

# Evaluation of the Oregon Relief Nurseries

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## Executive Summary

Founded in 1976, there are currently 10 Relief Nurseries in the state of Oregon, and another 4 in development. This report includes data provided by 10 Nurseries for 1,720 families and 2,266 children served during the 2008-2010 biennium.



## Introduction

Relief Nurseries provide services to families with very young children who are at high risk of involvement with the child welfare system (including some with current or previous involvement with this system). While services vary among the Relief Nurseries, all Nurseries provide therapeutic early childhood education in classroom settings, home visits, parent education classes and support groups, respite care, case management, and assistance accessing basic resources and other community services.

The Oregon Association of Relief Nurseries (OARN) contracted with Portland State University's Center for the Improvement of Child and Family Services (CICFS) to conduct the 2008-2010 evaluation of Relief Nursery Programs. The goal of the evaluation was to determine the extent to which Relief Nursery programs were successful in achieving primary program goals related to family and child well-being. Specifically, CICFS assessed the extent to which the 10 current Relief Nurseries helped families to:

1. Reduce child and family risk factors associated with increased risk of child maltreatment;
2. Improve family stability and family functioning.
3. Improve parents' ability to successfully parent their children, and
4. Support positive child development and well-being.

Key findings from these and other outcomes are described below. A second report examining the extent to which the Relief Nurseries helped children and families to avoid involvement with child welfare services and foster care will be available in late winter 2011.

## Families Served by the Relief Nurseries

In the 2008-2010 biennium, services were provided to 1,720 families and 2,266 children by the 10 Relief Nurseries. Of these families, primary caregivers were 62% Caucasian/White, 26%

Hispanic, and 12% other race/ethnicities. In the current sample, 70% of the families were single parent families, and 69% of primary caregivers were unemployed at intake. Families enter the Relief Nurseries with a high level of risk – on average, about 16 risk factors. Those families who left Relief Nursery services during fiscal year 2008 received about 13 months of services; families who were still in the program at the time of this report had been receiving services somewhat longer, about 15 months. For this report, outcomes were calculated based on changes in family risk factors and outcomes over time from intake to 6 (n=826), 12 (n=504), and 24 (n=183) months post-enrollment.

## Relief Nurseries Improve Family Functioning, Parent-Child Interactions, and Engagement in Early Literacy Activities

Two of the primary goals of the Relief Nursery are to stabilize families and to improve the nature and quality of parent-child interactions. Families that are experiencing multiple challenges related to poverty and other circumstances have difficulty providing the safe, stable environments that children need for positive development. Research on early brain development has clearly documented that engaged, nurturing parenting supports the early attachment relationships that are critical to children’s physical, social, and cognitive development, while harsh, disengaged, and unpredictable parenting is associated with child maltreatment and other negative outcomes (Shonkoff & Phillips, 2000; Zeanah, Boris, & Larrieu, 1997). Thus, improvements in these areas represent key outcomes for parents and children served by the Relief Nurseries.

The Relief Nursery evaluation includes two indicators designed to assess the quality of general family functioning and the frequency of positive parent-child interactions. These scales are completed by Relief Nursery staff at intake and every 6 months thereafter. The evaluation also includes a third measure that asks about the frequency of reading to children. Early reading to children has been found to be a key predictor of children’s language and literacy development (Snow, 1993). Results found that there was statistically significant improvement on all three of these outcomes for parents participating in the Relief Nursery for 6, 12 and 24 months.

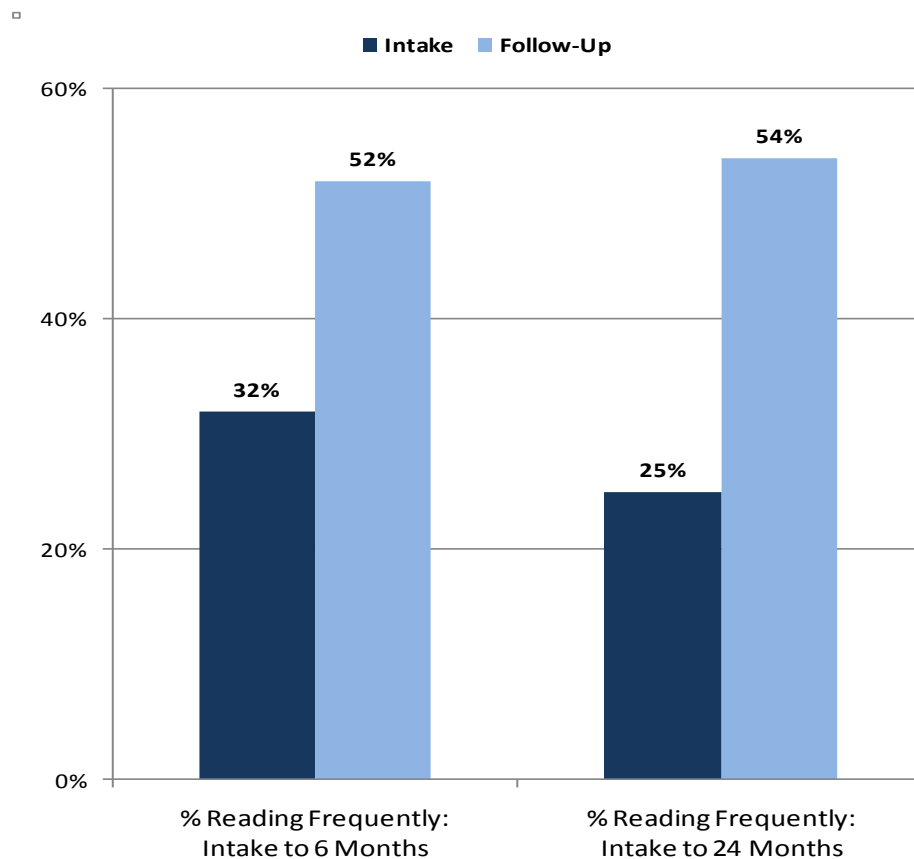
Specifically:

- The percentage of parents who were rated as having positive family functioning “most of the time” or “always” increased from 36% at intake to 45% at the 6-month follow-up. For parents participating at least 12 months, 45% had positive family functioning at intake, compared to 51% at the 12 month follow-up. Families who remained in the

program for two years or more had the highest level of positive family functioning at intake (45%), but increased by 9%, to 54% after 2 years.

- The frequency of positive parent-child interactions increased over time as well. After 6 months in the program 43% of families were rated as consistently engaging in sensitive, responsive parenting (compared to 33% at intake); this percentage increased to 49% after 12 months and 50% for those remaining two years or more.
- At program intake, fewer than a third (about 31%) of all parents read to their young children several times per week or more; however, after participating in the Relief Nurseries for at least 6 months this increased to 52%. Fifty-four (54%) percent of families who remained for two years were reading frequently to their children.

