48.7)	– 2.4		(3.5)	– 0.04
Any use of transitional housing during months 7 to 32 after RA (%)	434	17.3	(38.1)	434	22.8	(42.0)	– 5.4	*	(2.8)	– 0.11

CBRR = priority access to community-based rapid re-housing. UC = usual care.

ES = emergency shelter. ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error. TH = transitional housing.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Appendix B for outcome definitions.

Source: Family Options Study Program Usage Data

Exhibit E-3. PBTH Versus UC: Impacts on Use of ES and TH in Months 0 to 32 After RA

Outcome	PBTH			UC			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Any use of ES or TH during months 0 to 32										
Any use of emergency shelter or transitional housing during months 0 to 32 after RA (%)	293	95.1	(20.6)	259	92.9	(24.8)	2.2		(2.1)	0.07
Any use of emergency shelter during months 0 to 32 after RA (%)	293	82.5	(37.7)	259	88.8	(32.1)	– 6.3	**	(3.0)	– 0.17
Any use of transitional housing during months 0 to 32 after RA (%)	293	52.3	(49.9)	259	33.9	(47.8)	18.3	***	(4.5)	0.35
Number of months of ES and TH during months 0 to 32										
Number of months of emergency shelter and transitional housing use during months 0 to 32 after RA	293	10.1	(9.6)	259	7.0	(8.5)	3.0	***	(0.8)	0.32
Number of months of emergency shelter use during months 0 to 32 after RA	293	2.7	(3.5)	259	3.7	(4.9)	– 1.0	***	(0.3)	– 0.19
Number of months of transitional housing use during months 0 to 32 after RA	293	7.4	(9.6)	259	3.3	(7.3)	4.1	***	(0.7)	0.52
Any use of ES or TH during months 7 to 32										
Any use of emergency shelter or transitional housing during months 7 to 32 after RA (%)	293	58.3	(49.3)	259	46.9	(50.1)	11.4	**	(4.5)	0.20
Any use of emergency shelter during months 7 to 32 after RA (%)	293	24.5	(43.1)	259	32.6	(47.3)	– 8.1	**	(4.0)	– 0.15
Any use of transitional housing during months 7 to 32 after RA (%)	293	43.2	(49.8)	259	26.6	(45.1)	16.6	***	(4.4)	0.33

PBTH = priority access to project-based transitional housing. UC = usual care.
ES = emergency shelter. ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error. TH = transitional housing.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Appendix B for outcome definitions.
Source: Family Options Study Program Usage Data

Exhibit E-4. SUB Versus CBRR: Impacts on Use of ES and TH in Months 0 to 32 After RA

Outcome	SUB			CBRR			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Any use of ES or TH during months 0 to 32										
Any use of emergency shelter or transitional housing during months 0 to 32 after RA (%)	362	85.7	(35.9)	290	91.7	(26.5)	– 6.1	**	(2.6)	– 0.19
Any use of emergency shelter during months 0 to 32 after RA (%)	362	84.6	(36.7)	290	90.5	(27.6)	– 5.9	**	(2.7)	– 0.16
Any use of transitional housing during months 0 to 32 after RA (%)	362	7.5	(25.4)	290	18.9	(39.5)	– 11.4	***	(2.7)	– 0.22
Number of months of ES and TH during months 0 to 32										
Number of months of emergency shelter and transitional housing use during months 0 to 32 after RA	362	3.0	(4.1)	290	5.6	(7.0)	– 2.6	***	(0.4)	– 0.28
Number of months of emergency shelter use during months 0 to 32 after RA	362	2.5	(3.2)	290	4.0	(5.1)	– 1.5	***	(0.3)	– 0.28
Number of months of transitional housing use during months 0 to 32 after RA	362	0.5	(2.5)	290	1.6	(4.4)	– 1.1	***	(0.3)	– 0.14
Any use of ES or TH during months 7 to 32										
Any use of emergency shelter or transitional housing during months 7 to 32 after RA (%)	362	15.9	(37.0)	290	43.6	(49.8)	– 27.7	***	(3.8)	– 0.48
Any use of emergency shelter during months 7 to 32 after RA (%)	362	14.5	(35.4)	290	36.0	(48.2)	– 21.5	***	(3.7)	– 0.39
Any use of transitional housing during months 7 to 32 after RA (%)	362	4.7	(20.6)	290	15.9	(37.2)	– 11.3	***	(2.4)	– 0.23

CBRR = priority access to community-based rapid re-housing. SUB = priority access to permanent housing subsidy.
ES = emergency shelter. ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error. TH = transitional housing.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Appendix B for outcome definitions.
Source: Family Options Study Program Usage Data

Exhibit E-5. SUB Versus PBTH: Impacts on Use of ES and TH in Months 0 to 32 After RA

Outcome	SUB			PBTH			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Any use of ES or TH during months 0 to 32										
Any use of emergency shelter or transitional housing during months 0 to 32 after RA (%)	215	88.7	(33.2)	201	93.4	(20.7)	– 4.7		(3.2)	– 0.15
Any use of emergency shelter during months 0 to 32 after RA (%)	215	88.4	(34.2)	201	81.3	(36.7)	7.1	*	(3.8)	0.20
Any use of transitional housing during months 0 to 32 after RA (%)	215	9.2	(29.1)	201	49.3	(50.1)	– 40.2	***	(4.3)	– 0.77
Number of months of ES and TH during months 0 to 32										
Number of months of emergency shelter and transitional housing use during months 0 to 32 after RA	215	3.0	(5.1)	201	9.8	(9.7)	– 6.8	***	(0.8)	– 0.72
Number of months of emergency shelter use during months 0 to 32 after RA	215	2.1	(2.8)	201	2.8	(3.8)	– 0.7	**	(0.3)	– 0.12
Number of months of transitional housing use during months 0 to 32 after RA	215	0.9	(4.1)	201	7.0	(9.8)	– 6.1	***	(0.7)	– 0.77
Any use of ES or TH during months 7 to 32										
Any use of emergency shelter or transitional housing during months 7 to 32 after RA (%)	215	11.3	(32.7)	201	58.5	(49.3)	– 47.2	***	(4.5)	– 0.82
Any use of emergency shelter during months 7 to 32 after RA (%)	215	7.0	(27.0)	201	26.8	(43.9)	– 19.9	***	(4.0)	– 0.36
Any use of transitional housing during months 7 to 32 after RA (%)	215	6.3	(23.9)	201	40.4	(49.6)	– 34.1	**	(4.0)	– 0.69

PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy.
ES = emergency shelter. ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error. TH = transitional housing.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Appendix B for outcome definitions.
Source: Family Options Study Program Usage Data

Exhibit E-6. CBRR Versus PBTH: Impacts on Use of ES and TH in Months 0 to 32 After RA

Outcome	CBRR			PBTH			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Any use of ES or TH during months 0 to 32										
Any use of emergency shelter or transitional housing during months 0 to 32 after RA (%)	180	92.3	(26.0)	184	94.9	(20.4)	– 2.6		(2.6)	– 0.08
Any use of emergency shelter during months 0 to 32 after RA (%)	180	86.9	(32.2)	184	86.0	(37.0)	1.0		(3.7)	0.03
Any use of transitional housing during months 0 to 32 after RA (%)	180	30.9	(46.4)	184	51.4	(49.8)	– 20.4	***	(5.7)	– 0.39
Number of months of ES and TH during months 0 to 32										
Number of months of emergency shelter and transitional housing use during months 0 to 32 after RA	180	6.1	(8.3)	184	9.6	(9.6)	– 3.4	***	(1.0)	– 0.37
Number of months of emergency shelter use during months 0 to 32 after RA	180	3.2	(4.0)	184	2.6	(3.4)	0.6		(0.4)	0.11
Number of months of transitional housing use during months 0 to 32 after RA	180	2.9	(6.5)	184	6.9	(9.5)	– 4.0	***	(0.9)	– 0.51
Any use of ES or TH during months 7 to 32										
Any use of emergency shelter or transitional housing during months 7 to 32 after RA (%)	180	42.2	(49.5)	184	55.4	(49.4)	– 13.2	**	(5.5)	– 0.23
Any use of emergency shelter during months 7 to 32 after RA (%)	180	30.1	(46.2)	184	25.0	(43.7)	5.1		(5.3)	0.09
Any use of transitional housing during months 7 to 32 after RA (%)	180	22.4	(42.1)	184	42.7	(50.0)	– 20.3	***	(5.3)	– 0.41

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing.
ES = emergency shelter. ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error. TH = transitional housing.
*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.
[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.
Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Appendix B for outcome definitions.
Source: Family Options Study Program Usage Data

APPENDIX F.
IMPACT ESTIMATES FOR POOLED COMPARISONS

List of Exhibits

Exhibit F-1. SUB+CBRR+PBTH Versus UC: Impacts on Housing Stability at 37 Months

Outcome	SUB+CBRR+PBTH			UC			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Homelessness or doubled up during the follow up period										
At least 1 night homeless[b] or doubled up in past 6 months or in shelter in past 12 months[c] (%)	1,226	30.3	(46.0)	556	38.9	(48.7)	– 8.6	***	(2.6)	– 0.15
At least 1 night homeless[b] or doubled up in past 6 months (%)	1,226	27.7	(44.7)	556	34.8	(47.5)	– 7.1	***	(2.5)	– 0.13
At least 1 night homeless[b] in past 6 months (%)	1,227	13.8	(34.5)	556	18.0	(38.4)	– 4.2	**	(2.0)	– 0.10
At least 1 night doubled up in past 6 months (%)	1,227	22.0	(41.4)	556	28.4	(45.1)	– 6.4	***	(2.3)	– 0.12
Any stay in emergency shelter in past 6 months (%) [Program Usage Data]	1,228	5.2	(22.2)	556	8.5	(27.8)	– 3.2	**	(1.4)	– 0.10
Any stay in emergency shelter in months 21 to 32 after RA (%) [Program Usage Data]	1,228	9.6	(29.5)	556	17.6	(37.7)	– 8.1	***	(1.9)	– 0.19
Number of days homeless[b] or doubled up in past 6 months	1,224	36.1	(66.1)	553	47.5	(74.0)	– 11.4	***	(3.9)	– 0.13
Number of days homeless[b] in past 6 months	1,227	12.3	(39.2)	556	18.4	(48.2)	– 6.1	**	(2.4)	– 0.11
Number of days doubled up in past 6 months	1,225	26.2	(57.5)	553	33.1	(62.3)	– 6.8	**	(3.4)	– 0.09
Housing independence										
Living in own house or apartment at followup (%)	1,228	74.3	(43.7)	556	69.1	(46.3)	5.2	**	(2.4)	0.10
Living in own house or apartment with no housing assistance (%)	1,224	29.2	(45.4)	553	41.4	(49.1)	– 12.2	***	(2.5)	– 0.21
Living in own house or apartment with housing assistance (%)	1,224	45.2	(49.8)	553	27.6	(45.2)	17.6	***	(2.4)	0.34
Number of places lived										
Number of places lived in past 6 months[d]	1,225	1.5	(1.0)	556	1.6	(1.0)	– 0.1		(0.1)	– 0.06
Housing quality										
Persons per room	1,166	1.5	(1.1)	526	1.6	(1.2)	– 0.1	**	(0.1)	– 0.10
Housing quality is poor or fair (%)	1,166	30.5	(45.8)	525	32.7	(46.8)	– 2.2		(2.6)	– 0.04

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] The definition of "homeless" in this report includes stays in emergency shelters and places not meant for human habitation. It excludes transitional housing.

[c] After adjustment of multiple comparisons, the impact on the confirmatory outcome is statistically significant at the .01 level for the SUB+CBRR+PBTH-versus-UC comparison.

[d] The number of places lived in past 6 months is topcoded at 6 places.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Sources: Family Options Study 37-month followup survey; Program Usage Data

Exhibit F-2. SUB+CBRR+PBTH Versus UC: Impacts on Family Preservation at 37 Months

Outcome	SUB+CBRR+PBTH			UC			ITT Impact		Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Current or recent separations of family members present at baseline									
Family has at least one child separated in past 6 months (%)	1,199	15.9	(36.5)	545	17.0	(36.3)	– 1.1	(2.0)	– 0.02
Family has at least one foster care placement in past 6 months[b] (%)	1,208	3.4	(18.1)	550	3.5	(17.3)	– 0.1	(1.1)	0.00
Spouse/partner separated in past 6 months, of those with spouse/partner present at RA (%)	317	42.1	(49.0)	151	34.8	(48.8)	7.3	(5.0)	0.12
Reunification of family members reported as separated at baseline									
Family has at least one child reunified, of those families with at least one child absent at RA (%)	231	40.6	(49.5)	107	35.7	(47.1)	4.9	(6.2)	0.09
Spouse/partner reunified, of those with spouse/partner absent at RA (%)	120	28.1	(45.3)	55	22.1	(40.4)	5.9	(9.0)	0.13

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Foster care placement outcome includes any children (present at baseline) who are placed in foster care or adopted by another family at the time of followup.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Exhibit F-3. SUB+CBRR+PBTH Versus UC: Impacts on Adult Well-Being at 37 Months

Outcome	SUB+CBRR+PBTH			UC			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Adult physical health										
Health in past 30 days was poor or fair (%)	1,224	31.3	(46.3)	555	30.8	(46.3)	0.5		(2.4)	0.01
Adult mental health										
Goal-oriented thinking[b]	1,211	4.46	(1.02)	553	4.52	(0.98)	– 0.06		(0.05)	– 0.06
Psychological distress[c]	1,223	6.75	(5.57)	554	7.07	(5.79)	– 0.33		(0.29)	– 0.05
Adult trauma symptoms										
Post-traumatic stress disorder (PTSD) symptoms in past 30 days (%)	1,217	20.9	(40.4)	552	22.5	(41.8)	– 1.6		(2.2)	– 0.03
Adult substance use										
Alcohol dependence or drug abuse[d] (%)	1,226	11.3	(31.8)	554	11.9	(31.8)	– 0.5		(1.7)	– 0.01
Alcohol dependence[d] (%)	1,227	8.6	(28.3)	555	8.8	(27.3)	– 0.2		(1.5)	– 0.01
Drug abuse[d] (%)	1,226	3.9	(19.4)	555	5.2	(21.9)	– 1.3		(1.2)	– 0.05
Experience of intimate partner violence										
Experienced intimate partner violence in past 6 months (%)	1,224	7.6	(26.5)	553	10.7	(31.1)	– 3.1	*	(1.6)	– 0.09

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Goal-oriented thinking is measured with a modified version of the State Hope Scale and ranges from 1 to 6, with higher scores indicating higher levels of positive, goal-oriented thinking.

[c] Psychological distress is measured with the Kessler 6 (K6) scale and ranges from 0 to 24, with higher scores indicating greater distress.

[d] Alcohol dependence is measured with the Rapid Alcohol Problems Screen (RAPS-4), and drug abuse is measured with six items from the Drug Abuse Screening Test (DAST-10). Both are measured for the 6 months before the 37-month survey.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Exhibit F-4. SUB+CBRR+PBTH Versus UC: Impacts on Child Well-Being Across Age Groups at 37 Months

Outcome	SUB+CBRR+PBTH			UC			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Child education										
Number of schools attended since RA[b]	1,442	2.1	(0.9)	655	2.1	(0.9)	– 0.0		(0.1)	– 0.01
Grade completion (not held back) (%)	1,198	90.85	(29.47)	539	91.05	(28.24)	– 0.20		(1.72)	– 0.01
School grades[c]	1,095	3.1	(0.9)	485	3.1	(0.9)	0.0		(0.1)	0.01
Child physical health										
Poor or fair health in past 30 days (%)	1,670	6.3	(23.4)	743	5.7	(23.4)	0.6		(1.3)	0.02
Well-child checkup in past year (%)	1,669	89.5	(30.6)	741	91.0	(29.1)	– 1.5		(1.7)	– 0.04
Child has regular source of health care (%)	1,666	91.8	(26.2)	742	91.6	(27.1)	0.2		(1.8)	0.01
Sleep problems[d]	1,669	2.06	(1.05)	744	2.20	(1.09)	– 0.14	**	(0.06)	– 0.10
Child behavioral strengths and challenges										
Behavior problems[e]	1,589	0.45	(1.23)	709	0.59	(1.25)	– 0.15	**	(0.07)	– 0.09
Prosocial behavior[f]	.	.	(.)	.	.	(.)	.		(.)	.

