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TECHNICAL REPORT

National Evaluation of Safe Start Promising Approaches

Results Appendix K: Providence, Rhode Island

In Jaycox, L. H., L. J. Hickman, D. Schultz, D. Barnes-Proby, C. M. Setodji, A. Kofner, R. Harris, J. D. Acosta, and T. Francois, *National Evaluation of Safe Start Promising Approaches: Assessing Program Outcomes,* Santa Monica, Calif.: RAND Corporation, TR-991-1-DOJ, 2011

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HEALTH and
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PROVIDENCE, RHODE ISLAND, SAFE START OUTCOMES REPORT

ABSTRACT

The Providence Safe Start Program developed three distinct interventions that aimed to provide a systematic and coordinated approach to service delivery for children (age 18 and younger) exposed to violence. The second and third tiers of service were included in the evaluation. The second tier of service focused on case management for women residing in a domestic violence shelter. The third tier of service consisted of Child-Parent Psychotherapy (CPP) combined with case management for children exposed to domestic violence. A full description of the interventions can be found in *National Evaluation of Safe Start Promising Approaches: Assessing Program Implementation* (Schultz et al., 2010). The two interventions were evaluated separately.

The program attempted to conduct a quasi-experimental study of the second tier of case management services. Providence enrolled only 19 families in the study (including only three in the comparison group) and retained only one of them for the six-month assessment. At baseline, caregivers reported that children had been exposed to an average of 3.8 types of violence during their lives. One-third of enrolled families reported baseline child posttraumatic stress disorder (PTSD) symptoms that fell in the "significant" range, and 68 percent had levels of parental stress that fell in the "clinical" range. Because of the slow pace of enrollment, the U.S. Department of Justice's Office of Juvenile Justice and Delinquency Prevention and FSRI mutually agreed to discontinue Tier 2 in the fall of 2008 after one year of operation. Because of the low enrollment and low retention rate for the six-month follow-up assessment, there were very limited data available on the services received by Tier 2 intervention group families. Because of the lack of a comparison group, the results were limited to baseline means for the 16 intervention group families.

For the third tier of their intervention, CPP, Providence conducted a randomized controlled trial with randomization occurring at the family level. Providence enrolled 58 families into Tier 3 CPP, retaining 36 percent of them for the six-month assessment. At baseline, caregivers reported that children had been exposed to an average of 4.8 types of violence during their lives. Forty-one

percent of enrolled families reported baseline child PTSD symptoms that fell in the significant range, and 60 percent had levels of parental stress that fell in the clinical range. Tier 3 families in the intervention group's six-month analysis sample received CPP, case management, and multidisciplinary team involvement. Overall, 85 percent of the Tier 3 families received CPP, 69 percent received case management, and 31 percent had multidisciplinary team involvement. While the mean scores for the intervention group moved in the expected direction, it was not possible to compare the intervention and control groups over time because of sample size limitations.

For both Tier 2 and Tier 3, the sample size limitations mean that no conclusions can be drawn about the impact of the Providence interventions as implemented on child- and family-level outcomes. Overall, the Providence Safe Start models require further testing with adequate sample sizes to determine whether the intervention positively affects outcomes for children exposed to violence.

INTRODUCTION

The Providence Safe Start program is located in Providence, Rhode Island. Between 2001 and 2004, the Providence Police Department estimated that there had been approximately 400 domestic violence incidents per year in homes where children were living (Family Service of Rhode Island, 2004). In addition, in 2003 the Rhode Island Department of Children, Youth, and Families had nearly 600 cases of child abuse and neglect in Providence in which the investigation found that a child had been victimized. While there were some resources for crisis intervention, shelter care, and treatment, the Providence Safe Start program was developed in response to what the developers perceived as somewhat limited and scattered local resources for children exposed to domestic and community violence. The Safe Start program sought to address the gaps in services and to provide more systematic and coordinated services for this population.

This program consisted of three different levels of service, and families were permitted to move between these levels as needed. Services ranged from crisis intervention for children who came into contact with the Providence Police Department (Tier 1), case management for mothers of young children who entered a domestic violence shelter (Tier 2), and CPP and case management for

families of children ages 0 to 13 who had been exposed to violence (Tier 3). As discussed below, only Tiers 2 and 3 were included in the evaluation. For Tier 3, earlier evaluations of CPP (Lieberman, Van Horn, and Ghosh Ippen, 2005) showed medium effects on PTSD symptoms and behavior problems (0.63 and 0.64, respectively). However, this particular mix of services had not been evaluated previously.

The outcomes evaluation presented here presents data relevant to the question of whether Tiers 2 and 3 of the Providence Safe Start program, as implemented within this project, improve outcomes for children exposed to violence.

PROVIDENCE SAFE START

TIER 2

- **Intervention type:** Case management
- **Intervention length:** 24 months
- **Intervention setting:** Shelter and in-home post-shelter discharge
- **Target population**: Children exposed to domestic or community violence
- **Age range:** 0–18 for girls, 0–12 for boys
- **Primary referral source:** Domestic violence shelter

TIER 3

- **Intervention type:** CPP and case management (for ages 0–13), child individual therapy and case management (for ages 14–18)
- **Intervention length:** Six months
- **Intervention setting:** Clinic
- **Target population:** Children exposed to domestic or community violence
- **Age range:** 0–18
- **Primary referral source:** Family Service of Rhode Island

INTERVENTION

As noted above, the Providence Safe Start program involved three different tiers of services: (1) Tier 1 crisis intervention, (2) Tier 2 case

management, and (3) Tier 3 CPP for younger children or individual therapy for older children combined with case management. Only Tiers 2 and 3 could be included in the national evaluation, and these tiers are described briefly below. For a full description of all components of the Providence interventions as they were delivered, see Schultz et al. (2010).