*Figure A. Families Reading to Children 3 Times per Week or More*



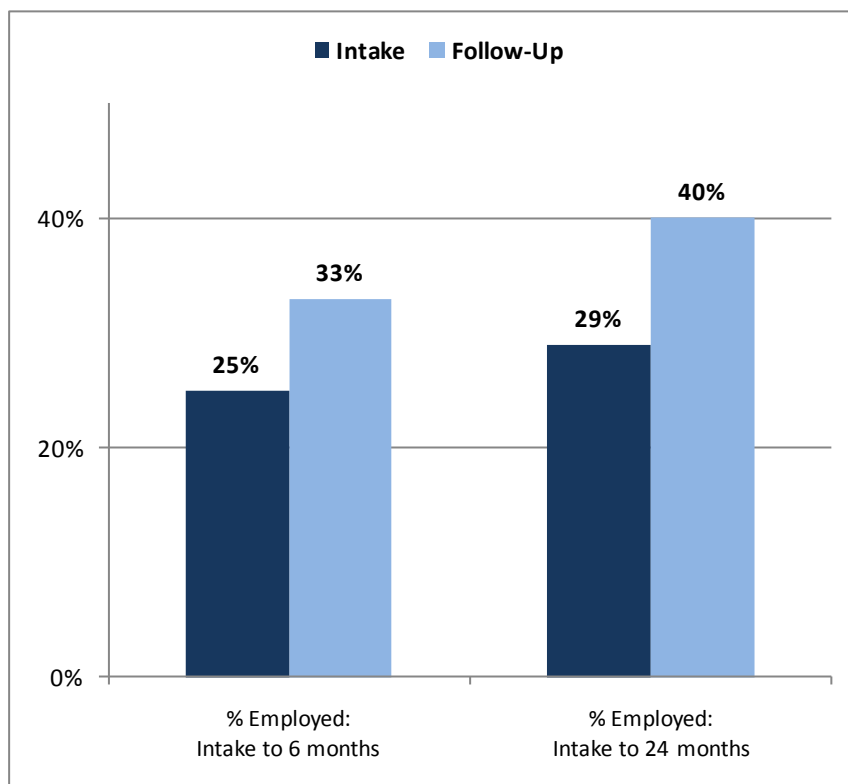
\*Changes from intake to follow up are statistically significant,  $p < .05$ .

## Relief Nurseries Improve Family Economic Stability

Relief Nurseries strive to help families become stable economically, by providing assistance connecting with job training, education, employment assistance, as well as with community resources such as WIC, TANF, child care subsidies, etc. A lack of resources to meet basic family needs has been consistently linked to increased risk for child abuse and neglect (Brooks-Gunn & Duncan, 1997).

Results from this year’s evaluation found that the Relief Nurseries are having considerable success in these areas, increasing the number of parents employed by over 30%, and moving 8% of families out of poverty (a 114% increase in families above the poverty level) after two years of service.

*Figure B. Parental Employment: Intake to 6 & 24 Months*



\*\*Changes from intake to follow up are statistically significant,  $p < .05$ .



Relief Nurseries are also successful in linking families to health care resources as evidenced by a decreased use of costly emergency room services for routine care. Families who received services for 6 months were significantly less likely to use the ER for health care at follow-up than at enrollment (38% vs. 32%).

## Relief Nurseries Decrease Overall Family Risk

Research on risk factors for child abuse and neglect suggests that while particular events and characteristics (e.g., poverty, childhood history of abuse) are clearly related to the increased likelihood that a parent will become abusive, the number of risk factors experienced by parents and/or children may be even more important (Sameroff, 1993). For example, research on Oregon's Healthy Start program consistently finds that the more psychosocial risk factors present in a family, the more likely it is that abuse will occur—children from families with four or more risk factors are more than ten times as likely to be abused than those with no risk factors.

Relief Nurseries services appropriately focus on helping to reduce risk factors in families as a means for reducing risk for child maltreatment. At program entry, families are screened using a detailed 47-item risk assessment tool that includes issues such as child welfare and foster care involvement, mental and physical health, poverty, and family violence. Of these 47 indicators, 23 are considered to be both mutable (changeable) and targets of intervention (for example, a non-mutable risk factor would be a parent's personal abuse history). Families are re-assessed using the risk factor checklist every 6 months. Results found that parents who participated in the Relief Nursery showed significant reduction in the number of risk factors in evidence:

- For families participating at least 6 months, the average number of risk factors was reduced from 8.96 risk factors at intake to 7.76 risk factors, a statistically significant reduction.
- For families participating at least 12 months, the average number of risk factors was reduced from 9.23 risk factors at intake to 7.48 risk factors, a statistically significant reduction.
- For families participating at least 24 months, the average number of risk factors was reduced from 9.42 to 7.31, a statistically significant difference. This suggests that families who remain in services for 2 years or more enter the program with somewhat more risk factors at enrollment, but show a greater degree of risk reduction compared to families who remained in services for a shorter duration.

## Conclusion

Results of this evaluation suggest that the Relief Nurseries are providing services to a relatively large number of families whose children are at high risk for child abuse and/or neglect. Over 2,200 children received services from the 10 Relief Nurseries this biennium, with many receiving services for more than one year. Families enter the program with an average of 15.7 total risk factors, and 9.1 mutable (changeable) risk factors. The majority of parents are unemployed, and most are single-parent households that are below the federal poverty level.

Given the high-risk profile of Relief Nursery participants, overall results are all the more striking. The evaluation shows statistically significant and meaningful improvements across a variety of areas, including:

- Increased parent employment
- Improved quality of parent-child interactions
- Reduced use of emergency room services
- Increased frequency of reading to children
- Reduced number of family risk factors
- Improved family functioning and stability

These results provide evidence of the effectiveness of Relief Nursery services in stabilizing families, improving parenting, and helping to set the stage for long-term success for children.

## Introduction

This report presents findings from the 2008-2010 biennium for 10 Relief Nursery programs. Portland State University's Center for the Improvement of Child and Family Services was contracted to analyze data collected by the Relief Nursery programs through the statewide database managed by the Oregon Commission on Children and Families. Data from the 10 fully operational Relief Nurseries are included in this report. A subsequent report will include information related to the influence of the Relief Nursery programs on families' involvement with DHS child welfare services; however, these data were not yet available at this writing. In this report we provide a brief description of the program's history and implementation, and an overview of the data collection methods. Following this, we provide combined results for the 10 Relief Nurseries in the areas of family functioning, parent-child interactions, child well-being, family self-sufficiency, and reductions in risk factors for the evaluation.