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Number of schools outcome is topcoded at 4 or more schools.

[c] School grades outcome is defined as 1 = mostly Ds or Fs, 2 = mostly Cs, 3 = mostly Bs, 4 = mostly As.

[d] Sleep problems outcome ranges from 1 to 5, with higher values indicating more frequent tiredness upon waking and during the day.

[e] Behavior problems outcome is measured as the standardized Total Difficulties score from the Strengths and Difficulties Questionnaire (SDQ).

[f] Prosocial behavior is measured as the standardized prosocial domain score from the SDQ.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey (parent report)

Exhibit F-5. SUB+CBRR+PBTH Versus UC: Impacts on Child Well-Being Developmental Outcomes by Age Group at 37 Months

Outcome	SUB+CBRR+PBTH			UC			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Ages 2 to 5 years[b]										
Preschool or Head Start enrollment[c] (%)	516	37.1	(48.7)	223	37.3	(49.6)	– 0.2		(4.4)	0.00
Child care or preschool absences in past month[d]	195	0.73	(0.92)	93	0.76	(0.91)	– 0.03		(0.14)	– 0.03
Positive child care or preschool experiences[e]	205	0.83	(0.42)	97	0.82	(0.39)	0.01		(0.06)	0.02
Positive child care or preschool attitudes[f]	205	4.57	(0.90)	96	4.50	(0.69)	0.07		(0.11)	0.08
Child care or preschool conduct problems[g] (%)	217	7.7	(30.3)	98	6.9	(24.1)	0.7		(3.5)	0.03
Ages 2 years to 5 years, 6 months										
Met developmental milestones[h] (%)	451	71.1	(45.1)	204	70.4	(45.7)	0.6		(5.0)	0.01
Ages 3 years, 6 months to 7 years										
Verbal ability[i]	582	– 0.23	(1.02)	246	– 0.34	(1.04)	0.11		(0.10)	0.08
Math ability[j]	580	– 0.27	(0.94)	249	– 0.30	(0.95)	0.03		(0.09)	0.03
Executive functioning[k] (self-regulation)	554	16.00	(16.16)	239	18.41	(16.39)	– 2.41	**	(1.10)	– 0.12
Ages 5 to 17 years[l]										
School enrollment[c] (%)	1,162	97.9	(13.6)	525	97.6	(13.7)	0.3		(1.0)	0.02
School absences in past month[d,m]	438	0.89	(0.93)	176	1.04	(0.98)	– 0.15		(0.10)	– 0.12
Positive school experiences[e,m]	441	0.54	(0.59)	178	0.47	(0.63)	0.08		(0.07)	0.09
Positive school attitudes[f,m]	441	4.17	(1.10)	178	4.06	(1.12)	0.11		(0.10)	0.07
School conduct problems[g,m] (%)	442	25.0	(43.4)	180	30.7	(46.6)	– 5.7		(4.4)	– 0.09
Ages 8 to 17 years										
Anxiety[n]	716	35.39	(7.45)	328	35.17	(7.53)	0.22		(0.56)	0.02
Fears[o]	724	63.29	(14.43)	329	62.95	(14.75)	0.34		(0.98)	0.02
Substance use[p] (%)	706	6.00	(24.95)	321	7.30	(27.80)	– 1.30		(2.01)	– 0.04
Goal-oriented thinking[q]	693	22.39	(4.92)	316	22.22	(4.65)	0.17		(0.38)	0.03
School effort in past month[r]	715	2.76	(0.81)	323	2.80	(0.78)	– 0.04		(0.06)	– 0.04
Arrests or police involvement in past 6 months[s] (%)	386	9.99	(29.83)	181	8.36	(25.89)	1.63		(3.04)	0.04

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes focal children who were ages 4 years or younger on the September 1 before the 37-month parent survey.

[c] Preschool or Head Start enrollment outcome is defined as enrollment in preschool, center-based child care, or school.

[d] Absences outcome is defined as 0 = no absences in past month, 1 = one to two absences, 2 = three to five absences, 3 = six or more absences.

[e] Positive child care, preschool, or school experiences outcome is defined as – 1 = mostly negative experiences, 0 = both positive and negative experiences, 1 = mostly positive experiences.

[f] Positive child care, preschool, or school attitudes outcome is parent report of how much child likes school and ranges from 1 to 5, with higher values indicating greater like of school.

[g] Child care, preschool, or school conduct problems outcome is defined as 0 = no conduct problems reported to parent, 1 = parent contacted about conduct problems or suspension or expulsion from school or child care center.

[h] Met developmental milestones outcome is defined as scoring above the typical development cutoffs in all domains of the Ages and Stages Questionnaire (ASQ-3).

[i] Verbal ability outcome is the nationally standardized score from the Woodcock-Johnson III (WJ III) letter-word identification test.

[j] Math ability outcome is the nationally standardized score from the WJ III applied problems test.

[k] Executive functioning outcome is the Head Toes Knees Shoulders (HTKS) score and ranges from 0 to 40, with higher scores indicating greater executive functioning.

[l] Includes focal children who were ages 5 to 17 years on the September 1 before the 37-month parent survey and no older than 17 years at the time of the survey.

[m] This parent-reported outcome was collected from only the first 38 percent of parents surveyed due to an error in data collection.

[n] Anxiety (child report) is measured using the A-Trait scale from the State-Trait Anxiety Inventory for Children (STAIC). Scores range from 20 to 60, with higher scores indicating greater anxiety.

[o] Fears outcome (child report) is the score from the Fears Scale and ranges from 33 to 99, with higher scores indicating more fear.

[p] Substance use (child report) is measured with 23 items from the Centers for Disease Control and Prevention 2011 Youth Risk Behavior Survey.

[q] Goal-oriented thinking (child report) is measured with a modified version of the Children's Hope Scale and ranges from 6 to 30, with higher scores indicating higher levels of positive, goal-oriented thinking.

[r] School effort outcome (child report) ranges from 1 to 4, with higher scores indicating greater effort during school day and on homework.

[s] Arrest or police involvement in past 6 months is from parent report.

Sources: Family Options Study 37-month followup survey (parent report); Family Options Study 37-month child survey (child report); ASQ-3; WJ III; HTKS

Exhibit F-6. SUB+CBRR+PBTH Versus UC: Impacts on Self-Sufficiency at 37 Months

Outcome	SUB+CBRR+PBTH			UC			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Employment status										
Work for pay in week before survey (%)	1,227	38.5	(48.7)	556	37.2	(48.5)	1.2		(2.5)	0.02
Any work for pay since 20-month survey[b] (%)	.	.	(.)	.	.	(.)	.		(.)	.
Months worked for pay since 20-month survey[b,c]	.	.	(.)	.	.	(.)	.		(.)	.
Any work for pay since RA (%)	1,227	71.6	(44.4)	555	73.7	(45.0)	– 2.1		(2.2)	– 0.04
Months worked for pay since RA[c]	1,214	13.2	(13.5)	542	13.6	(13.5)	– 0.4		(0.6)	– 0.02
Hours of work per week at current main job[d]	1,223	12.2	(17.0)	555	12.0	(16.8)	0.2		(0.9)	0.01
Income sources and amounts										
Annualized current earnings ($)	1,204	6,810	(10,983)	542	6,531	(10,759)	279		(536)	0.02
Total family income ($)	1,175	11,762	(9,994)	536	12,314	(11,331)	– 552		(548)	– 0.04
Anyone in family had earnings in past month (%)	1,228	49.8	(50.0)	556	50.4	(50.0)	– 0.6		(2.6)	– 0.01
Anyone in family received TANF in past month (%)	1,227	27.0	(44.5)	556	22.7	(42.4)	4.3	**	(2.2)	0.09
Anyone in family received SSDI in past month (%)	1,225	8.7	(27.4)	556	8.7	(29.9)	– 0.1		(1.4)	0.00
Anyone in family received SSI in past month (%)	1,227	14.1	(34.4)	556	14.4	(36.0)	– 0.3		(1.5)	– 0.01
Anyone in family received SNAP/Food Stamps in past month (%)	1,227	82.1	(38.0)	556	81.8	(39.0)	0.4		(2.0)	0.01
Anyone in family received WIC in past month (%)	1,227	26.2	(44.5)	556	24.3	(42.5)	1.9		(2.2)	0.04
Education and training										
Participated in 2 weeks or more weeks of any school or training since RA (%)	1,223	38.8	(48.9)	555	39.3	(48.8)	– 0.5		(2.5)	– 0.01
Number of weeks in school/training programs since RA	1,210	7.1	(14.9)	546	8.8	(17.0)	– 1.7	*	(0.9)	– 0.08
Participated in 2 weeks or more weeks of school since RA (%)	1,222	10.6	(30.7)	555	11.8	(31.5)	– 1.3		(1.7)	– 0.03
Participated in 2 weeks or more weeks of basic education since RA (%)	1,222	2.7	(16.5)	555	2.1	(15.7)	0.6		(0.7)	0.03
Participated in 2 weeks or more weeks of vocational education since RA (%)	1,222	10.7	(31.5)	555	15.0	(34.6)	– 4.2	**	(1.8)	– 0.10
Food security and hunger										
Household is food insecure (%)	1,228	40.9	(49.1)	556	46.2	(49.9)	– 5.3	**	(2.7)	– 0.09
Food insecurity scale[e]	1,222	1.71	(2.03)	554	1.91	(2.08)	– 0.21	*	(0.11)	– 0.09
Economic stressors										
Economic stress scale[f]	1,218	– 0.18	(0.48)	554	– 0.12	(0.49)	– 0.06	**	(0.02)	– 0.10

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error. SNAP = Supplemental Nutrition Assistance Program. SSDI = Social Security Disability

Insurance. SSI = Supplemental Security Income. TANF = Temporary Assistance for Needy Families. WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes only families who responded to both 20-month and 37-month followup surveys; not weighted for survey nonresponse.

[c] Number of months worked for pay includes partial calendar months.

[d] Hours of work per week includes those not currently working (that is, those with 0 hours of work per week).

[e] Food insecurity scale ranges from 0 to 6, with higher values indicating higher food insecurity.

[f] Economic stress scale ranges from – 1 to 1, with higher values indicating higher economic stress.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Exhibit F-7. SUB+CBRR Versus PBTH: Impacts on Housing Stability at 37 Months

Outcome	SUB+CBRR			PBTH			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Homelessness or doubled up during the follow up period										
At least 1 night homeless[b] or doubled up in past 6 months or in shelter in past 12 months (%)	394	28.8	(45.7)	289	42.5	(49.5)	– 13.7	***	(4.1)	– 0.24
At least 1 night homeless[b] or doubled up in past 6 months (%)	394	26.2	(44.3)	289	38.9	(49.0)	– 12.7	***	(4.1)	– 0.23
At least 1 night homeless[b] in past 6 months (%)	394	14.9	(35.5)	290	20.1	(40.1)	– 5.2	*	(3.2)	– 0.12
At least 1 night doubled up in past 6 months (%)	395	20.6	(41.0)	289	29.2	(46.0)	– 8.7	**	(3.9)	– 0.17
Any stay in emergency shelter in past 6 months (%) [Program Usage Data]	395	5.8	(23.4)	290	7.4	(26.5)	– 1.5		(2.0)	– 0.05
Any stay in emergency shelter in months 21 to 32 after RA (%) [Program Usage Data]	395	8.5	(27.7)	290	10.2	(29.6)	– 1.7		(2.4)	– 0.04
Number of days homeless[b] or doubled up in past 6 months	394	33.9	(65.8)	289	48.5	(72.8)	– 14.6	**	(6.1)	– 0.17
Number of days homeless[b] in past 6 months	394	12.1	(40.0)	290	17.0	(44.3)	– 4.9		(3.4)	– 0.09
Number of days doubled up in past 6 months	395	22.6	(55.4)	289	34.3	(64.5)	– 11.6	**	(5.4)	– 0.16
Housing independence										
Living in own house or apartment at followup (%)	395	75.6	(42.9)	290	65.9	(47.5)	9.7	**	(3.9)	0.18
Living in own house or apartment with no housing assistance (%)	393	27.2	(44.2)	289	40.8	(49.3)	– 13.5	***	(3.9)	– 0.24
Living in own house or apartment with housing assistance (%)	393	48.7	(50.1)	289	25.0	(43.1)	23.6	***	(3.9)	0.46
Number of places lived										
Number of places lived in past 6 months[c]	395	1.5	(1.0)	287	1.6	(1.0)	– 0.1		(0.1)	– 0.09
Housing quality										
Persons per room	376	1.6	(1.2)	272	1.7	(1.3)	– 0.1		(0.1)	– 0.09
Housing quality is poor or fair (%)	378	27.4	(44.4)	270	33.2	(47.2)	– 5.8		(4.0)	– 0.11

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] The definition of "homeless" in this report includes stays in emergency shelters and places not meant for human habitation. It excludes transitional housing.

[c] The number of places lived in past 6 months is topcoded at 6 places.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Sources: Family Options Study 37-month followup survey; Program Usage Data

Exhibit F-8. SUB+CBRR Versus PBTH: Impacts on Family Preservation at 37 Months

Outcome	SUB+CBRR			PBTH			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Current or recent separations of family members present at baseline										
Family has at least one child separated in past 6 months (%)	386	15.0	(36.0)	280	21.5	(41.1)	– 6.5	**	(3.1)	– 0.15
Family has at least one foster care placement in past 6 months[b] (%)	388	4.8	(19.9)	283	3.1	(19.4)	1.7		(1.7)	0.08
Spouse/partner separated in past 6 months, of those with spouse/partner present at RA (%)	127	33.3	(47.8)	81	36.6	(47.4)	– 3.3		(7.5)	– 0.06
Reunification of family members reported as separated at baseline										
Family has at least one child reunified, of those families with at least one child absent at RA (%)	93	48.7	(50.0)	56	38.6	(49.9)	10.1		(10.2)	0.18
Spouse/partner reunified, of those with spouse/partner absent at RA (%)	42	31.0	(45.7)	27	35.4	(46.5)	– 4.4		(15.7)	– 0.09

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Foster care placement outcome includes any children (present at baseline) who are placed in foster care or adopted by another family at the time of followup.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Exhibit F-9. SUB+CBRR Versus PBTH: Impacts on Adult Well-Being at 37 Months

Outcome	SUB+CBRR			PBTH			ITT Impact		Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Adult physical health									
Health in past 30 days was poor or fair (%)	393	31.9	(46.4)	288	30.8	(46.1)	1.1	(3.9)	0.02
Adult mental health									
Goal-oriented thinking[b]	387	4.45	(0.99)	284	4.39	(1.04)	0.06	(0.09)	0.05
Psychological distress[c]	393	6.38	(5.72)	289	6.95	(5.51)	– 0.57	(0.44)	– 0.08
Adult trauma symptoms									
Post-traumatic stress disorder (PTSD) symptoms in past 30 days (%)	390	19.8	(39.9)	288	19.0	(39.4)	0.8	(3.3)	0.02
Adult substance use									
Alcohol dependence or drug abuse[d] (%)	394	11.4	(32.5)	290	14.0	(34.5)	– 2.6	(2.7)	– 0.07
Alcohol dependence[d] (%)	394	9.4	(29.6)	290	10.8	(31.0)	– 1.4	(2.4)	– 0.04
Drug abuse[d] (%)	394	3.3	(17.9)	290	5.5	(23.5)	– 2.3	(1.6)	– 0.08
Experience of intimate partner violence									
Experienced intimate partner violence in past 6 months (%)	393	8.9	(28.9)	289	7.7	(27.1)	1.2	(2.4)	0.03

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Goal-oriented thinking is measured with a modified version of the State Hope Scale and ranges from 1 to 6, with higher scores indicating higher levels of positive, goal-oriented thinking.

