RAISINGSTL
Better Paths to Health & Learning
for St. Louis Children

2016

Annual Evaluation Report

Acknowledgements

This report was developed by:

Smriti Bajracharya
Sarah Bobmeyer
Nikole Lobb Dougherty

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For more information, please contact:

Nikole Lobb Dougherty
Associate Director
Center for Public Health Systems Science
Washington University in St. Louis
1 Brookings Drive, Campus Box 1196
St. Louis, MO 63130
nlobbdougherty@wustl.edu

Center for Public Health Systems Science

GEORGE WARREN BROWN SCHOOL OF SOCIAL WORK

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INTRODUCTION

Poor infant health is a major public health concern in the City of St. Louis, with a high infant mortality rate of 11.2 infant deaths per 1,000 live births, compared to 7.3 infant deaths per 1,000 live births across Missouri.[1] Additionally, 22% of family households living in the City of St. Louis are in poverty, compared to 11% in Missouri.[2] Poor health outcomes in the City of St. Louis is inter-related with low socioeconomic status of the city residents.

In response to the complex and inter-related health, education, and income disparities in neighborhoods near Barnes-Jewish Hospital, BJC HealthCare created Raising St. Louis program (RSTL) in 2014 with an ambitious goal to ensure **all children born in the City of St. Louis be healthy and be able to read on grade level by third grade.** RSTL partners with existing effective organizations to bring services to families in a coordinated, systematic way. The program's core components include home visits (from **Nurses for Newborns** and **Parents as Teachers**), monthly parent support meetings (i.e., Family Connections Meetings), navigation of health and social services, and encouraging early and adequate prenatal care (Figure 1).

Figure 1. Core Components of RSTL program

This is the third-year evaluation report for the RSTL program. The report begins with demographic information of active moms in the program, followed by findings corresponding to six out of the seven evaluation questions. Data on the evaluation question about academic achievement of children is excluded from this report because the oldest RSTL child is not school-aged yet. Each section has findings corresponding to each of the evaluation questions, followed by a set of recommendations.

Evaluation findings presented on this report primarily used data from the RSTL database between **January 1, 2014, and December 31, 2016**. Where relevant, the report also includes findings from a RSTL Implementation Survey conducted in fall of 2016.

The overall sample size is still small and therefore has limitations related to the generalizability of the findings. However, the information can be used and has been used to inform planning, further development and expansion, and continuous improvement of the program.

See **Appendix A** for more details on the program background, **Appendix B** for the program logic model, **Appendix C** for goals and objectives, and **Appendix D** for evaluation methods.

[1] Missouri Department of Health and Senior Services. (2015). Infant Health Profile for St. Louis City. Retrieved June 19, 2017, from http://health.mo.gov/data/mica/ASPsInfant/header.php?cnty=191t

[2] Missouri Census Data Center. (2017). ACS Profiles for St. Louis City and Missouri. Retrieved May 19, 2017, from https://census.missouri.edu/acs/profiles/report.php?p=25&g=05000US29510

WHO PARTICIPATED IN RSTL?

Women were eligible to participate in RSTL if they were pregnant at the time of enrollment and resided in the 31 targeted zip codes within the City of St. Louis. **Participants were officially "enrolled" in the program and become "active" after they had undergone two home visits that introduced them to the program and services in greater detail, and their first foundational Parents as Teachers (PAT) visit.** This provided an opportunity for families to learn more about the program and its staff**. The number of active participants in the program grew from 86 at the end of 2015 to 145 at the end of 2016**.

By the end of 2016:

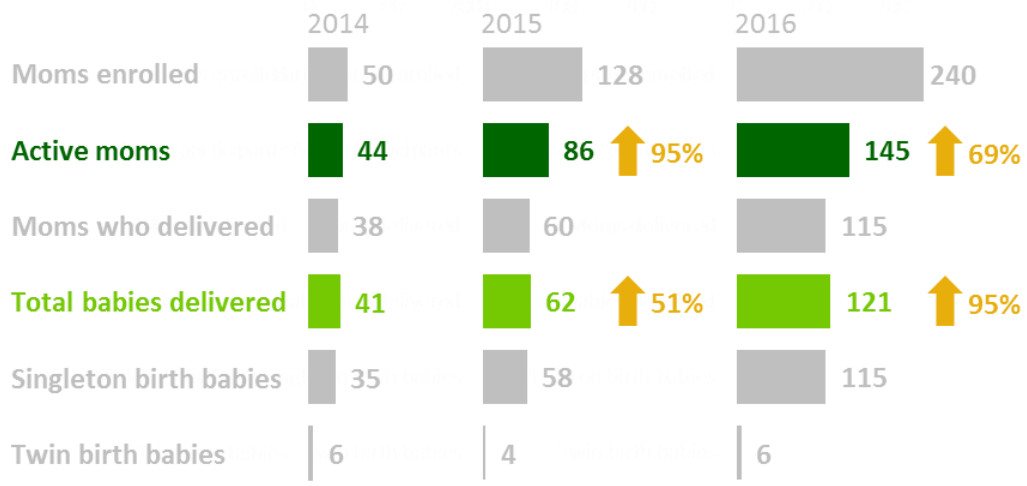
- **240** moms had ever enrolled
- **145** moms were active in the program
- **115** moms delivered babies
- **121** babies were delivered
- **115** singleton babies were born
- **6** twin babies born (3 sets)

Out of 240 moms who ever enrolled since the launch of the program, 145 moms were active in the program at the end of 2016. The attrition rate in the program by the end of 2016 was 40%. **The program retained 60% of the enrolled participants, which is a decrease from last year's 67% retention rate and less than RSTL's annual goal of 65%**. See Figure 2 for a comparison of number of RSTL participants enrolled in 2014, 2015, and 2016.

The most common reason participants were dropped from the program was due to RSTL staff's loss of contact with them (for example, no response, regularly missed visits, moved without providing a new address, etc.), which reflects the transient nature that is common to the population currently being served.

In 2016, RSTL implemented a 're-engagement protocol' and successfully re-engaged 30 moms in the program after a lapse in participation. If the number of re-engaged participants grows, the evaluation team recommends that future analysis compare the outcomes of continuously engaged and re-engaged participants to assess differences in the program's impact.

Figure 2. Comparison of 2014, 2015, and 2016 enrollments and births



What are the demographic characteristics of RSTL participants?

Figure 3 shows the demographic characteristics of active moms (n=145) as of the end of 2016:

- **Age**: The average age of RSTL moms was 27 years old (median = 26 years old). The youngest participant was 14 years old and the oldest was 41 years old. The majority of moms (64%) were young adults between the ages of 18 years and 29 years.

- **Employment**: Nearly a third of the RSTL moms (32%) were unemployed. Slightly more than a quarter of the participants (26%) had a full-time job and 23% had a part-time job.

- **Race and Ethnicity**: The majority of RSTL moms (88%) were African-American, followed by biracial moms (3%) and Caucasian moms (1%). More than 90% of moms were non-Hispanic.

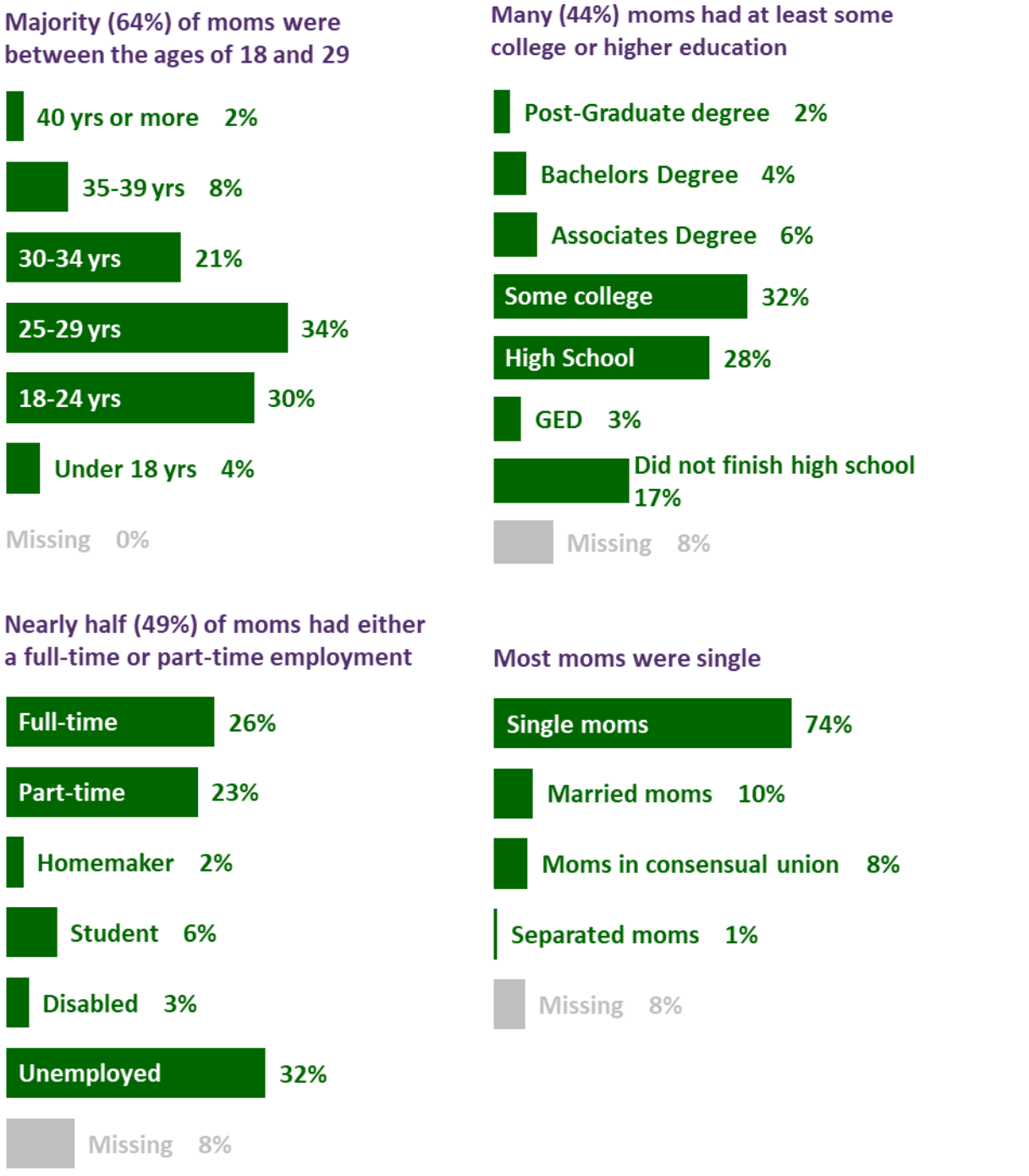
- **Education level**: Many RSTL moms reported that they had completed some college (32%), followed by 28% who had completed high school. About 17% of moms had not finished high school.

- **Marital status**: Most RSTL participants were single (74%). Eighteen percent of moms were either married (10%) or were in a consensual union (8%).

- **Motherhood status**: Most RSTL moms (59%) were non-first-time moms, meaning they had children before enrolling in the RSTL program. First-time moms, made up 40% of the active RSTL moms. Three first-time moms became pregnant for the second time while active in the RSTL program; two of them gave birth before the end of 2016 and the third mom was due to give birth in 2017.

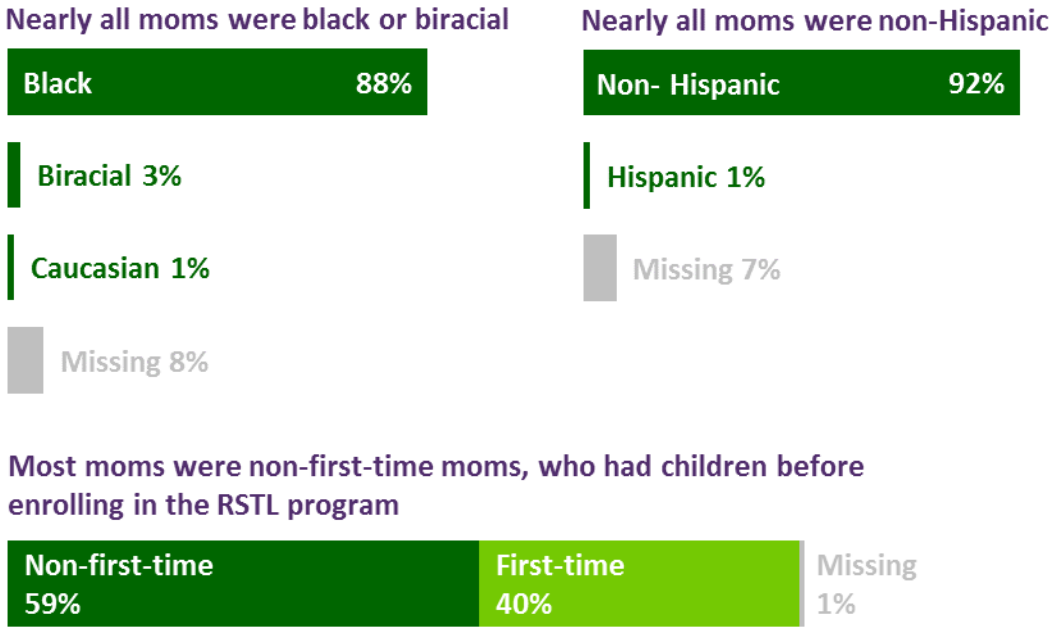
At the end of 2016, **31 participants were pregnant and 115 participants had given birth**, including two moms who gave birth for the second time while participating in the RSTL program (i.e., moms whose status changed from first-time moms to non-first-time moms). In addition, almost all moms who were pregnant at the end of 2016 were in their third trimester (94%), with the remainder of pregnant moms in their second trimester. As seen in Figures 3-5, as of the end of 2016, of the children who had been born, nearly half (45%) were 0-5 months old. **On average, children were 9.7 months old, ranging from 4 days old to 2.9 years in age**. As RSTL babies grow, RSTL should continue to monitor potential challenges for moms to continue with the program as moms may move or return to work after their children are older, and what the program can support moms to stay in the program.