## Program History and Implementation

The first Oregon Relief Nursery program began in 1976 in Eugene, Oregon. The program was developed to address the needs of families whose young children were at risk for abuse or neglect. Although other Nurseries developed over the next few decades, expansion of the Relief Nursery Model occurred primarily during 2000-2005. Growth in the model was facilitated by Oregon Senate Bill 555, which provided funds for model dissemination. Presently, the Oregon Commission on Children and Families (OCCF) provides support through local commission offices to Relief Nurseries in Albany, Bend, Cottage Grove, Eugene, Medford, Pendleton, Portland, Roseburg, and Salem. Information from these programs is included in the present report. The Relief Nursery model continues to expand with emerging Relief Nurseries in Corvallis, Ontario, Gladstone and Madras.

The stated goal of the Relief Nursery Program is: “To stop the cycle of child abuse and neglect through intervention that strengthens parents, builds successful and resilient children, and preserves families by offering comprehensive and integrated support services.” ([www.occf.gov](http://www.occf.gov)). Relief Nurseries accomplish this by providing comprehensive family services to children under the age of six and their families who experience numerous risk factors that could lead to abuse and neglect. Relief Nursery services are voluntary and may include:

1. Parenting education and support
2. Therapeutic infant and preschool classrooms for children
3. Advocacy and case management services
4. Respite care
5. Mental health services and referrals for adults and children
6. Home visitation
7. Family-centered recovery support
8. Family literacy services

Families participate in two primary program components: (1) Therapeutic Early Childhood classrooms, (typically referred to as “center-based” services, and which also include home visits to participating families) or (2) the Home Visiting/Outreach component. In some Relief Nurseries, families in the Home Visiting/Outreach component are provided periodic services to engage them while they are on the waiting list for center-based therapeutic classroom services. In other programs, Home Visiting/Outreach is offered as a stand-alone service module. Programs offer case management, respite care, and mental health services as needed. Relief Nursery programs are based on nationally recognized standards for best practices in early

childhood education and family support, maintaining small teacher-child ratios in classroom-based settings and utilizing evidence-based parenting curricula such as Make Parenting a Pleasure (OJJDP, 1999). Relief Nurseries play a pivotal role in serving at-risk families with young children, and work closely with other programs such as Family Drug Court, Healthy Start, Early Intervention/Early Childhood Special Education (for special needs children), Early Head Start and Head Start.

# Evaluation Purpose and Methodology

The purpose of the 2008-2010 evaluation was to examine the effectiveness of the Relief Nursery programs in influencing key outcomes, using information collected through a statewide database. The overarching evaluation goal is to provide information that can be used for ongoing Relief Nursery program improvement, planning, and accountability.



Beginning in 2007, the Oregon Association of Relief Nurseries (OARN), a group representing all of the state's Relief Nursery programs, worked with the Oregon Commission for Children and Families (OCCF) and NPC Research to develop and implement a standardized data collection process. A web-based data management system was developed by 2H systems, based on an agreed-upon set of data elements collected by Relief Nursery staff. NPC Research and 2H systems provide technical assistance to the Relief Nurseries to implement data collection tools and to ensure data were entered into the statewide system.

The forms currently being used by the Relief Nurseries include the following:

1. ***Risk Factor Checklist: Intake.*** This form includes 47 risk factors collected for each family during their intake assessment. The form includes 23 malleable risk factors (risk factors that can be changed or reduced by participating in the Relief Nursery program), 10 risk factors that may change but are not a target of the intervention (e.g., marital status), as well as 14 historical risk factors (e.g., the parents' childhood history of involvement with child welfare services) that provide key information about the family context but which cannot be changed by current services.
2. ***Risk Factor Checklist: Update.*** This form includes all of the malleable risk factors contained in the Intake Risk Factor Checklist. Families are re-assessed on the Risk Factor checklist every 6 months they participate in the program, and at program exit.
3. ***Family Assessment Form.*** This form includes basic demographic information about the family as well as information about the core family outcomes (parent-child interactions, family functioning, frequency of reading). The form also includes a set of optional items related to various family outcomes that Relief Nurseries can track if

desired. The Family Assessment Form is completed at intake and every 6 months thereafter.

4. *Child Data Form.* The Child Data Form consists of key demographic information for all participating children as well as select child outcomes such as child welfare involvement and parent-child interactions. It is collected at intake and every 6 months thereafter.

Information is collected by program staff and then entered by programs into the web-based data system. A wide variety of reports are available through the data system for ongoing monitoring and accountability.

For the current study, PSU obtained a data-sharing agreement with OCCF to gain access to the data collected through the statewide data system. Data from the 10 Relief Nursery programs was obtained on November 1, 2010; thus, the results presented here reflect information entered as of this date.

PSU is in the process of entering into a data-sharing agreement with Oregon Department of Human Services, Children, Adults, and Families division (CAF, child welfare) in order to obtain information about the extent of involvement of Relief Nursery families with the child welfare system. However, this information was not available as of this writing, and will be provided in a separate report pending finalization of data-sharing protocols.

# Program Outcomes

## Sample Description

Families and children were included in this report if at least one assessment of any type (risk, family, or child), and any round (intake, 6 months, 12 months, 18 months, 24 months, 30 months, exit, etc) occurred between July 1, 2008, and June 30, 2010, and this assessment was entered or uploaded into the statewide database by November 1, 2010. If a family met this criteria, all information available for this family was downloaded from the state data system. This represents the number of families served by the Relief Nurseries during the 2008-2010 biennium.



A total of 1,720 families and 2,266 children were identified as having received services from the Relief Nursery during FY2008-2010.

For inclusion in the outcome study, a family or child must have had an intake assessment completed (at any time), and at least one follow-up assessment that occurred during the biennium. Data were analyzed to compare changes over time at three time periods: Intake to 6 months post-intake; Intake to 12 months post-intake; and Intake to 24 months post-Intake. Table 1 presents the number of family, risk and child assessments available for analysis at each time period. Families that were served but who are not included in these analysis include families whose intake assessment was not included in the statewide database (usually because that family was enrolled in the program prior to the start of the statewide data system) or because the family was not enrolled for long enough to have their first set of follow-up assessments completed at 6 months post-intake.

*Table 1. Number of Assessments Available for Outcome Study*

|                    | Intake to 6 Months | Intake to 12 Months | Intake to 24 Months |
|--------------------|--------------------|---------------------|---------------------|
| Risk Assessments   | 826                | 508                 | 183                 |
| Family Assessments | 798                | 506                 | 181                 |
| Child Assessments  | 960                | 602                 | 169                 |



### *Participant Characteristics*

Table 2 describes program participant characteristics. This table represents the total sample of 1720 families and 2266 children, although there is missing item-level data in some areas. Appendix A provides descriptive information for participants for each individual Relief Nursery.

