Calhoun County
Nurse-Family Partnership®

October 1, 2011 - September 30, 2012

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Calhoun County
Nurse-Family Partnership®

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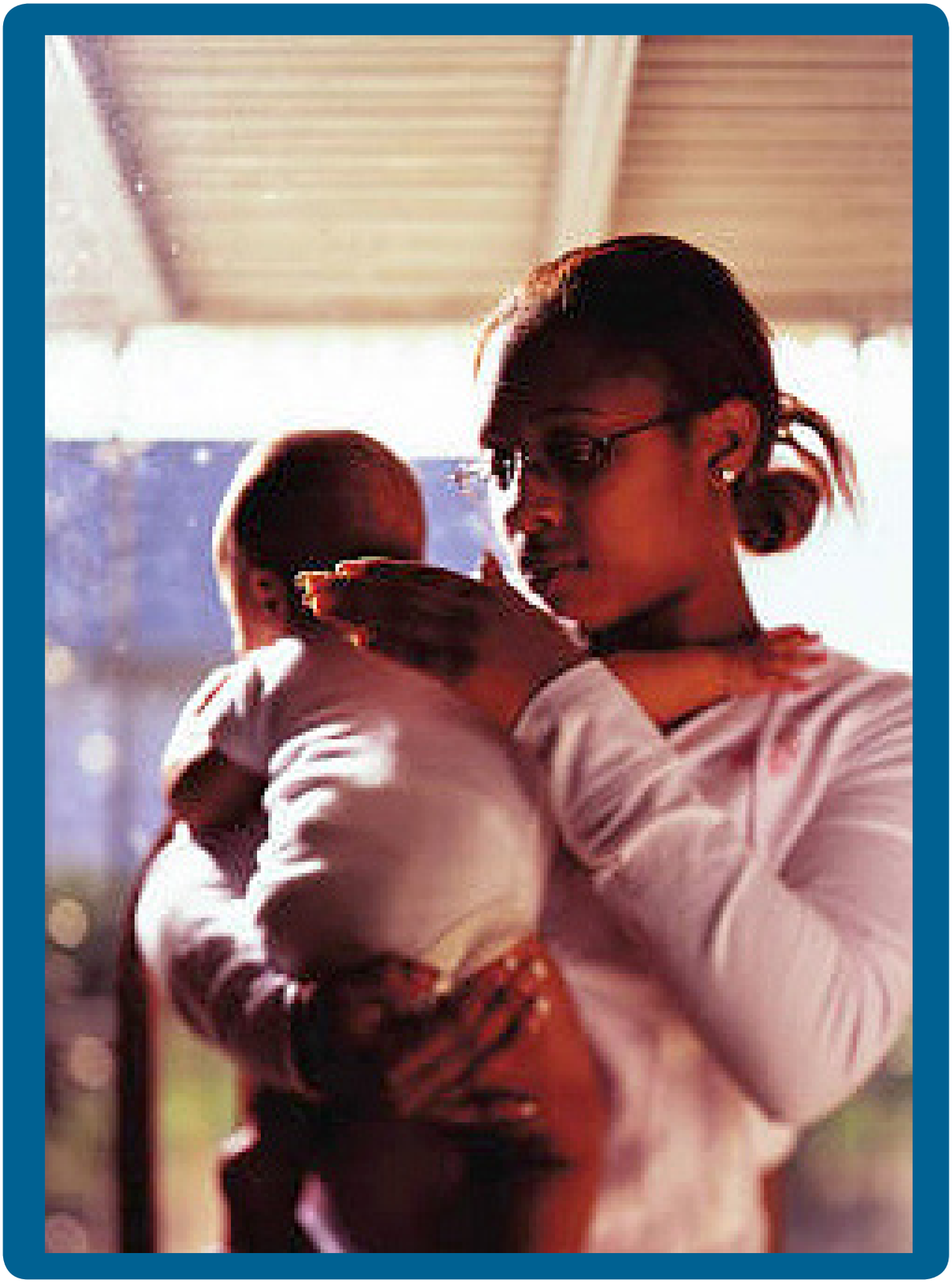

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Overview

Nurse-Family Partnership® (NFP) is an evidence-based community health program that helps transform the lives of vulnerable, low-income mothers pregnant with their first child. Built upon the pioneering work of David Olds, PhD, NFP's model is based on more than 30 years of evidence from randomized, controlled trials that prove it works.