Figure 3. Demographic characteristics of 145 active RSTL moms
(*age, education level, employment, marital status, race, ethnicity, motherhood status*)



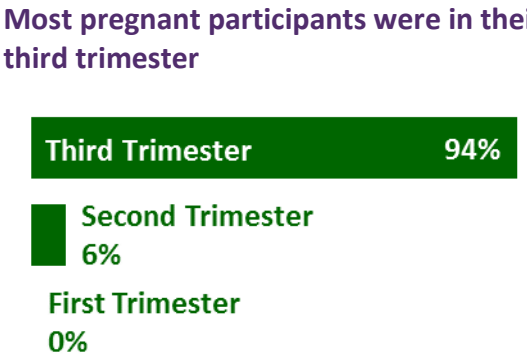
(n = 145)

Figure 3. Demographic characteristics of 145 active RSTL moms (continued)
(*age, education level, employment, marital status, race, ethnicity, motherhood status)*



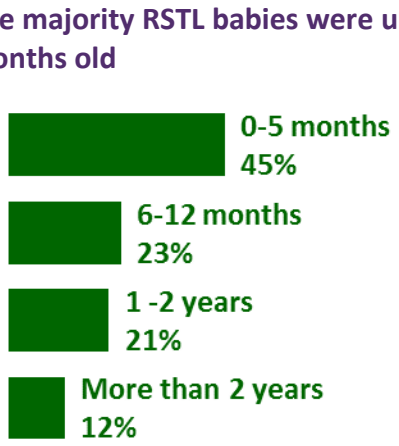
(n = 145)

Figure 4. Developmental stage of pregnant moms as of the end of 2016



(n = 31)

Figure 5. Developmental stage of babies born as of the end of 2016

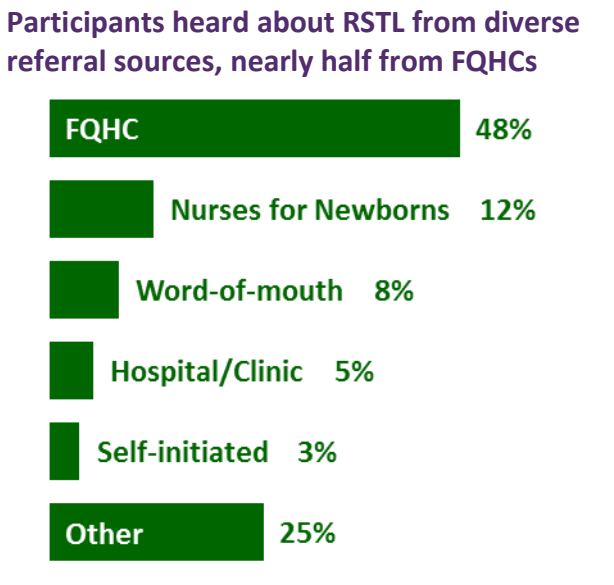


(n = 121)

How did participants hear about the program?

RSTL participants heard about the program from diverse avenues. **Nearly half (48%) of the participants heard about RSTL through Federally Qualified Health Centers (FQHCs)** such as Grace Hill Health Center (28%), Myrtle Hilliard (14%), and People's (6%). Sources under "Other" include, but are not limited to, participants referred from Perinatal Behavioral Health Service (PBHS) (6%), Birthright (3%), and St. Louis Public Schools (1%). Figure 6 elaborates on multiple categories of referral sources for participants where they first heard about RSTL. See Appendix G for more details on referral sources.

Figure 6. Referral sources of RSTL moms

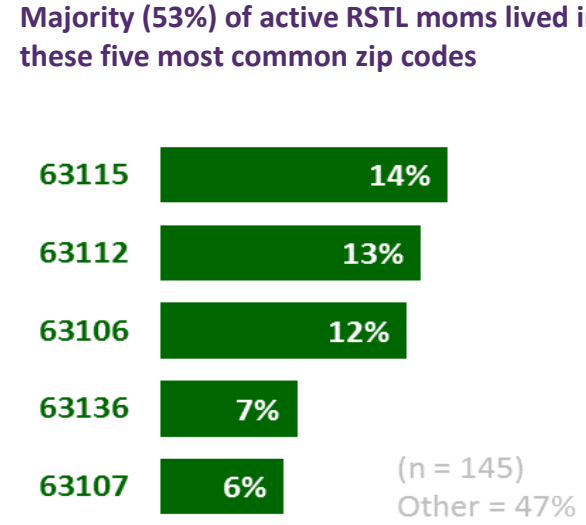


Where do RSTL participants live?

RSTL currently serves moms living in 28 zip codes in St. Louis City and County, which is a significant increase from year one and two. Figure 7 shows the five most common zip codes, where more than half of active RSTL moms lived, as of the end of 2016. All the participants lived within the targeted service areas at the time of enrollment. The largest proportion (14%) of active RSTL participants lived in the 63115 zip code. See Appendix F for a full list of zip codes.

In 2016, 28% of all active participants moved to a new zip code at least once, twice as many as in 2015. Some moms moved within the same zip code, while others moved to a different zip code within the RSTL service area. Figure 8 shows the geographic distribution of home zip codes of participants (e.g., primary residence), as of December 31, 2016.

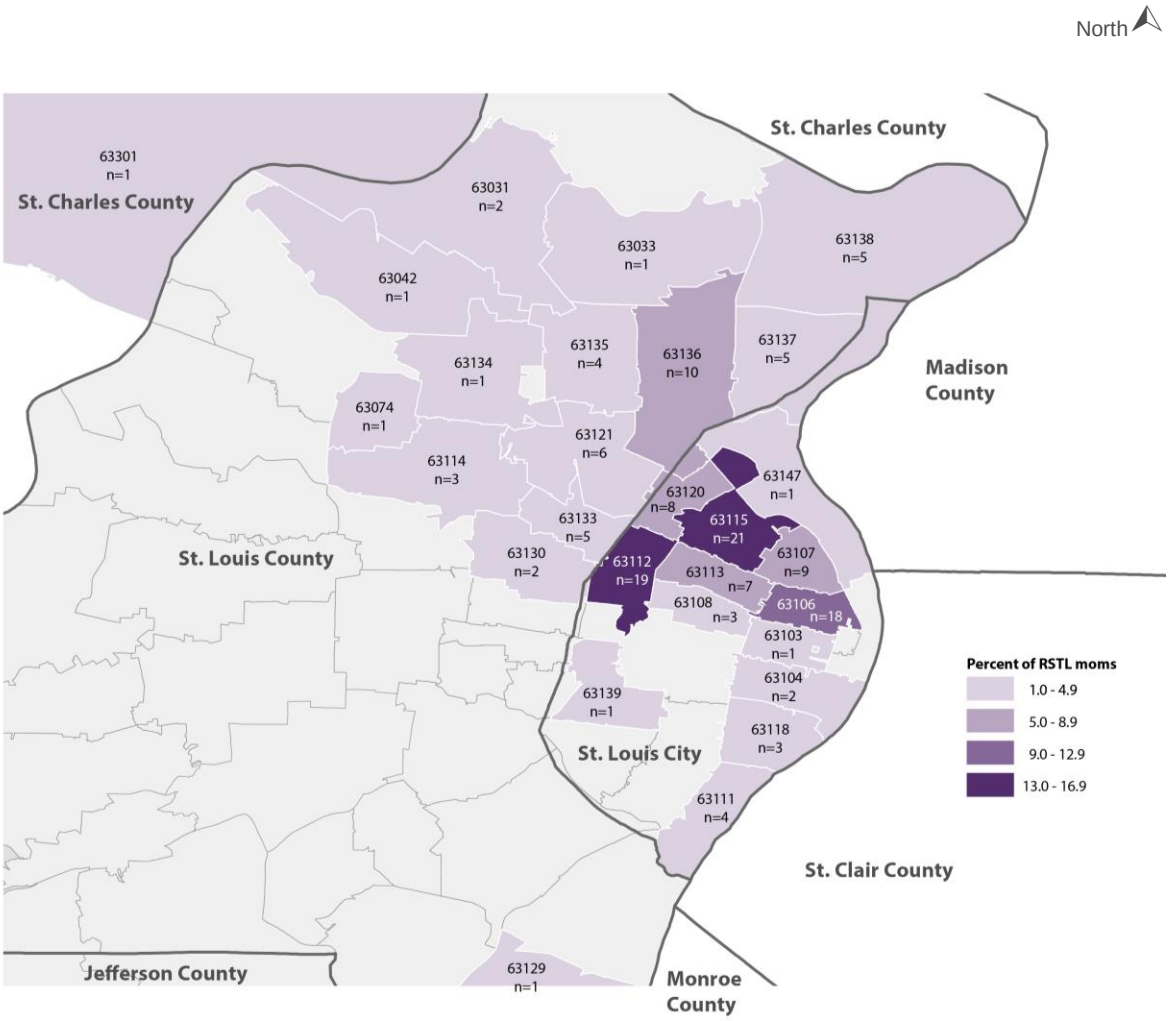
Figure 7. Most common home zip codes of RSTL moms



Of the participants who moved to a new zip code, one-third changed their address three or more times. This demonstrates the transient nature of the population served. As of the end of 2016, the program has lost 14% of the enrolled participants either because the participants moved or the family could not be located. RSTL staff members continue to follow participants,

as best as they can, if they move outside the zip code at enrollment but are within St. Louis City or County.

Figure 8. Geographic distribution of home zip codes of RSTL moms at the end of 2016

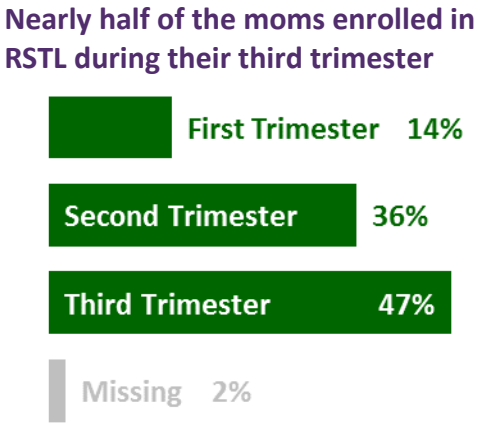


What was the typical number of days in the program prior to delivery?

The number of days that moms spent in the program prior to delivery widely ranged between 0 to 279 days, including two moms who experienced second birth while active in the program. On average, moms spent 99 days (median = 84.5 days) in the program before giving birth.

The largest proportion (47%) of women enrolled in the RSTL program were in their third trimester of pregnancy, similar to year one and year two of the program. See Figure 9.

Figure 9. Moms' trimester at enrollment



Recommendations for enrollment in RSTL

Below are some recommendations regarding participation and enrollment in the RSTL program, based on the experiences in 2014, 2015, and 2016:

- **Actively recruit and enroll participants early in their pregnancies.**
  Majority of moms continue to be in their third trimester when they enroll in RSTL. RSTL has less time to make an impact on birth outcomes for women who enroll in the program later in their pregnancies. We continue to recommend the program to consider an upper limit for enrolling participants in the program if impacting birth outcomes is a priority. Alternatively, as sample sizes increases, birth outcomes of babies born to moms enrolled in RSTL during different trimesters can be assessed separately.

- **Continue to track the RSTL staff's capacity to conduct home visits and number of families served by each parent educator.**
  RSTL moms' geographic location has expanded significantly in 2016, compared to 2014 and 2015. As the program staff members continue to follow participants to conduct required home visits, the program should also track the logistics of delivering services, such as travel time to/from visits, and visit length per participant to inform case management in the future. Being mindful of RSTL staff's caseload characteristics can help in maintaining high quality for home visits and data collection.

- **Employ strategies to improve the retention rate.**
  Given the falling retention rate, a deeper examination of reasons for participant drop out might be worthwhile. Participants who are continuously engaged are likely to benefit the most from program participation (i.e. higher dose), compared to re-engaged participants. In this report, participants who were re-engaged after 90 days (n = 1) were excluded from birth outcomes analyses. Similar criteria should be applied in the future analyses for moms that drop in and out of the program.

TO WHAT EXTENT IS THE PROGRAM IMPLEMENTED WITH FIDELITY TO THE RSTL SERVICE DELIVERY MODEL?

The program tracked fidelity to key components of the RSTL program in order to measure quality of program implementation. Below is a summary of the fidelity to the RSTL programs.

Home Visits

RSTL utilizes two well-established home visitation models: Nurses for Newborns (NFN) and Parents as Teachers (PAT). NFN nurses work closely with RSTL parent educators (RSTL is a PAT affiliate) to conduct visits separately and jointly, when necessary.

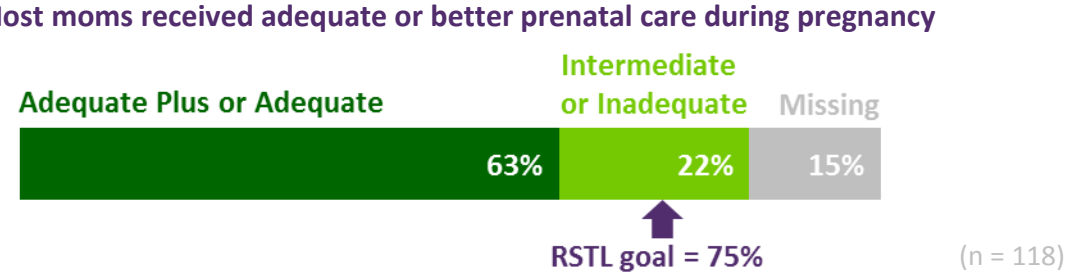
RSTL team is currently working with the database developers to rebuild the visit level report and therefore, the findings shared in this section reflect a sample of active moms as of the end of 2016. PAT visit data is available for 69 moms (48% of active moms) and NFN visit data is available for 48 moms (33% of active moms).