Tier 2 focused on case management for women in the Women's Center of Rhode Island domestic violence shelter. The intervention case management was provided by the Safe Start family advocate. At the time of admission to the shelter, a general needs assessment would be completed by the Safe Start advocate. The family advocate also met with the eligible mother to assess her needs and the needs of her child or children. Once the assessment was complete, the family advocate met with the mother several times a week during her shelter stay to discuss goals, progress, and other issues that may have arisen. The Safe Start family advocate also participated in shelter team meetings with the shelter's residential advocate and child advocate to ensure continuity and consistency in service plans. After the family's shelter stay, the advocate maintained weekly contact for the first two months and then monthly contact until the mother had been engaged with Safe Start for a total of 24 months (including her shelter stay). If the mother needed more intensive case management support at any time, then the advocate attempted to increase efforts to meet the mother's needs. The post-discharge services were similar to what was provided during the shelter stay but were more community based.

Tier 3 of the Providence Safe Start project consisted of CPP, which is a relationship-based intervention designed for use with children up to age 6. Providence modified the CPP approach for use with older children up to age 18. It can be used with any child whose relationship to his or her parent or other primary caregiver is impacted by negative circumstances, including family violence. CPP integrates psychodynamic, attachment, trauma, cognitive-behavioral, and social learning theories (NCTSN, 2008). There are two components in CPP: assessment and treatment, with information gained during the assessment used to inform the treatment component. In the intervention component, child-parent interactions were the focus of six intervention modalities aimed at restoring a sense of mastery, security, and growth and promoting congruence between bodily sensations, feelings, and thinking on the

part of both child and parent and in their relationship with one another (NCTSN, 2008).

CPP was delivered by a clinician in one-hour sessions at the Family Service of Rhode Island (FSRI) clinic (initially weekly, then every two weeks until termination). The therapist provided diagnostic assessments and clinical counseling using the CPP model. In addition, the therapists provided crisis intervention and assessment if needed and coordinated with case managers and other service providers. The families also received case management from case managers who made home visits to assist with housing, educational, and employment needs as needed. In addition, case managers would assist the parent with obtaining individual mental health services as needed. The intervention was complete when approximately 12 sessions of CPP or individual therapy had been conducted. Based on the individual situation, there could be more or fewer sessions. The ending point was defined as when the sessions were completed and a wrap-up session had been delivered.

Site efforts to monitor the quality of the program included 100 hours of clinician training during the therapist's first month, followed by weekly booster sessions for new and current staff. The clinical supervisor provided on-site consultation as necessary. The therapists used an integrated checklist as a guide to each session.

METHOD

Design Overview

The evaluation of Tier 2 involved a quasi-experimental design with a comparison group of families residing at other domestic violence shelters in the community. In addition to receiving any services or supports from the referring agency, those who were at an intervention shelter received case management from FSRI staff during and after their shelter stay. Those who were at the comparison shelters received the services and supports they were already receiving from the comparison shelter.

For Tier 3, the design of this study was a randomized controlled trial, with block randomization occurring at the family level within age groups (0–2, 3–6, 7–12, 13–18) and eligible children recruited after families were referred to the program. In addition to usual support (i.e., services from the referring agency

and a drop-in support group for trauma and loss), the children in the treatment group received CPP and case management for up to six months. Families assigned to the control group also received usual support.

For both tiers, child outcomes and contextual information were assessed for both the intervention and control/comparison groups at baseline, six, 12, 18, and 24 months. Study enrollment took place between October 2007 and October 2008 for Tier 2 and November 2006 and March 2009 for Tier 3.

Evaluation Eligibility Criteria

For Tier 2, eligible women were those residing in the target domestic violence shelter accompanied by a child age 0–18. However, boys over age 13 were not allowed to reside in the shelter (a common restriction for many domestic violence shelters), so families with adolescent boys were not included.

The Tier 3 eligibility criteria were residency in the city of Providence, the child being 0–18 years old, proficiency in English or Spanish, and having been exposed to violence (defined as any type of direct or indirect victimization that causes physical or psychological harm to the individual). Later, the eligibility criteria were expanded to include those residing beyond the Providence city limits and in the greater Providence area at the time of intake into FSRI. When there was more than one child in the eligible age range, the target child was identified by the presence of increased trauma symptoms related to witnessing the event, as identified by FSRI intake staff via the caregiver's self-report.

Randomization Procedures

On enrollment into the Tier 3 evaluation, the children were randomized into intervention or control groups using a block randomization procedure that allowed for approximately the same number of children in the intervention and control groups (see Chapter Four of the main document [http://www.rand.org/pubs/technical_reports/TR991-1.html]). Because of the possibility that the impact of the intervention could differ by child age, the sample was stratified into four groups. One group of children was recruited between the ages of 0 and 2, the second group between the ages of 3 and 5, the third group between the ages of 7 and 12, and the last group between the ages of 13 and 18. For one family, the baseline data were missing, and the site could not recover it. The data for this family were removed from the analysis. For nine

families, the target child was over 14 years of age. Because the CPP model is not appropriate for older children, these children received individual therapy. Data from these families were also not included from the analysis.

Measures

The measures used in this study are described fully in Chapter Two of the main document (see http://www.rand.org/pubs/technical_reports/TR991-1.html). The measures were uniform across the national evaluation but prioritized within each site as to the relevance to the intervention under study. Given the nature of the Providence Safe Start intervention, the outcomes were prioritized as shown in Table 1.

Enrollment and Retention

Referrals into Tier 2 case management came from participating domestic violence shelters. The study procedures were for shelter workers to identify mothers with children as they entered the shelter. The Safe Start program staff worked with the Women's Center to establish a protocol to facilitate after-hours enrollment for families. In this protocol, the shelter advocate included the Safe Start brochure along with the usual letters about shelter services that are routinely mailed by the shelter to victims of domestic violence. Because Tier 2 was discontinued after one year of operation, Providence enrolled only 19 families in the study (16 in the intervention group and three in the comparison group) and completed six-month research assessments for one of the caregivers and none of the children.

Providence received its referrals for Tier 3 CPP from within FSRI, the partner agencies, and self-referrals from "walk-in" families. Tier 3 referrals went through a centralized intake process at FSRI's Trauma, Intake, and Emergency Services unit. Once eligibility was established, the project director implemented the random assignment procedures. After the baseline assessment, the program staff implemented the random assignment procedures and informed the family and the referral source.