Trial outcomes demonstrate that Nurse-Family Partnership® delivers against its three primary goals of better pregnancy outcomes, improved child health and development, and increased economic self-sufficiency — making a measurable impact on the lives of children, families, and the communities in which they live.

Distinguishing Program Features

Nurse-Family Partnership® focuses on first-time mothers. It is during a first pregnancy that the best chance exists to promote and teach positive health and development behaviors between a mother and her baby.

The NFP program is delivered by registered nurses who are perceived as trusted and competent professionals, fostering a powerful bond between nurse and mother.

Nurse-Family Partnership® has sufficient duration. Typically, a client begins to work with her Nurse Home Visitor (NHV) during her first trimester and continues through the child's second birthday. This early intervention during pregnancy allows for any critical behavioral changes needed to improve the health of the mother and child.

The program also has sufficient intensity, combining relevant content valued by the mother with a therapeutic relationship focused on self-efficacy.

The NFP National Service Office provides intensive education for NHVs who utilize Visit-to-Visit Guidelines, clinical consultation, and intervention resources to translate the program's theoretical foundations and content into practice in a way that is adaptable to each family.

Nurse-Family Partnership® maintains fidelity to its model by using a web-based performance management system designed specifically to collect and report family characteristics, needs, services provided, and progress toward accomplishing program goals as recorded by Nurse-Family Partnership® NHVs.

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Calhoun County Implementation

Implementation in Calhoun County began in December 2010 with the employment of the full-time nurse manager. The community was well prepared for the introduction of Nurse-Family Partnership®. The Maternal Infant Health Commission (MIHC), an Issue Action Group of the Regional Health Alliance, was instrumental in bringing the program to the area and spreading the word regarding the implementation date. Activities since that time include completion of hiring, orienting, and training staff, enrolling clients towards a full caseload, establishing relationships with community agencies for referrals and care coordination, and the development of an Advisory Board.

Three nurse home visitors (NHV) completed agency and NFP orientation, attended national training, and began accepting client referrals on March 7, 2011. The fourth NHV started work on June 28, 2011 and begin accepting client referrals after attending national training in early August 2011. Therefore, the team of four NHVs have been actively working with clients throughout this reporting period. An ongoing goal is to maintain a full caseload of 100 families. Caseload was capped at 75-80 clients starting April 2012 and ending in September 2012 to accommodate a NHV medical leave.

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Community Collaborations

Collaborations for referrals, care coordination, and strengthening community supports are essential. Calhoun County has a high teen pregnancy rate and a high infant mortality rate, therefore, it is important that first-time mothers have the option to enroll in NFP. Currently, NFP has agreements with the Family Health Center of Battle Creek, Calhoun County WIC program, School Nurses in most Calhoun County school districts, the pregnancy testing site at the Calhoun County Public Health Department, and the Alternative Education for Pregnant and Parenting Teens through the Calhoun Intermediate School District to refer all first-time mothers to NFP.

After a woman has enrolled in NFP, it is important that a working relationship exists between the NFP nurse and other services she is connected to. These include the client's medical providers (OB, pediatric, and family medicine), mental health providers, school personnel, and other agencies involved with the family. These collaborative relationships enhance the service that the client receives, reduces duplication, and promotes trust as professionals work together.

At a broader level, relationships that build community support for young families are essential to assuring access to needed services. Service gaps and new concerns will surface as agencies promote discussion. Once this happens, the community can then work together to address issues as a unified entity. This work is facilitated by the MIHC.

The first NFP Advisory Board meeting was held on May 18, 2011. Nineteen persons attended representing 13 different agencies. The purpose of the Advisory Board is two-fold: to be part of the ongoing community wide conversation about Maternal/Infant Health and to keep the community updated on the activities of NFP. The first function is met by the NFP manager's attendance at monthly MIHC meetings. The community has an opportunity to receive a NFP update at the quarterly NFP specific meetings that are held immediately following the MIHC meetings. Meetings were held in August and November 2011 and February, June, and October 2012.