Statewide, primary caregivers for Relief Nursery families are, on average, 28 years old, female (73%), and most likely to be Caucasian (62%) or Hispanic (26%). Most primary caregivers were not employed (31%), and the majority of families (89%) were living at or below the federal poverty level at intake. At intake, 70% of primary caregivers were unmarried, and 40% did not have a high school diploma or GED. Most did have health insurance (91%). The average age of children in this sample was 1.64 years. Most families had either one or two children, although the range was 1-9.

### *Service Information*

A limited amount of service information is tracked through the state data system. Staff report whether children received home visits, classroom-based services, or both, and record the number of home visits provided. For this sample, 1,175 children received classroom-based services during at least one 6-month period and 1,212 children received at least one home visit during the biennium. Children were most likely to have received classroom services for 2 assessment periods (about one year, 34% of children), although 12% received classroom services in 4 assessment periods (about 2 years). In the data provided, children received center-based services during an average of 1.6 assessment (6 month) periods (with a range of 0-10), and on average received about 6 home visits during their enrollment period (although the range was from 0-69 home visits).

As shown in Table 3, for families who had exited the Relief Nursery program, the average duration of services was a little over one year (13 months). However, if duration is calculated including those still in the program, the average length of stay increases to 15 months, suggesting that there are a substantial number of families who do remain in service beyond the one-year mark. In fact, statewide there were almost 200 families (n=196) who received services for over two years. Length of stay in the program can be quite individualized, depending on families' needs, and the ability of the program to successfully transition the family to other services such as Early Head Start, Head Start, or kindergarten.

### *Attrition Analyses*

We conducted attrition analyses comparing baseline risks (total and total mutable) differences in families for those who also had 6, 12, or 24 month follow-up assessments. All comparisons were significant,  $p < .01$ , comparing those who did have a specific follow-up assessment to those

who did not. Interestingly, however, those who did not have follow up assessments were consistently lower risk than those who did have assessments. This suggests that at each time point, families who left service prior to completing a given assessment were generally lower in baseline risk factors, compared to those who remained in services. It appears, therefore, that the Relief Nurseries are doing a good job at retaining the higher risk families in services for longer periods of time.

*Table 2. Participant Characteristics<sup>1</sup>*

| <b>Primary Caregiver and Family Characteristics at Intake</b>                          |               |
|--|---------------|
| Average age of primary caregiver at intake   | 27.9 years    |
| Race/Ethnicity (n=1397):   |               |
| African American   | 57 (4%)       |
| Asian American   | 8 (.5%)       |
| Caucasian  | 872 (62%)     |
| Hispanic   | 357 (26%)     |
| Multi-Ethnic   | 10 (.5%)      |
| Native American/Alaskan Native/Native Hawaiian   | 44 (3%)       |
| Other  | 11 (1%)       |
| Not Reported   | 39 (3%)       |
| Percent Female (n=1318)  | 1252 (95%)    |
| Percent of Families at/below the Federal Poverty Level at Intake (n=1487)              | 1318 (89%)    |
| Percent Attending School (n=1533)  | 147 (10%)     |
| Percent Single/Not Partnered (n=1472)  | 1032(70%)     |
| Percent Employed Full-or Part time (n=1342)  | 416 (31%)     |
| Percent 19 years of age or less at Intake (n=1216)                                     | 31 (3%)       |
| Percent with a High School Education (n=1488)  | 892 (60%)     |
| Percent with Health Insurance (n=1534)   | 1396 (91%)    |
| Average Total Risk Factors at Intake (all risk factors, n=1563)                        | 15.7          |
| <b>Child Characteristics at Intake</b>   |               |
| Average age of child (n=763)   | 1.64 years    |
| Percent Male (n=1890)  | 996 (53%)     |
| Percent Female (n=1890)  | 894 (47.3%)   |
| Race/Ethnicity (n=1913)  |               |
| African American   | 64 (3.35)     |
| White/Caucasian  | 1072 (56%)    |
| Hispanic   | 547 (29%)     |
| Multi-Ethnic   | 64 (3.3%)     |
| Not Reported   | 7 (.4%)       |
| Average Number of Children in Family (n=1924)  | 1.65 children |
| Average Length of Stay in Program for Participants with Exit Assessments Only (n=1227) | 13.12 months  |
| Average Length of Stay in Program for all Participants (n=1227)                        | 15.07 months  |

<sup>1</sup> Note: Sample sizes may not equal the number of families served because of missing information.

## *Key Outcome Variables*

The Relief Nurseries measure several key outcomes that reflect the program goals of helping to stabilize families, improving the quality of parenting, and supporting children's development. Key outcomes included in this report are described below.

### *Family and Caregiver Outcome Variables*

1. *Risk reduction.* Families are screened using a 47-item risk assessment tool at program entry and every 6 months thereafter. Of the 47 risk factors, 23 are considered both changeable (mutable) and targets of intervention. This risk Assessment includes both mutable (changeable) and non-mutable (non-changeable) risk factors. Examples of non-mutable risk factors include prior involvement with child welfare and past criminal history. Changeable risk factors fall into five categories: (1) Family violence/victimization (e.g., domestic violence, anger management problems); (2) Poverty (e.g., below federal poverty level; unemployed; unstable housing); (3) current Child Welfare involvement (e.g., current abuse, open DHS case); Mental Health (e.g., parental depression, high stress); and Other (e.g., lacks support, substance abuse).
2. *Daily family functioning.* The measure of daily family functioning is comprised of the following three items, rated by Nursery staff: "The family has consistent daily routines", "The family handles routines", and "The family has positive social support". Workers use the following rating scale: '0' = not at this time; '1' = seldom; '2' = sometimes; '3' = most of time, and '4' = almost always.
3. *Increased reading to children.* This single item outcome measure uses a four point scale: '1' = less than once a week; '2' = once a week; '3' = several times week; '4' = daily or more and asks whether an adult "reads to the child for at least 15 minutes every day."
4. *Employment status.* Employment status is tracked on the Family Assessment form, and is coded as '1'= fulltime (30 hours a week or more), '2'= part time, '3'= employed seasonally, '4'= not employed/actively seeking work, and '5'= not seeking work. For analysis, this variable was recoded into a two categories: (1) unemployed; and (2) any employment.
5. *Federal Poverty Level.* Whether the family is at or below the federal poverty level (yes or no) is assessed using the risk assessment tool.
6. *Use of emergency room services.* Staff indicate on each assessment whether the family has used emergency services for routine health care in the past 6 months.

### *Quality of Parent-Child Interactions*

Relief Nurseries use an observational rating scale to assess the quality of parent-child interactions. Staff rate the extent to which parents engage in each of the following behaviors (0=not at this time; 1=seldom; 2=sometimes; 3=most of the time; and 4=almost always):

1. Enjoys child and expresses warmth and love
2. Shows sensitivity to child's feelings, needs, interests
3. Uses effective, firm, but loving guidance
4. Responds appropriately to child's behavior and needs
5. Adjusts environment and responses to child's temperament and needs
6. Engages in reciprocal interactions, conversations, play involving taking turns
7. Provides encouragement (both verbal and non-verbal support) for developmental advances
8. Creates a developmentally appropriate learning environment for the child.