[c] Psychological distress is measured with the Kessler 6 (K6) scale and ranges from 0 to 24, with higher scores indicating greater distress.

[d] Alcohol dependence is measured with the Rapid Alcohol Problems Screen (RAPS-4), and drug abuse is measured with six items from the Drug Abuse Screening Test (DAST-10). Both are measured for the 6 months before the 37-month survey.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Exhibit F-10. SUB+CBRR Versus PBTH: Impacts on Child Well-Being Across Age Groups at 37 Months

Outcome	SUB+CBRR			PBTH			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Child education										
Number of schools attended since RA[b]	457	2.1	(1.0)	336	2.1	(1.0)	– 0.1		(0.1)	– 0.05
Grade completion (not held back) (%)	384	93.01	(25.16)	284	87.60	(33.72)	5.42	**	(2.53)	0.14
School grades[c]	351	3.1	(0.9)	251	3.0	(0.9)	0.1		(0.1)	0.09
Child physical health										
Poor or fair health in past 30 days (%)	543	5.3	(23.2)	389	6.3	(21.6)	– 1.0		(2.1)	– 0.03
Well-child checkup in past year (%)	544	90.6	(29.4)	389	89.8	(32.3)	0.7		(2.5)	0.02
Child has regular source of health care (%)	544	93.4	(24.9)	385	88.2	(29.5)	5.1		(3.3)	0.14
Sleep problems[d]	544	2.08	(1.04)	388	2.14	(1.10)	– 0.06		(0.08)	– 0.04
Child behavioral strengths and challenges										
Behavior problems[e]	515	0.36	(1.17)	370	0.54	(1.19)	– 0.18	*	(0.10)	– 0.11
Prosocial behavior[f]	516	– 0.11	(1.05)	370	– 0.25	(1.22)	0.14		(0.09)	0.10

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Number of schools outcome is topcoded at 4 or more schools.

[c] School grades outcome is defined as 1 = mostly Ds or Fs, 2 = mostly Cs, 3 = mostly Bs, 4 = mostly As.

[d] Sleep problems outcome ranges from 1 to 5, with higher values indicating more frequent tiredness upon waking and during the day.

[e] Behavior problems outcome is measured as the standardized Total Difficulties score from the Strengths and Difficulties Questionnaire (SDQ).

[f] Prosocial behavior is measured as the standardized prosocial domain score from the SDQ.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey (parent report)

Exhibit F-11. SUB+CBRR Versus PBTH: Impacts on Child Well-Being Developmental Outcomes by Age Group at 37 Months

Outcome	SUB+CBRR			PBTH			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Ages 2 to 5 years[b]										
Preschool or Head Start enrollment[c] (%)	178	36.3	(48.7)	114	33.8	(48.2)	2.6		(5.8)	0.04
Child care or preschool absences in past month[d]	64	0.70	(1.01)	44	0.73	(0.81)	– 0.03		(0.22)	– 0.03
Positive child care or preschool experiences[e]	65	0.89	(0.36)	49	0.76	(0.54)	0.13		(0.09)	0.27
Positive child care or preschool attitudes[f]	66	4.60	(0.82)	48	4.52	(1.07)	0.08		(0.18)	0.10
Child care or preschool conduct problems[g] (%)	70	4.1	(20.4)	53	8.9	(34.2)	– 4.8		(5.9)	– 0.17
Ages 2 years to 5 years, 6 months										
Met developmental milestones[h] (%)	148	69.4	(47.0)	95	68.8	(47.5)	0.6		(7.1)	0.01
Ages 3 years, 6 months to 7 years										
Verbal ability[i]	198	– 0.20	(1.10)	131	– 0.48	(1.06)	0.28		(0.18)	0.21
Math ability[j]	195	– 0.30	(1.02)	131	– 0.36	(1.01)	0.06		(0.15)	0.05
Executive functioning[k] (self-regulation)	183	15.64	(16.28)	120	15.12	(15.80)	0.52		(1.98)	0.03
Ages 5 to 17 years[l]										
School enrollment[c] (%)	369	98.9	(11.6)	277	95.4	(14.6)	3.5		(2.5)	0.18
School absences in past month[d,m]	136	0.79	(0.92)	102	0.95	(0.94)	– 0.16		(0.13)	– 0.13
Positive school experiences[e,m]	135	0.57	(0.54)	105	0.55	(0.64)	0.02		(0.09)	0.02
Positive school attitudes[f,m]	135	4.21	(1.08)	105	4.12	(1.09)	0.09		(0.15)	0.06
School conduct problems[g,m] (%)	135	27.1	(44.4)	105	28.2	(45.8)	– 1.2		(6.8)	– 0.02
Ages 8 to 17 years										
Anxiety[n]	221	35.14	(7.02)	166	35.02	(7.72)	0.12		(0.95)	0.01
Fears[o]	224	63.39	(14.83)	169	62.02	(14.76)	1.37		(1.45)	0.07
Substance use[p] (%)	217	4.11	(22.91)	161	10.74	(33.09)	– 6.63	**	(3.25)	– 0.18
Goal-oriented thinking[q]	211	22.26	(4.62)	159	22.83	(5.00)	– 0.57		(0.56)	– 0.09
School effort in past month[r]	219	2.59	(0.81)	168	2.71	(0.84)	– 0.12		(0.10)	– 0.11
Arrests or police involvement in past 6 months[s] (%)	117	10.98	(30.47)	83	15.07	(36.57)	– 4.08		(5.76)	– 0.11

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes focal children who were ages 4 years or younger on the September 1 before the 37-month parent survey.

[c] Preschool or Head Start enrollment outcome is defined as enrollment in preschool, center-based child care, or school.

[d] Absences outcome is defined as 0 = no absences in past month, 1 = one to two absences, 2 = three to five absences, 3 = six or more absences.

[e] Positive child care, preschool, or school experiences outcome is defined as – 1 = mostly negative experiences, 0 = both positive and negative experiences, 1 = mostly positive experiences.

[f] Positive child care, preschool, or school attitudes outcome is parent report of how much child likes school and ranges from 1 to 5, with higher values indicating greater like of school.

[g] Child care, preschool, or school conduct problems outcome is defined as 0 = no conduct problems reported to parent, 1 = parent contacted about conduct problems or suspension or expulsion from school or child care center.

[h] Met developmental milestones outcome is defined as scoring above the typical development cutoffs in all domains of the Ages and Stages Questionnaire (ASQ-3).

[i] Verbal ability outcome is the nationally standardized score from the Woodcock-Johnson III (WJ III) letter-word identification test.

[j] Math ability outcome is the nationally standardized score from the WJ III applied problems test.

[k] Executive functioning outcome is the Head Toes Knees Shoulders (HTKS) score and ranges from 0 to 40, with higher scores indicating greater executive functioning.

[l] Includes focal children who were ages 5 to 17 years on the September 1 before the 37-month parent survey and no older than 17 years at the time of the survey.

[m] This parent-reported outcome was collected from only the first 38 percent of parents surveyed due to an error in data collection.

[n] Anxiety (child report) is measured using the A-Trait scale from the State-Trait Anxiety Inventory for Children (STAIC). Scores range from 20 to 60, with higher scores indicating greater anxiety.

[o] Fears outcome (child report) is the score from the Fears Scale and ranges from 33 to 99, with higher scores indicating more fear.

[p] Substance use (child report) is measured with 23 items from the Centers for Disease Control and Prevention 2011 Youth Risk Behavior Survey.

[q] Goal-oriented thinking (child report) is measured with a modified version of the Children's Hope Scale and ranges from 6 to 30, with higher scores indicating higher levels of positive, goal-oriented thinking.

[r] School effort outcome (child report) ranges from 1 to 4, with higher scores indicating greater effort during school day and on homework.

[s] Arrest or police involvement in past 6 months is from parent report.

Sources: Family Options Study 37-month followup survey (parent report); Family Options Study 37-month child survey (child report); ASQ-3; WJ III; HTKS

Exhibit F-12. SUB+CBRR Versus PBTH: Impacts on Self-Sufficiency at 37 Months

Outcome	SUB+CBRR			PBTH			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Employment status										
Work for pay in week before survey (%)	394	37.5	(48.3)	290	38.8	(48.9)	– 1.3		(4.0)	– 0.02
Any work for pay since 20-month survey[b] (%)	369	60.6	(48.9)	256	57.9	(49.5)	2.7		(3.9)	0.06
Months worked for pay since 20-month survey[b,c]	368	6.8	(7.7)	254	7.3	(8.3)	– 0.5		(0.6)	– 0.06
Any work for pay since RA (%)	394	72.4	(44.4)	290	72.1	(44.9)	0.3		(3.3)	0.01
Months worked for pay since RA[c]	389	13.3	(13.3)	287	13.8	(13.7)	– 0.5		(1.0)	– 0.03
Hours of work per week at current main job[d]	393	12.0	(16.6)	289	12.7	(18.0)	– 0.7		(1.4)	– 0.04
Income sources and amounts										
Annualized current earnings ($)	385	6,594	(10,302)	285	7,534	(12,128)	– 940		(969)	– 0.08
Total family income ($)	371	12,009	(9,631)	287	12,936	(11,711)	– 926		(812)	– 0.07
Anyone in family had earnings in past month (%)	395	49.2	(50.0)	290	53.3	(49.9)	– 4.1		(4.0)	– 0.07
Anyone in family received TANF in past month (%)	395	26.2	(44.8)	289	25.6	(43.1)	0.6		(3.6)	0.01
Anyone in family received SSDI in past month (%)	393	8.8	(26.2)	290	7.6	(26.5)	1.1		(2.1)	0.03
Anyone in family received SSI in past month (%)	395	13.3	(33.0)	289	12.8	(33.9)	0.6		(2.5)	0.01
Anyone in family received SNAP/Food Stamps in past month (%)	395	81.0	(38.4)	289	82.2	(39.0)	– 1.2		(3.0)	– 0.03
Anyone in family received WIC in past month (%)	395	27.7	(45.2)	289	29.6	(46.0)	– 1.9		(3.7)	– 0.04
Education and training										
Participated in 2 weeks or more weeks of any school or training since RA (%)	393	40.4	(49.2)	287	36.9	(48.4)	3.5		(4.0)	0.06
Number of weeks in school/training programs since RA	386	8.0	(16.2)	286	5.7	(12.4)	2.3	**	(1.2)	0.12
Participated in 2 weeks or more weeks of school since RA (%)	392	12.3	(32.2)	287	9.6	(30.6)	2.7		(2.5)	0.07
Participated in 2 weeks or more weeks of basic education since RA (%)	392	1.5	(13.3)	287	2.2	(13.1)	– 0.7		(1.2)	– 0.04
Participated in 2 weeks or more weeks of vocational education since RA (%)	392	8.1	(28.6)	287	11.0	(30.2)	– 2.8		(2.6)	– 0.07
Food security and hunger										
Household is food insecure (%)	395	34.4	(47.8)	290	46.7	(49.9)	– 12.3	***	(4.1)	– 0.21
Food insecurity scale[e]	394	1.44	(1.89)	286	1.90	(2.03)	– 0.47	***	(0.17)	– 0.19
Economic stressors										
Economic stress scale[f]	390	– 0.19	(0.48)	287	– 0.14	(0.51)	– 0.05		(0.04)	– 0.09

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error. SNAP = Supplemental Nutrition Assistance Program. SSDI = Social Security Disability

Insurance. SSI = Supplemental Security Income. TANF = Temporary Assistance for Needy Families. WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes only families who responded to both 20-month and 37-month followup surveys; not weighted for survey nonresponse.

[c] Number of months worked for pay includes partial calendar months.

[d] Hours of work per week includes those not currently working (that is, those with 0 hours of work per week).

[e] Food insecurity scale ranges from 0 to 6, with higher values indicating higher food insecurity.

[f] Economic stress scale ranges from – 1 to 1, with higher values indicating higher economic stress.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Exhibit F-13. SUB+PBTH Versus CBRR: Impacts on Housing Stability at 37 Months

Outcome	SUB+PBTH			CBRR			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Homelessness or doubled up during the follow up period										
At least 1 night homeless[b] or doubled up in past 6 months or in shelter in past 12 months (%)	545	25.8	(43.6)	382	40.4	(48.9)	– 14.6	***	(3.4)	– 0.26
At least 1 night homeless[b] or doubled up in past 6 months (%)	545	23.3	(42.3)	382	35.5	(47.7)	– 12.2	***	(3.3)	– 0.22
At least 1 night homeless[b] in past 6 months (%)	546	13.1	(34.1)	382	16.0	(36.2)	– 2.8		(2.6)	– 0.06
At least 1 night doubled up in past 6 months (%)	545	16.9	(37.7)	382	31.0	(45.8)	– 14.1	***	(3.0)	– 0.27
Any stay in emergency shelter in past 6 months (%) [Program Usage Data]	546	4.2	(20.5)	382	5.6	(23.8)	– 1.4		(1.6)	– 0.04
Any stay in emergency shelter in months 21 to 32 after RA (%) [Program Usage Data]	546	7.4	(26.1)	382	16.8	(36.4)	– 9.4	***	(2.5)	– 0.22
Number of days homeless[b] or doubled up in past 6 months	544	28.1	(59.8)	381	49.6	(73.6)	– 21.6	***	(4.9)	– 0.25
Number of days homeless[b] in past 6 months	546	11.8	(39.6)	382	14.6	(41.1)	– 2.8		(3.1)	– 0.05
Number of days doubled up in past 6 months	544	18.5	(49.3)	381	38.7	(66.1)	– 20.2	***	(4.3)	– 0.27
Housing independence										
Living in own house or apartment at followup (%)	546	77.8	(41.4)	382	68.8	(46.8)	9.1	***	(3.2)	0.17
Living in own house or apartment with no housing assistance (%)	545	24.8	(42.4)	380	36.9	(48.2)	– 12.1	***	(3.2)	– 0.21
Living in own house or apartment with housing assistance (%)	545	52.9	(49.8)	380	32.4	(46.5)	20.5	***	(3.4)	0.40
Number of places lived										
Number of places lived in past 6 months[c]	543	1.4	(0.9)	382	1.6	(1.0)	– 0.1	**	(0.1)	– 0.11
Housing quality										
Persons per room	521	1.3	(0.9)	362	1.6	(1.3)	– 0.3	***	(0.1)	– 0.23
Housing quality is poor or fair (%)	520	30.1	(45.5)	365	30.2	(45.7)	– 0.1		(3.3)	0.00

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] The definition of "homeless" in this report includes stays in emergency shelters and places not meant for human habitation. It excludes transitional housing.