Members of the Advisory Board include a wide range of agencies and programs in the community.

- Albion Health and Wellness Action Team
- Alternative Education for Pregnant and Parenting Teens
- Battle Creek Community Foundation/Regional Health Alliance
- Bronson Battle Creek
- Burma Center
- Calhoun County Public Health Department
- Connect Health Services Maternal Infant Health Program
- Coordinating Council
- Early Childhood Connections
- Family and Children's Services
- Family Health Center of Battle Creek
- Fetal Infant Mortality Review
- Healthy Equity Alliance
- Marshall Doulas and Childbirth Education
- Miller College/Kellogg Community College Schools of Nursing
- Oaklawn Hospital
- Summit Pointe
- WIC Program

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Populatio

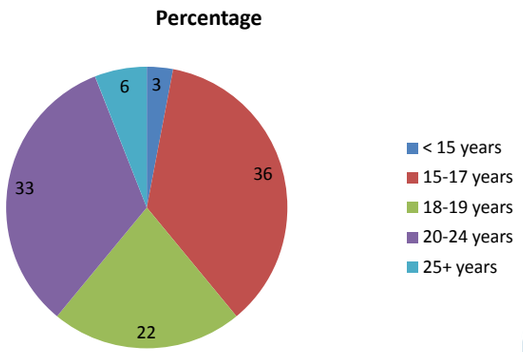
The Calhoun County Nurse-Family Partnership® (NFP) team visited 115 pregnant women in their homes from January 18, 2011 to September 30, 2012. The target population is low-income, first-time mothers.

- All of the mothers on our caseload were first-time mothers.
- Ninety-eight percent were on Medicaid or were Medicaid eligible.
- Of women who were not dependent on parents for support, the median household income was $9,000 per year. The national poverty threshold in 2012 for a family of two was $11,170.
- At intake, 60% were 13-19 years of age; 33% were 20-24 years of age; and 6% were 25 years of age or older. As we are aware, teen pregnancy is a concern in Calhoun County and we are carefully assessing clients older than 25 years for appropriateness in the program to assure ongoing openings for teen mothers.
- The racial breakdown is 55% white; 30% black; 10% black/white; 3% Asian/Pacific Islander/ Native American; and 4% ethnically Hispanic.