### *Child Outcomes*

Relief Nurseries have the option of recording child developmental outcomes and other information in the statewide database. It appears that although 8 of the 10 Relief Nursery programs have at least some of this optional data, sample sizes for these outcomes were considerably smaller than for other areas, suggesting that this information is not consistently reported for all children. The following outcomes are included:

1. Child welfare involvement, specifically, whether Relief Nursery staff made a report to DHS and whether any child was removed from their parents' care.
2. Developmental delays, specifically whether each child has a diagnosed disability, is receiving Early Intervention services, has identified developmental delays, and whether they have been referred to Early Intervention for further assessment or service.
3. Health Care, specifically whether each child's immunizations are up-to-date and whether they are linked to a primary health care provider.

### *Analysis Strategy*

To examine whether outcomes improve over time, we conducted repeated measures Analysis of Variance (ANOVAs) (for continuous outcomes) or McNemar's test (for categorical repeated-measures variables) to evaluate change from program entry to follow-up for each of the outcomes described above. Note that due to difficulties in the data download process, outcome analyses reflect incomplete information for the Eugene Relief Nursery.

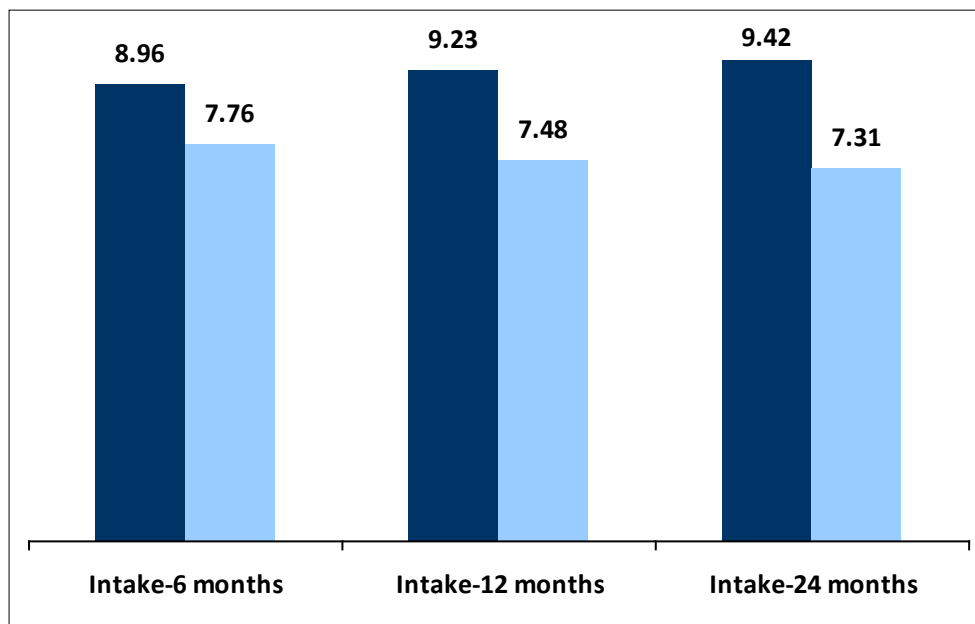
### Risk Reduction Results

Research on risk factors for child abuse and neglect suggests that while particular events and characteristics (e.g., poverty, childhood history of abuse) are clearly related to the increased likelihood that a parent will become abusive, the number of risk factors experienced by parents and/or children may be even more important (Sameroff, Seifer, Barocas, Zax, & Greenspan, 1987). For example, research on Oregon’s Healthy Start program consistently finds that the more psychosocial risk factors present in a family, the more likely it is that abuse will occur—children from families with four or more risk factors are more than ten times as likely to be abused than those with no risk factors (Green, Lambarth, Tarte, & Snoddy, 2007).

Data analyses found that families who participated in the Relief Nursery program showed a statistically significant reduction in the number of family risk factors over time, as shown in Figures 1a, 1b, & 1c.

Specifically, after 6 months in the program, the average number of risk factors decreased from 8.96 risk factors to 7.76 risk factors; families who remained in services for 12 months showed evidence of a decrease from 9.23 to 7.48 risk factors. Families who remained in the program for 2 years showed similar decreases, from 9.42 risk factors at intake to 7.31 risk factors. All of these decreases were statistically significant,  $p < .01$ .

*Figure 1. Reduction in Family Risk Factors from Intake to Follow-Up \**



\*All changes from intake to follow-up are statistically significant,  $p < .01$

As shown in Table 3, there were substantial reductions across all of the key domains of risk for families. Families show statistically significant reductions in poverty-related risk factors, child welfare risk factors, mental health risk factors and other general risk factors. These reductions were greatest for families who participated in services for 12 months. Interestingly, those who had intake and 12 or 24 month assessments were also significantly higher risk at baseline compared to the group of families who had intake to 6 month assessments.

*Table 3. Specific Areas of Risk Reduction*

| Outcome   | Intake | 6 Months* | Intake | 12 Months* | Intake | 24 Months* |
|---|--------|-----------|--------|------------|--------|------------|
| <b>Total malleable risk factors</b>             | 8.96   | 7.76      | 9.23   | 7.48       | 9.42   | 7.31       |
|   | N=826  |           | N=504  |            | N=183  |            |
| <b>Total poverty-related risk factors</b>       | 3.32   | 2.82      | 3.46   | 2.75       | 3.40   | 2.49       |
|   | N=798  |           | N=482  |            | N=180  |            |
| <b>Total child welfare-related risk factors</b> | .55    | .45       | .56    | .44        | .49    | .35        |
|   | N=749  |           | N=436  |            | N=158  |            |
| <b>Total mental health-related risk factors</b> | 2.26   | 2.09      | 2.32   | 2.07       | 2.45   | 2.17       |
|   | N=799  |           | N=483  |            | N=181  |            |
| <b>Total other risk factors</b>                 | 2.0    | 1.70      | 2.11   | 1.61       | 2.11   | 1.59       |
|   | N=817  |           | N=498  |            | N=180  |            |

\*all changes from intake to follow-up were statistically significant,  $p < .05$ .

### *Self-Sufficiency Results*

Relief Nurseries strive to help families become stable economically, by providing assistance connecting with job training, education, and employment assistance, as well as with community resources such as WIC, TANF, child care subsidies, etc. A lack of resources to meet basic family needs has been consistently linked to increased risk for child abuse and neglect (Brooks-Gunn & Duncan, 1997). Relief Nurseries also work to ensure that all families are connected with a health care provider, have health insurance, and that children are receiving regular preventive health care.