[c] The number of places lived in past 6 months is topcoded at 6 places.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Sources: Family Options Study 37-month followup survey; Program Usage Data

Exhibit F-14. SUB+PBTH Versus CBRR: Impacts on Family Preservation at 37 Months

Outcome	SUB+PBTH			CBRR			ITT Impact		Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Current or recent separations of family members present at baseline									
Family has at least one child separated in past 6 months (%)	530	15.9	(36.9)	379	15.6	(35.8)	0.3	(2.6)	0.01
Family has at least one foster care placement in past 6 months[b] (%)	535	3.2	(17.6)	379	4.5	(18.9)	– 1.2	(1.4)	– 0.06
Spouse/partner separated in past 6 months, of those with spouse/partner present at RA (%)	133	37.3	(49.3)	106	43.9	(48.7)	– 6.6	(6.6)	– 0.11
Reunification of family members reported as separated at baseline									
Family has at least one child reunified, of those families with at least one child absent at RA (%)	109	40.6	(49.8)	72	36.0	(47.9)	4.6	(9.0)	0.08
Spouse/partner reunified, of those with spouse/partner absent at RA (%)	55	32.8	(45.8)	35	23.7	(45.8)	9.2	(15.3)	0.20

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Foster care placement outcome includes any children (present at baseline) who are placed in foster care or adopted by another family at the time of followup.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Exhibit F-15. SUB+PBTH Versus CBRR: Impacts on Adult Well-Being at 37 Months

Outcome	SUB+PBTH			CBRR			ITT Impact		Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Adult physical health									
Health in past 30 days was poor or fair (%)	546	31.1	(46.3)	381	32.8	(46.6)	– 1.7	(3.1)	– 0.03
Adult mental health									
Goal-oriented thinking[b]	540	4.43	(1.07)	379	4.47	(0.98)	– 0.04	(0.07)	– 0.03
Psychological distress[c]	544	6.87	(5.74)	381	6.67	(5.64)	0.20	(0.38)	0.03
Adult trauma symptoms									
Post-traumatic stress disorder (PTSD) symptoms in past 30 days (%)	540	22.0	(41.6)	379	18.9	(38.9)	3.0	(2.8)	0.06
Adult substance use									
Alcohol dependence or drug abuse[d] (%)	545	12.5	(33.5)	381	9.4	(30.4)	3.1	(2.1)	0.08
Alcohol dependence[d] (%)	546	9.7	(30.1)	381	7.8	(28.2)	1.9	(1.9)	0.06
Drug abuse[d] (%)	545	4.5	(20.5)	381	2.7	(16.0)	1.8	(1.3)	0.07
Experience of intimate partner violence									
Experienced intimate partner violence in past 6 months (%)	545	7.7	(27.3)	382	8.8	(26.9)	– 1.1	(1.9)	– 0.03

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Goal-oriented thinking is measured with a modified version of the State Hope Scale and ranges from 1 to 6, with higher scores indicating higher levels of positive, goal-oriented thinking.

[c] Psychological distress is measured with the Kessler 6 (K6) scale and ranges from 0 to 24, with higher scores indicating greater distress.

[d] Alcohol dependence is measured with the Rapid Alcohol Problems Screen (RAPS-4), and drug abuse is measured with six items from the Drug Abuse Screening Test (DAST-10). Both are measured for the 6 months before the 37-month survey.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Exhibit F-16. SUB+PBTH Versus CBRR: Impacts on Child Well-Being Across Age Groups at 37 Months

Outcome	SUB+PBTH			CBRR			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Child education										
Number of schools attended since RA[b]	629	2.0	(0.9)	444	2.1	(1.0)	– 0.1	**	(0.1)	– 0.12
Grade completion (not held back) (%)	515	90.48	(29.64)	370	92.16	(28.15)	– 1.68		(2.14)	– 0.04
School grades[c]	466	3.1	(0.9)	347	3.0	(0.9)	0.1		(0.1)	0.05
Child physical health										
Poor or fair health in past 30 days (%)	733	7.1	(23.8)	524	5.2	(22.5)	2.0		(1.8)	0.06
Well-child checkup in past year (%)	730	89.7	(30.0)	524	91.4	(28.9)	– 1.7		(2.2)	– 0.05
Child has regular source of health care (%)	730	89.9	(27.9)	525	94.5	(23.2)	– 4.5	**	(2.2)	– 0.12
Sleep problems[d]	730	2.04	(1.05)	524	2.08	(1.03)	– 0.04		(0.07)	– 0.03
Child behavioral strengths and challenges										
Behavior problems[e]	691	0.48	(1.24)	506	0.38	(1.20)	0.11		(0.09)	0.06
Prosocial behavior[f]	692	– 0.21	(1.16)	507	– 0.18	(1.12)	– 0.04		(0.09)	– 0.02

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Number of schools outcome is topcoded at 4 or more schools.

[c] School grades outcome is defined as 1 = mostly Ds or Fs, 2 = mostly Cs, 3 = mostly Bs, 4 = mostly As.

[d] Sleep problems outcome ranges from 1 to 5, with higher values indicating more frequent tiredness upon waking and during the day.

[e] Behavior problems outcome is measured as the standardized Total Difficulties score from the Strengths and Difficulties Questionnaire (SDQ).

[f] Prosocial behavior is measured as the standardized prosocial domain score from the SDQ.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey (parent report)

Exhibit F-17. SUB+PBTH Versus CBRR: Impacts on Child Well-Being Developmental Outcomes by Age Group at 37 Months

Outcome	SUB+PBTH			CBRR			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Ages 2 to 5 years[b]										
Preschool or Head Start enrollment[c] (%)	235	35.1	(48.4)	168	34.3	(48.4)	0.8		(5.3)	0.01
Child care or preschool absences in past month[d]	93	0.81	(0.88)	53	0.47	(0.87)	0.35	*	(0.19)	0.31
Positive child care or preschool experiences[e]	98	0.78	(0.44)	55	0.89	(0.36)	– 0.11		(0.09)	– 0.23
Positive child care or preschool attitudes[f]	97	4.64	(0.86)	55	4.49	(0.90)	0.15		(0.19)	0.17
Child care or preschool conduct problems[g] (%)	103	10.5	(33.4)	59	6.7	(28.1)	3.8		(6.2)	0.14
Ages 2 years to 5 years, 6 months										
Met developmental milestones[h] (%)	205	64.9	(46.8)	149	72.9	(44.8)	– 8.0		(5.9)	– 0.14
Ages 3 years, 6 months to 7 years										
Verbal ability[i]	260	– 0.20	(1.00)	173	– 0.29	(1.02)	0.08		(0.12)	0.06
Math ability[j]	258	– 0.28	(1.03)	173	– 0.38	(0.83)	0.10		(0.11)	0.09
Executive functioning[k] (self-regulation)	253	15.20	(15.77)	165	15.51	(16.35)	– 0.30		(1.28)	– 0.01
Ages 5 to 17 years[l]										
School enrollment[c] (%)	499	97.2	(14.7)	359	97.3	(16.5)	– 0.1		(1.7)	– 0.01
School absences in past month[d,m]	219	0.95	(0.92)	141	0.76	(0.95)	0.19		(0.13)	0.15
Positive school experiences[e,m]	223	0.57	(0.59)	140	0.51	(0.58)	0.06		(0.08)	0.07
Positive school attitudes[f,m]	223	4.22	(1.05)	141	4.10	(1.13)	0.13		(0.12)	0.08
School conduct problems[g,m] (%)	224	25.2	(43.1)	140	27.0	(44.6)	– 1.9		(5.2)	– 0.03
Ages 8 to 17 years										
Anxiety[n]	310	35.38	(7.59)	230	35.18	(7.35)	0.20		(0.73)	0.02
Fears[o]	313	63.03	(14.49)	232	63.71	(14.52)	– 0.67		(1.24)	– 0.03
Substance use[p] (%)	306	4.44	(23.57)	226	5.94	(22.47)	– 1.50		(2.25)	– 0.04
Goal-oriented thinking[q]	303	22.01	(5.08)	223	22.91	(4.73)	– 0.90	*	(0.52)	– 0.14
School effort in past month[r]	312	2.78	(0.79)	228	2.71	(0.81)	0.07		(0.08)	0.07
Arrests or police involvement in past 6 months[s] (%)	174	11.46	(30.54)	130	8.84	(29.06)	2.63		(4.14)	0.07

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes focal children who were ages 4 years or younger on the September 1 before the 37-month parent survey.

[c] Preschool or Head Start enrollment outcome is defined as enrollment in preschool, center-based child care, or school.

[d] Absences outcome is defined as 0 = no absences in past month, 1 = one to two absences, 2 = three to five absences, 3 = six or more absences.

[e] Positive child care, preschool, or school experiences outcome is defined as – 1 = mostly negative experiences, 0 = both positive and negative experiences, 1 = mostly positive experiences.

[f] Positive child care, preschool, or school attitudes outcome is parent report of how much child likes school and ranges from 1 to 5, with higher values indicating greater like of school.

[g] Child care, preschool, or school conduct problems outcome is defined as 0 = no conduct problems reported to parent, 1 = parent contacted about conduct problems or suspension or expulsion from school or child care center.

[h] Met developmental milestones outcome is defined as scoring above the typical development cutoffs in all domains of the Ages and Stages Questionnaire (ASQ-3).

[i] Verbal ability outcome is the nationally standardized score from the Woodcock-Johnson III (WJ III) letter-word identification test.

[j] Math ability outcome is the nationally standardized score from the WJ III applied problems test.

[k] Executive functioning outcome is the Head Toes Knees Shoulders (HTKS) score and ranges from 0 to 40, with higher scores indicating greater executive functioning.

[l] Includes focal children who were ages 5 to 17 years on the September 1 before the 37-month parent survey and no older than 17 years at the time of the survey.

[m] This parent-reported outcome was collected from only the first 38 percent of parents surveyed due to an error in data collection.

[n] Anxiety (child report) is measured using the A-Trait scale from the State-Trait Anxiety Inventory for Children (STAIC). Scores range from 20 to 60, with higher scores indicating greater anxiety.

[o] Fears outcome (child report) is the score from the Fears Scale and ranges from 33 to 99, with higher scores indicating more fear.

[p] Substance use (child report) is measured with 23 items from the Centers for Disease Control and Prevention 2011 Youth Risk Behavior Survey.

[q] Goal-oriented thinking (child report) is measured with a modified version of the Children's Hope Scale and ranges from 6 to 30, with higher scores indicating higher levels of positive, goal-oriented thinking.

[r] School effort outcome (child report) ranges from 1 to 4, with higher scores indicating greater effort during school day and on homework.

[s] Arrest or police involvement in past 6 months is from parent report.

Sources: Family Options Study 37-month followup survey (parent report); Family Options Study 37-month child survey (child report); ASQ-3; WJ III; HTKS

Exhibit F-18. SUB+PBTH Versus CBRR: Impacts on Self-Sufficiency at 37 Months

Outcome	SUB+PBTH			CBRR			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Employment status										
Work for pay in week before survey (%)	546	37.2	(48.1)	382	37.7	(48.9)	– 0.5		(3.3)	– 0.01
Any work for pay since 20-month survey[b] (%)	505	58.7	(49.3)	358	62.7	(48.3)	– 3.9		(3.3)	– 0.08
Months worked for pay since 20-month survey[b,c]	502	7.1	(8.2)	358	7.3	(8.1)	– 0.2		(0.5)	– 0.02
Any work for pay since RA (%)	546	69.7	(46.0)	382	74.5	(42.2)	– 4.9	*	(2.9)	– 0.09
Months worked for pay since RA[c]	540	13.1	(13.9)	379	14.1	(13.6)	– 1.0		(0.8)	– 0.07
Hours of work per week at current main job[d]	546	11.5	(16.6)	381	12.4	(17.2)	– 0.9		(1.2)	– 0.05
Income sources and amounts										
Annualized current earnings ($)	539	6,526	(10,676)	373	6,698	(11,127)	– 171		(743)	– 0.01
Total family income ($)	522	11,885	(10,057)	364	11,772	(9,436)	113		(694)	0.01
Anyone in family had earnings in past month (%)	546	49.7	(50.0)	382	48.1	(50.1)	1.5		(3.4)	0.03
Anyone in family received TANF in past month (%)	546	26.2	(44.2)	382	28.9	(44.8)	– 2.7		(3.1)	– 0.05
Anyone in family received SSDI in past month (%)	544	7.8	(27.3)	382	11.4	(28.9)	– 3.6	*	(2.1)	– 0.11
Anyone in family received SSI in past month (%)	546	13.4	(34.5)	382	14.1	(34.9)	– 0.7		(2.2)	– 0.02
Anyone in family received SNAP/Food Stamps in past month (%)	546	81.7	(39.3)	382	81.8	(37.2)	– 0.1		(2.7)	0.00
Anyone in family received WIC in past month (%)	546	26.5	(44.2)	382	27.7	(45.5)	– 1.3		(2.9)	– 0.03
Education and training										
Participated in 2 weeks or more weeks of any school or training since RA (%)	544	37.4	(48.6)	382	40.7	(49.2)	– 3.3		(3.3)	– 0.06
Number of weeks in school/training programs since RA	540	6.6	(13.2)	373	7.9	(17.0)	– 1.3		(1.1)	– 0.07
Participated in 2 weeks or more weeks of school since RA (%)	544	12.1	(32.5)	381	8.8	(27.4)	3.2		(2.0)	0.09
Participated in 2 weeks or more weeks of basic education since RA (%)	544	3.1	(16.9)	381	3.7	(20.1)	– 0.7		(1.3)	– 0.04
Participated in 2 weeks or more weeks of vocational education since RA (%)	544	10.3	(30.9)	381	11.1	(32.0)	– 0.8		(2.1)	– 0.02
Food security and hunger										
Household is food insecure (%)	546	42.1	(49.5)	382	40.0	(48.9)	2.1		(3.5)	0.04
Food insecurity scale[e]	542	1.69	(2.04)	382	1.66	(2.02)	0.03		(0.14)	0.01
Economic stressors										
Economic stress scale[f]	543	– 0.20	(0.49)	379	– 0.17	(0.49)	– 0.03		(0.03)	– 0.05

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error. SNAP = Supplemental Nutrition Assistance Program. SSDI = Social Security Disability

Insurance. SSI = Supplemental Security Income. TANF = Temporary Assistance for Needy Families. WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes only families who responded to both 20-month and 37-month followup surveys; not weighted for survey nonresponse.

[c] Number of months worked for pay includes partial calendar months.

[d] Hours of work per week includes those not currently working (that is, those with 0 hours of work per week).

[e] Food insecurity scale ranges from 0 to 6, with higher values indicating higher food insecurity.

[f] Economic stress scale ranges from – 1 to 1, with higher values indicating higher economic stress.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Exhibit F-19. CBRR+PBTH Versus SUB: Impacts on Housing Stability at 37 Months

Outcome	CBRR+PBTH			SUB			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Homelessness or doubled up during the follow up period										
At least 1 night homeless[b] or doubled up in past 6 months or in shelter in past 12 months (%)	490	38.6	(48.8)	462	17.4	(37.5)	21.2	***	(2.9)	0.38
At least 1 night homeless[b] or doubled up in past 6 months (%)	490	34.6	(47.7)	462	15.8	(36.1)	18.8	***	(2.9)	0.34
At least 1 night homeless[b] in past 6 months (%)	491	15.7	(36.8)	462	9.7	(28.8)	6.0	***	(2.2)	0.13
At least 1 night doubled up in past 6 months (%)	490	28.3	(45.2)	463	11.0	(31.3)	17.3	***	(2.6)	0.33
Any stay in emergency shelter in past 6 months (%) [Program Usage Data]	491	5.7	(24.0)	463	3.9	(17.7)	1.8		(1.5)	0.06
Any stay in emergency shelter in months 21 to 32 after RA (%) [Program Usage Data]	491	13.9	(34.6)	463	5.4	(21.8)	8.5	***	(2.0)	0.20
Number of days homeless[b] or doubled up in past 6 months	489	46.1	(72.1)	461	18.1	(49.4)	27.9	***	(4.2)	0.32
Number of days homeless[b] in past 6 months	491	13.7	(41.8)	462	9.5	(34.6)	4.2	*	(2.5)	0.07
Number of days doubled up in past 6 months	489	34.9	(64.7)	462	10.5	(39.3)	24.4	***	(3.8)	0.33
Housing independence										
Living in own house or apartment at followup (%)	491	68.8	(46.8)	463	83.8	(36.5)	– 15.1	***	(2.9)	– 0.28
Living in own house or apartment with no housing assistance (%)	488	38.5	(48.5)	462	16.1	(36.1)	22.4	***	(2.9)	0.39
Living in own house or apartment with housing assistance (%)	488	30.5	(46.0)	462	67.6	(46.4)	– 37.0	***	(3.1)	– 0.72
Number of places lived										
Number of places lived in past 6 months[c]	489	1.6	(1.0)	463	1.4	(0.9)	0.2	***	(0.1)	0.17
Housing quality										
Persons per room	465	1.6	(1.2)	442	1.2	(0.6)	0.4	***	(0.1)	0.29
Housing quality is poor or fair (%)	464	32.0	(46.0)	441	27.6	(44.7)	4.4		(3.2)	0.08

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] The definition of "homeless" in this report includes stays in emergency shelters and places not meant for human habitation. It excludes transitional housing.