Within the sample of data, 2,385 visits were scheduled, out of which, 1,944 visits (82%) were successfully completed. Of the 1,944 total visits completed, 279 were NFN visits (14%) and 1,665 were PAT visits (86%).

Prenatal care adequacy

RSTL uses **the Kotelchuck Index** to assess the adequacy of prenatal care that pregnant mothers receive during pregnancy. The Kotelchuck Index uses two self-reported elements: 1) when prenatal care began (initiation) and 2) the number of prenatal visits from when prenatal care began until delivery (received services). Among 118 total births, 63% of moms received Adequate Plus or Adequate prenatal care, as shown in Figure 10. In addition, 59% of first-time moms and 68% of non-first-time moms received Adequate Plus or Adequate prenatal care. This is a decline from 71% of active moms who received Adequate Plus or Adequate prenatal care in 2015. The program also did not achieve the RSTL goal of 75% of active moms having Adequate or better prenatal care during pregnancy.

Figure 10. Adequacy of prenatal care among active RSTL moms



In addition to providing resources and discussing developmental expectations with families, nurses and parent educators use home visits to conduct periodic assessments on the health and well-being of moms and children. Currently, assessments examine potential risk factors for high excessive stress and postpartum depression among mothers. Separate assessments screen babies and children for developmental delays, socio-emotional development, and health,

hearing, and vision screenings. Early detection through these assessments can reduce risk factors and promote positive development among both mothers and children.

Stress

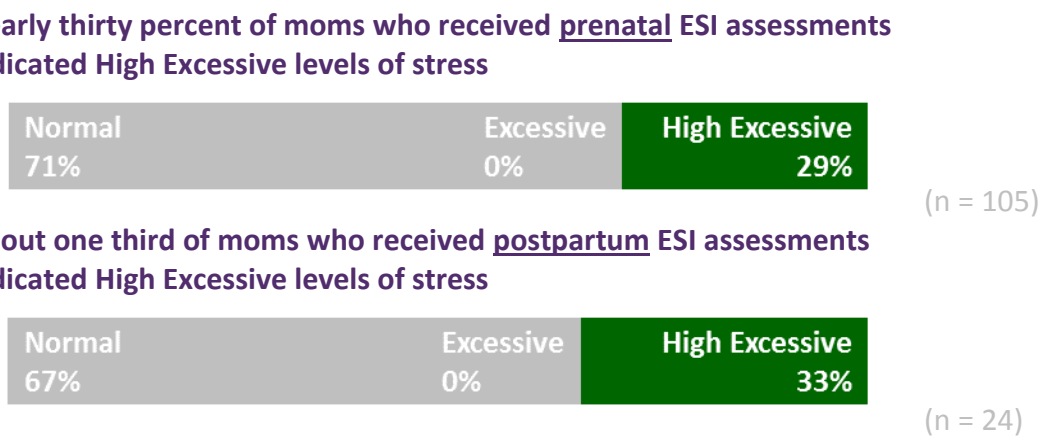
The Everyday Stressors Index (ESI) is a standard tool used by NFN nurses for assessing level of stress during home visits. The Index assigns a score after each assessment that reflects Normal, Excessive, or High Excessive levels of stress. The goal is to use this tool to assess RSTL participants' stress levels at least once prenatally and at least once postpartum. As of the end of 2016, the team had at least one prenatal ESI score for 105 moms (or 72% of all active moms) and at least one postpartum ESI score for 24 moms who had delivered babies (or 20% of moms who had delivered by end of 2016).

Figure 11 below presents the proportion of moms reporting each level of stress, prenatally and postpartum. Of the moms with completed ESI assessments, a slightly lower proportion (29%) of moms reported High Excessive levels of stress prenatally, compared to 33% of moms with High Excessive levels of stress after child delivery.

In prenatal ESI assessments among non-first-time moms, 38% showed High Excessive stress, which was twice as high compared to High Excessive stress among first time moms (15%). Similarly, in postpartum ESI assessments, High Excessive stress among non-first-time moms was 40%, compared to none among first time moms. Moms who have had previous children might have experienced higher level of stress in the postpartum period due to having to manage older children and a newborn.

Overall, eight active moms were ever diagnosed with High Excessive stress in postpartum, and two of them received follow-up visits.

Figure 11. Stress levels of RSTL moms, prenatal and postpartum

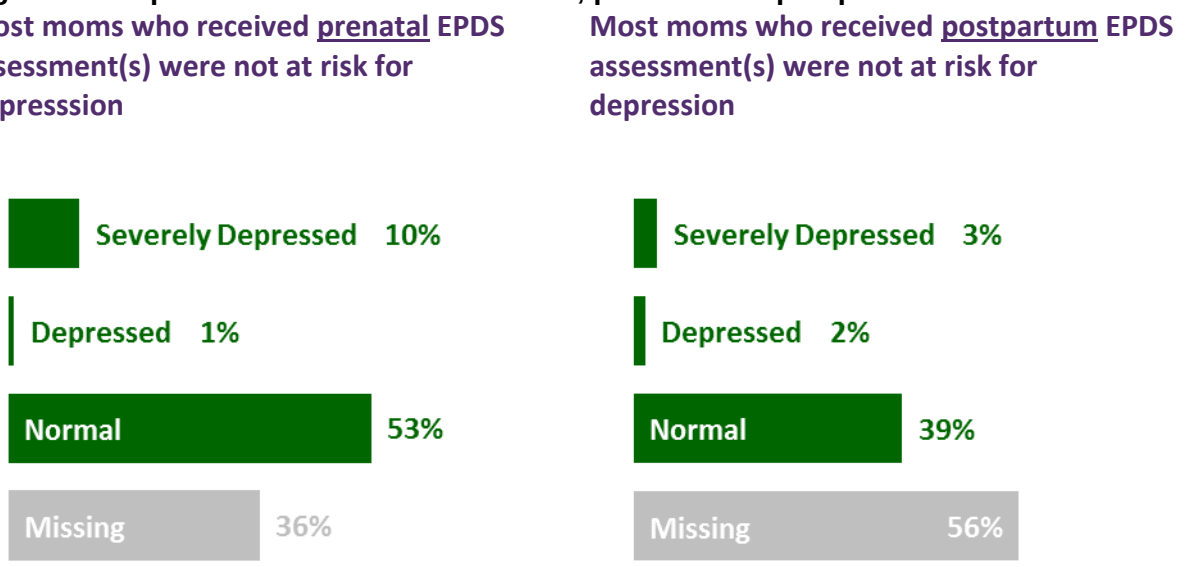


Depression

The **Edinburgh Postnatal Depression Scale (EPDS)** is a standard tool used by NFN nurses for assessing depression in mothers. Based on the scores obtained (e.g., number of risk factors identified) from the tool, moms are classified as within Normal, Depressed, or Severely Depressed range. If RSTL moms are identified to be Depressed or Severely Depressed, NFN nurses navigate those moms to services to cope with the depression.

Originally, the service delivery model called for nurses to administer this assessment to moms once prenatally and then again at 30 days, 60 days, 120 days, and 6-months postpartum, per the NFN clinical guidelines. However, NFN nurses are often not serving RSTL families more than a few months postpartum, unless required by certain health needs. Therefore, the RSTL team is in the process of developing a protocol which will outline the frequency and timeline of administration of this assessment postpartum to allow parent educators to conduct this assessment at multiple time points (e.g., at six, twelve, and 18 months postpartum), and if/when nurses are no longer engaged with the participants. See Figure 12 for assessment outcomes.

Figure 12. Depression levels of RSTL moms, prenatal and postpartum



(n = 118)

As of the end of 2016, 64% of moms have a prenatal EPDS assessment on record, and 44% of moms who had delivered had at least one postpartum EPDS assessment conducted. A higher proportion of non-first-time moms showed depression in both the prenatal and postpartum period, compared to first-time moms. Non-first-time moms might be experiencing more challenges as they have to manage older children and a newborn. Overall, there were six cases of active moms who were depressed or severely depressed in postpartum, and two of those cases received follow-up assessments.

ASQ-3 and ASQ-SE

One way to support children's development is through frequently screening for potential developmental delays and socio-emotional challenges. Children who are increasingly exposed to risk factors such as poverty or toxic stress have a higher likelihood of depression, anxiety, and anti-social behavior.[3] For this reason, RSTL parent educators utilize well-known and family-friendly ways to **screen children between the ages of one month and five and a half years old for developmental delays (ASQ-3), and potential social-emotional concerns (ASQ-SE)**. The ASQ-3 assessment is administered at two months of age and then at six, twelve, 18, 24,

[3] Shern, D., Blanch, A., & Steverman, S. (2014). Impact of Toxic Stress on Individuals and Communities: A Review of the Literature. Alexandria, VA: Mental Health America.

30, 36, 42, 48, 54, and 60 months of age. The ASQ-SE assessment is administered at six, twelve, 18, 24, 30, 36, 48, and 60 months of age.

The RSTL goal of completing 90% of all ASQ-3 and ASQ-SE screenings for eligible babies was partially met, as can be seen in Figure 13. The numbers in grey on the right of the figure indicate the number of babies who were eligible for the screening at the end of 2016, but were not yet past due for this assessment (e.g., within the grace period allowed for this assessment). Out of all of the ASQ-3 and ASQ-SE screenings that were conducted in 2016, there is no knowledge of children whose assessments indicated concerning results for potential development delays or socio-emotional concerns.

Vision, hearing, and health

RSTL children also undergo screenings for vision, hearing, and health in order to increase preventative practices. RSTL's goal for 2016, was that 80% of all eligible children would receive these screenings within the recommended time frame (e.g., by the time they were six months old). As seen in Figure 14, the program partially met the goal of completing assessments.

Figure 13. ASQ-3 and ASQ-SE screenings of RSTL children

For most administrations, less than 90% of eligible children received the ASQ-3 and ASQ-SE assessments, which is the RSTL administration goal

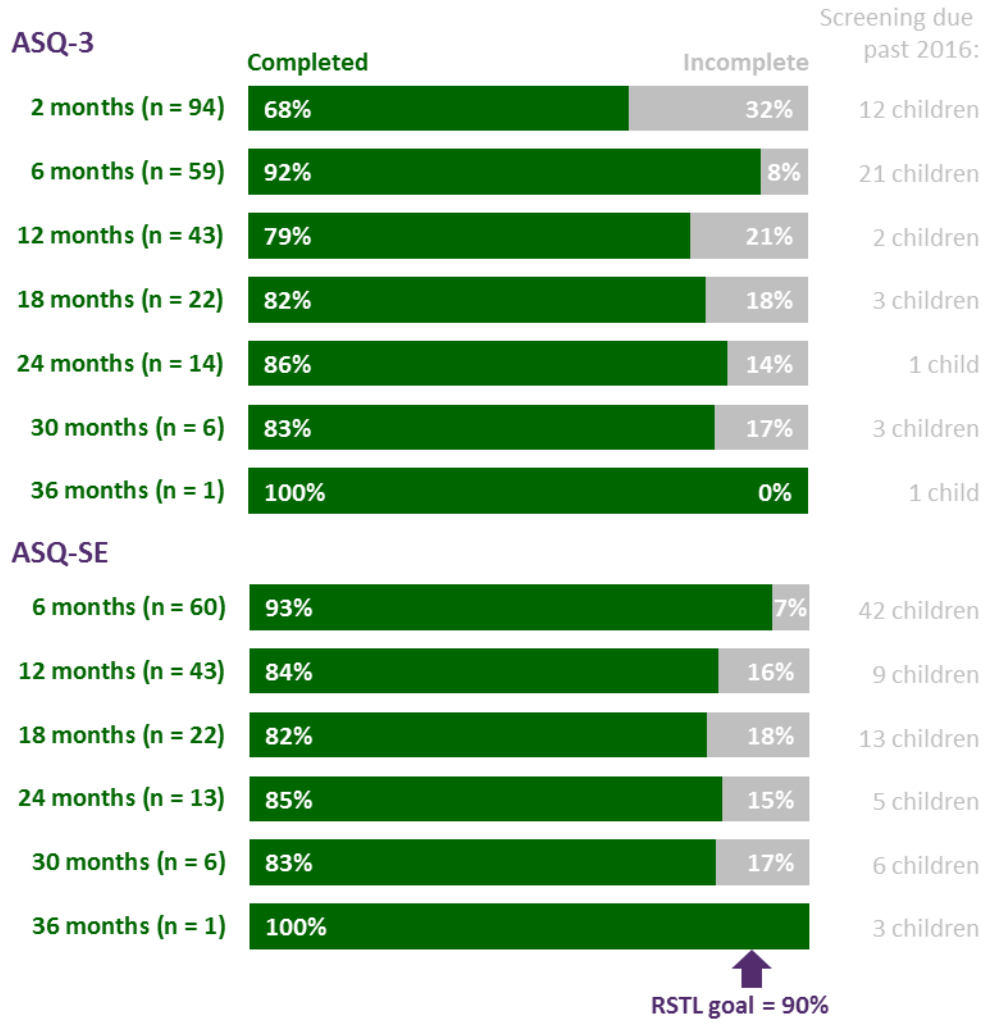
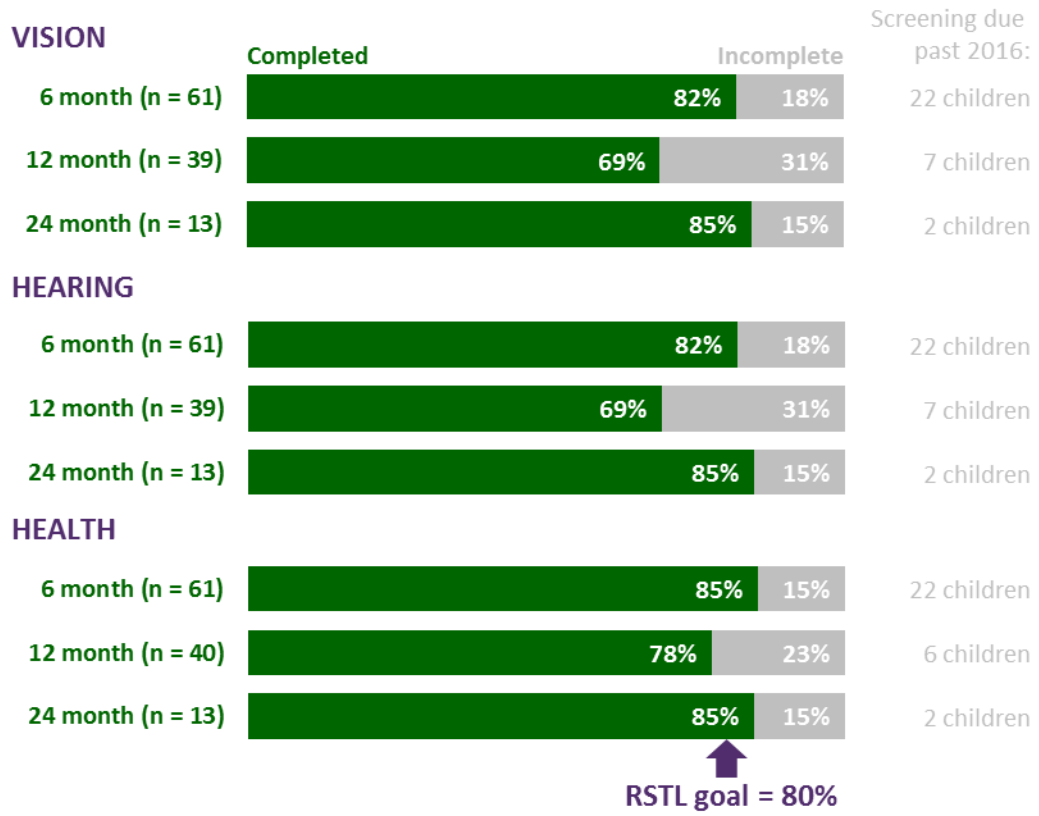