Results in this area were positive, suggesting that the intensive case management and family support provided by the Relief Nursery have been successful in helping parents become

employed and increase family income (see Table 4). Employment increased substantially and significantly even within the first 6 months of services, from 25% employed to 33% employed. For families who stayed in for two years, 40% were employed by the time of the 24 month assessment. Similarly, the percent of families at or below the Federal Poverty Level decreased for families who remained in the program at least 12 months, from 92% at intake, to 88% at the 12 month assessment, a statistically significant difference.

Further, it appears that Relief Nurseries have also been successful in linking families to health care resources, and thus reducing costly emergency room use by families from 38% to 32%; this reduction was statistically significant for families at the 6-month assessment.

*Table 4. Family Self-Sufficiency Outcomes*

| Outcome                                | Intake | 6 Months | Intake | 12 Months | Intake | 24 Months |
|--|--------|----------|--------|-----------|--------|-----------|
| <b>Below the Federal Poverty Level</b> | 91%    | 89%      | 92%    | 88%*      | 93%    | 85%*      |
|  | N=826  |          | N=461  |           | N=162  |           |
| <b>Employed full or part time</b>      | 25%    | 33%*     | 23%    | 31%*      | 29%    | 40%*      |
|  | N=734  |          | N=446  |           | N=161  |           |
| <b>ER use for routine care</b>         | 38%    | 32%*     | 39%    | 34%       | 36%    | 31%       |
|  | N=781  |          | N=482  |           | N=173  |           |

\*Indicates statistically significant change from program entry to Follow-Up,  $p < .05$ .

### *Parenting Results*

Two of the primary goals of the Relief Nursery are to stabilize families and to improve the nature and quality of parent-child interactions. Families that are experiencing multiple challenges related to poverty and other circumstances have difficulty providing the safe, stable environments that children need for positive development. Research on early brain development has clearly documented that engaged, nurturing parenting supports the early attachment relationships that are critical to children’s physical, social, and cognitive development, while harsh, disengaged, and unpredictable parenting is associated with child maltreatment and other negative outcomes (Shonkoff & Phillips, 2000; Zeanah, Boris, & Larrieu, 1997). Thus, improvements in these areas represent important outcomes for parents and children served by the Relief Nurseries. The evaluation also includes a third measure that asks about the frequency of reading to children. Early reading to children has been found to be a key predictor of children’s language and literacy development (Snow, 1993).

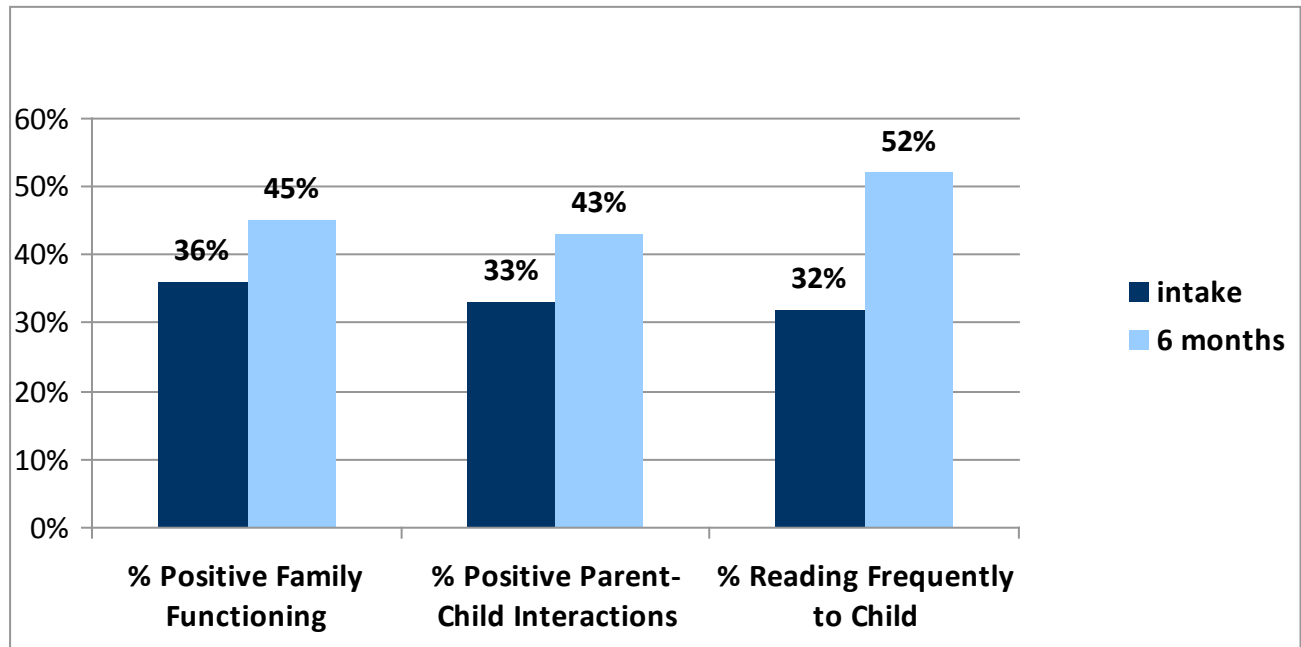


Results from this year's evaluation (see Figure 2) found extremely positive results in terms of improved parenting and family functioning, with statistically significant and substantive improvements documented at each assessment point. The percentage of parents who were rated by staff as having positive family functioning (e.g., stable and predictable routines, and available social supports) either "most of the time" or "always" increased from 36% at intake to 45% at the 6-month follow-up. For parents participating at least 12 months, 40% had positive family functioning at intake, compared to 51% at the 12 month follow-up; and for those who remained 2 years or more, there was an increase from 45% to 54%.