[c] The number of places lived in past 6 months is topcoded at 6 places.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Sources: Family Options Study 37-month followup survey; Program Usage Data

Exhibit F-20. CBRR+PBTH Versus SUB: Impacts on Family Preservation at 37 Months

Outcome	CBRR+PBTH			SUB			ITT Impact		Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Current or recent separations of family members present at baseline									
Family has at least one child separated in past 6 months (%)	482	18.3	(38.3)	449	14.8	(34.8)	3.5	(2.6)	0.08
Family has at least one foster care placement in past 6 months[b] (%)	483	4.0	(19.0)	454	3.4	(17.9)	0.6	(1.3)	0.03
Spouse/partner separated in past 6 months, of those with spouse/partner present at RA (%)	133	47.6	(49.6)	119	39.5	(49.9)	8.1	(6.6)	0.14
Reunification of family members reported as separated at baseline									
Family has at least one child reunified, of those families with at least one child absent at RA (%)	84	32.3	(47.8)	92	44.9	(50.1)	– 12.6	(9.3)	– 0.22
Spouse/partner reunified, of those with spouse/partner absent at RA (%)	43	25.0	(44.1)	49	31.9	(45.6)	– 6.9	(12.8)	– 0.15

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Foster care placement outcome includes any children (present at baseline) who are placed in foster care or adopted by another family at the time of followup.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Exhibit F-21. CBRR+PBTH Versus SUB: Impacts on Adult Well-Being at 37 Monthss

Outcome	CBRR+PBTH			SUB			ITT Impact		Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact	(SE)	
Adult physical health									
Health in past 30 days was poor or fair (%)	488	30.6	(46.0)	462	30.9	(46.4)	– 0.3	(2.9)	– 0.01
Adult mental health									
Goal-oriented thinking[b]	482	4.47	(1.03)	457	4.48	(1.05)	– 0.01	(0.07)	– 0.01
Psychological distress[c]	489	6.93	(5.62)	461	6.59	(5.56)	0.33	(0.36)	0.05
Adult trauma symptoms									
Post-traumatic stress disorder (PTSD) symptoms in past 30 days (%)	486	20.1	(39.5)	458	22.3	(41.5)	– 2.2	(2.7)	– 0.04
Adult substance use									
Alcohol dependence or drug abuse[d] (%)	490	11.6	(32.3)	462	13.3	(32.7)	– 1.6	(2.3)	– 0.04
Alcohol dependence[d] (%)	490	8.8	(28.9)	463	10.1	(28.4)	– 1.2	(2.1)	– 0.04
Drug abuse[d] (%)	490	4.1	(19.8)	462	4.4	(19.9)	– 0.3	(1.4)	– 0.01
Experience of intimate partner violence									
Experienced intimate partner violence in past 6 months (%)	490	8.8	(27.7)	460	8.2	(26.5)	0.7	(1.9)	0.02

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Goal-oriented thinking is measured with a modified version of the State Hope Scale and ranges from 1 to 6, with higher scores indicating higher levels of positive, goal-oriented thinking.

[c] Psychological distress is measured with the Kessler 6 (K6) scale and ranges from 0 to 24, with higher scores indicating greater distress.

[d] Alcohol dependence is measured with the Rapid Alcohol Problems Screen (RAPS-4), and drug abuse is measured with six items from the Drug Abuse Screening Test (DAST-10). Both are measured for the 6 months before the 37-month survey.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

Exhibit F-22. CBRR+PBTH Versus SUB: Impacts on Child Well-Being Across Age Groups at 37 Months

Outcome	CBRR+PBTH			SUB			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Child education										
Number of schools attended since RA[b]	554	2.1	(1.0)	533	1.9	(0.9)	0.2	***	(0.1)	0.19
Grade completion (not held back) (%)	460	89.67	(30.60)	439	92.88	(26.76)	– 3.20		(2.08)	– 0.08
School grades[c]	423	3.0	(0.9)	403	3.1	(0.9)	– 0.1		(0.1)	– 0.10
Child physical health										
Poor or fair health in past 30 days (%)	659	7.0	(24.2)	620	7.5	(25.2)	– 0.5		(1.8)	– 0.02
Well-child checkup in past year (%)	658	90.7	(29.4)	619	89.3	(30.7)	1.4		(2.0)	0.04
Child has regular source of health care (%)	656	92.1	(26.1)	619	91.0	(26.5)	1.1		(2.2)	0.03
Sleep problems[d]	659	2.10	(1.06)	620	2.00	(1.04)	0.10		(0.07)	0.07
Child behavioral strengths and challenges										
Behavior problems[e]	628	0.49	(1.22)	582	0.48	(1.27)	0.02		(0.09)	0.01
Prosocial behavior[f]	629	– 0.23	(1.19)	584	– 0.19	(1.12)	– 0.04		(0.08)	– 0.03

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Number of schools outcome is topcoded at 4 or more schools.

[c] School grades outcome is defined as 1 = mostly Ds or Fs, 2 = mostly Cs, 3 = mostly Bs, 4 = mostly As.

[d] Sleep problems outcome ranges from 1 to 5, with higher values indicating more frequent tiredness upon waking and during the day.

[e] Behavior problems outcome is measured as the standardized Total Difficulties score from the Strengths and Difficulties Questionnaire (SDQ).

[f] Prosocial behavior is measured as the standardized prosocial domain score from the SDQ.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey (parent report)

Exhibit F-23. CBRR+PBTH Versus SUB: Impacts on Child Well-Being Developmental Outcomes by Age Group at 37 Months

Outcome	CBRR+PBTH			SUB			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Ages 2 to 5 years[b]										
Preschool or Head Start enrollment[c] (%)	211	31.6	(47.7)	199	35.4	(48.9)	– 3.8		(4.9)	– 0.06
Child care or preschool absences in past month[d]	71	0.57	(0.83)	80	0.86	(0.94)	– 0.29	*	(0.16)	– 0.26
Positive child care or preschool experiences[e]	76	0.79	(0.48)	83	0.85	(0.38)	– 0.06		(0.08)	– 0.13
Positive child care or preschool attitudes[f]	75	4.53	(0.94)	84	4.73	(0.69)	– 0.20		(0.15)	– 0.24
Child care or preschool conduct problems[g] (%)	81	9.3	(33.1)	87	9.8	(30.6)	– 0.5		(5.9)	– 0.02
Ages 2 years to 5 years, 6 months										
Met developmental milestones[h] (%)	186	72.1	(44.7)	173	68.3	(44.6)	3.8		(5.3)	0.07
Ages 3 years, 6 months to 7 years										
Verbal ability[i]	223	– 0.41	(1.07)	229	– 0.18	(1.03)	– 0.24	*	(0.12)	– 0.18
Math ability[j]	222	– 0.37	(0.96)	228	– 0.24	(1.01)	– 0.13		(0.11)	– 0.11
Executive functioning[k] (self-regulation)	208	15.32	(16.02)	223	15.54	(16.06)	– 0.22		(1.30)	– 0.01
Ages 5 to 17 years[l]										
School enrollment[c] (%)	452	96.9	(17.3)	424	98.6	(11.8)	– 1.7		(1.2)	– 0.09
School absences in past month[d,m]	173	0.87	(0.94)	195	0.93	(0.91)	– 0.06		(0.13)	– 0.05
Positive school experiences[e,m]	173	0.49	(0.61)	196	0.58	(0.58)	– 0.09		(0.07)	– 0.11
Positive school attitudes[f,m]	173	4.09	(1.14)	195	4.25	(1.09)	– 0.17		(0.13)	– 0.11
School conduct problems[g,m] (%)	172	24.0	(44.4)	197	23.8	(41.1)	0.2		(5.2)	0.00
Ages 8 to 17 years										
Anxiety[n]	281	34.92	(7.75)	259	35.18	(7.53)	– 0.25		(0.76)	– 0.03
Fears[o]	284	62.58	(14.69)	260	62.94	(14.48)	– 0.36		(1.39)	– 0.02
Substance use[p] (%)	272	9.83	(30.44)	257	2.94	(20.28)	6.89	***	(2.17)	0.19
Goal-oriented thinking[q]	268	23.19	(4.90)	252	21.67	(5.11)	1.52	***	(0.55)	0.24
School effort in past month[r]	279	2.78	(0.84)	258	2.76	(0.77)	0.02		(0.08)	0.02
Arrests or police involvement in past 6 months[s] (%)	142	9.71	(29.92)	142	9.93	(27.91)	– 0.22		(4.02)	– 0.01

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes focal children who were ages 4 years or younger on the September 1 before the 37-month parent survey.

[c] Preschool or Head Start enrollment outcome is defined as enrollment in preschool, center-based child care, or school.

[d] Absences outcome is defined as 0 = no absences in past month, 1 = one to two absences, 2 = three to five absences, 3 = six or more absences.

[e] Positive child care, preschool, or school experiences outcome is defined as – 1 = mostly negative experiences, 0 = both positive and negative experiences, 1 = mostly positive experiences.

[f] Positive child care, preschool, or school attitudes outcome is parent report of how much child likes school and ranges from 1 to 5, with higher values indicating greater like of school.

[g] Child care, preschool, or school conduct problems outcome is defined as 0 = no conduct problems reported to parent, 1 = parent contacted about conduct problems or suspension or expulsion from school or child care center.

[h] Met developmental milestones outcome is defined as scoring above the typical development cutoffs in all domains of the Ages and Stages Questionnaire (ASQ-3).

[i] Verbal ability outcome is the nationally standardized score from the Woodcock-Johnson III (WJ III) letter-word identification test.

[j] Math ability outcome is the nationally standardized score from the WJ III applied problems test.

[k] Executive functioning outcome is the Head Toes Knees Shoulders (HTKS) score and ranges from 0 to 40, with higher scores indicating greater executive functioning.

[l] Includes focal children who were ages 5 to 17 years on the September 1 before the 37-month parent survey and no older than 17 years at the time of the survey.

[m] This parent-reported outcome was collected from only the first 38 percent of parents surveyed due to an error in data collection.

[n] Anxiety (child report) is measured using the A-Trait scale from the State-Trait Anxiety Inventory for Children (STAIC). Scores range from 20 to 60, with higher scores indicating greater anxiety.

[o] Fears outcome (child report) is the score from the Fears Scale and ranges from 33 to 99, with higher scores indicating more fear.

[p] Substance use (child report) is measured with 23 items from the Centers for Disease Control and Prevention 2011 Youth Risk Behavior Survey.

[q] Goal-oriented thinking (child report) is measured with a modified version of the Children's Hope Scale and ranges from 6 to 30, with higher scores indicating higher levels of positive, goal-oriented thinking.

[r] School effort outcome (child report) ranges from 1 to 4, with higher scores indicating greater effort during school day and on homework.

[s] Arrest or police involvement in past 6 months is from parent report.

Sources: Family Options Study 37-month followup survey (parent report); Family Options Study 37-month child survey (child report); ASQ-3; WJ III; HTKS

Exhibit F-24. CBRR+PBTH Versus SUB: Impacts on Self-Sufficiency at 37 Months

Outcome	CBRR+PBTH			SUB			ITT Impact			Effect Size[a]
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)	
Employment status										
Work for pay in week before survey (%)	491	39.2	(48.9)	462	36.5	(48.0)	2.7		(3.2)	0.05
Any work for pay since 20-month survey[b] (%)	445	60.8	(48.7)	433	58.8	(49.4)	2.0		(3.2)	0.04
Months worked for pay since 20-month survey[b,c]	444	7.4	(8.2)	431	6.8	(7.9)	0.6		(0.5)	0.07
Any work for pay since RA (%)	491	73.8	(42.9)	462	69.9	(46.3)	3.9		(2.7)	0.08
Months worked for pay since RA[c]	487	14.1	(13.6)	456	12.2	(13.5)	1.9	**	(0.8)	0.12
Hours of work per week at current main job[d]	489	13.1	(17.8)	461	11.4	(16.5)	1.7		(1.1)	0.09
Income sources and amounts										
Annualized current earnings ($)	483	7,511	(12,048)	454	6,355	(10,376)	1,156		(747)	0.09
Total family income ($)	476	12,632	(10,696)	434	11,430	(9,535)	1,202	*	(666)	0.09
Anyone in family had earnings in past month (%)	491	50.8	(50.0)	463	46.9	(49.9)	3.9		(3.3)	0.07
Anyone in family received TANF in past month (%)	490	28.2	(45.2)	463	28.4	(45.3)	– 0.2		(2.9)	0.00
Anyone in family received SSDI in past month (%)	491	9.1	(26.7)	460	7.0	(26.5)	2.1		(1.9)	0.06
Anyone in family received SSI in past month (%)	490	15.5	(35.4)	463	13.8	(35.0)	1.7		(2.1)	0.04
Anyone in family received SNAP/Food Stamps in past month (%)	490	81.1	(38.8)	463	80.7	(38.9)	0.5		(2.7)	0.01
Anyone in family received WIC in past month (%)	490	28.8	(45.6)	463	25.8	(43.6)	3.0		(2.9)	0.06
Education and training										
Participated in 2 weeks or more weeks of any school or training since RA (%)	489	38.1	(48.7)	461	38.5	(48.9)	– 0.4		(3.3)	– 0.01
Number of weeks in school/training programs since RA	481	7.0	(15.3)	458	7.6	(15.0)	– 0.6		(1.0)	– 0.03
Participated in 2 weeks or more weeks of school since RA (%)	489	9.3	(28.9)	461	13.4	(33.7)	– 4.1	*	(2.2)	– 0.11
Participated in 2 weeks or more weeks of basic education since RA (%)	489	3.3	(17.8)	461	2.3	(15.9)	0.9		(1.2)	0.05
Participated in 2 weeks or more weeks of vocational education since RA (%)	489	12.2	(33.1)	461	10.5	(31.4)	1.7		(2.1)	0.04
Food security and hunger										
Household is food insecure (%)	491	44.5	(49.5)	463	37.3	(48.7)	7.2	**	(3.3)	0.12
Food insecurity scale[e]	488	1.89	(2.04)	461	1.52	(1.99)	0.37	***	(0.13)	0.15
Economic stressors										
Economic stress scale[f]	486	– 0.17	(0.49)	460	– 0.24	(0.45)	0.07	**	(0.03)	0.12

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. RA = random assignment. SD = standard deviation. SE = standard error. SNAP = Supplemental Nutrition Assistance Program. SSDI = Social Security Disability

Insurance. SSI = Supplemental Security Income. TANF = Temporary Assistance for Needy Families. WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

[a] Effect size column shows standardized effect sizes, which were calculated by dividing impact by standard deviation for the entire UC group.

[b] Includes only families who responded to both 20-month and 37-month followup surveys; not weighted for survey nonresponse.

[c] Number of months worked for pay includes partial calendar months.

[d] Hours of work per week includes those not currently working (that is, those with 0 hours of work per week).

[e] Food insecurity scale ranges from 0 to 6, with higher values indicating higher food insecurity.

[f] Economic stress scale ranges from – 1 to 1, with higher values indicating higher economic stress.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics and are weighted to adjust for survey nonresponse. See Chapter 2 and Appendix B for outcome definitions.

Source: Family Options Study 37-month followup survey

APPENDIX G. INTERVENTION COSTS—METHODOLOGY, SITES, AND PROGRAMS

This appendix provides greater detail on the cost analysis methodology and the sites and programs in the cost analysis. The study team calculated costs using primary data collected from transitional housing, rapid re-housing, and emergency shelter programs. The study team sought to capture costs of all program inputs consistently across each program type. The study team used administrative data to estimate costs for vouchers and public housing offered to families assigned to the permanent housing subsidy (SUB) intervention.