Table 1
Prioritized Outcome Measures for Providence Safe Start

Primary Outcome Measures			
Domain	***Source/Measure***	***Age of Child***	***Respondent***
PTSD Symptoms	Trauma Symptom Checklist for Young Children	0–10 years	Caregiver
PTSD Symptoms	Trauma Symptom Checklist for Children	8–18 years	Child
Depressive Symptoms	Children's Depression Inventory	8–18 years	Child
Behavior/Conduct Problems	BITSEA and Behavior Problem Index	1–18 years	Caregiver
Social-Emotional Competence	ASQ	0–2 years	Caregiver
Social-Emotional Competence	BITSEA and SSRS (Assertion and Self-Control)	1–12 years	Caregiver
Social-Emotional Competence	SSRS (Cooperation, Assertion, and Self-Control)	13–18 years	Child
Caregiver-Child Relationship	Parenting Stress Index	0–12 years	Caregiver
Caregiver-Child Relationship	BERS-2 (Family Involvement)	6–12 years	Caregiver
Caregiver-Child Relationship	BERS-2 (Family Involvement)	11–18 years	Child
Violence Exposure	Juvenile Victimization Questionnaire	0–12 years	Caregiver
Violence Exposure	Juvenile Victimization Questionnaire	11–18 years	Child
Violence Exposure	Caregiver Victimization Questionnaire	All	Caregiver
Secondary Outcome Measures			
Domain	***Source/Measure***	***Age of Child***	***Respondent***
Behavior/Conduct Problems	Delinquency Items	11–18 years	Child
Social-Emotional Competence	BERS-2 (School Functioning, Affective Strengths)	6–12 years	Caregiver
Social-Emotional Competence	BERS-2 (School Functioning, Affective Strengths)	11–18 years	Child
Social-Emotional Competence	SSRS (Cooperation)	3–12 years	Caregiver
Tertiary Outcome Measures			
Domain	***Source/Measure***	***Age of Child***	***Respondent***
Background and Contextual Factors	Everyday Stressors Index	0–18	Caregiver
School Readiness/Performance	Woodcock-Johnson III	3–18 years	Child

NOTE: ASQ = Ages and Stages Questionnaire, BERS-2 = Behavior and Emotional Rating Scales—2, BITSEA = Brief Infant-Toddler Social and Emotional Assessment, SSRS = Social Skills Rating System.

According to data submitted on its Quarterly Activity Reports, Providence Safe Start enrolled 38 percent of the families referred to Tier 3 of the program. The most common reasons that families did not enroll included inability to locate the child's legal guardian (29 percent) or caregiver (23 percent), other legal guardian issues (28 percent), and the caregiver's lack of interest (13 percent).

In Table 2, we present the number and percentage of all enrollees who were eligible for participation at each data collection time point. Providence program staff enrolled 58 families in the study and completed a six-month research assessment for 36 percent of both caregivers and children. For subsequent follow-up assessments, Providence retained from 25 to 50 percent of the families, depending on the assessment point and type.

Providence's low retention at the six-month follow-up assessment increases the potential for biased results. This degree of attrition may be related to treatment factors that lead to selection bias. For example, if families in more distress are more likely to leave the study and be lost to follow-up, then the results can be misleading.

Table 2
Retention of Providence Tier 3 Enrollees Eligible to Participate in Assessments at Each Time Point

	Caregiver Assessment				Child Assessment			
	Six Months	**12 Months**	**18 Months**	**24 Months**	**Six Months**	**12 Months**	**18 Months**	**24 Months**
Intervention								
Received	13	8	3	2	12	8	3	1
Expected*	29	13	7	3	26	13	7	3
Retention Rate	45%	62%	43%	67%	46%	62%	43%	33%
Control								
Received	8	1	3	0	7	1	3	0
Expected*	29	13	9	1	27	13	9	1
Retention Rate	28%	8%	33%	0%	26%	8%	33%	0%
Overall								
Retention Rate	36%	35%	38%	50%	36%	35%	38%	25%

* The number of expected assessments for longer-term assessments differs from the number who entered the study because the field period for collecting data in this study ended in the fall of 2009, before all families entered the window of time for assessments at 12, 18, or 24 months.

Special Issues

During its one year of operation, Safe Start served only 19 families in Tier 2 case management. The shelter staff reported that women rarely took advantage of transitional services offered by the Safe Start advocate. The staff speculated that this might have been due to lack of clarity about what services were offered and women being overwhelmed by their immediate circumstances (i.e., addressing crisis needs first). Because of the slow pace of enrollment, the U.S. Department of Justice's Office of Juvenile Justice and Delinquency Prevention and FSRI mutually agreed to discontinue Tier 2 in the fall of 2008 after one year of operation.

Recruitment into Tier 3 CPP was also challenging. The referrals from within FSRI, the partner agencies, and walk-ins all fell short of expectations. Partway through implementation, the eligibility criteria for Tier 3 were expanded to include several cities in the greater Providence area that had similar demographics and that FSRI already served. Despite this change, the pace of referrals remained slow. For a more in-depth discussion, see Schultz et al. (2010).

Analysis Plan

First, we conducted descriptive analyses to summarize the sample characteristics: age, gender, race or ethnicity, the family income level, and the child's violence exposure at baseline. Because of Tier 2's quasi-experimental design, there was a possibility of differences between the two groups (intervention and comparison) at baseline. However, because of the small size we were unable to test for any differences on these characteristics between the intervention and comparison groups at baseline. For Tier 2, only one intervention group family remained in the study at the six-month follow-up. As a result, we were unable to examine the effect of the Tier 2 intervention over time. Thus, we only present baseline means of the outcome measures for the intervention group when the sample size is greater than five.

Because of Tier 3's randomized experimental design, we did not expect any major differences between the two groups at baseline. However, to be certain, we tested for differences in child and caregiver characteristics and outcomes at baseline between intervention and control group children using t-tests and chi-square tests when the sample size allowed.

For Tier 3, attrition resulted in only 13 intervention and eight control children observed at the six-month follow-up and an even smaller number of children (eight and one, respectively) retained in each of the intervention and control groups at the 12-month follow up. Because of the small sample sizes, we only conducted limited analysis of the Tier 3 data to compare the intervention group baseline mean outcomes to the mean outcomes at the six-month assessment point using t-tests when the sample size allowed. We were unable to examine differences in outcomes between the intervention and control groups using an intent-to-treat approach or conduct statistical modeling that would allow us to control for child characteristics that could impact the outcome and correlate with the Safe Start intervention. Thus, these results will not allow us to disentangle the intervention effect from a simple time trend.