ons Served

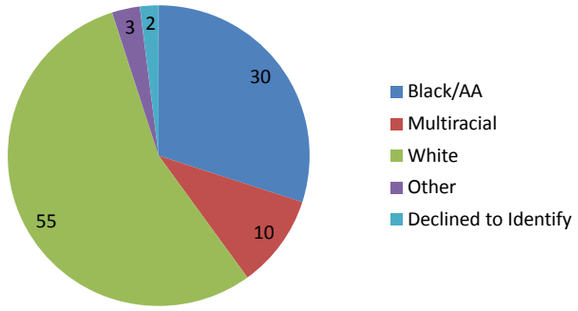
Age at Intake Consistent pattern

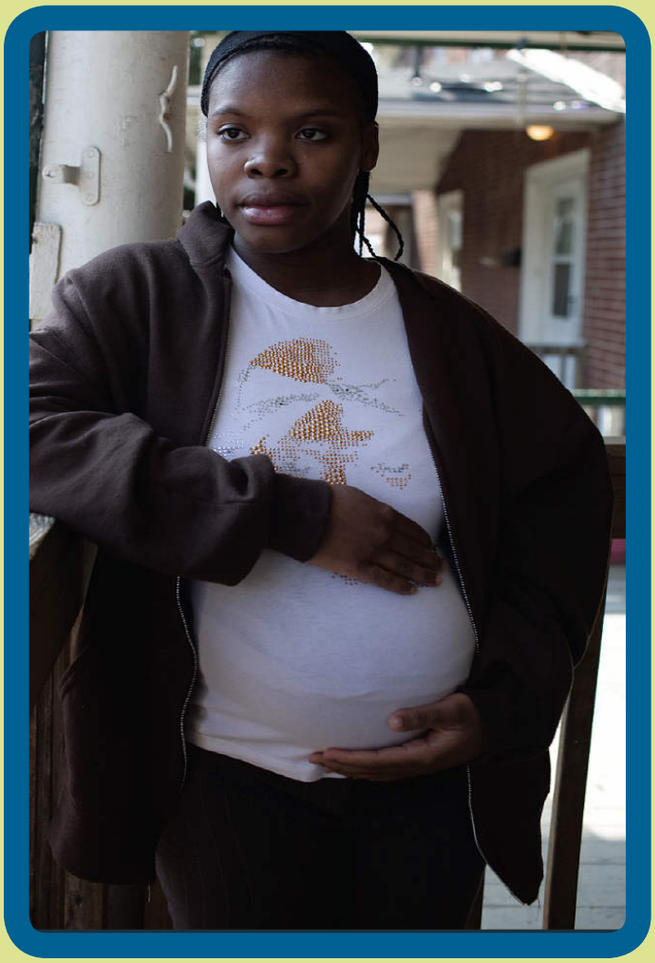
~60% < 20 years; 94% < 25 years



Race Consistent pattern

~60% White; ~40% Black/African American/Multiracial



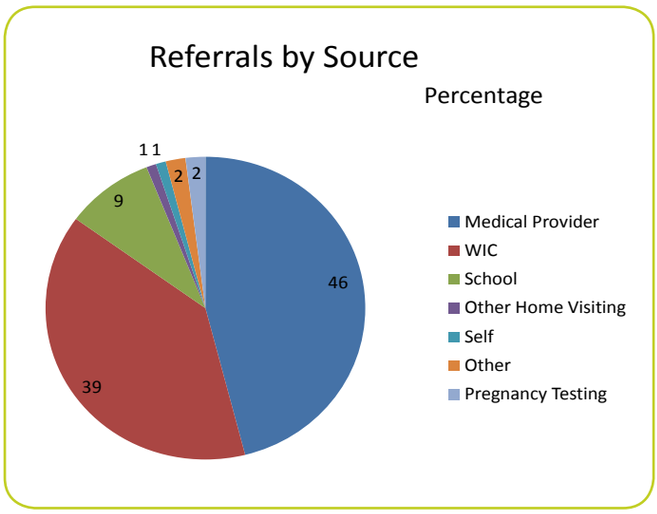


REFERRALS AND ENROLLMENT

Referral Sources

The early months of implementation were spent building awareness and support among agencies and residents of the county. The manager and staff met with more than 30 agencies and individuals to inform them of NFP's goals and referral criteria. Community awareness is an ongoing activity with a new connection being made on a monthly basis.

The majority of referrals are received from medical providers, WIC (Women's Infants and Children's supplemental food program), and schools. The Family Health Center of Battle Creek and WIC are the largest referral partners with 46% and 39% of referrals received respectively from these agencies. The school nurses in multiple districts make us aware of pregnant young women. Referrals have also been received from medical providers in private practice, other home visiting programs (Connect Health Services and NFP programs in other counties), the woman herself, current NFP clients, Department of Human Services Child Protective Services and Foster Care divisions, and the pregnancy testing site at the Calhoun County Public Health Department.



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Frequency and Duration of Home Visits

The Calhoun County Nurse-Family Partnership® (NFP) team visited 115 pregnant women in their homes from January 18, 2011 to September 30, 2012. The women were visited an average of 11 times for approximately 71 minutes each visit. This calculates to 13 hours of one-on-one instruction by a registered nurse during pregnancy. Fifty-five infants were born during this time period. During the infant's first year, they received an average of 21 home visits for 78 minutes each. The mother/infant pair received nearly 27 hours of support in their first year.

Referrals Made

An essential intervention is connecting clients to resources in the community. This not only gives the mother the phone number but coaches her in how to interact with the resource. Initially the NHV may need to call for the mother. The next time the mother may call herself with the NHV coaching her on how to prepare and what questions to ask. Eventually the mother will have learned how to make these calls on her own.