The first four sections of this appendix describe the process of determining the per-family monthly program cost for each program in the cost study, referred to as the *program-level per-family monthly program cost*. Section G.1 reviews the programs in the cost study. Section G.2 describes the elements of the per-family monthly program cost relevant to the transitional housing, rapid re-housing, and emergency shelter programs. Section G.3 reviews the approach used to calculate the per-family monthly program cost for the SUB intervention, and section G.4 reviews the calculation for the other program types. Section G.5 reviews how the study team averaged these program-level per-family monthly program costs to derive the average per-family monthly program cost for each program type for the entire study and for study sites. This section also reviews how the study team combined per-family monthly program costs with study families' observed program usage to calculate the other two types of costs addressed in Chapter 9 of the report: (1) cost of all program use during the followup period, and (2) monthly cost of all program use in the month of the 37- month followup survey.

G.1. Programs in the Cost Study

The study team collected cost data at a large subset of rapid re-housing, transitional housing, and emergency shelter programs that participated in the study in the 12 study sites. The study team purposefully selected programs from each site in which a substantial number of study families had enrolled or, in the case of emergency shelter, programs with a high number of families recruited for the study.

We attempted to collect cost data from all programs in which at least one study family enrolled and either (1) at least five study families were referred to the program or (2) the number of families referred was among the top three for the program type in the site. As such, the estimates were more likely to include larger programs that were able to make spaces available to study families and that study families were willing to accept. Collectively, the programs selected for the cost analysis represented more than 85 percent of study families who accepted a study referral to CBRR and PBTH programs, and more than 90 percent of families assigned to usual care (UC) from emergency shelters.

Cost estimates are based on detailed reviews of 81 CBRR, PBTH, and emergency shelter programs providing housing or services to homeless families across the 12 sites, plus administrative data (both at the household and public housing agency [PHA] level) covering the 10 sites providing permanent housing subsidies offered through the SUB intervention. The data collected from these programs represent a valuable contribution to the understanding of the cost of providing services to homeless families using each of the interventions studied and emergency shelter. Exhibit G-1 reports the number of programs in which the study team collected cost data. Sites that offered the SUB intervention are also indicated in Exhibit G-1.

As described in *The Family Options Study Interim Report*, families were enrolled in the study from September 2010 through January 2012. Then, depending on which group a family was assigned to, families may have received housing and services from the program associated with their intervention for either days or weeks (shelter), months (rapid re-housing and transitional housing), or years (transitional housing or permanent subsidies). We designed the cost analysis to be representative of the approximate timeframe when families were most likely to be enrolled in the programs. The study team collected cost data for the full-year period that best aligned with the time period in which most families were referred to the program and that overlapped with the program's financial recordkeeping. Most often (48 programs) this period was fiscal year 2011. We adjusted all costs using local consumer price index measures of inflation so that all estimates are reported in 2013 dollars.

Exhibit G-1. Number of Programs From Which Cost Data Were Collected and Presence of SUB Intervention by Study Site

Site	Number of CBRR Programs	Numberof PBTH Programs	Number of ES Programs	SUB Site
Alameda County	1	3	7	Yes
Atlanta	1 *	1	2	No
Baltimore	1	2	3	No
Boston	1	—	5	Yes
Connecticut*	1	2	7	Yes
Denver	1	2	5	Yes
Honolulu	1	5	5	Yes
Kansas City	1 *	3	3	Yes
Louisville	1	1	2	Yes
Minneapolis	1	—	1	Yes
Phoenix	1	4	4	Yes
Salt Lake City	1	1	1	Yes
Total	**12**	**24**	**45**	**10**

CBRR = community-based rapid re-housing. ES = emergency shelter. PBTH = project-based transitional housing. SUB = permanent housing subsidy.

* This study site comprises four Continuums of Care in New Haven and Bridgeport, Connecticut.

Notes: Pooled data from multiple CBRR programs were reported for Atlanta and Kansas City. PBTH was not offered in Boston, and enrollment in PBTH in Minneapolis did not support cost-data collection. SUB was not offered in Atlanta and Baltimore.

Source: Family Options Study cost data

G.2. Elements of Program-Level per-Family Monthly Program Cost

The methodology was designed to collect comprehensive program costs. Both to ensure that the study team collected all costs associated with proving program services and to allow for analysis comparing program structure, the study team collected costs in five high-level cost categories: (1) overhead, (2) rental assistance, (3) facility operations, (4) supportive services, and (5) capital costs. Exhibit G-2 shows the cost categories and how typical line items were sorted within categories.

The study team collected cost data for CBRR, PBTH, and emergency shelter programs from the programs directly. The study team reviewed these categories and all program activities with key program operations and agency accounting staff using a standardized protocol and data collection tools that were adapted from previous studies, including HUD's Cost of Homelessness Study (Spellman et al., 2010). Our primary source of cost information for all inputs except capital costs and in-kind and partner costs was audited expense statements. These statements were supplemented by program budgets, staffing lists, partner commitment letters, and program staff estimates of labor and material costs of any services not reflected in expense statements. To further ensure all program services were recognized as costs, interviews also reviewed program calendars and case management approaches for each age group of program residents.

To clarify and simplify comparisons across intervention programs for reporting our findings in Chapter 9, we collapsed the five cost-data collection categories into two broad designations: (1) housing or shelter and (2) supportive services.

1. ***Housing or shelter*** refers to the rental cost—either observed or estimated—of the space used to provide housing or shelter and program services and also any maintenance or other facility operation costs (including durable items such as furnishings). This rental cost is net of any rent payments made by the family.

Exhibit G-2. Cost Data Collection Categories and Associated Item Prompts

	Supportive Services	Housing or Shelter		
Agency Overhead	**Program/Assistance Expenses**	**Rental Assistance for Client Housing**	**Facility Operating Costs (project-based programs)**	**Property Value or Lease Expenses**
Administrative staff • Salaries • Fringe • Other staff-related costs Advertising Audit Accounting Legal Management fee Leasing & utilities (prorated agency) Miscellaneous office expenses Payroll taxes Indirect or allocated costs	Supportive services staff • Salaries • Fringe • Other staff-related costs Staff transportation Program supplies Activities Housing placement Employment search Direct support • Food • Clothing • Furniture • Transportation • Education • Cash • Other	Lease of client housing Electric Gas Water/sewer Other Family contributions	Housing operations staff • Salaries • Fringe • Other Trash removal Landscaping Exterminating Painting and decorating Property Insurance Real estate taxes Repairs Supplies Furnishing equipment Other	Market rate lease of client, program, and administrative property Estimate of rental rate of owned or donated property Estimate of rental rate of owned or donated property-Facility rent (or capital cost) for space used for supportive services

2. ***Supportive services costs*** refer to any services other than shelter or housing provided as an integral part of the program, including case management, and any cash or in-kind assistance (for example, meals provided in emergency shelters).

Additional detail is reported in Chapter 9 for two other categories—(1) administrative and overhead costs and (2) in-kind and partner costs—because they provide information on typical program structures.

1. ***Administrative and overhead costs*** include management salaries; legal, accounting, and other professional services; and program support costs, such as insurance premiums and agency and association fees. Administrative and overhead costs are divided among supportive services and housing and shelter costs according to the cost types' relative share of total costs so that they are included in the two broad categories.

2. ***In-kind and partner costs*** include any costs of housing or shelter or supportive services provided to families because they participate in a program. These costs are not provided by the program, and, as a result, are not included in program financial statements. Common examples include onsite health or mental health providers funded by an outside agency, community volunteers providing a variety of services, and consumer goods donated to program clients. The importance of these costs varies widely from program to program. When present, they typically are part of the cost of supportive services provided by a program. In some cases, however, housing or shelter costs include the costs of labor, such as handyman services, or of facilities used regularly for program activities that were provided in kind. In other cases, accounting, legal, or administrative services were provided in kind or by partners. In each case, the study team apportioned the cost to the appropriate category.

The next section provides additional detail regarding the assessment of in-kind and partner costs and capital costs and detail about our treatment of participant contributions.

In-Kind and Partner Costs

The study team reviewed all services that were provided to families because they were enrolled in the program to ensure that we were accounting for all inputs consistently across programs and across interventions, whether the assistance was provided directly by the program or in kind by a partner or volunteer.

The analysis, however, does not include the costs of every social service accessible to or encountered by program participants. The study team did not gather costs for services provided or made available by virtue of a families' housing or socioeconomic status alone, regardless of their enrollment in a particular program. Rather, costs were included for housing or shelter, goods, and services provided to families explicitly because they were enrolled in the study program. The analysis included only the partner services and in-kind assistance that resulted from a dedicated relationship with the program and were accessed by at least 20 percent of eligible families (as determined by interviews with program staff). In addition, the analysis included any services that programs cited as critical to the mission or core approach, regardless of participation rates. Exhibit G-3 provides examples of services that our approach did and did not include when identifying partner and in-kind costs.

When inputs were provided by an external partner or through in kind donations, the study team estimated the value of the program input using the following resources, as available—

- Program documentation (such as an audit estimate of in-kind services value).
- Costs of a similar service or item paid for by the program or by another program at the site.
- External documentation, such as Bureau of Labor Statistics data on local wages or publicly listed costs for the goods or services.

Examples of partner and in-kind services and resources used to determine an associated cost are listed in Exhibit G-4.

Exhibit G-3. Determining Inclusion of External Services

Included—On Site	Not Included—On Site
A health clinic sends a doctor and a nurse practitioner to the program site to conduct weekly screenings and checkups.	A volunteer organization holds parenting classes in a common area, but less than 20 percent of parents attend.
Included—Off Site	**Not Included—Off Site**
A Head Start school reserves and guarantees priority slots for all appropriately aged children from the program.	If a client expresses interest, case managers refer her to an external job training program run by the local workforce board.

Exhibit G-4. Valuing In-Kind Services

Example	Estimation Approach
Partnering organization sends substance-abuse counselor to program to hold weekly meetings with residents.	Program has an equivalent social worker with a substance-abuse specialization on staff. This hourly wage rate is applied to level of effort by partner staff.
Health clinic sends team of nurse practitioners monthly to offer basic preventative health care and checkups.	Clinic sends leverage letter detailing the estimated costs of the nurses' time and medical supplies.
Local church contributes a move-in packet for each family, including furniture and kitchenware.	Program estimates the value of each packet at $500 per client.
YMCA nearby holds five slots in its summer camp for children staying in program's shelter.	YMCA website lists costs for summer camp activities.
Area nonprofit organization sends a dentist to conduct exams for all parents and children once per year.	Bureau of Labor Statistics' median wage for a dentist in that state is applied to the level of effort by the dentist.

YMCA = Young Men's Christian Association.

The approach used to valuing partner and in-kind staff is conservative in that it applies estimated labor rates to partner and in-kind level of effort, but it does not apply an overhead cost multiplier to that rate. The logic of this approach is an assumption that the program's existing overhead infrastructure could absorb any additional administrative cost associated with directly funding this partner or in-kind service were the service to be provided by the program.

Capital Costs

Accounting for capital costs associated with the physical space used to provide client housing and program services is critical to establishing comparable costs within and across programs. For some programs this accounting was fairly straightforward. A few programs rent client housing units, program services, space, or administrative office space at market rates, providing direct market-rate estimates of the cost of facilities used by the program. At other programs, where client client-housing facilities are unique and different from typical housing stock, estimating a cost of ongoing occupancy of the space used for the program was more nuanced. For example, a congregate shelter in an otherwise industrial neighborhood or in the basement of a downtown historic religious sanctuary is not comparable with any space that would be rented at a market rate. Other space is provided at an in-kind discount; for example, office space owned by a municipality is leased at effectively no cost to the program.

For cases in which market rates were not paid by the organization directly, the study team took an opportunity-cost approach to valuing space used to provide housing and services. We specifically relied on the following resources to derive annual capital cost estimates, as available[1]—

- Program's or donor's stated annual value of the occupied space.
- A 5-percent annual cost of capital applied to a total property value estimate; for example, a property value estimate from a recent appraisal or sales price-based insurance estimate.
- HUD's published Fair Market Rent (FMR) for a comparable number of units as the space used by the program, adjusted for maintenance costs.
- Readily available estimates of market rent for similar nearby properties, adjusted for maintenance costs; for example, similar units or properties listed publicly for rent next door or reasonable rental estimates from similar neighboring properties provided by Zillow.

When rental value was imputed, either using comparable properties or local FMR, an estimate of net rent—the opportunity cost of interest—was imputed as 55 percent of the gross rent. This deflation was based on an analysis of data from the Residential Housing Finance Survey (RHFS; HUD, 2014b). Our analysis of the RHFS indicated an average 45-percent expense ratio for market-rate rental properties with between 5 and 49 units—the relevant size properties for the size of buildings used by programs in our analysis.

Participant Contributions

Of the 45 shelters in the cost analysis, 8 required shelter participants to pay some set amount or percent of income as rent. Of the 24 transitional housing programs, 21 required rental payments.[2] This analysis reports program costs net of these contributions. Annual program costs were reduced specifically by the amount of any participant contributions before determining

[1] In developing this approach, we used multiple methods for facilities where data were available. Estimates for the same property resulting from different methods were remarkably similar (typically within 5 to 10 percent), which gives us confidence that a particular choice of property valuation method does not introduce material variation into our cost estimates.

[2] A few programs return mandatory participant savings as cash on their exit. Because funds dispersed are exactly offset by the participant contributions, we do not include these transactions as program costs.

per-family averages, which conceptually is consistent with reporting the net costs to society of providing assistance. From a practical standpoint, this procedure allows for a closer comparison across program types. The actual family rental payments for families receiving rapid re-housing or subsidy assistance were unknown (For SUB, we know households' expected rent contribution, but we do not observe actual payment to landlords.) Reducing costs by tenant rent for project-based transitional housing and emergency shelter programs makes the resulting estimates more comparable with rapid re-housing and permanent subsidy costs. As such, costs reported in Chapter 9 were net of any participant contributions.

The pattern of participant contributions was similar across sites, with the exception of project-based transitional housing in Hawaii, where family contributions averaged slightly less than $480 per family per month across the five programs. Among the 8 remaining sites (16 programs) in which families in project-based transitional housing programs pay some rent, the average monthly per-family rent is $144. For the 8 emergency shelters at which families pay some rent or program fee, the average per-family per-month contribution is $105.

All costs were reported net of any family contributions.

G.3. Costs of SUB Intervention

The approach to collecting cost data for the SUB intervention differed from that outlined previously for the CBRR and PBTH programs and for emergency shelters. Because the SUB intervention offered priority access to permanent housing assistance provided by PHAs, mostly in the form of a housing choice voucher, administrative data sources available to HUD were an efficient source of cost information.

The cost of housing assistance was calculated directly from household-level administrative data for each study family assigned to the SUB group who received SUB assistance. These HUD Public and Indian Housing Information Center data contain move-in dates and housing assistance payments (HAPs) made on behalf of the family. To determine site-level and overall average HAP, we averaged these household HAPs, weighting households by the number of days of assistance received. These site-level HAPs were then inflated to account for administrative costs. Annual PHA financial reports provided information on the total administrative costs for the voucher program in each of the 18 PHAs that participated in the Family Options Study.[3]

G.4. Calculating Costs

For CBRR, PBTH, and emergency shelter programs, the study team collected or calculated costs for the entire program, typically for a fiscal year. Translating this total program cost into a per-family unit cost required determining the number of families assisted at a time for PBTH and emergency shelter programs, and, for CBRR programs, the average number of months of assistance provided to each family. For PBTH and emergency shelter programs,

$$Program\text{-}level\ per\ family\ monthly\ program\ cost = t = \frac{Total\ annual\ program\ cost/12}{Number\ of\ families\ served\ at\ a\ time}.$$

The number of families served at a time is determined from program reports of the number of units and occupancy rate for unit-based facilities and the number of beds—typical family size—and occupancy rate for congregate facilities.