We examined outcomes using an intent-to-treat approach, which includes in analyses all families in an intervention grouping, regardless of the amount of services received. Ideally, analyses would take into account the type and amount of services received to account for dosage variability. However, there were not enough families in this site's sample in order to proceed with this type of analysis. Thus, the findings presented here on the entire intervention sample may obscure important subgroup differences by service dose received.

When conducting large numbers of simultaneous hypothesis tests (as we did in this study), it is important to account for the possibility that some results will achieve statistical significance simply by chance. The use of a traditional 95-percent confidence interval, for example, will result in one out of 20 comparisons achieving statistical significance as a result of random error. We therefore adjusted for false positives using the False Discovery Rate (FDR) method (Benjamini and Hochberg, 1995). Our assessments of statistical significance were based on applying the FDR procedure separately to all of the primary, secondary, and tertiary outcome tests in this report using an FDR of 0.05. For instance, with 14 statistical tests conducted among the primary outcomes, this led to adopting a statistical significance cutoff of 0.011 for the within–intervention group results and 0.05 for the within–control group results. In the discussion of results, we have also identified nonsignificant trends in the data, defined as those tests with p-values of less than 0.05 but not exceeding the threshold established using the FDR method to adjust for multiple significance tests. While these trends may suggest a practical difference that would be statistically significant with a larger

sample size, they must be interpreted with caution, because we cannot rule out that the difference was due to chance because of the multiple significance tests being conducted.

TIER 2 RESULTS

Baseline Descriptive Statistics

For the descriptive statistics, we provide the characteristics for the full enrolled sample at baseline. As seen in Table 3, the Tier 2 baseline sample was composed of 47 percent males, with an average age of 4.4 years. More than two-thirds (68 percent) of the enrolled children were identified as other race/ethnicity, with 26 percent white and 5 percent black. The vast majority (94 percent) of families had family incomes of less than $30,000 with one-half of them having family incomes of less than $5,000. According to the caregiver reports, children in the baseline sample had been exposed to an average of 3.8 types of violence in their lives prior to the baseline assessment. All of the caregivers were the parent or guardian of the child. Because of the small sample size, we were unable to test for differences on these characteristics between the intervention and control groups at baseline.

Table 3
Providence Tier 2 Sample Characteristics for Safe Start Families in the Baseline Assessment Sample

	Combined		Intervention		Control		Test for Comparison P-Value
Child Characteristics	***N***	***Mean***	***N***	***Mean***	***N***	***Mean***	
Age	19	4.4	16	4.8	3	2.1	0.09
CR Violence Exposure	19	3.8	16	3.8	3	4.0	0.91
Gender	***N***	***%***	***N***	***%***	***N***	***%***	
Male	9	47.4	7	43.8	2	66.7	0.47
Female	10	52.6	9	56.3	1	33.3	
Race/Ethnicity	***N***	***%***	***N***	***%***	***N***	***%***	
Hispanic	0	0.0	0	0.0	0	0.0	
White	5	26.3	5	31.3	0	0.0	
Black	1	5.3	1	6.3	0	0.0	
Other	13	68.4	10	62.5	3	100.0	
Caregiver Characteristics	***N***	***%***	***N***	***%***	***N***	***%***	
Family Income Level							
Less than $5,000	9	50.0	7	46.7	2	66.7	
$5,000–$10,000	6	33.3	5	33.3	1	33.3	
$10,001–$15,000	1	5.6	1	6.7	0	0.0	
$15,001–$20,000	1	5.6	1	6.7	0	0.0	
$20,001–$30,000	0	0.0	0	0.0	0	0.0	
More than $30,000	1	5.6	1	6.7	0	0.0	
Relationship to Child							
Parent or Guardian	19	100.0	16	100.0	3	100.0	
Other Relationship	0	0.0	0	0.0	0	0.0	

NOTES: CR = Caregiver Report. Percentages may not total 100 percent because of rounding.

Next, we examined the Providence Tier 2 sample at baseline on two outcomes (PTSD symptoms and parenting stress) to understand the level of severity on these indexes among families entering this portion of the project. As shown in Table 4, caregivers reported baseline PTSD symptoms that fell in the clinical range for 33 percent of the children. For the caregiver-child relationship, 68 percent of the sample had total stress levels that fell in the clinical range, with 56 percent for boys and 80 percent for girls. For the different subscales, 47 percent of the sample had clinical levels on the parental distress subscale, 63 percent had clinical levels on the parent-child dysfunctional interaction subscale, and 47 percent had clinical levels on the difficult child subscale.

Table 4
Baseline Assessment Estimates for Providence Tier 2 Safe Start Families

	Combined		Boys		Girls	
CR PTSD Symptoms for Ages 3–10	*N*	*%*	*N*	*%*	*N*	*%*
Normal	6	50	2	40	4	57
Borderline	2	17	1	20	1	14
Significant	4	33	2	40	2	29
CR Total Parenting Stress for Ages 0–12	*N*	*%*	*N*	*%*	*N*	*%*
Parental Distress—Clinical	9	47	4	44	5	50
Parent-Child Dysfunctional Interaction—Clinical	12	63	5	56	7	70
Difficult Child—Clinical	9	47	5	56	4	40
Total Stress—Clinical	13	68	5	56	8	80

NOTE: CR = Caregiver Report.

As noted previously, we were unable to examine differences between the intervention and control groups at baseline for Providence Tier 2's primary, secondary, or tertiary outcomes because of the small sample sizes.

Uptake, Dosage, and Process of Care

The process evaluation report documents the services that were made available to Providence Tier 2 intervention group families (Schultz et al., 2010). Among the 16 families in the Tier 2 intervention groups, data were collected on services received for only three of them. These three families each received a total of one or two case management contacts each between the baseline and six-month assessment.