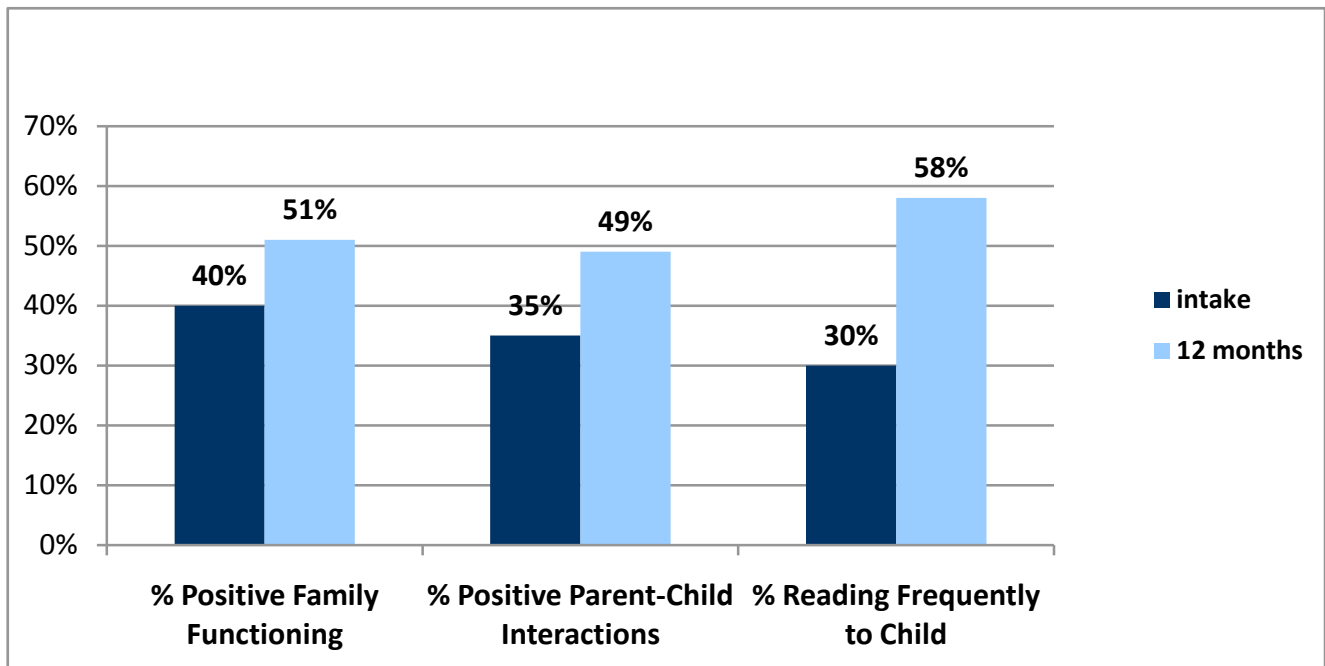
Similarly, staff regularly rate families in terms of the quality of their interactions with their children. The frequency of positive parent-child interactions also increased significantly over time, with 33% of parents showing regular, positive interactions with their children at intake, compared to 43% at the first follow-up assessment. For families participating at least 12 months, 35% demonstrated consistent positive interactions at baseline, compared to 49% after one year of Relief Nursery services. Similar increases were apparent for those who remained in the program for two years, who increased from 39% having regular positive interactions at baseline to 50% consistently showing positive interactions at the 24 month assessment.

Relief Nursery parents showed dramatic and statistically significant improvements in the frequency of reading to children. At program intake, only 32% of parents read to their young children several times or more per week; however, after participating in the Relief Nurseries for at least 6 months this increased to 52%. For families participating at least 12 months, 30% read to their children several times per week or more at intake, compared to 58% at the 12-month Assessment. The largest gains were seen for those families participating at least 2 years; only 25% of these families read to their children regularly at intake; this more than doubled by the 2-year assessment. Reading to children has been shown to be an extremely important activity that promotes children's language and literacy development.

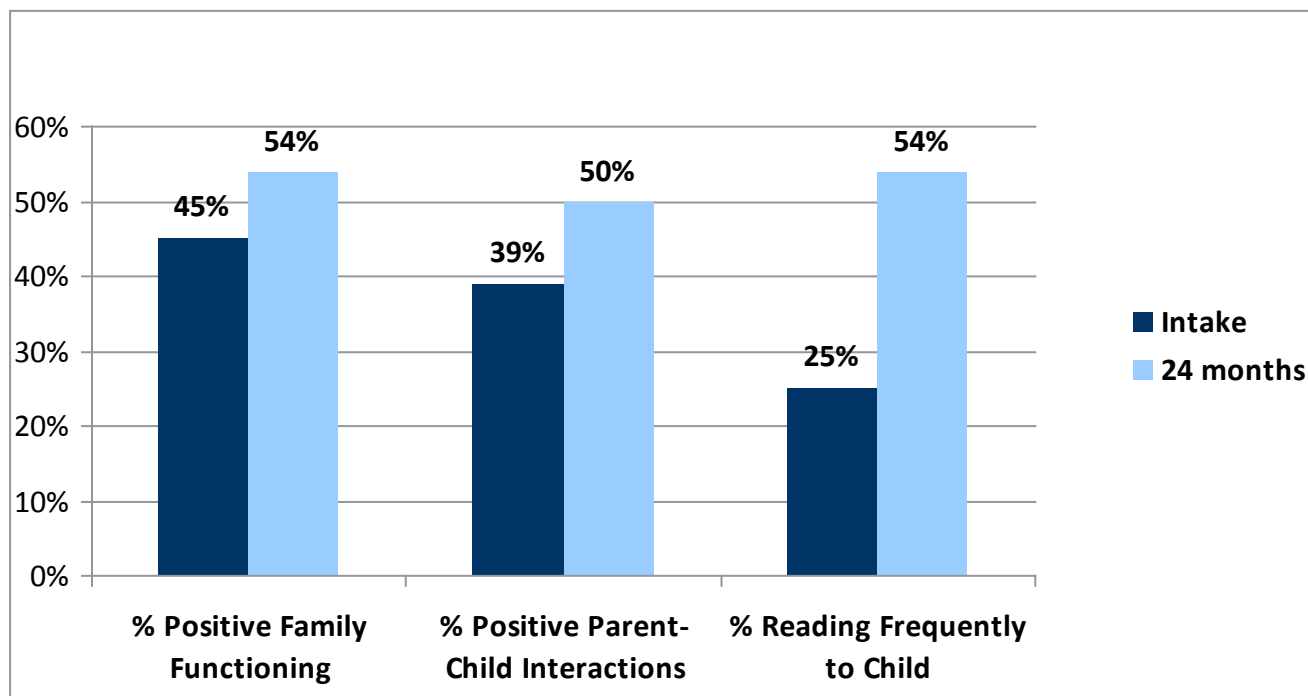
Figure 2. Improvements in Key Parenting Outcomes



all changes from intake to follow-up are statistically significant,  $p < .05$



all changes from intake to follow-up are statistically significant,  $p < .05$



all changes from intake to follow-up are statistically significant,  $p < .05$

### *Child Outcome Results*

Several child outcomes were available through the statewide database. However, it should be noted that these outcomes are not a required part of data entry for the Relief Nurseries, and therefore do not reflect the status of all participating children. Three outcome areas are included in the data system: (1) involvement in child welfare services; (2) developmental status and linkages; and (3) health-related indicators. Relief Nurseries regularly conduct developmental assessments on enrolled children to identify areas of development that may need additional support or referral to Early Intervention services. Note that sample sizes were too small to reliably report data from the 24 month assessment point

In terms of child welfare involvement, the role of the Relief Nursery staff as mandated reporters is quite clear, as evidenced by the number of children reported by Relief Nursery staff at the 6 and 12 month follow-up assessments. However, given the high risk status of these families, it is hardly surprising that reports to DHS-child welfare would be needed. It appears that there may be a slight trend towards reducing the number of children in out-of-home placements during their time at the Relief Nursery. While this reduction is small, the number of children in out-of-home placements is quite small, making it difficult to detect effects. Further examination of the patterns of child welfare system involvement for Relief Nursery clients will

be conducted in late winter 2011 to better understand the influence of the Relief Nurseries on child welfare-related outcomes.