For rapid re-housing programs, the study team divided total program costs by the total number of months of rent supported by the program for all families in the program during the period for which costs were collected. In some cases, we received program administrative data from which we calculated the number of months of assistance directly. For other providers, programs provided us total program expenditures, total number of households assisted, and average number of months of housing provided by the assistance. Exhibit G-5 reviews the cost calculation for each program type.

Exhibit G-5. Program Level Average per Family Cost Calculations

Program Type	Program Level Average per-Family Monthly Cost Calculation
Emergency shelter	((Total annual program cost)/12)/typical number of families assisted at a time
CBRR programs	(Total annual program costs)/total family-months[a] of rent subsidized with funds
PBTH programs	((Total annual program cost)/12)/typical number of families served at a time
Voucher program assistance offered to the SUB group	Average observed per family per month rental subsidy for sample families scaled by PHA administrative cost rate
Public housing program assistance offered to the SUB group	Average per family per month costs with imputed rental value for sample families scaled by PHA administrative cost rate

CBRR = community-based rapid re-housing. PBTH = project-based transitional housing. SUB = permanent housing subsidy.
PHA = public housing authority.
[a] "Family-month" means a rent is a subsidy for one family for 1 month.

[3] For families in Honolulu who were assigned to SUB and received permanent subsidies from public housing programs, the study team imputed the cost of providing the public housing unit using the Honolulu FMR discounted to reflect typical maintenance costs together with average observed maintenance and actual administrative costs.

This per-family monthly program cost for each program in the cost study is used to calculate each of our four cost concepts; (1) average per-family monthly program cost, (2) program cost per stay during the followup period, (3) cost of all program use during the followup period, and (4) monthly program cost of all program use at the 18-month followup survey.

Per-Family Monthly Program Cost

Chapter 9 reports per-family monthly program cost averaged across all programs included in the cost analysis. As noted previously, this group of programs is a subset of all programs in the Family Options Study. One aim in selecting programs was to produce cost estimates that reflected the assistance that study families actually received. To be consistent with this aim—to calculate average per-family monthly program costs—we weighted program-level per-family monthly program costs by the number of study families who actually enrolled in the program after being referred to the program by the study for PBTH and CBRR programs. To be consistent with this approach for emergency shelter programs, we weighted program-level costs by the number of families assigned to the UC group at each shelter in the cost study. SUB costs were averaged directly from family-level data, weighted by the number of days a family received assistance.

Cost of All Program Use During the Followup Period

The per-family monthly program cost is calculated from program-level data points. By contrast, the study team estimated the cost of all program use during the followup period from family-level data points multiplied by site-level per-family monthly program cost estimates. This approach is used because average costs of all program use during the followup period are calculated for each of the six pairwise comparisons in the study—a concept that is based on families assigned to intervention rather than families referred to particular programs.

This approach requires two additional assumptions. First, site-level per-family monthly program costs for each of our four program types are used as cost estimates for a month of assistance at any program of that type.[4] For example, all transitional housing programs in a site have the same per-family monthly program cost as the site-level average PBTH program cost estimated using program-level costs reported in Chapter 9. Second, the study data track families' use of permanent supportive housing (PSH), public housing, and project-based housing assistance that was not provided to families assigned to the SUB intervention nor included in the cost analysis. Under the assumption that they have similar program and cost structures, the estimates reported in this section use site-level PBTH program costs as a proxy for the cost of PSH and SUB costs as a proxy for the costs of public housing and project-based housing assistance.

To calculate the average cost of all program use during the followup period for the families on each side of each pairwise comparison, we first multiplied each family's observed duration in each program type with the site-level average per-family monthly program cost of providing that type of assistance. After summing all program types a family uses during the followup period, we averaged this family-level cost of all program use during the followup period over all families in each assignment group, using the same nonresponse weights used in the impact analysis.

Cost of All Program Use at the Time of the Followup Survey

To calculate the cost of all program use at the time of the followup survey, we average the site-level average per-family monthly program cost for the program type in the site in which a family was receiving assistance (if any) at the time of the 37-month followup survey. As with the per-family monthly cost measure, site-level average per-family monthly program costs are calculated with weights for the number of study families who accepted an assignment to the programs. Associating site-level program type costs with assistance study families are receiving at the time of the followup survey requires the same two assumptions described previously for cost of all program use during the followup period. First, site-level per-family monthly program costs for each of our four program types are used as cost estimates for a month of assistance at any program of that type. Second, the study data track families' use of PSH, public housing, and project-based housing assistance that was not associated with the study or included in the cost analysis.

We calculate the cost of all program use at the time of the followup survey by averaging these site-level cost estimates that we associate with the assistance families are receiving. These averages are calculated over families on each side of each impact comparison using the same survey nonresponse used in the impact analysis.

[4] Atlanta and Baltimore did not offer the SUB intervention and per-family monthly program costs were not calculated in these sites for SUB programs. An additional site (Minneapolis) did not have adequate takeup of PBTH programs to support cost data collection. In these sites, the study team uses study-level average per-family monthly program costs as a proxy to allow for cost of all program use since random assignment estimates to include the families who found their way to these program types without study assistance.

APPENDIX H.
SUPPLEMENTAL ANALYSES

This appendix provides exhibits from supplemental analyses conducted for the Family Options Study. Exhibits H-1 through H-6 show information about the use of homeless and housing assistance programs in the latter part of the 37-month followup period, from months 21 to 32 after the month of random assignment. The analysis of program use presented in Chapters 2 through 6 examined the extent to which families in each of the policy comparisons used seven types of homeless and housing assistance programs at any time during the entire 37-month followup period. For completeness, and to supplement the program use analysis reported in *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families* for the first 20 months after random assignment, the study team also tabulated program use for months 21 to 32 after random assignment.

Exhibits H-7, H-8, and H-9 provide updates to three nonexperimental analyses presented in the *Short-Term Impacts* report. Exhibits 6-6, 7-7, and 8-10 in the *Short-Term Impacts* report showed comparisons of outcomes for families assigned to priority access to (1) permanent housing subsidy (SUB), (2) community-based rapid re-housing (CBRR), and (3) project-based transitional housing (PBTH) who did and did not use the programs to which they received priority access. The study team also tabulated 37-month outcomes for these groups of families as shown in Exhibits H-7, H-8, and H-9. Neither the differences nor the similarities between the groups' outcomes can be causally attributed to the use of the SUB, CBRR, or PBTH programs because use of the programs was not randomly assigned.

Exhibit H-1. SUB Versus UC: Program Use From 19th Month After RA Until 37-Month Survey Response Month

Type of Housing Assistance	Percent Ever Used From 19th Month After RA to 37-Month Followup Survey[a]		Number of Months Used From 19th Month After RA to 37-Month Followup Survey, if Ever Used Type of Housing Assistance				Percent Used in Month of Followup Survey Response	
	SUB	UC	SUB		UC		SUB	UC
			Mean	Median	Mean	Median		
Permanent housing subsidies offered to the SUB group[b]	78.5	12.0	17.9	19.0	15.7	18.0	68.4	10.8
Rapid re-housing (CBRR)	1.3	6.1	3.7	3.5	5.6	4.5	0.3	1.8
Transitional housing	3.8	17.7	7.9	8.0	8.2	7.5	0.9	3.7
Permanent supportive housing	2.8	8.5	10.1	9.5	12.1	12.5	2.3	6.9
Public housing	1.5	9.8	17.9	18.0	13.4	16.0	1.4	7.6
Project-based vouchers/Section 8 projects	1.3	5.9	9.3	14.5	13.7	15.5	0.8	5.4
Any form of permanent housing subsidy[c]	*83.9*	*34.5*	*17.6*	*18.0*	*14.6*	*17.0*	*73.0*	*30.5*
Emergency shelter[d]	6.4	22.8	3.6	2.4	3.5	2.4	1.7	5.4
No use of homeless or housing programs[e]	11.2	42.1	—	—	—	—	24.1	59.1
N	***501***	***395***	**—**	**—**	**—**	**—**	***501***	***395***

CBRR = priority access to community-based rapid re-housing. SUB = priority access to permanent housing subsidy. UC = usual care.
RA = random assignment.

[a] Percentage of families who ever used a type of assistance program during the period from the 19th calendar month after the month of RA to the month of the 37-month followup survey response. Percentages do not add to 100 because some families used more than one program type during the followup period.

[b] Subsidies offered to the SUB group are housing choice vouchers plus site-specific programs offered to families assigned to the SUB group in Bridgeport, Connecticut, and Honolulu, Hawaii.

[c] Any form of permanent housing subsidy includes the types of permanent subsidy offered to the SUB group, permanent supportive housing, public housing, and project-based vouchers/Section 8 projects.

[d] All families were in emergency shelter at RA. Percentages less than 100 are because of missing data on shelter use.

[e] Indicates no use of the six program types in this table during any of the followup period and no use of emergency shelter after the first 6 months after RA. No use in the month of followup survey response indicates no use of any of these seven program types.

Notes: Percentages are regression adjusted, controlling for site and randomization ratio. Percentages, means, and medians are weighted for survey nonresponse to represent full comparison sample.

Source: Family Options Study Program Usage Data

Exhibit H-2. CBRR Versus UC: Program Use From 19th Month After RA Until 37-Month Survey Response Month

Type of Housing Assistance	Percent Ever Used From 19th Month After RA to 37-Month Followup Survey[a]		Number of Months Used From 19th Month After RA to 37-Month Followup Survey, if Ever Used Type of Housing Assistance				Percent Used in Month of Followup Survey Response	
	CBRR	UC	CBRR		UC		CBRR	UC
			Mean	Median	Mean	Median		
Permanent housing subsidies offered to the SUB group[b]	9.8	11.5	15.6	18.0	15.0	17.0	8.5	10.2
Rapid re-housing (CBRR)	7.1	5.7	7.4	7.5	6.4	6.5	2.3	1.1
Transitional housing	12.9	15.5	7.7	6.5	8.2	6.5	4.2	3.3
Permanent supportive housing	8.9	9.9	12.8	11.5	13.3	14.5	6.7	8.0
Public housing	10.7	9.3	14.1	16.5	13.7	15.5	9.4	8.2
Project-based vouchers/Section 8 projects	5.4	5.7	14.4	17.0	12.1	14.0	5.3	4.8
Any form of permanent housing subsidy[c]	*34.4*	*34.8*	*14.4*	*16.5*	*14.4*	*16.5*	*29.7*	*31.1*
Emergency shelter[d]	20.9	22.8	3.2	2.0	3.4	2.2	2.6	5.2
No use of homeless or housing programs[e]	44.0	42.6	—	—	—	—	61.3	59.9
N	***434***	***434***	**—**	**—**	**—**	**—**	***434***	***434***

CBRR = priority access to community-based rapid re-housing. SUB = priority access to permanent housing subsidy. UC = usual care.

RA = random assignment.

[a] Percentage of families who ever used a type of assistance program during the period from the 19th calendar month after the month of RA to the month of the 37-month followup survey response. Percentages do not add to 100 because some families used more than one program type during the followup period.

[b] Subsidies offered to the SUB group are housing choice vouchers plus site-specific programs offered to families assigned to the SUB group in Bridgeport, Connecticut, and Honolulu, Hawaii.

[c] Any form of permanent housing subsidy includes the types of permanent subsidy offered to the SUB group, permanent supportive housing, public housing, and project-based vouchers/Section 8 projects.

[d] All families were in emergency shelter at RA. Percentages less than 100 are because of missing data on shelter use.

[e] Indicates no use of the six program types in this table during any of the followup period and no use of emergency shelter after the first 6 months after RA. No use in the month of followup survey response indicates no use of any of these seven program types.

Notes: Percentages are regression adjusted, controlling for site and randomization ratio. Percentages, means, and medians are weighted for survey nonresponse to represent full comparison sample.

Source: Family Options Study Program Usage Data

Exhibit H-3. PBTH Versus UC: Program Use From 19th Month After RA Until 37-Month Survey Response Month

Type of Housing Assistance	Percent Ever Used From 19th Month After RA to 37-Month Followup Survey[a]		Number of Months Used From 19th Month After RA to 37-Month Followup Survey, if Ever Used Type of Housing Assistance				Percent Used in Month of Followup Survey Response	
	PBTH	UC	PBTH		UC		PBTH	UC
			Mean	Median	Mean	Median		
Permanent housing subsidies offered to the SUB group[b]	8.6	9.7	10.6	9.5	12.9	17.0	7.4	7.9
Rapid re-housing (CBRR)	6.2	6.4	5.3	3.5	5.2	4.5	0.7	1.8
Transitional housing	25.8	19.1	9.6	8.5	7.9	6.5	9.3	6.2
Permanent supportive housing	10.1	9.6	13.3	14.0	14.4	17.0	7.6	8.3
Public housing	8.0	8.5	14.3	17.0	13.2	15.5	7.1	5.8
Project-based vouchers/Section 8 projects	5.3	6.1	13.1	12.5	13.2	13.5	3.9	5.4
Any form of permanent housing subsidy[c]	*31.1*	*31.5*	*13.1*	*14.5*	*14.5*	*17.0*	*26.0*	*27.1*
Emergency shelter[d]	16.2	18.9	2.0	1.1	3.5	2.2	3.5	4.3
No use of homeless or housing programs[e]	43.4	44.0	—	—	—	—	61.5	61.5
N	***293***	***259***	**—**	**—**	**—**	**—**	***293***	***259***

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

RA = random assignment.

[a] Percentage of families who ever used a type of assistance program during the period from the 19th calendar month after the month of RA to the month of the 37-month followup survey response. Percentages do not add to 100 because some families used more than one program type during the followup period.

[b] Subsidies offered to the SUB group are housing choice vouchers plus site-specific programs offered to families assigned to the SUB group in Bridgeport, Connecticut, and Honolulu, Hawaii.

[c] Any form of permanent housing subsidy includes the types of permanent subsidy offered to the SUB group, permanent supportive housing, public housing, and project-based vouchers/Section 8 projects.

[d] All families were in emergency shelter at RA. Percentages less than 100 are because of missing data on shelter use.

[e] Indicates no use of the six program types in this table during any of the followup period and no use of emergency shelter after the first 6 months after RA. No use in the month of followup survey response indicates no use of any of these seven program types.

Notes: Percentages are regression adjusted, controlling for site and randomization ratio. Percentages, means, and medians are weighted for survey nonresponse to represent full comparison sample.

Source: Family Options Study Program Usage Data

Exhibit H-4. SUB Versus CBRR: Program Use From 19th Month After RA Until 37-Month Survey Response Month

Type of Housing Assistance	Percent Ever Used From 19th Month After RA to 37-Month Followup Survey[a]		Number of Months Used From 19th Month After RA to 37-Month Followup Survey, if Ever Used Type of Housing Assistance				Percent Used in Month of Followup Survey Response	
	SUB	CBRR	SUB		CBRR		SUB	CBRR
			Mean	Median	Mean	Median		
Permanent housing subsidies offered to the SUB group[b]	77.4	9.6	18.3	19.0	16.6	18.0	67.4	8.4
Rapid re-housing (CBRR)	1.9	7.4	3.8	5.0	7.9	8.0	0.3	2.6
Transitional housing	3.9	11.4	7.7	8.0	7.3	7.5	0.9	4.1
Permanent supportive housing	3.6	11.3	10.1	9.5	12.6	11.5	3.1	8.0
Public housing	1.1	10.9	16.8	15.0	15.7	17.0	1.2	10.0
Project-based vouchers/Section 8 projects	0.8	6.7	11.9	14.5	13.2	17.0	0.6	6.4
Any form of permanent housing subsidy[c]	*83.0*	*37.9*	*17.9*	*19.0*	*14.8*	*17.0*	*72.3*	*32.6*
Emergency shelter[d]	7.6	21.7	3.7	2.7	3.5	2.3	1.8	2.5
No use of homeless or housing programs[e]	11.9	42.2	—	—	—	—	24.7	58.3
N	*362*	*290*	—	—	—	—	*362*	*290*

CBRR = priority access to community-based rapid re-housing. SUB = priority access to permanent housing subsidy.