Outcomes Analysis

As noted earlier, we were unable to examine the effects of the Tier 2 intervention over time because of the small sample sizes. In this section we present baseline means for the intervention group's primary, secondary, and tertiary outcome measures when the sample size is greater than five. As shown in Table 6, primary outcomes include PTSD symptoms, behavior/conduct problems, some aspects of social-emotional competence, caregiver-child relationship, and violence exposure. Providence's secondary outcomes include the affective strengths, school functioning, and cooperation aspects of the social-emotional competence domain (Table 7), while the tertiary outcomes included

only the background and contextual factor and school readiness/performance domains (Table 8).

Table 6
Tier 2 Intervention Group Baseline Means for Primary Outcome Variables

Primary Outcome	Baseline	
	N	Mean
PTSD Symptoms		
CR Child PTSD Symptoms for Ages 3–10	13	43.15
Behavior/Conduct Problems		
CR Child Behavior Problems for Ages 1–18	14	0.10
Social-Emotional Competence		
CR Child Assertion for Ages 1–12	14	–0.42
CR Child Self-Control for Ages 1–12	14	–0.23
Caregiver-Child Relationship		
CR Parent Distress for Ages 0–12	16	31.69
CR Parent-Child Dysfunction for Ages 0–12	16	25.31
CR Difficult Child for Ages 0–12	16	29.88
CR Total Parenting Stress for Ages 0–12	16	86.88
CR Family Involvement for Ages 6–12	7	21.86
Violence Exposure		
CR Total Child Victimization Experiences for Ages 0–12	16	3.81
CR Child Maltreatment for Ages 0–12	16	0.75
CR Child Assault for Ages 0–12	15	0.87
CR Child Sexual Abuse for Ages 0–12	16	0.06
CR Child Witnessing Violence for Ages 0–12	16	1.94
CR Caregiver Total Number of Traumatic Experiences	16	0.25
CR Caregiver Experience of Any Non-DV Trauma	16	0.38
CR Caregiver Experience of Any DV	16	0.75

NOTES: CR = Caregiver Report; DV = domestic violence; SR = Child Self-Report. Data are not shown for outcomes when the cell size is fewer than five for the group.

Table 7
Tier 2 Intervention Group Baseline Means for Secondary Outcome Variables

Secondary Outcome	Baseline	
	N	Mean
Social-Emotional Competence		
CR Child Affective Strengths for Ages 6–12	7	15.86
CR Child School Functioning for Ages 6–12	7	17.43
CR Child Cooperation for Ages 3–12	10	10.60

NOTES: CR = Caregiver Report; SR = Child Self-Report. Data are not shown for outcomes when the cell size is fewer than five for the group.

Table 8
Tier 2 Intervention Group Baseline Means for Tertiary Outcome Variables

Tertiary Outcome	Baseline	
	N	Mean
Background and Contextual Factors		
CR Caregiver Resource Problems	16	17.88
CR Caregiver Personal Problems	16	23.75
School Readiness/Performance		
Letter Word Identification for Ages 3–18	13	5.00
Passage Comprehension for Ages 3–18	13	8.38
Applied Problems for Ages 3–18	13	0.62

NOTES: CR = Caregiver Report. Data are not shown for outcomes when the cell size is fewer than five for the group.

TIER 3 RESULTS

Baseline Descriptive Statistics

For the descriptive statistics, we provide the characteristics for the full enrolled sample at baseline. As seen in Table 9, the baseline sample included 47 percent males and 53 percent females, with an average age of 8. Forty-three percent of the sample was Hispanic, with some white (17 percent), black (14 percent), and other race/ethnicity children (26 percent). Most of the families (92 percent) had family incomes of less than $30,000, with more than one-quarter (26 percent) having family incomes of less than $5,000. According to the caregiver reports, children in the baseline sample had been exposed to an average of 4.8 types of violence in their lives prior to the baseline assessment. Older children self-reported an average of 4.9 types of violence exposure on the baseline assessment. The vast majority (97 percent) of the caregivers were the parent or guardian of the child. As noted in the table, there were no differences for these characteristics between the intervention and control groups at baseline.

In the sample of families retained at six months, the demographics were similar to those at baseline, with slightly more females (57 percent) and whites (24 percent). Again, there were no differences at baseline between groups in the sample retained at six months (data not shown).

Table 9
Providence Tier 3 Sample Characteristics for Safe Start Families in the Baseline Assessment Sample

	Combined		Intervention		Control		Test for Comparison P-Value
Child Characteristics	***N***	***Mean***	***N***	***Mean***	***N***	***Mean***	
Age	58	8.0	29	8.1	29	8.0	0.96
CR Violence Exposure	53	4.8	27	4.7	26	4.9	0.74
SR Violence Exposure	16	4.9	8	4.4	8	5.5	0.37
Gender	***N***	***%***	***N***	***%***	***N***	***%***	
Male	27	46.6	13	44.8	14	48.3	0.79
Female	31	53.4	16	55.2	15	51.7	
Race/Ethnicity	***N***	***%***	***N***	***%***	***N***	***%***	
Hispanic	25	43.1	10	34.5	15	51.7	0.09
White	10	17.2	6	20.7	4	13.8	
Black	8	13.8	7	24.1	1	3.4	
Other	15	25.9	6	20.7	9	31.0	
Caregiver Characteristics	***N***	***%***	***N***	***%***	***N***	***%***	
Family Income Level							
Less than $5,000	14	25.9	3	11.1	11	40.7	
$5,000–$10,000	10	18.5	7	25.9	3	11.1	
$10,001–$15,000	9	16.7	3	11.1	6	22.2	
$15,001–$20,000	4	7.4	4	14.8	0	0.0	
$20,001–$30,000	10	18.5	7	25.9	3	11.1	
More than $30,000	7	13.0	3	11.1	4	14.8	
Relationship to Child							
Parent or Guardian	56	96.6	27	93.1	29	100.0	
Other Relationship	2	3.4	2	6.9	0	0.0	

NOTES: CR = Caregiver Report; SR = Child Self-Report. Percentages may not total 100 percent because of rounding.