Figure 14. Vision, Hearing, and Health screenings of RSTL children

All children eligible to receive their vision, hearing, and health assessments at 6 months and 24 months met the 80% RSTL goal



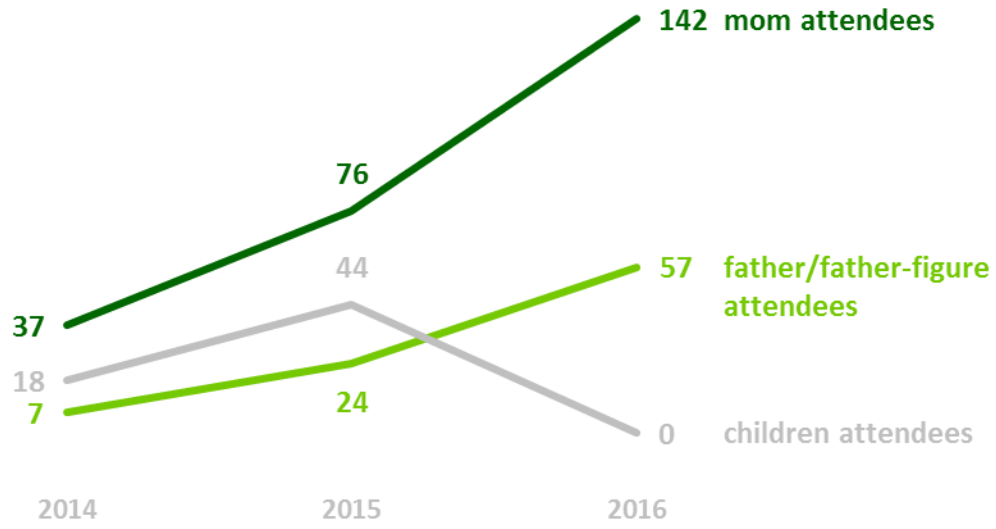
Family Connections Meetings

Another key component of the RSTL program is to provide support to caregivers through parent support groups called Family Connections Meetings. RSTL hosted a total of 27 Family Connections Meetings by the end of 2016 (about one every month). In 2014, there was a delay in the ramping up of these meetings, and the meetings did not begin until June 2014. As a result, only five meetings were held during the first year and the goal was not met. In 2015, RSTL hosted twelve Family Connections Meetings. In 2016, RSTL hosted ten Family Connections Meetings between February and November. For details about topics and participation in Family Connections Meetings, see Appendix E.

Overall, the number of moms and fathers/father-figures attending Family Connections Meetings has increased over the years (see Figure 15). On average, nine moms and three dads have participated in the Family Connections Meetings between June 2014 and December 2016. Compared to 2014, the average number of moms who attended the meeting doubled from seven moms per session to 14 moms per session. Similarly, the average number of fathers/father-figures increased from one in 2014 to six in 2016. Over the three years, 64 unique moms have attended various Family Connections Meetings, including some moms who have attended 14 out of 27 meetings. With the passing time and as more families benefit from attending the meetings, the participation of families in the meetings has grown.

Figure 15. Number of attendees at Family Connections Meetings (2014, 2015, & 2016)

Family Connections Meetings have experienced increased participation from moms and father/father-figures over the years



The most attended meeting by moms so far was "*RSTL Table Talk*" in November 2015, (39 moms attended), followed by "*Job and Education Forum*" in September 2016 (25 moms attended). The exceptional participation of moms and dads in "*RSTL Table Talk*" can be partially attributed to heavy marketing of the meeting, which included sending flyers about the meeting and providing other unique incentives to each family to encourage participation.

At least one father/father-figure was present in 21 Family Connections Meetings between June 2014 and December 2016, with the highest attendance occurring in November 2015 (twelve dads attended). The next highest instance of father/father-figure present at the meeting was in November 2016, attended by eleven dads. Raising St. Louis has been collaborating with Father Support Center to engage fathers in these meetings and more generally.

Need identification, resource referrals, and resource utilization

One of the four main components of the RSTL program is to facilitate navigation to available social and health services. This is primarily achieved by having participants identify their need(s) during home visits, followed by nurses and/or parent educators making referrals to relevant organizations or services that could assist them with their need.

As of the end of 2016, 88 families (61%) identified 448 unique needs. Those families that had needs identified had an average of almost five needs per family, with a median of two needs (range 1-44). Out of the 448 unique needs identified, a nurse or parent educator made 215 referrals to an agency or service (or for 56% of the needs identified). Nurses and parent educators made referrals for these families to more than 55 unique organizations. See Figures 16-17.

The top five needs identified during the visits were:

- Clothing & Household items (12% of all needs identified
- Other (12% of all needs identified)
- Counseling (11% of all needs identified)
- Medical (8% of all needs identified)
- Parental Education/Skill Building (7% of all needs identified)

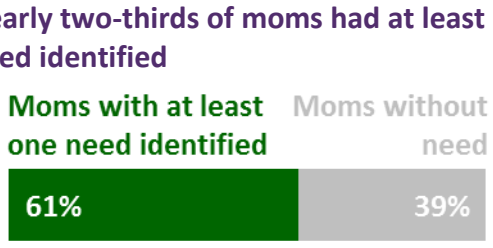
88 families had at least one need identified

448 unique needs were identified by 88 families

215 needs where given referral to agency or service was made to family

55+ agencies/services were contacted by families

Figure 16. Moms with needs identified



(n = 145 active moms)

Figure 17. Referrals made after needs identified

(n = 459 visits, where at least 1 need was identified)

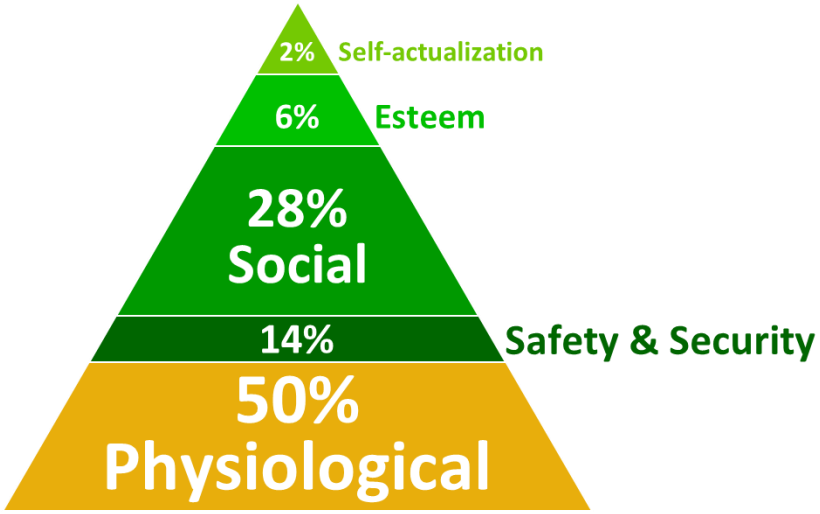
Maslow's Hierarchy of Needs suggests that people are motivated to fulfill basic needs before focusing on more advanced needs.[4] Maslow identified five levels in the hierarchy of needs: 1) Physiological needs (e.g., food, sleep); 2) Safety and Security needs (e.g., housing, employment); 3) Social needs (e.g., support services); 4) Esteem needs (e.g., education services); and 5) Self-actualizing needs (e.g., religion). Figure 18 shows the proportion of five levels of Maslow's hierarchy of needs out of 448 needs identified by participants.

Fifty percent of all identified needs were physiological needs, followed by 28% of social needs and 14% of safety needs, demonstrating the unique challenges of addressing the most basic needs among this population before being able to address more advanced needs.

[4] McLeod, S. (2007). Maslow's Hierarchy of Needs, from http://www.simplypsychology.org/maslow.html

Figure 18. Need identified by Maslow's Hierarchy of needs

Most RSTL moms have basic, physiological needs, such as clothing and household items needs



(n = 448 needs identified)
Note: The figure excludes 52 missing or unknown needs

To what extent has the RSTL program met its goals and objectives?

Since the first year, RSTL solicited the Evaluation Advisory Committee to help develop a set of initial goals and objectives of the program that can determine the degree of success in delivering the program services and achieving program outcomes. Because the goals and objectives currently available do not fully reflect the activities and adjustments that the program went through in 2016, they have been excluded from this report. RSTL team and the evaluation team plans to review and revision the goals and objectives in the summer of 2017. See Appendix C for currently available goals and objectives.

Recommendations regarding fidelity of implementation to the RSTL service delivery model

Learning from experiences and fidelity findings in 2014, 2015, and 2016, there are a number of recommendations regarding fidelity of implementation to the RSTL service delivery model:

- **Examine reasons for decline in proportion of moms who received adequate prenatal care.**
  The overall proportion of RSTL moms who received Adequate Plus or Adequate prenatal care during pregnancy is less than in previous years. Because receiving adequate prenatal care is instrumental in achieving positive birth outcomes, RSTL should examine reasons for this decline and take measures to promote better prenatal care for moms. In addition, there was a fair amount of missing data, with 13% of moms without recorded data, which may also be contributing to this overall decline. Data completion protocols should be implemented to reduce the amount of missing data.

- **Consider tailored protocols for administration of ESI and EPDS screenings for first-time vs. non-first-time moms.**
  There is a small but visible difference in the outcomes of ESI and EPDS assessments among first-time and non-first-time moms. Therefore, the frequency of ESI and EPDS screenings must be administered accordingly to accurately capture changes in stress level and depression occurrence. Timely identification of stress and depression above normal levels may be referred to appropriate services.

- **Increase proportion of moms who receive postpartum ESI and EPDS screenings.**
  Fewer moms had received ESI and EPDS screenings at postpartum, when compared to the proportion that received these screenings prenatally. This impacts ability to adequately and accurately monitor active moms' behavioral health, as well as making timely referrals to service organizations. Therefore, more efforts should be made to increase proportion of moms who receive postpartum ESI and EPDS screenings.

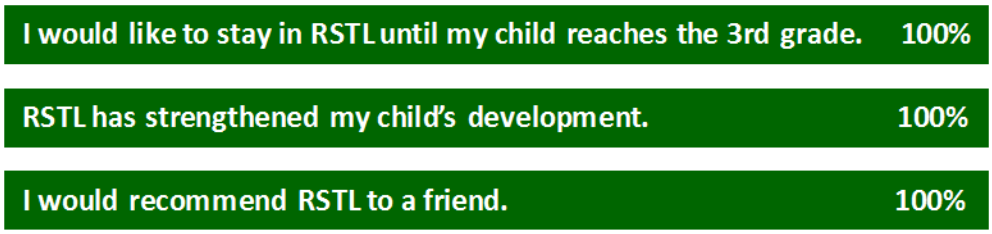
- **Consider ways to streamline the number of various assessments.**
  Assessments of moms, children, and father/father-figure engagement together make up more than six types of assessments. Furthermore, assessments regarding child developments, health outcomes, and father/father-figure engagement are often on the same or similar timetables for administration. With the increasing number of moms and babies, particularly with large proportion of babies under twelve months old, the program should consider ways to streamline the frequency, or stagger administration of different assessments at different time points. This will minimize burden on moms as well as the nurses and parent educators who conduct the assessments.

WHAT IS THE LEVEL OF PARTICIPANT SATISFACTION WITH THE RSTL PROGRAM?

Information on the level of participant satisfaction with the RSTL program in 2016 is limited to the findings from the RSTL Implementation Survey only. See Figures 19-20.

Figure 19. Level of program satisfaction

Moms and father/father-figures were satisfied and intend to continue in the program



(n = 17)

Figure 20: Participants' perceived sufficiency of information received during visits

Moms and father/father-figures thought they received sufficient information about parenting and childcare

(n = 17)

WHAT ARE COMMON BARRIERS TO PARTICIPATION IN EACH OF THE RSTL PROGRAM COMPONENTS?