As would be expected, the Relief Nurseries provide services to a relatively high percentage of children with diagnosed disabilities and/or identified developmental delays. Almost all of the children with diagnosed disabilities are also receiving services through Early Intervention/Early Childhood Special Education. The number of referrals being made for children with identified developmental delays, however, is somewhat lower than what might be expected. This may be because the Relief Nurseries well-trained staff and low teacher:child ratios allow them to serve and support these children within the program, rather than needing to rely on external referrals.

In terms of health care outcomes, it appears that the majority of children enter the Relief Nursery already linked to primary health care providers. Immunization rates do not change significantly during program participation, suggesting that this may be an area the Nurseries want to focus on in the future (although it should be noted that these immunization rates are relatively high given the high-risk nature of the program's population).

*Table 5. Children’s Health and Developmental Status*

|   | <b>At Intake</b>     | <b>At 6 Month Follow-Up</b> | <b>At 12-Month Follow-Up</b> | <b>At 24-Month Follow-Up</b> |
|---|----------------------|-----------------------------|------------------------------|------------------------------|
| Number of children reported to DHS by RN staff within the last 6 months | 19 (1%)<br>N=1593    | 26 (4%)<br>N=635            | 25 (5%)<br>N=499             | NA                           |
| Number of children removed from home within the last 6 months           | 75 (5%)<br>N=1593    | 21 (3.3%)<br>N=635          | 21 (4.2%)<br>N=499           | NA                           |
| Number of children with diagnosed disability                            | 106 (8.3%)<br>N=1273 | 52 (9.5%)<br>N=548          | 60 (5%)<br>N=394             | NA                           |
| Of children with a diagnosis, #/% receiving Early Intervention services | 78 (89%)<br>N=88     | 14 (88%)<br>N=16            | 38 (100%)<br>N=38            | NA                           |
| Number of children with identified delays (RN assessment)               | 166 (27%)<br>N=621   | 95 (26%)<br>N=361           | 64 (24%)<br>N=267            | NA                           |
| Of children with identified delay, #/% referred for further assessment  | 54 (36%)<br>N=152    | 16 (23%)<br>N=71            | 18 (46%)<br>N=39             | NA                           |
| Number of children with up-to-date immunizations                        | 722 (82%)<br>N=886   | 392 (85%)<br>N=388          | 250 (82%)<br>N=307           | 110 (82%)<br>N=134           |
| Number of children with a primary health care provider                  | 735 (93%)<br>N=793   | 315 (94%)<br>N=335          | 196 (92%)<br>N=215           | 48 (94%)<br>N=51             |

## Summary of Results and Recommendations

Results from this evaluation found that after receiving a year or more of Relief Nursery services, participants significantly improved in the key areas being targeted by the program: risk reduction, family functioning, parenting, and child well-being. Specifically, the evaluation found that:



- The total number of family risk factors decreased by 13% after 6 months and by 22% after 2 years;
- Positive parent-child interactions increased by 30% after 6 months and by 28% for those remaining for 2 years;
- Frequency of reading to children increased by 63% after 6 months and by 116% after 2 years;
- The percent using the emergency room for routine health care decreased by 16 after 6 months and by 14% for those remaining for 2 years;
- The percentage of families living above the Federal Poverty Level increased by 22% after 6 months, and by 114% for those remaining for 2 years; and
- Family employment increased by 32% after 6 months, and by 38% for those remaining for 2 years.

These gains were even more impressive for families who remained in the program for two years—especially since these families tended to be higher risk at intake compared to families who received services for shorter periods of time. This is a significant finding, as it speaks both to the ability of the Relief Nurseries to retain the highest-risk families in program services, while working with these families successfully to achieve family and program goals. In fact, families who left Relief Nursery services earlier tended to be lower in risk compared to those who were retained in the program.

The findings from this evaluation highlight the success of Relief Nurseries in achieving important outcomes for children and families. Working with families at very high risk for poor outcomes, the Relief Nurseries have shown considerable success in reducing family risk factors associated with child maltreatment, and supporting families to provide safe, stable environments for their children.

While data that directly examines the impact of the Relief Nurseries on families' child welfare involvement was not yet available, data reported by Relief Nursery staff suggest that there is a trend towards fewer out-of-home placements for children receiving 6 months of Relief Nursery services or more, with 5% of children placed out of home at intake compared to 3.3% at the 6-month assessment. This mirrors CAF data analyzed for the Relief Nurseries in 2007 (Burrus & Green, 2007) that found that foster care placements were greatly reduced after families became involved with the Relief Nurseries. A report examining CAF data for the 2008-2010 biennium will be released in Spring 2011.

Data also suggest a few areas in which Relief Nurseries may want to continue to focus their attention and work towards strengthening program efforts to support families. First, while outcomes related to reading to children showed significant and substantial improvements, these families are still reading much less frequently than the national average, even for low income families, of whom 67% report reading daily to their children (ChildTrends, 2009). The Relief Nurseries should continue to emphasize the importance of daily reading to children, even from infancy. Relief Nurseries may also want to consider providing services focusing on adult and family literacy, as it is likely that a substantial number of adults in this program have relatively low literacy skills themselves. Such services are already available at some of the Relief Nursery programs.

Staff may also want to provide more targeted efforts to improve the parenting practices of parents who are not providing consistent, positive, parent-child interactions. Again, while the percentage of families who are improving their parenting skill increased significantly over time, only about half the RN families were rated by staff as demonstrating these skills consistently. Parent coaching and other intensive, hands-on parenting support may be needed to provide opportunities for parents to practice skills that they are learning from staff.

Finally, a relatively large percentage of children are being identified with developmental delays. While this is hardly surprising, given the risk profiles that these families present, the programs may want to strengthen their relationships with Early Intervention/Early Childhood Special Education services to ensure that children with identified delays receive the level and intensity of services that they need. Increasing the number of referrals to early intervention may require additional staff training and/or working on strengthening the inter-agency relationships with Early Intervention/Early Childhood Special Education.

Overall, however, the results suggest a pattern of consistent, positive outcomes for families who received services from the Relief Nurseries during the past biennium. Especially given the high-risk profile of these families, the pattern of positive outcomes across a number of domains

is very encouraging, and suggests that the Relief Nurseries are helping families to provide safe and stable environments for their children that will help them to avoid involvement with the child welfare system and support positive long-term outcomes.

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