We also examined the Providence Tier 3 sample at baseline on the PTSD and parenting stress outcome measures (Table 10). Overall, 41 percent of the caregivers reported child PTSD symptoms that fell within the significant range, with 39 percent for boys and 43 percent for girls. For the caregiver-child relationship, 60 percent of the sample had total stress levels that fell in the clinical range. For the different subscales, 49 percent of the sample had clinical levels on the parental distress subscale, 58 percent had clinical levels on the

parent-child dysfunctional interaction subscale, and 60 percent had clinical levels on the difficult child subscale.

Table 10
Baseline Assessment Estimates for Providence Tier 3 Safe Start Families

	Combined		Boys		Girls	
CR PTSD Symptoms for Ages 3–10	*N*	*%*	*N*	*%*	*N*	*%*
Normal	14	44	9	50	5	36
Borderline	5	16	2	11	3	21
Significant	13	41	7	39	6	43
CR Total Parenting Stress for Ages 0–12	*N*	*%*	*N*	*%*	*N*	*%*
Parental Distress—Clinical	26	49	14	54	12	44
Parent-Child Dysfunctional Interaction—Clinical	31	58	17	65	14	52
Difficult Child—Clinical	32	60	18	69	14	52
Total Stress—Clinical	32	60	19	73	13	48

NOTE: CR = Caregiver Report.

We also examined differences between the intervention and control groups at baseline for Providence Tier 3's primary, secondary, and tertiary outcomes (see this report's appendix). There were no differences observed between the intervention and control groups at baseline for any of the primary, secondary, or tertiary outcomes with a large-enough sample size (Tables A.1, A.2, and A.3).

Uptake, Dosage, and Process of Care

As described fully in the Safe Start process evaluation report (Schultz et al., 2010), the Providence Tier 3 Safe Start intervention services included CPP, child individual therapy, family therapy, case management, and multidisciplinary team meetings. Family-level service data were recorded by the program on the follow-up Family Status Sheet and submitted at six-month intervals following initial enrollment (see Chapter Two of the main document [http://www.rand.org/pubs/technical_reports/TR991-1.html] for a description). Tables 11a and 11b show the type and amount of services received by the families assigned to the intervention group. The data displayed include services received by summing all time points reported by the program, with a maximum of 24 months of service provision.

As shown in Table 11a, 69 percent of these families received CPP, with an average of 11.8 sessions per family. Nearly two-thirds (59 percent) received case

management services, and 28 percent had multidisciplinary team involvement. Providence reported information on the reason that the services ended for only eight of the 29 intervention group families.

Table 11a
Services Received by Providence Tier 3 Safe Start Intervention Families (Baseline Assessment Sample)

Service	Number with Service	Percentage with Service*	Range	Distribution	Mean	Median
Dyadic Therapy (CPP)	20	69%	3–28	1–5 25% 6–10 15% 11–20 50% >20 2%	11.8	10.3
Child Individual Therapy	12	41%	1–21	1–5 58% 6–10 33% 11–20 0% >20 8%	6	4.0
Family Therapy	10	34%	1–12	1–5 60% 6–10 30% 11–20 10%	5.4	4.0
Case Management	17	59%	1–52	1–5 47% 6–10 24% 11–20 18% >20 12%	10.4	5.0
Multidisciplinary Team	8	28%	1–10	1–5 75% 6–10 25%	3.1	1.0

* The denominator is the 29 intervention group families with a follow-up Family Status Sheet at the six-month assessment point.
NOTE: Percentages may not total 100 percent because of rounding.

Table 11b shows the services received between the baseline and six-month follow-up assessment for the 13 intervention families who participated in at least the six-month research assessment and this are part of our analytic sample for examination of outcomes. Overall, a large majority of these families (85 percent) received CPP, with 62 percent receiving child individual therapy and 54 percent receiving family therapy. Providence's case manager was involved with 69 percent of the families, and its multidisciplinary team met regarding 31 percent of the families.

Table 11b
Six-Month Services Received by Providence Tier 3 Safe Start Intervention Families in the Six-Month Assessment Sample

Service	Number with Service	Percentage with Service*	Range	Distribution	Mean	Median
Dyadic Therapy	11	85%	5–18	1–5 9% 6–10 36% 11–20 55%	11.4	10.5
Child Individual Therapy	8	62%	1–12	1–5 88% 6–10 0% 11–20 13%	4.0	2.5
Family Therapy	7	54%	1–6	1–5 57% 6–10 43%	4.0	3.5
Case Management	9	69%	1–52	1–5 33% 6–10 11% 11–20 33% >20 2%	15.6	7.5
Multidisciplinary Team	4	31%	1–2	1–5 100%	1.3	1.0

* The denominator is the 13 intervention group families in the six-month assessment sample.
NOTE: Percentages may not total 100 percent because of rounding.

Outcomes Analysis

As noted above, the small sample sizes limited the analyses to testing whether there were statistically significant changes in mean scores within the intervention group. Table 12 shows the mean change between baseline and six months for Providence's primary outcomes within the intervention group. T-tests were conducted within the intervention group when the sample size allowed. The analyses revealed several statistically significant within-group differences. Between baseline and the six-month follow-up, caregivers in the intervention group reported significantly fewer total types of child victimization, child witnessing violence, and caregiver domestic violence experiences. These decreases in the caregiver's report of victimization were expected because of difference reference periods for the baseline assessment and six-month assessment. Within the intervention group, there were three nonsignificant trends, including decreases in the parental distress and total stress measures and fewer non–domestic violence traumatic experiences. Decreases in caregiver victimization experiences are expected because of different reference periods for the baseline (one year) and follow-up assessment (six months).

For the secondary outcomes, the small sample size in the intervention group at the six-month follow-up assessment did not allow for any statistical

tests. For the tertiary outcomes, there were no statistically significant differences in mean scores between the baseline and six-month follow-up assessment within the intervention group (Table 13).