In 2011 – 2012, 405 referrals were made to 32 types of services. The top 10 referral types were (in order of decreasing frequency):

- Mental health services
- Housing
- WIC (Women's Infant's and Children's supplemental food program)
- Lactation services
- Childbirth education
- Job training or education beyond high school
- Government assistance - Medicaid for the mother; TANF/Cash assistance; Food stamps
- Transportation
- Dental services
- GED/alternative high school

Content of Home Visits

During pregnancy, the NHVs completed 79% of the completed/expected visits. The NFP objective is 80% of completed/expected visits. NHVs schedule visits in accordance with the recommended guidelines: weekly for the first four weeks and then every other week until the baby is born. The number of expected visits depends on the client's gestational age at enrollment and birth of infant. The mean visit time is 71 minutes with the NFP objective of at least 60 minutes. The NHVs spent the recommended time in each of the topic areas (personal health, environmental health, life course development, maternal role, and family/friends) with the exception of environmental health. A slightly higher percentage of time was spent on environmental health than is suggested. This may be due to many families with unstable or unsafe housing.

During infancy, the NHVs completed 77% of the completed/expected visits. The NFP objective is 65% or greater. NHVs schedule visits in accordance with the recommended guidelines: every week for the first six weeks postpartum, and then every other week through the infant's first birthday. The mean visit time is 78 minutes with the NFP objective of at least 60 minutes. The NHVs spent the recommended time in each of the topic areas (personal health, environmental health, life course development, maternal role, and family/friends) with the exception of personal health. A slightly higher percentage of time was spent on personal health than is suggested. This may be due to many mothers dealing with mental health concerns.

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Pregnancy

Pregnancy Outcomes

In Calhoun County, the top three maternal risk factors for premature birth are pre-pregnancy overweight, inadequate prenatal care, and maternal tobacco use during pregnancy. NFP provides interventions to reduce these risks for women in the program.

As 24% of our clients are obese before pregnancy, we address nutrition at the first visit in pregnancy. We discuss portion sizes, healthy choices, shopping on a budget, and resources for food assistance such as WIC. We also address healthy eating and physical activity in the postpartum and toddler periods as mothers are developing healthy eating habits for their child. Breastfeeding is promoted for the benefit of both mother and child.

The NHVs work with our pregnant women as they communicate with their medical provider. We help them develop a list of questions for each visit and discuss how to advocate for the type of birth they desire. We make them aware of transportation resources, Medicaid coverage, or medical providers near their home to reduce barriers to receiving adequate prenatal care.

Approximately 17% of our clients are smoking at intake to the program though some may have quit when they first became pregnant. We saw an 18% decrease in smoking from intake to 36 weeks gestation. Of those women who continued to smoke at 36 weeks gestation, they reported smoking six less cigarettes a day than at intake. We contribute this change in part to the encouragement by the NHV to continue to abstain from smoking, to the ongoing education on dangers to self and infant, and to instruction on alternate ways to handle daily stress.

Breastfeeding

One of the major focus areas of our Implementing Agency Annual Plan was breastfeeding initiation. All NHVs completed the WIC Breastfeeding Basics course, attended the annual conference of the West Michigan Association of Lactation Consultants in 2011 and 2012, and the International Childbirth Educators Association (ICEA) Birthing Conference that emphasized mother friendly labor support. All mothers are offered breastfeeding education during pregnancy and very few decline. The NHVs share information about the benefits of breastfeeding for baby and mother, basics on how to breastfeed, and where to find additional support. We collaborate with the lactation consultant and peer counselors in WIC and with the lactation consultants at Bronson Battle Creek and Oaklawn Hospital. NFP has a representative on the Calhoun County Breastfeeding Coalition.

Seventy-seven percent of NFP mothers initiated breastfeeding which includes any breastfeeding in the hospital or during the first days at home. This is a high percentage and close to the Healthy People 2020 target of 82%. Nineteen infants were exclusively breastfed for 10 weeks.

Our rates of breastfeeding continuation, which includes exclusive or partial breastfeeding at 6 and 12 months of age, are significantly lower than initiation and Healthy People 2020 targets. Our goal for 2013 is to maintain high initiation rates while increasing our continuation rates.