Home visits: Barriers to participation

The evaluation team tracked the number of expected or scheduled visits and the number of visits actually completed in 2014, 2015 and 2016. As reported earlier in this report, the findings shared in this section reflect a sample of active moms, i.e. 308 NFN visits among 48 moms and 2,077 PAT visits among 69 moms.

Within the sample of data, 18% of scheduled visits were missed, similar to 2015 (20%). However, the proportion of missed NFN visits (9%) was less than missed PAT visits (20%). Reasons for missing a scheduled NFN and PAT visits varied.

Out of 29 missed NFN visits, the most common reason for missing a visit (28%) was “no answer at visit”. Reasons for missing NFN visits include:

- No answer at visit 28%
- Other 17%
- Refused visit 14%
- Hospital visit 7%
- Moved without providing a new address 3%

Out of 412 missed PAT visits, the most common reason was 142 instances of families cancelling a visit, followed by 110 instances of re-scheduling a visit. Reasons for missing PAT visits include:

- Family cancelled 34%
- Family rescheduled 27%
- No show or family did not confirm 20%
- Other 13%
  (e.g., family emergency, no answer at visit, refused a visit, staff cancelled, and hospital visit)
- Missing 5%

RSTL should consider employing multiple strategies for confirming appointments (e.g., text, phone, email) to try to decrease some of this missed visits. RSTL does provide Kids Kash for every completed visit, and a family receives bonus Kids Kash if they keep three consecutive visits in a row.

TO WHAT EXTENT ARE RSTL CHILDREN ACHIEVING AGE-APPROPRIATE DEVELOPMENTAL AND HEALTH BENCHMARKS?

Birth outcomes

By enrolling mothers while they are pregnant and providing home visits with a nurse during pregnancy, RSTL hopes to positively affect birth outcomes, such as a larger proportion of full-term births (≥37 weeks of gestation) and babies of normal birth weight (≥ 2500 grams, or 5 pounds 8 ounces). As a result of prenatal home visits, mothers have a better understanding about a normal child's health and development, and when to be concerned. Child's birth term (full-term or pre-term) was calculated based on the child's due date and date of birth. Weight of babies at birth was collected as a part of assessing birth outcomes. A majority (82%) of all singleton babies were born full-term, and a majority (83%) of all singleton births had normal birth weight. Overall, RSTL was shy of meeting its 85% target for singleton babies born full-term and with normal weight at birth. When stratified by moms' trimester when she enrolled in RSTL, it shows goals were not met for moms who enrolled in their second trimester. See Figures 21-22.

Figure 21. Full-term and pre-term singleton births among RSTL babies

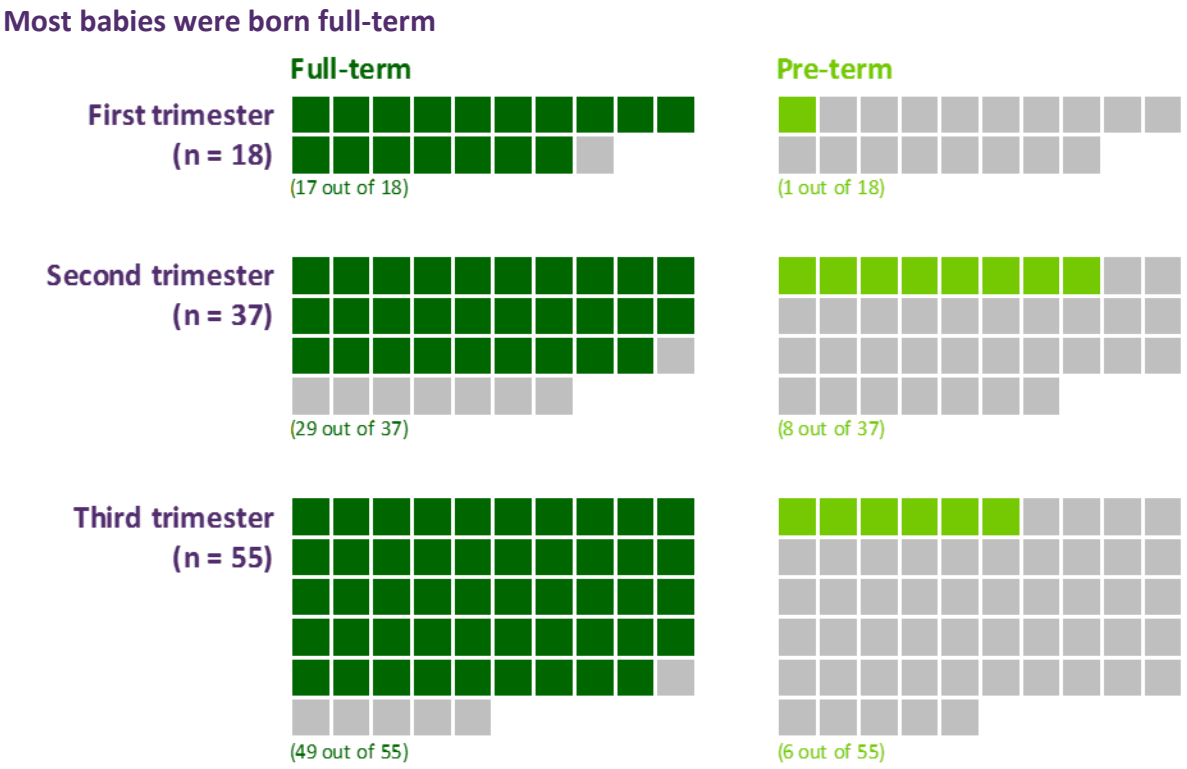
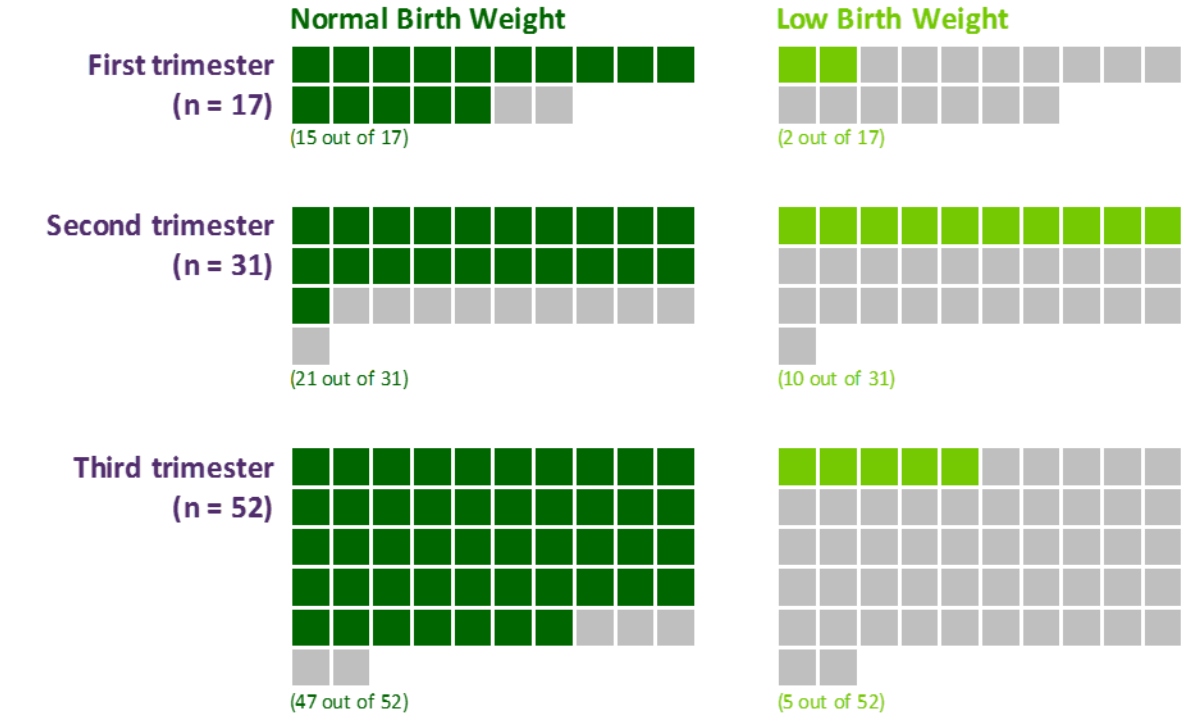


Figure 22. RSTL singleton babies' weight at birth



Health outcomes and immunizations

Nurses and parent educators continue to gather information on children's immunization through the caregivers. However, the RSTL database, as well as a detailed protocol and process to capture this information is still in progress. Therefore, in the absence of complete information, the findings have been excluded from this report and will be included in next year's report. RSTL objective continues to have at least 80% of eligible children receive recommended vaccinations within two months, as recommended by the Centers for Disease Control and Prevention.

Developmental outcomes

Similar to last year, none of the ASQ-3 and ASQ-SE screenings produced results to indicate concern for potential developmental delays or socio-emotional concerns. As seen earlier in Figure 13, the RSTL goal of completing 90% of all ASQ-3 and ASQ-SE screenings for eligible babies was met at certain administration time points but not others. Developmental screenings will continue to occur as children age.

Recommendations regarding developmental and health benchmarks

- **Engage and enroll mothers early in their pregnancies.**
  Enrolling mothers as early in their pregnancies as possible will allow the program to provide higher "dose" of services and positively affect birth outcomes. Currently, there are very few moms who enrolled in the program in their first trimester and it is hard to assess true benefit of participating in the program prior to delivery for moms and babies. In the future, if moms enrolled early in the program show positive birth outcomes compared to moms enrolled later in their pregnancies, modifications to current enrollment criteria might be considered.

- **Develop more detailed protocols for monitoring and verifying immunizations child(ren) receive.**
  The RSTL team has already started to think about how to be more systematic in recording immunizations received by children in future years of the evaluation. A more detailed protocol is expected to be finalized in the coming year.

- **Develop additional developmental and health indicators and objectives for children as they age through the program.**
  Currently, most of the outcomes related to child's health that are tracked are birth outcomes and child's developmental outcomes in early stages.

- **Develop and implement protocols that track fidelity to implementation across all visit types (e.g., visits with nurses and parent educators**).
  Currently, there is only one objective around the fidelity to minimal service level, i.e., number of home visits conducted based on need, for parent educators. Expand or revise objectives to include home visits overall, and also determine changes in level of service over time.

TO WHAT EXTENT ARE PARTICIPATING FAMILIES EXERCISING POSITIVE PARENTING PRACTICES?

To answer this question in the past, we have reported on **positive parenting practice** and father engagement. Findings about positive parenting practice in the past were based on qualitative data collected from surveys and focus group discussions. This information was not collected last year, and therefore is excluded from this report. Findings on father engagement are detailed below.

Father engagement

When the evaluation team consulted the community members during the program design phase, the team repeatedly heard the need to get fathers more involved in their children's lives. The team collaborated with the **Fathers' Support Center (FSC)**, a respected and trusted organizations working in this content area, to enhance father engagement. After some initial discussions, FSC and RSTL teams together agreed on several areas where the two could work together and be a resource for each other's clients. In late 2014, the collaboration was formalized and FSC took on the role of helping RSTL to recruit additional clients and to engage fathers more effectively. In exchange, RSTL agreed to promote FSC programs and provide information to RSTL service recipients. The FSC team is now an important stakeholder of the program who attend the monthly parent meetings and talk directly with fathers in RSTL. In the near future, FSC will play a key role in planning special events focused on fathers/father-figures in the RSTL program.

Data related to father engagement were collected in 2015 and 2016 at prenatal and postpartum. The data continue to show that a majority of families enrolled in RSTL have child's birth father present as a father-figure (73% in prenatal and 71% in postpartum administration), a contrast with findings from the program planning phase. Most moms are also in a committed relationship with the child's father or father-figure (54% in prenatal and 47% in postpartum). See Figures 23-30 for the findings.

Figure 23. Father/father-figure relationship with the child, prenatal and postpartum

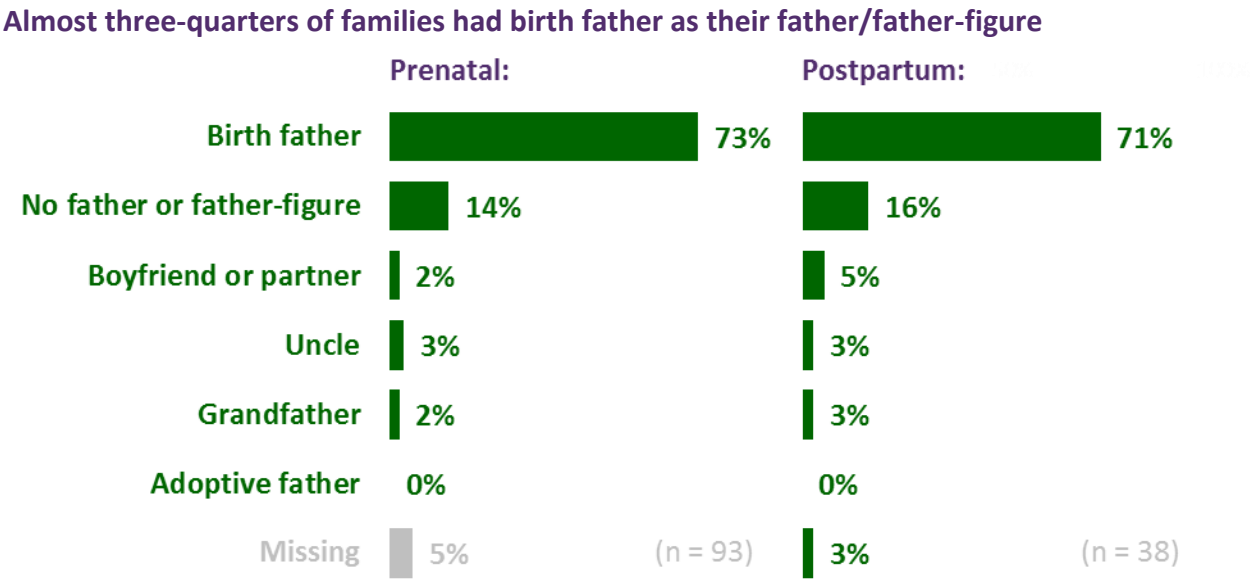


Figure 24: Caregivers' relationship with father/father-figure, prenatal and postpartum