Table 12
Changes in Intervention Group Means for Primary Outcome Variables Between Baseline and Six-Month Assessment

Primary Outcome	N	Within-Family Mean Changes[a]	
Behavior/Conduct Problems			
CR Child Behavior Problems for Ages 1–18	13	–0.09	
Social-Emotional Competence			
CR Child Assertion for Ages 1–12	12	0.38	
CR Child Self-Control for Ages 1–12	12	0.13	
Caregiver-Child Relationship			
CR Parental Distress for Ages 0–12	11	–6.00	#
CR Parent-Child Dysfunction for Ages 0–12	12	–3.17	
CR Difficult Child for Ages 0–12	12	–4.58	
CR Total Parenting Stress for Ages 0–12	11	–14.91	#
Violence Exposure			
CR Total Child Victimization Experiences for Ages 0–12	12	–2.75	*
CR Child Maltreatment for Ages 0–12	11	–0.55	
CR Child Assault for Ages 0–12	12	–0.50	
CR Child Sexual Abuse for Ages 0–12	12	0.00	
CR Child Witnessing Violence for Ages 0–12	12	–1.58	*
CR Caregiver Total Number of Traumatic Experiences	12	–0.08	
CR Caregiver Experience of Any Non-DV Traumas[b]	13	–0.15	#
CR Caregiver Experience of Any Domestic Violence[b]	13	–0.46	*

[a] This column reflects within-family mean changes between the baseline and six-month scores. * indicates a significant paired t-test of differences over time.
[b] This outcome is a categorical variable, and the unadjusted within-family mean change is a change in proportion.
NOTES: CR = Caregiver Report; DV = domestic violence. # indicates a nonsignificant trend in the t-test ($p<0.05$ but does not meet the FDR correction threshold). Mean change estimates are not shown when the group size is fewer than ten, and comparisons are not shown when the group size is fewer than ten for either group.

Table 13
Changes in Intervention Group Means for Tertiary Outcome Variables Between Baseline and Six-Month Assessment

Tertiary Outcome	N	Within-Family Mean Changes[a]
Background and Contextual Factors		
CR Caregiver Resource Problems	13	–1.54
CR Caregiver Personal Problems	13	1.00
School Readiness/Performance		
Letter Word Identification for Ages 3–18	12	4.92
Passage Comprehension for Ages 3–18	10	11.60
Applied Problems for Ages 3–18	10	4.20

[a] This column reflects within-family mean changes between the baseline and six-month scores. * indicates a significant paired t-test of differences over time.
NOTES: CR = Caregiver Report. # indicates a nonsignificant trend in the t-test ($p<0.05$ but does not meet the FDR correction threshold). Mean change estimates are not shown when the group size is fewer than ten, and comparisons are not shown when the group size is fewer than ten for either group.

CONCLUSIONS

Providence's Safe Start intervention focused on service delivery for children exposed to violence. Tier 2 of the intervention provided case management for women with children residing in a domestic violence shelter. Tier 3 provided an established clinic-based therapeutic intervention (CPP) for children identified as having been exposed to violence. For Tier 2, the program planned a quasi-experimental study but enrolled only 19 families in the study and retained only one of them for the six-month assessment before Tier 2 was discontinued after one year of operation. The participants in the study had substantial violence exposure, with caregivers reporting that these young children (average age of 4 years) had been exposed to an average of 3.8 instances of violence in their lives prior to the baseline assessment. At baseline, families enrolled in the study were experiencing parental stress, with the caregiver for 68 percent of the families reporting levels of parental stress that fell in the clinical range. Difficulties in enrolling families in the study during their shelter stays resulted in too few enrolled families to conduct any analyses.

For the Tier 3 CPP intervention, Providence conducted a randomized controlled trial. Providence enrolled 58 families in Tier 3, retaining 36 percent of them for the six-month assessment. The difficulties in establishing a steady flow of referrals from the primary referring agency resulted in enrollment considerably below expectations. At baseline, caregivers reported that children

had been exposed to an average of 4.8 types of violence during their lives. At baseline, many of the children (41 percent) enrolled in the study were experiencing PTSD symptoms, and a majority of families (60 percent) reported baseline child PTSD symptoms that fell in the significant range. Tier 3 families in the intervention group received CPP (69 percent), case management (59 percent), and multidisciplinary team involvement (28 percent). Overall, 85 percent of the Tier 3 families in the six-month analysis sample received CPP, 69 percent received case management, and 31 percent had multidisciplinary team involvement. The small sample sizes limited the analyses to testing whether there were statistically significant changes in mean scores on the six-month assessment within the intervention group.

Evaluation of the impact of the Providence Tier 2 intervention was not possible because of the lack of a comparison group to examine difference in outcomes over time. The lack of a comparison group limited the analyses to testing whether there were statistically significant changes in mean scores over time within the intervention group only. Between baseline and the six-month follow-up, caregivers in the intervention group reported significantly fewer total types of child victimization, child witnessing violence, and caregiver domestic violence experiences. However, these decreases in the caregiver's report of victimization were expected because of difference reference periods for the baseline assessment and six-month assessment. Overall, it was not possible to draw conclusions about the impact of the program because of the lack of a comparison group to examine the difference in outcomes over time. Nonetheless, Providence Safe Start developed a multi-tiered program to address gaps in the system for children exposed to violence. The program employed multiple ways to identify and intervene with families. Overall, the Providence Safe Start models require further testing with adequate sample sizes to determine whether the interventions positively affect outcomes for children exposed to violence.

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PROVIDENCE OUTCOMES APPENDIX

Table A.1
Comparison of Means for Providence Tier 3 Primary Outcome Variables over Time