RA = random assignment.

[a] Percentage of families who ever used a type of assistance program during the period from the 19th calendar month after the month of RA to the month of the 37-month followup survey response. Percentages do not add to 100 because some families used more than one program type during the followup period.

[b] Subsidies offered to the SUB group are housing choice vouchers plus site-specific programs offered to families assigned to the SUB group in Bridgeport, Connecticut, and Honolulu, Hawaii.

[c] Any form of permanent housing subsidy includes the types of permanent subsidy offered to the SUB group, permanent supportive housing, public housing, and project-based vouchers/Section 8 projects.

[d] All families were in emergency shelter at RA. Percentages less than 100 are because of missing data on shelter use.

[e] Indicates no use of the six program types in this table during any of the followup period and no use of emergency shelter after the first 6 months after RA. No use in the month of followup survey response indicates no use of any of these seven program types.

Notes: Percentages are regression adjusted, controlling for site and randomization ratio. Percentages, means, and medians are weighted for survey nonresponse to represent full comparison sample.

Source: Family Options Study Program Usage Data

Exhibit H-5. SUB Versus PBTH: Program Use From 19th Month After RA Until 37-Month Survey Response Month

Type of Housing Assistance	Percent Ever Used From 19th Month After RA to 37-Month Followup Survey[a]		Number of Months Used From 19th Month After RA to 37-Month Followup Survey, if Ever Used Type of Housing Assistance				Percent Used in Month of Followup Survey Response	
	SUB	PBTH	SUB		PBTH		SUB	PBTH
			Mean	Median	Mean	Median		
Permanent housing subsidies offered to the SUB group[b]	76.1	7.1	18.1	19.0	10.6	8.5	65.8	6.5
Rapid re-housing (CBRR)	0.5	6.7	3.5	3.5	5.5	2.5	0.4	0.9
Transitional housing	5.3	23.2	7.5	3.5	9.4	8.5	1.0	7.3
Permanent supportive housing	2.1	10.8	7.2	8.0	13.6	12.5	1.2	8.6
Public housing	1.6	7.8	18.5	20.5	14.5	15.5	1.5	6.9
Project-based vouchers/Section 8 projects	1.7	5.8	9.0	14.5	12.8	15.0	1.2	4.6
Any form of permanent housing subsidy[c]	*81.2*	*30.1*	*17.7*	*19.0*	*13.6*	*15.5*	*69.7*	*26.7*
Emergency shelter[d]	6.5	18.7	4.6	2.4	2.1	1.2	2.5	5.2
No use of homeless or housing programs[e]	13.4	45.2	—	—	—	—	26.4	60.7
N	*215*	*201*	—	—	—	—	*215*	*201*

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy.

RA = random assignment.

[a] Percentage of families who ever used a type of assistance program during the period from the 19th calendar month after the month of RA to the month of the 37-month followup survey response. Percentages do not add to 100 because some families used more than one program type during the followup period.

[b] Subsidies offered to the SUB group are housing choice vouchers plus site-specific programs offered to families assigned to the SUB group in Bridgeport, Connecticut, and Honolulu, Hawaii.

[c] Any form of permanent housing subsidy includes the types of permanent subsidy offered to the SUB group, permanent supportive housing, public housing, and project-based vouchers/Section 8 projects.

[d] All families were in emergency shelter at RA. Percentages less than 100 are because of missing data on shelter use.

[e] Indicates no use of the six program types in this table during any of the followup period and no use of emergency shelter after the first 6 months after RA. No use in the month of followup survey response indicates no use of any of these seven program types.

Notes: Percentages are regression adjusted, controlling for site and randomization ratio. Percentages, means, and medians are weighted for survey nonresponse to represent full comparison sample.

Source: Family Options Study Program Usage Data

Exhibit H-6. CBRR Versus PBTH: Program Use From 19th Month After RA Until 37-Month Survey Response Month

Type of Housing Assistance	Percent Ever Used From 19th Month After RA to 37-Month Followup Survey[a]		Number of Months Used From 19th Month After RA to 37-Month Followup Survey, if Ever Used Type of Housing Assistance				Percent Used in Month of Followup Survey Response	
	CBRR	PBTH	CBRR		PBTH		CBRR	PBTH
			Mean	Median	Mean	Median		
Permanent housing subsidies offered to the SUB group[b]	6.8	7.0	17.4	19.0	12.7	15.0	6.8	6.2
Rapid re-housing (CBRR)	6.9	5.6	6.6	6.5	6.6	4.0	2.7	0.4
Transitional housing	15.5	27.2	8.2	7.5	9.3	7.5	5.1	9.1
Permanent supportive housing	8.7	9.6	13.7	15.5	13.1	14.0	7.6	6.8
Public housing	11.5	9.1	13.7	16.5	14.6	18.0	10.1	8.2
Project-based vouchers/Section 8 projects	4.9	4.7	16.6	18.0	14.1	12.5	4.9	3.8
Any form of permanent housing subsidy[c]	*31.8*	*30.4*	*14.9*	*17.0*	*13.6*	*14.5*	*29.3*	*25.1*
Emergency shelter[d]	17.6	15.5	3.1	2.0	2.2	1.1	2.8	2.0
No use of homeless or housing programs[e]	46.0	42.8	—	—	—	—	60.1	63.4
N	***180***	***184***	**—**	**—**	**—**	**—**	***180***	***184***

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. RA = random assignment.

[a] Percentage of families who ever used a type of assistance program during the period from the 19th calendar month after the month of RA to the month of the 37-month followup survey response. Percentages do not add to 100 because some families used more than one program type during the followup period.

[b] Subsidies offered to the SUB group are housing choice vouchers plus site-specific programs offered to families assigned to the SUB group in Bridgeport, Connecticut, and Honolulu, Hawaii.

[c] Any form of permanent housing subsidy includes the types of permanent subsidy offered to the SUB group, permanent supportive housing, public housing, and project-based vouchers/Section 8 projects.

[d] All families were in emergency shelter at RA. Percentages less than 100 are because of missing data on shelter use.

[e] Indicates no use of the six program types in this table during any of the followup period and no use of emergency shelter after the first 6 months after RA. No use in the month of followup survey response indicates no use of any of these seven program types.

Notes: Percentages are regression adjusted, controlling for site and randomization ratio. Percentages, means, and medians are weighted for survey nonresponse to represent full comparison sample.

Source: Family Options Study Program Usage Data

Exhibit H-7. Housing Stability Outcomes for the SUB RA Group by Use of the Offered Permanent Subsidy

Outcome	Families Assigned to SUB Who Never Used the Offered Permanent Subsidy	Families Assigned to SUB Who Ever Used the Offered Permanent Subsidy
	N = 82	N = 419
Homelessness or doubled up during the followup period		
At least 1 night homeless[a] or doubled up in past 6 months or in shelter in past 12 months (%)	40.7	11.2 †
At least 1 night homeless[a] or doubled up in past 6 months (%)	38.3	10.0 †
At least 1 night homeless[a] in past 6 months (%)	24.7	5.3 †
At least 1 night doubled up in past 6 months (%)	26.8	7.4 †
Any stay in emergency shelter in past 6 months (%)	12.2	1.2 †
Any stay in emergency shelter in months 21 to 32 after RA (%)	20.7	1.4 †
Number of days homeless[a] or doubled up in past 6 months	45.6	11.9 †
Number of days homeless[a] in past 6 months	26.4	4.9 †
Number of days doubled up in past 6 months	27.9	7.5 †
Housing independence		
Living in own house or apartment at followup (%)	72.0	87.4 †
Living in own house or apartment with no housing assistance (%)	46.3	7.9 †
Living in own house or apartment with housing assistance (%)	25.6	79.4 †
Number of places lived		
Number of places lived in past 6 months[b]	1.8	1.2 †
Housing quality		
Persons per room	1.4	1.2 †
Housing quality is poor or fair (%)	32.9	25.1

SUB = priority access to permanent housing subsidy.

RA = random assignment.

† Difference in means is statistically significant at 0.10 level.

[a] The definition of "homeless" in this report includes stays in emergency shelters and places not meant for human habitation. It excludes transitional housing.

[b] The number of places lived in past 6 months is topcoded at 6 places.

Notes: Outcome means are unweighted. See Chapter 2 and Appendix B for outcome definitions.

Sources: Family Options Study 37-month followup survey; Program Usage Data

Exhibit H-8. Housing Stability Outcomes for the CBRR RA Group by Use of Rapid Re-Housing

Outcome	Families Assigned to CBRR Who Never Used Rapid Re-housing	Families Assigned to CBRR Who Ever Used Rapid Re-housing
	N = 182	N = 252
Homelessness or doubled up during the followup period		
At least 1 night homeless[a] or doubled up in past 6 months or in shelter in past 12 months (%)	34.6	42.1
At least 1 night homeless[a] or doubled up in past 6 months (%)	31.9	36.9
At least 1 night homeless[a] in past 6 months (%)	14.8	16.7
At least 1 night doubled up in past 6 months (%)	26.9	31.7
Any stay in emergency shelter in past 6 months (%)	6.6	6.0
Any stay in emergency shelter in months 21 to 32 after RA (%)	13.2	17.1
Number of days homeless[a] or doubled up in past 6 months	44.3	51.3
Number of days homeless[a] in past 6 months	16.0	13.0
Number of days doubled up in past 6 months	32.9	40.2
Housing independence		
Living in own house or apartment at followup (%)	62.1	72.2 †
Living in own house or apartment with no housing assistance (%)	27.5	46.0 †
Living in own house or apartment with housing assistance (%)	34.6	26.8 †
Number of places lived		
Number of places lived in past 6 months[b]	1.5	1.6
Housing quality		
Persons per room	1.7	1.6
Housing quality is poor or fair (%)	26.1	31.0

CBRR = priority access to community-based rapid re-housing.
RA = random assignment.
† Difference in means is statistically significant at 0.10 level.
[a] The definition of "homeless" in this report includes stays in emergency shelters and places not meant for human habitation. It excludes transitional housing.
[b] The number of places lived in past 6 months is topcoded at 6 places.
Notes: Outcome means are unweighted. See Chapter 2 and Appendix B for outcome definitions.
Sources: Family Options Study 37-month followup survey; Program Usage Data

Exhibit H-9. Housing Stability Outcomes for the PBTH RA Group by Use of Transitional Housing

Outcome	Families Assigned to PBTH Who Never Used Transitional Housing	Families Assigned to PBTH Who Ever Used Transitional Housing
	N = 133	N = 160
Homelessness or doubled up during the followup period		
At least 1 night homeless[a] or doubled up in past 6 months or in shelter in past 12 months (%)	40.2	43.1
At least 1 night homeless[a] or doubled up in past 6 months (%)	35.6	41.9
At least 1 night homeless[a] in past 6 months (%)	16.5	22.5
At least 1 night doubled up in past 6 months (%)	30.3	29.4
Any stay in emergency shelter in past 6 months (%)	7.5	7.5
Any stay in emergency shelter in months 21 to 32 after RA (%)	9.8	9.4
Number of days homeless[a] or doubled up in past 6 months	46.0	50.1
Number of days homeless[a] in past 6 months	13.0	19.1
Number of days doubled up in past 6 months	35.4	33.1
Housing independence		
Living in own house or apartment at followup (%)	72.9	60.0 †
Living in own house or apartment with no housing assistance (%)	50.8	36.6 †
Living in own house or apartment with housing assistance (%)	22.0	29.7
Number of places lived		
Number of places lived in past 6 months[b]	1.5	1.7
Housing quality		
Persons per room	1.8	1.7
Housing quality is poor or fair (%)	31.1	31.6

PBTH = priority access to project-based transitional housing.
RA = random assignment.
† Difference in means is statistically significant at 0.10 level.
[a] The definition of "homeless" in this report includes stays in emergency shelters and places not meant for human habitation. It excludes transitional housing.
[b] The number of places lived in past 6 months is topcoded at 6 places.
Notes: Outcome means are unweighted. See Chapter 2 and Appendix B for outcome definitions.
Sources: Family Options Study 37-month followup survey; Program Usage Data

APPENDIX I.
LENGTH OF BASELINE STAY IN EMERGENCY SHELTER

This appendix updates analysis presented in *Family Options Study: Short-Term Impacts of Housing and Services Interventions for Homeless Families* about the relative impacts of the interventions on the length of time families remain in emergency shelter after random assignment. Exhibit I-1 presents this information for each of the six policy comparisons (SUB versus UC, CBRR versus UC, PBTH versus UC, SUB versus CBRR, SUB versus PBTH, and CBRR versus PBTH).

The results presented in this appendix reflect three important revisions from the analysis conducted for the *Short-Term Impacts* report.

1. The findings presented here are for the full sample of 2,282 families. Updated Program Usage Data permit examination of the length of baseline stay outcome for the full sample, whereas the *Short-Term Impacts* report included findings only for the sample that responded to the 20-month survey (1,857 families). The updated findings are thus more robust, because they account for the entire study sample.

2. The outcome, ***length of baseline stay in emergency shelter***, has been measured more precisely than was done in the *Short-Term Impacts* report. As described in Appendix B, the outcome analyzed is measured as the count of days in emergency shelter converted to months and is based on exit dates in the source data. In the previous analysis, measures were based on adjusted counts of monthly dummy variables, wherein each dummy variable indicated a calendar month during which at least 1 night of shelter stay was observed for a family.

3. The Program Usage Data were entirely recreated for the 37-month analysis in order to make use of updated extracts from the Homeless Management Information System (HMIS), Public and Indian Housing Information Center, and Tenant Rental Assistance Certification System and newly available data from the 27-month tracking survey and 37-month followup survey. Updated data (particularly from HMIS) and revisions to data cleaning procedures may have resulted in some changes to the Program Usage Data used to measure length of baseline stay.

The *Short-Term Impacts* report presented results showing that assignment to priority access to community-based rapid re-housing (CBRR) led to more rapid departures from emergency shelter than usual care (UC) by about 2 weeks, but it did not lead to more rapid departures than for families assigned to priority access to permanent housing subsidy (SUB) or to project-based transitional housing (PBTH). Revised analysis using updated Program Usage Data on length of emergency shelter stays shown in this appendix has resulted in changes to the findings about length of initial shelter stay, however. For the full study sample, families assigned to CBRR left shelter on average 1 week faster than families assigned to UC. This difference is not statistically significant.

Exhibit I-1. Impacts on Length of Baseline Stay in Emergency Shelter

Comparison	First Assignment Group			Second Assignment Group			ITT Impact		
	N	Mean	(SD)	N	Mean	(SD)	Impact		(SE)
SUB vs. UC	466	2.54	(2.57)	430	3.12	4.27	– 0.58	***	(0.20)
CBRR vs. UC	453	2.87	(4.31)	456	3.09	4.24	– 0.23		(0.24)
PBTH vs. UC	281	2.51	(3.35)	272	2.74	3.40	– 0.23		(0.26)
SUB vs. CBRR	336	2.56	(2.75)	306	3.27	4.84	– 0.70	**	(0.28)
SUB vs. PBTH	198	1.99	(2.26)	183	2.71	3.69	– 0.71	**	(0.29)
CBRR vs. PBTH	181	2.43	(3.53)	185	2.69	3.24	– 0.26		(0.32)

CBRR = priority access to community-based rapid re-housing. PBTH = priority access to project-based transitional housing. SUB = priority access to permanent housing subsidy. UC = usual care.

ITT = intention-to-treat. SD = standard deviation. SE = standard error.

*/**/*** Impact estimate is significantly different from 0 at the .10/.05/.01 levels, respectively, using a two-tailed *t*-test.

Notes: Impact estimates and outcome means are regression adjusted for baseline characteristics. See Appendix B for outcome definitions. All study sample families with an observed emergency shelter stay that includes random assignment date are included in the analysis.

Source: Family Options Study Program Usage Data