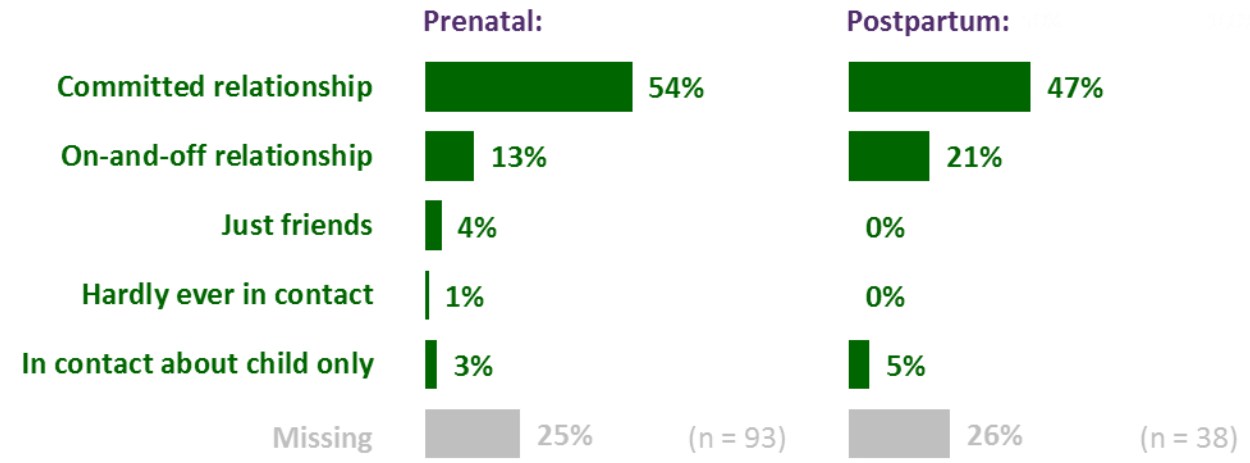


Figure 25: Child's father/father-figure living with the caregiver in the past 6 months, prenatal and postpartum

Most moms and child's father/father-figure lived together all or most of the time in the past 6 months

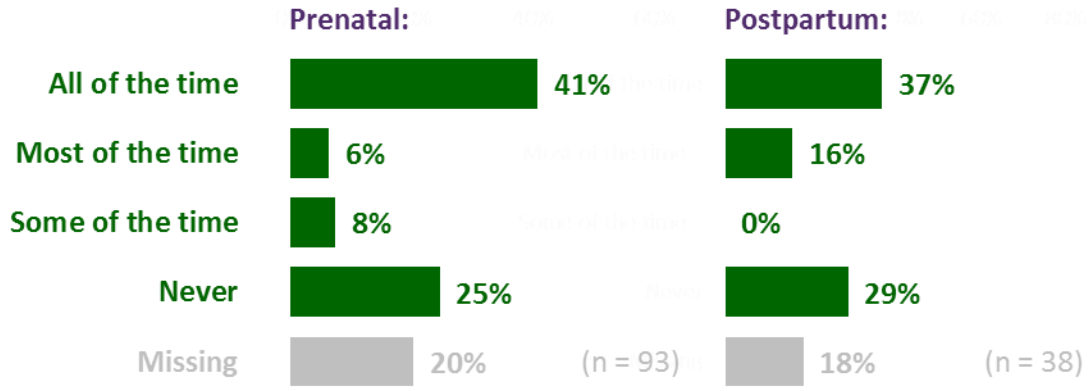


Figure 26: Caregiver's happiness with relationship with child's father/father-figure

Roughly three-quarters of moms were very happy or fairly happy with their relationship with the child's father/father-figure

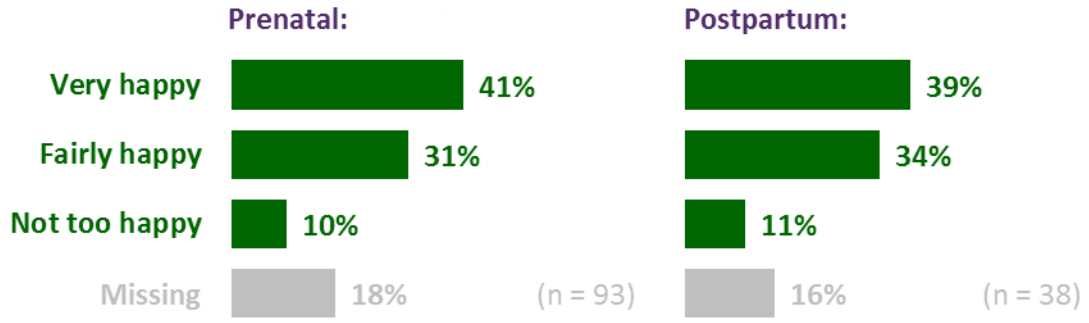


Figure 27: Father/father-figure's level of involvement with child, as reported by moms, prenatally

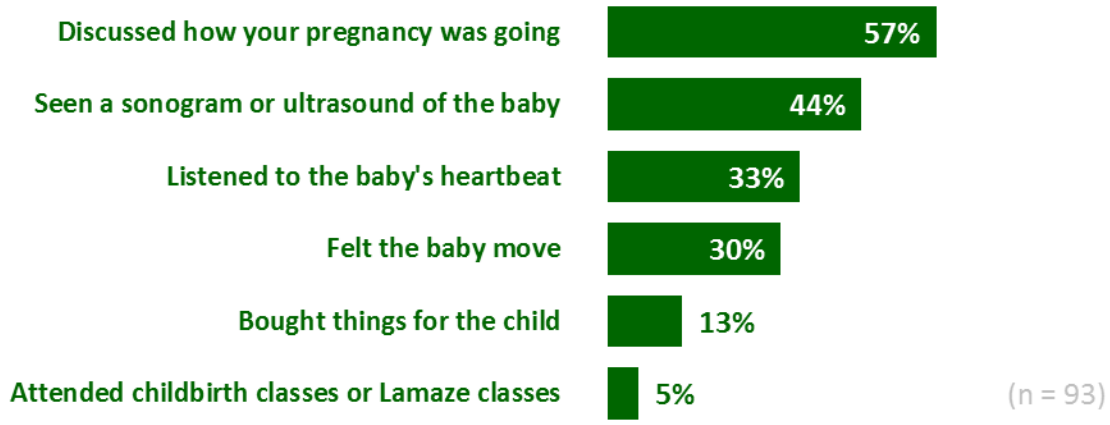


Figure 28: Father/father-figure activities with the child, as reported by moms, postpartum

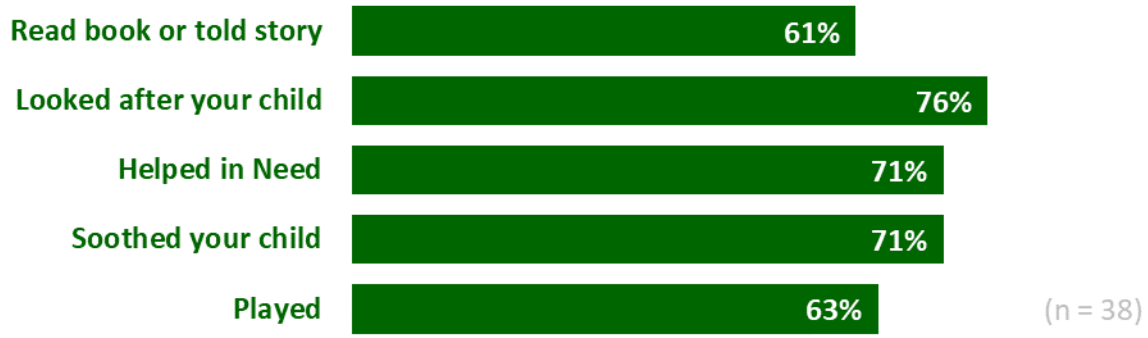


Figure 29: Father/father-figure's frequency of interaction with child, postpartum

Since most recent visit, moms said that the child's father/father-figure has seen the child:

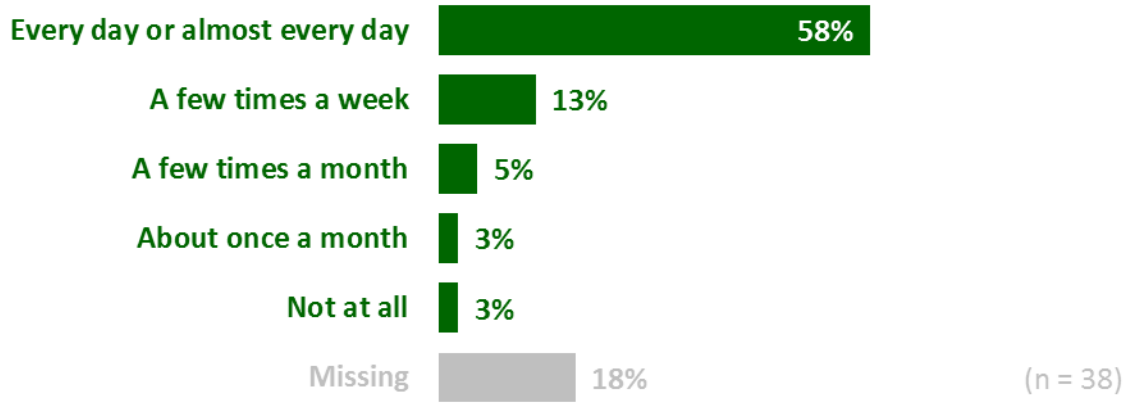
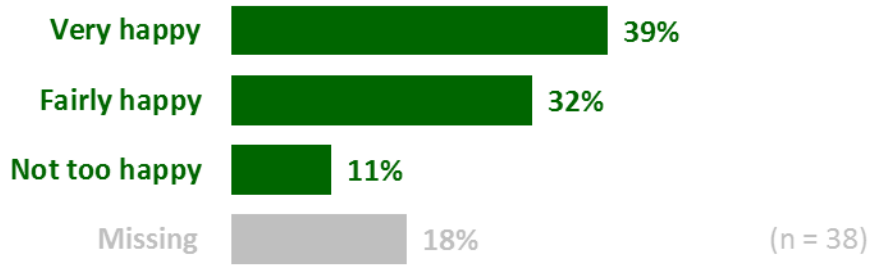


Figure 30: Father/father-figure's relationship with child, postpartum, as reported by moms

More than two-thirds of moms reported that the child's relationship with father/father-figure was fairly or very happy



Recommendations around families exercising positive parenting practices

- **Identify and implement an instrument or assessment process to document parenting practices throughout all stages of a child's development.**
  This may require selection of more than one instrument and various indicators at different developmental stages (e.g., toddler vs. school-age children).

- **Continue to encourage father/father-figure participation in the program.**
  Father engagement, as reported by moms, is lower postpartum compared to engagement prenatally. Consider strategies to encourage fathers/father-figures participation in the program, at all stages of the child's development.

- **Employ strategies or protocols that decrease the amount of father/father-figure engagement data that is incomplete or missing.**
  Continue to gather information on level of father/father-figure engagement over time. Currently, there are many instances of missing information, particularly postpartum administration of the father/father-figure engagement assessment. Having these data for a larger proportion of families can inform the development of appropriate objectives of the RSTL program around father/father-figure engagement.

TO WHAT EXTENT ARE PARTICIPANTS CONNECTING WITH ORGANIZATIONS REFERRED TO THEM THROUGH THE RSTL PROGRAM?

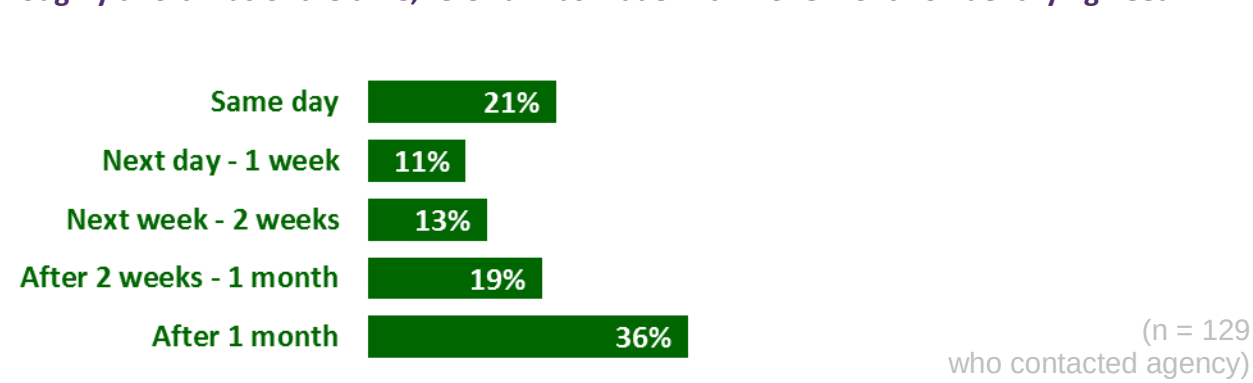
Facilitating navigation to healthcare and social services that can help in meeting the participants' needs is one of the core components of the RSTL program. During home visits, nurses and/or parent educators worked with the participants to identify needs and referred families to organizations or other entities that could be of assistance to the families.

As previously mentioned, the evaluation team analyzed data for 88 active families (61%), where 448 unique needs were identified. Those families that had needs identified had an average of almost five needs per family, with a median of two needs per family, since inception in the program (range 1-44). Out of the 448 unique needs identified, a nurse or parent educator made 215 referrals to an agency or service provider (or for 56% of the needs identified). Nurses and/or parent educators made referrals to more than 55 unique organizations.