Primary Outcome		Baseline		Six Months		12 Months		18 Months	
		N	Mean	N	Mean	N	Mean	N	Mean
PTSD Symptoms									
CR Child PTSD Symptoms for Ages 3–10	Intervention	18	46.11	8	43.50	5	38.40	1	
	Control	19	50.11	4		1		1	
SR Child PTSD Symptoms for Ages 8–12	Intervention	15	9.93	7	7.43	6	5.00	1	
	Control	13	9.46	5	10.60	0		2	
Depressive Symptoms									
SR Child Depressive Symptoms for Ages 8–18	Intervention	14	14.21	7	6.71	6	5.00	1	
	Control	13	8.62	5	13.20	0		2	
Behavior/Conduct Problems									
CR Child Behavior Problems for Ages 1–18	Intervention	29	0.34	13	0.00	8	0.00	2	
	Control	29	0.68	8	0.12	1		3	
Social-Emotional Competence									
CR Child Assertion for Ages 1–12	Intervention	27	–0.36	12	0.09	5	0.26	1	
	Control	26	–0.39	5	–0.20	1		2	
CR Child Self-Control for Ages 1–12	Intervention	27	–0.12	12	–0.04	5	0.40	1	
	Control	26	–0.40	5	–0.16	1		2	
Caregiver-Child Relationship									
CR Parent Distress for Ages 0–12	Intervention	27	32.44	11	29.27	5	26.20	2	
	Control	26	34.23	5	37.80	1		2	
CR Parent-Child Dysfunction for Ages 0–12	Intervention	27	26.04	12	25.42	5	21.60	2	
	Control	26	28.15	5	25.20	1		2	
CR Difficult Child for Ages 0–12	Intervention	27	32.67	12	30.58	5	30.40	2	
	Control	26	35.77	5	27.80	1		2	
CR Total Parenting Stress for Ages 0–12	Intervention	27	91.15	11	86.27	5	78.20	2	
	Control	26	98.15	5	90.80	1		2	
CR Family Involvement for Ages 6–12	Intervention	18	21.22	10	23.30	3		0	
	Control	17	19.18	4		1		2	
SR Family Involvement for Ages 11–18	Intervention	8	20.88	4		3		1	
	Control	8	20.88	3		0		2	

Table A.1—continued

Primary Outcome		Baseline		Six Months		12 Months		18 Months	
		N	Mean	N	Mean	N	Mean	N	Mean
Violence Exposure									
CR Total Child Victimization Experiences for Ages 0–12	Intervention	27	4.67	12	1.42	5	0.80	1	
	Control	26	4.88	5	0.60	1		2	
CR Child Maltreatment for Ages 0–12	Intervention	25	1.24	12	0.33	5	0.00	1	
	Control	26	1.00	5	0.00	1		2	
CR Child Assault for Ages 0–12	Intervention	27	1.04	12	0.33	5	0.20	1	
	Control	26	1.08	5	0.40	1		2	
CR Child Sexual Abuse for Ages 0–12	Intervention	27	0.19	12	0.08	5	0.00	1	
	Control	25	0.12	5	0.00	1		2	
CR Child Witnessing Violence for Ages 0–12	Intervention	26	2.12	12	0.50	5	0.60	1	
	Control	26	2.38	5	0.20	1		2	
SR Total Child Victimization Experiences for Ages 11–18	Intervention	8	4.38	4		3		1	
	Control	8	5.50	3		0		2	
SR Child Maltreatment for Ages 11–18	Intervention	8	1.00	4		3		1	
	Control	8	0.88	3		0		2	
SR Child Assault for Ages 11–18	Intervention	8	1.13	3		3		1	
	Control	8	1.63	3		0		2	

Table A.1—continued

Primary Outcome		Baseline		Six Months		12 Months		18 Months	
		N	Mean	N	Mean	N	Mean	N	Mean
SR Child Sexual Abuse for Ages 11–18	Intervention	8	0.13	4		3		1	
	Control	8	0.00	3		0		2	
SR Child Witnessing Violence for Ages 11–18	Intervention	8	2.13	4		2		1	
	Control	8	2.50	3		0		2	
CR Caregiver Total Number of Traumatic Experiences	Intervention	29	0.24	12	0.08	8	0.00	3	
	Control	29	0.17	8	0.25	1		3	
CR Caregiver Experience of Any Non-DV Trauma	Intervention	29	0.24	13	0.08	8	0.25	3	
	Control	29	0.41	8	0.13	1		3	
CR Caregiver Experience of Any DV	Intervention	29	0.55	13	0.23	8	0.13	3	
	Control	29	0.55	8	0.13	1		3	

NOTES: CR = Caregiver Report; DV = domestic violence; SR = Child Self-Report. Data are not shown for outcomes when the cell size is fewer than five for the group. Comparisons were not tested when the group size was fewer than ten for either group.

Table A.2
Comparison of Means for Providence Tier 3 Secondary Outcome Variables over Time

Secondary Outcome		Baseline		Six Months		12 Months	
		N	Mean	N	Mean	N	Mean
Behavior/Conduct Problems							
SR Teen Delinquency for Ages 11–18	Intervention	7	1.14	4		3	
	Control	7	2.43	3		0	
Social-Emotional Competence							
CR Child Affective Strengths for Ages 6–12	Intervention	18	15.56	10	15.80	3	
	Control	17	14.35	4		1	
SR Child Affective Strengths for Ages 11–18	Intervention	8	12.00	4		3	
	Control	8	14.38	3		0	
CR Child School Functioning for Ages 6–12	Intervention	18	17.56	9	18.00	3	
	Control	17	14.94	4		1	
SR Child School Functioning for Ages 11–18	Intervention	8	18.88	4		3	
	Control	8	18.75	3		0	
SR Child Cooperation for Ages 13–18	Intervention	20	9.75	8	10.63	5	12.80
	Control	20	8.80	4		1	

NOTES: CR = Caregiver Report; SR = Child Self-Report. Data are not shown for outcomes when the cell size is fewer than five for the group. Comparisons were not tested when the group size was fewer than ten for either group.

Table A.3
Comparison of Means for Providence Tier 3 Tertiary Outcome Variables over Time

Tertiary Outcome		Baseline		Six Months		12 Months	
		N	Mean	N	Mean	N	Mean
Background and Contextual Factors							
CR Caregiver Resource Problems	Intervention	29	15.79	13	13.08	8	16.63
	Control	29	15.69	8	10.50	1	
CR Caregiver Personal Problems	Intervention	29	25.03	13	25.15	8	22.63
	Control	29	27.59	8	25.25	1	
School Readiness/Performance							
Letter Word Identification for Ages 3–18	Intervention	24	7.71	12	16.33	8	29.38
	Control	25	–2.84	7	1.71	1	
Passage Comprehension for Ages 3–18	Intervention	24	–8.42	11	2.00	8	8.00
	Control	27	–7.56	7	–9.14	1	
Applied Problems for Ages 3–18	Intervention	25	–0.60	10	13.30	7	22.43
	Control	24	–7.08	7	–2.43	1	

NOTES: CR = Caregiver Report; SR = Child Self-Report. Data are not shown for outcomes when the cell size is fewer than five for the group. Comparisons were not tested when the group size was fewer than ten for either group.