Nurses and/or parent educators were encouraged to follow-up regarding the status of previously identified needs, in subsequent home visits, to see if the issue had been resolved. Most follow-ups occurred more than one month (36%) after the referral was made, with roughly one-quarter of follow-ups occurring on the same day (21%), and 19% of all referrals were follow-up on between two-weeks and a month (19%) after being identified. See Figures 31-32.

Figure 31. Agency contacted after referrals were made

Figure 32. Days between referrals made and agency contacted



Recommendations around resource referral and utilization

- **Fully develop and maintain a RSTL specific resource inventory of social services and/or organizations for referral.**
  It may be beneficial for RSTL staff member(s) to periodically update, expand, and revise the list of organizations or service providers available in the RSTL database – which is used by nurses and/or parent educators when making referrals to participants. A few participants have commented that they have been unsuccessful in using the resource provided to them due to inaccurate or out-of-date information (e.g., a phone number no longer works).

- **Expand data collection around the extent to which participants are connecting with organizations or services they are referred.**
  Currently, nurses and/or parent educators record whether or not a participant connected to an organization (e.g., Yes/No). Additional details about if, and to what degree, need was met could also be documented to provide greater detail on whether referrals are meeting the needs of families.

- **Expand data collection around the extent to which participants are utilizing the services of the RSTL social worker.**
  Home visitors will refer the RSTL social worker to connect with families with certain kinds of needs or challenges. Currently, there is little formal documentation around when and how these services are utilized. Develop a protocol for documenting the support provided by the RSTL social worker into data collection and analysis process.

Summary of all recommendations

Recommendations for enrollment in RSTL

- **Actively recruit and enroll participants early in their pregnancies.**
  Majority of moms continue to be in their third trimester when they enroll in RSTL. RSTL has less time to make an impact on birth outcomes for women who enroll in the program later in their pregnancies. We continue to recommend the program to consider an upper limit for enrolling participants in the program if impacting birth outcomes is a priority. Alternatively, as sample sizes increases, birth outcomes of babies born to moms enrolled in RSTL during different trimesters can be assessed separately.

- **Continue to track the RSTL staff's capacity to conduct home visits and number of families served by each parent educator.**
  RSTL moms' geographic location has expanded significantly in 2016, compared to 2014 and 2015. As the program staff members continue to follow participants to conduct required home visits, the program should also track the logistics of delivering services, such as travel time to/from visits, and visit length per participant to inform case management in the future. Being mindful of RSTL staff's caseload characteristics can help in maintaining high quality for home visits and data collection.

- **Employ strategies to improve the retention rate.**
  Given the falling retention rate, an deeper examination of reasons for participant drop out might be worthwhile. Participants who are continuously engaged are likely to benefit the most from program participation (i.e. higher dose), compared to re-engaged participants. In this report, participants who were re-engaged after 90 days (n = 1) were excluded from birth outcomes analyses. Similar criteria should be applied in the future analyses for moms that drop in and out of the program

Recommendations regarding fidelity of implementation to the RSTL service delivery model

- **Examine reasons for decline in proportion of moms who received adequate prenatal care.**
  The overall proportion of RSTL moms who received Adequate Plus or Adequate prenatal care during pregnancy is less than in previous years. Because receiving adequate prenatal care is instrumental in achieving positive birth outcomes, RSTL should examine reasons for this decline and take measures to promote better prenatal care for moms. In addition, there was a fair amount of missing data, with 13% of moms without recorded data, which may also be contributing to this overall decline. Data completion protocols should be implemented to reduce the amount of missing data.

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  This may require selection of more than one instrument and various indicators at different developmental stages (e.g., toddler vs. school-age children).

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- **Employ strategies or protocols that decrease the amount of father/father-figure engagement data that is incomplete or missing.**
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GLOSSARY: Key terms used in this report

Key term	Meaning
Active mom	a mom who is enrolled and is receiving home visits from educators as of the date of data query (e.g., active as of 12/31/2017)
Disengaged	a mom who is no longer receiving visits from the NFN and PAT educators and other services from the RSTL program
Enrolled	a mom who went through two home visits, including their first foundational PAT visit, that introduced them to the program and services in greater detail
Father/father-figure	an adult male figure in the family who fulfils father role in a child's life by providing care and supporting the development of the child (e.g., birth father, grandfather, uncle, adoptive father, mom's boyfriend or partner, etc.)
First-time mom	a mom who is expecting to give birth or gave birth for the first time
Non-first-time mom	a mom who has given birth at least once and/or raising a child
Re-engaged	a mom whose status changed to active after disengaging for a certain period of time

Appendix A: Program Description and Background

Purpose of this Report

This third year evaluation report for the Raising St. Louis (RSTL) program shares progress and findings in a number of areas since the program launch in 2014, including participants enrolled in the program, successes, challenges, and outcomes. All data referenced in this report were collected by the RSTL team between **January 1, 2014, and December 31, 2016**.

Activities in 2014, year one, were focused on ramping up services in a targeted geographical area in the City of St. Louis and enrolling at least 40 participants by the end of 2014. In the second and third years of implementation in 2015 and 2016, the program continued to expand the service area by adding zip codes and increasing program enrollment. Learning from the experiences of 2014 and 2015, the program also made adjustments to increase participation and continuous program redesign based on lessons learned.

The report begins with a brief program description, discussion of the evaluation methods, and demographic information of active participants in the program as of the end of 2016. The remainder of the report has a section devoted to six out of the seven evaluation questions. Data on the evaluation question about academic achievement of children is excluded from this report because the oldest RSTL child is not school-aged yet. Each section has findings corresponding to each of the evaluation questions, followed by a set of recommendations.

The overall sample size is still small and therefore has limitations related to the generalizability of the findings. However, the information can be used and has been used to inform planning, further development and expansion, and continuous improvement of the program.

Program Description and Background

Poor infant health is a major public health concern in the City of St. Louis. One of the Healthy People 2020 objectives is to reduce the infant mortality rate to six infant deaths per 1,000 live births.[5] Compared to other areas across the nation and to Missouri, the City of St. Louis has continued to have a high infant mortality rate. According to the Missouri Department of Health and Senior Services, the City of St. Louis suffered from 11.2 infant deaths per 1,000 live births, compared to 7.3 infant deaths per 1,000 live births across Missouri.[6]

The socioeconomic status of individuals residing in the City of St. Louis is poor compared to other areas in Missouri. Approximately 83% of people older than 25 years have graduated from high school, compared to 88% statewide. Meanwhile, 22% of family households living in the City of St. Louis are in poverty, compared to 11% in Missouri.[7]

In response to the complex and inter-related health, education, and income disparities in neighborhoods near Barnes-Jewish Hospital, BJC HealthCare created the RSTL program with a very ambitious goal to ensure **all children born in the City of St. Louis be healthy and be**

[5] U.S. Department of Health and Human Services. (2015). Healthy People 2020 Maternal, Infant, and Child Health Objectives. Retrieved July 20, 2015, from https://www.healthypeople.gov/node/3492/objectives#4825

[6] Missouri Department of Health and Senior Services. (2015). Infant Health Profile for St. Louis City. Retrieved June 19, 2017, from http://health.mo.gov/data/mica/ASPsInfant/header.php?cnty=191t

[7] Missouri Census Data Center. (2017). ACS Profiles for St. Louis City and Missouri. Retrieved May 19, 2017, from https://census.missouri.edu/acs/profiles/report.php?p=25&g=05000US29510

able to read on grade level by third grade. Formative work to develop the program began in January 2012. The lead developer of RSTL conducted extensive research on childhood development, best programs and practices, costs, and visited several similar programs across the country. A program design group met regularly from May through October 2012. In fall 2012, RSTL conducted focus groups with moms in three low-income St. Louis neighborhoods. In February 2013, the Social System Design Lab (SSDL) from Washington University in St. Louis worked with program stakeholders to map process flows and design a blended service delivery system for use by RSTL. SSDL also conducted three design sessions with 30 residents from the target neighborhoods in July and August 2013. Formative work continued throughout fall 2013, and RSTL announced on December 9, 2013 that it was ready to enroll clients.

The RSTL program decided to focus on the prenatal period and early childhood years because the foundation for lifelong health and success is built in the first years of life. Early intervention is less costly and more effective than waiting until middle or high school years.[8] By engaging parents in their child's development, RSTL seeks to foster age-appropriate social, emotional, and cognitive growth, the building blocks of success in school and in life, while at the same time, screening for and addressing health issues that may slow proper development.

Figure 1. Core Components of RSTL program

RSTL was designed to partner with existing effective organizations to bring services to families in a coordinated, systematic way. The program's core components include home visits (from **Nurses for Newborns** and **Parents as Teachers**), monthly parent support group meetings (i.e., Family Connections Meetings), navigation of health and social services, and encouraging early and adequate prenatal care (Figure 1).

In the first year, the program targeted to work with families residing in four zip codes in north St. Louis City: 63112, 63113, 63115, and 63120. In the second year, the program added two more zip codes in St. Louis region: 63106 and 63107. In the third year, RSTL expanded its targeted service areas by more than five times to 31 zip codes. All the zip codes were identified based on their higher adverse birth outcomes, higher than average infant deaths, low birth weights of babies born, and overall higher level of health and socioeconomic disparities. The program plans to continue expansion in more areas of high needs of the services in future years.

During the program design and planning phase, key stakeholders were involved in the development of a program logic model to serve as a road map of how RSTL program activities will lead to short, intermediate, and long-term maternal and child health outcomes. Key stakeholders whose consultation and discussions informed the logic model eventually formed an Evaluation Advisory Council for the program (Appendix B). This logic model is reviewed periodically and revised to reflect lessons learned and ongoing adjustments along the way. The

[8] Center on the Developing Child at Harvard University. (2010). The Foundations of Lifelong Health Are Built in Early Childhood, from http://www.developingchild.harvard.edu

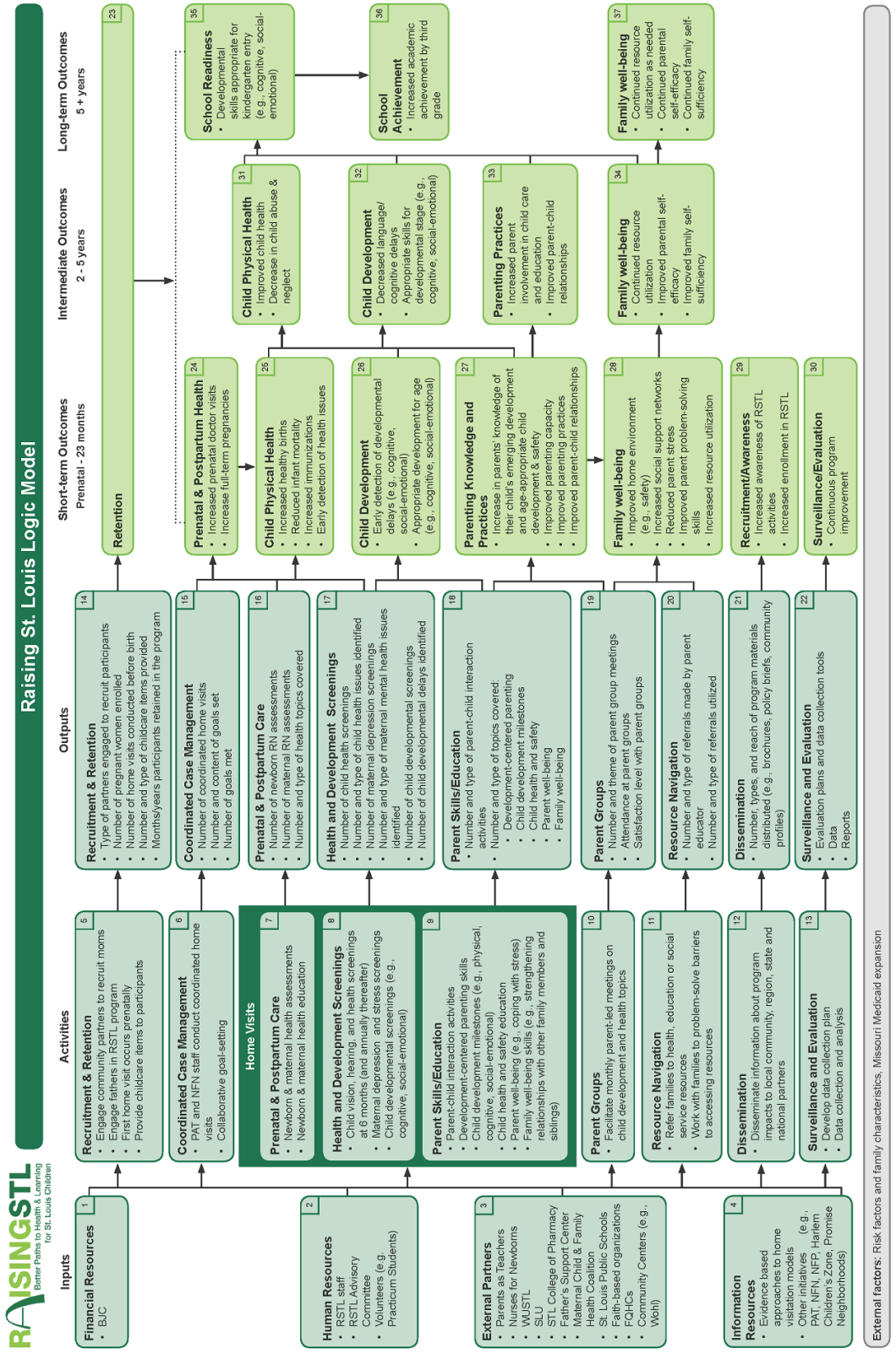
logic model from 2014 report was last reviewed in April of 2015, and will be reviewed again in the summer or fall of 2017.

Evaluation Methods

RSTL staff partnered with experienced evaluators ("the evaluation team") from Center for Public Health Systems Science (CPHSS) and Evaluation Center at the Brown School of Washington University in St. Louis (WUSTL) to design and implement a mixed-methods evaluation of the program. In the first year, the primary evaluation activities included evaluation planning, such as identification and prioritization of a set of key evaluation questions, development of data collection protocols and systems to answer those questions (Appendix D), development of a program logic model (Appendix B), and program specific goals and objectives (Appendix C). For more details around the evaluation approach, see Appendix D. As a part of the evaluation methods, the evaluation team and the RSTL team will review the program's goals, objectives, and logic model in the summer of 2017 to make necessary adjustments based on the need and maturity of the program, key lessons learned from data presented in this evaluation report, and the evaluation team's recommendations.

Evaluation findings presented on this report primarily used participant data from the RSTL database as of December 31st, 2016. Where relevant, the report also includes findings from the RSTL Implementation Survey conducted in fall of 2016.

Appendix B: RSTL Logic Model



Appendix C: RSTL Goals and Objectives (as of the end of 2015)

Raising St. Louis (RSTL), in conjunction with the evaluation team at CPHSS, and in consultation with the Evaluation Advisory Committee, developed an initial set of project specific goals and objectives. In the table below are the goals and objectives of the RSTL program, as of the end of 2015. These will be updated in the summer of 2017.

Goal 1: To recruit and retain participants of the Raising St. Louis program with fidelity of the service model

1. By December 31st of 2014, enroll 40 pregnant women from the pilot zip codes serviced in the Raising St. Louis program.
2. By December 31st of each year, retain 65% of Raising St. Louis program families.
3. By December 31st of each year, 75% of active Raising St. Louis program families received minimum RSTL expected home visits for their development stage.
4. By December 31st of each year, 90% of active children served by the Raising St. Louis program received developmental screenings (ASQ-3) initially at 2 and 6 months, and then at subsequent 6 month intervals through age five.
5. By December 31st of each year, 90% of active children served by the Raising St. Louis program received developmental screenings (ASQ-SE) initially at 6 months, and then at 12, 18, 24, 30, 36, 48 and 60 months of age.
6. By December 31st of each year, 90% of active families will have the Life Skills Progression (LSP) Outcome and Intervention Planning instrument completed by the Parent Educator, appropriate to their development stage.

Goal 2: To improve prenatal maternal and infant health of participants enrolled in Raising St. Louis

1. By December 31st of each year, 75% of active Raising St. Louis participants accessed adequate prenatal care visits as outlined by the Kotelchuck prenatal care index.
2. By December 31st of each year, 85% of active Raising St. Louis program participants with singleton births experience full-term pregnancies (>37 and 0/7 weeks gestational age).
3. By December 31st of each years, 90% of active Raising St. Louis program participants with singleton births give birth to normal birth weight babies (>2500 grams at birth or 5 lbs. 8 oz.)

Goal 3: To improve postpartum maternal and infant health of participants enrolled in Raising St. Louis

1. By December 31st of each year, 80% of active Raising St. Louis infants receive hearing screening within 6 months postpartum, and subsequently on an annual basis.

2. By December 31st of each year, 80% of active Raising St. Louis infants receive vision screening within 6 months postpartum, and subsequently on an annual basis.
3. By December 31st of each year, 80% of active Raising St. Louis infants receive health screening within 6 months postpartum, and subsequently on an annual basis.
4. By December 31st of each year, 90% of active Raising St. Louis mothers are receiving recommended prenatal maternal depression screenings (minimum of 1 prenatal screening).
5. By December 31st of each year, 90% of active Raising St. Louis mothers are receiving recommended post-partum maternal depression screenings at recommended times.
6. By December 31st of each year, active post-partum Raising St. Louis program participants will have an infant mortality rate of < 6.0/1000.
7. By December 31st of each year, 80% of Raising St. Louis active children receive all necessary immunizations, as appropriate for their age, within two months of recommended date.
8. By December 31st of each year, active families of the Raising St. Louis program will have 25% of fathers/male figures actively involved in two home visits per year of those who have identified a father/male figure as active.

Goal 4: To increase academic achievement of Raising St. Louis children by third grade by increasing parent engagement in their child's health and education

Objectives to be determined

Goal 5: To improve self-efficacy of Raising St. Louis caretakers through parent-led support groups

1. By December 31st of each year, the Raising St. Louis program will provide 12 Group Connection Parent meetings each year to enrolled and retained participants.
2. Out of the 12 Group Connections Meetings offered a year, two Group Connection Parent meetings will focus on fatherhood and father involvement.
3. By December 31st of each year, 60% of active families had at least one representative (e.g., mom, dad, primary caregiver) attend at least one Group Connection meeting per year.

Goal 6: To improve Raising St. Louis families' utilization to community resources by connecting families to resources referral network

1. By December 31, 2015, the Raising St. Louis program will have developed and maintained a resource inventory to refer participants appropriately.

More objectives to be determined

Appendix D: Evaluation Methods

RSTL staff partnered with experienced evaluators from the Center for Public Health System Science (CPHSS) at the Brown School at Washington University in St. Louis (WUSTL) to design and implement a mixed-method evaluation of the program. In the pilot year, the primary evaluation activities have included evaluation planning, collection and analyses of data, and dissemination of results.

Evaluation planning

In 2014, the evaluation team focused primarily on evaluation planning activities, including:

- Developed Evaluation Advisory Board: CPHSS team members worked closely with RSTL staff to develop an Evaluation Advisory Board, which consisted of RSTL staff members, sub-set of RSTL Board of Director members, and CPHSS evaluation team members
- Developed Program Logic Model: The Evaluation Advisory board helped to inform the development of a program logic model, identify and prioritize a set of key evaluation questions (which are listed in this Appendix), and formulate program specific goals and objectives (see Appendix C).
- Developed a preliminary evaluation plan: Plan will continue to be revised as data collection systems are rolled out and tested.
- Developed data collection systems: Assisted with and advised on the development of preliminary data collection protocols and systems to answer all evaluation questions.

Collection and analyses of data

The evaluation team and RSTL staff have developed both quantitative and qualitative data collection systems.

- **RSTL database:** This in an online quantitative case management and data system which includes data extracted from an existing NFN database and then uploads and merges these data to a database platform called Efforts to Outcomes (ETO). Nurses are responsible for entering data into the NFN database, and RSTL parent educators are responsible for entering data into the ETO system. These systems are closely monitored by RSTL staff and members of the evaluation team to increase data accuracy and completion and continuously revise data entry protocols. During the pilot year, much time and effort has been spent to customize the ETO system to meet RSTL's data collection and management needs.
- **Participant focus groups:** Evaluation team members from CPHSS helped to design a recruitment strategy and focus group question guide. This protocol has been implemented by an experienced facilitator from BJH. Two separate focus groups were conducted to date with plans to conduct focus groups with participants at least every other year.
  Overall, the focus groups were designed to:
  - Explore how mothers heard about the program and why they decided to enroll
  - Evaluate their reaction to the program overall as well as specific components
  - Learn more about home visits with the Nurses for Newborns nurses (e.g., level of satisfaction, barriers and facilitators to participation)

- Learn more about home visits with the Parents as Teachers educators (e.g., level of satisfaction, barriers and facilitators to participation)
- Learn more about Group Connections Meetings (e.g., level of satisfaction, barriers and facilitators to participation, recommendations)
- Understand if and how referrals to community services or organizations were made and acted upon
- Explore the role of incentives (e.g., Kids Kash), and the importance it plays in motivating mothers to participate
- Understand the degree to which fathers participate in the program and how to better engage them

➢ **Participant survey:** The evaluation team developed and implemented a participant survey in the fall of 2016. The survey was conducted over the phone. The current plan is to administer a participant survey to a sample of participants every other year to inquire about program implementation (fidelity) and participant satisfaction with the RSTL program.

➢ **School records:** Currently, no RSTL children are of school age yet. However, as RSTL children enter school, the evaluation team plans to collect a number of school records (e.g., attendance, grades, MAP scores) for active children every year.

Table 1 maps the data source used to answer each evaluation question.

Table 1: Evaluation Data Collection Sources

Evaluation Question	Participant focus groups	RSTL database (ETO)	Participant Satisfaction survey	Participant Fidelity or Implementation surveys	School records
1. What is the level of participant satisfaction with the RSTL program?	✓	✓	✓	✓	
2. What are common barriers to participation in each of the Raising St. Louis program components (e.g. home visitation, Group Connection meetings, etc.)?	✓	✓	✓	✓	
3. To what extent is the program implemented with fidelity to the RSTL service delivery model?	✓	✓		✓	
4. To what extent are participants connecting with organizations referred to them through the Raising St. Louis program?	✓	✓	✓		

Evaluation Question	Participant focus groups	RSTL database (ETO)	Participant Satisfaction survey	Participant Fidelity or Implementation surveys	School records
5. To what extent are participating families exercising positive parenting practices?	✓	✓	✓	✓	
6. To what extent are RSTL children achieving age-appropriate developmental and health benchmarks?	✓	✓	✓		
7. To what extent are school-aged RSTL children achieving age-appropriate academic benchmarks? [Not to be assessed until children are enrolled in school]					✓

Development of dissemination products

The evaluation team develops a couple of different dissemination related products each year. The primary intended audience for these products are RSTL staff and board members, as well as key partners and others doing similar work. These are used to help inform program planning and improvement.

- **Dashboard summary:** Each year the evaluation team developed dashboard reports providing a summary of key outputs and outcomes and presented them at the RSTL Board Meeting.
- **Annual evaluation report:** Each year an evaluation report is to be developed highlighting the answer to the prioritized set of evaluation questions to-date. In conjunction with the annual evaluation report, the evaluation team also develops brief summaries (e.g., 2-4 page) that highlight key findings.
- **Conference presentations and posters:** Another area where the teams get the word out about the Raising St. Louis work is through participation in regional and national conferences.
- **Presentations:** The evaluation typically presents evaluation findings at one to two RSTL Board Meetings each year.

Appendix E: Family Connections Meetings (2014, 2015, & 2016)

Date of meeting	Topic of meeting	Attendance	# of adults
June 2014	Connecting with baby	8 moms 3 dads 4 children	11 adults
July 2014	Routines with breastfeeding	10 moms 3 dads 8 children	13 adults
August 2014	Prenatal and postpartum support	9 moms No dads Number of children unknown	9 adults
September 2014	Nutrition	4 moms No dads 1 child	4 adults
December 2014	Exercise for the whole family	6 moms 1 dad 5 children	7 adults
January 2015	Budget Smart (Budgeting and Savings"	6 moms 2 dads 3 children	8 adults
February 2015	Take Care of Me!	2 moms 1 dad 2 children	3 adults
March 2015	Hire Me	3 moms 1 dad 7 children	4 adults
March 2015	Why Read?	3 moms 1 dad 4 children 1 guest	4 adults
April 2015	Playtime	3 moms No dads No children	3 adults
May 2015	Safe Sleep	1 mom No dads No children	1 adult
June 2015	Hands on Meal Prep Demo	3 moms No dads 1 child	3 adults

Date of meeting	Topic of meeting	Attendance	# of adults
July 2015	Positive Behavior Management	4 moms 1 dad 4 children	5 adults
August 2015	Playtime	2 moms 2 dads 4 children	4 adults
September 2015	Community Listening Session	1 mom No dads No children	1 adult
October 2015	Train With Mike Wayne	9 moms 4 dads 4 children 3 guests	13 adults
November 2015	RSTL Table Talk	39 moms 12 dads 15 children 14 guests	51 adults
February 2016	Baby Sign Language	7 moms 3 dads No children	10 adults
March 2016	Financial Literacy	12 moms 4 dads No children	16 adults
April 2016	Breastfeeding	11 moms 5 dads No children	16 adults
May 2016	Make and Take Toys	12 moms 5 dads No children	17 adults
June 2016	Making Baby Food/Swap Meet	10 moms 4 dads No children	14 adults
July 2016	Cooking Class/Nutrition	14 moms 4 dads No children	18 adults
August 2016	Train With Mike Wayne	24 moms 8 dads No children	32 adults

Date of meeting	Topic of meeting	Attendance	# of adults
September 2016	Job and Education Forum	25 moms 8 dads No children	33 adults
October 2016	Stress Management	16 moms 5 dads No children	21 adults
November 2016	Thankfulness and Gratitude	11 moms 11 dads No children	22 adults

Appendix F: Locations of RSTL active participants, as of the end of 2016

Current ZC	Number of participants	(%)
63115	21	(14%)
63112	19	(13%)
63106	18	(12%)
63136	10	(7%)
63107	9	(6%)
63120	8	(6%)
63113	7	(5%)
63121	6	(4%)
63138	5	(3%)
63137	5	(3%)
63133	5	(3%)
63111	4	(3%)
63135	4	(3%)
63114	3	(2%)
63108	3	(2%)
63118	3	(2%)
63130	2	(1%)
63031	2	(1%)
63104	2	(1%)
63129	1	(1%)
63301	1	(1%)
63033	1	(1%)
63139	1	(1%)
63074	1	(1%)
63147	1	(1%)
63134	1	(1%)
63042	1	(1%)
63103	1	(1%)

Appendix G: Referral sources of RSTL active participants

Category	Referral sources	Number of referrals	(%)
FQHC	Grace Hill (Affinia)	40	(28%)
Other	Other (Referral to RSTL)	23	(16%)
FQHC	Myrtle Hilliard	20	(14%)
NFN	Nurses for Newborns	17	(12%)
Word-of-mouth	Friend	11	(8%)
FQHC	People's	9	(6%)
Other	Perinatal Behavioral Health Service (PBHS)	8	(6%)
Hospital/Clinic	Barnes-Jewish Hospital OB/GYN Clinic	7	(5%)
Other	Birthright	4	(3%)
Self-initiated	RSTL Website	4	(3%)
Self-initiated	Self-Referral	1	(1%)
Other	St. Louis Public Schools	1	(1%)