Outcomes

Development Assessments

NFP uses the Ages and Stages Questionnaire (ASQ - 3) and the Ages and Stages Questionnaire: Social Emotional (ASQ–SE) to assess development. The ASQ is a Parent–Completed, Child–Monitoring system to screen development from 1½ months to 5 years of age. The NFP NHV completes the ASQ with the parent when the child is 4, 10, 14, and 20 months of age. This screener covers six developmental areas: communication, gross motor, fine motor, problem solving, personal–social, and overall growth. The ASQ – SE screens for key social and behavior concerns at 6, 12, 18 and 24 months. Often when milestones were not reached on time, instruction was provided to the parents and the child showed improvement by the next visit. Parents benefited from developmentally appropriate toys that were given, from pointing out opportunities for developmental progression, and by acknowledgment that they were their child's first teacher. Several children showed areas of concern upon screening and were referred to their primary care provider and/or Early On, an early intervention program through the Calhoun Intermediate School District for children with mild developmental delays.

Infancy Outcomes

Of the 55 infants born through June 2012, we had three premature births for a rate of 6.7%. This is lower than the Calhoun County rate for first-time Medicaid mothers of 7.4% to 13.5% for the time period 2005 – 2009. The three infants were born at 35 or 36 weeks gestation to two white teen mothers and one African American,21 year old mother. Only one infant was of low birthweight. We have had no infant deaths to mothers enrolled in NFP.

One-hundred percent of infants were assessed as up-to-date on immunizations at 6 and 12 months of age. Records are assessed using the Michigan Care Improvement Registry (MCIR).

Raising A Reader (RAR)

In March 2012, we partnered with Calhoun Intermediate School District to offer the Raising A Reader program to our clients. Raising A Reader helps parents develop the habit of sharing books through RAR's train-the-trainer model. The NHV shares the Raising A Reader DVD "Read Aloud: Share a Book with Me" with parents which enables them to listen to other parents who face the challenges of sharing books with children and how they overcame them.

To practice the habit of sharing books, at each visit a bright red book bag filled with award-winning books is left in the home; so that each day children invite a loved one to 'share a book with me.' At every visit, the family is given a different bag of books so that, on average, more than 100 high-quality books will rotate through childrens' homes over the course of a typical rotation cycle. Each bag contains one bilingual English-Spanish book and wholly Spanish books are available to primarily Spanish-speaking families. Most children start receiving the books between four and six months of age and continue until graduation from NFP at age two.

Client S

Pregnancy

Sara is a 17 year old who was 11 weeks pregnant at the first NFP visit. She was a senior in high school, attending half a day at her home school and half a day at the Pregnant and Parenting Teen Program offered at the Calhoun Area Career Center. She has a history of ADHD (attention deficit-hyperactivity disorder), physical abuse by adults and boyfriends, anxiety, and unstable living conditions. She was living during the week with the father of the child (FOC) and weekends with her mother. Her pregnancy was unplanned but she connected with medical care early in her pregnancy. The nurse was able to assist her to enroll in WIC.

Sara has many difficulties in her life. The relationship with the father of the child is difficult. They often fight verbally and physically. The house where they live is dirty, smoky, and cluttered. They live with the FOC's father who is an alcoholic. This creates tension and fear in Sara. She has no income and is unable to afford her own place.

In spite of difficult circumstances, Sara has many strengths. She asks questions and is able to follow through on her goals. She enrolled in WIC, signed up for Kellogg Community College, made improvements in her diet, stopped smoking, and learned communication skills. She is interested in making changes that will improve life for her child. With much hard work, Sara graduated from high school on time and walked with her class. She decreased smoking from 10/day to 0-3/day. Using her WIC benefits, Sara has made improved food choices.

Sara and her nurse discussed many topics during her pregnancy including body image, normal weight gain, her support relationships, nutrition, communication, labor and delivery, breastfeeding, and signs of preterm labor. Her nurse provided support and encouragement as she dealt with the impact of her pregnancy. Sara was able to practice adult skills such as communicating with her mother and the FOC and expressing her concerns to her doctor with the support of her nurse. She was able to imagine her future, set small goals, and follow through to move toward self-sufficiency.

At 31 weeks, Sara began to experience cramping and spotting. She was put on modified bed rest. She delivered a healthy 6lb-3oz daughter at 36 weeks. She is currently living with her mother. She is breastfeeding the infant and seeing good infant weight gain. Her nurse is able to observe the infant sleeping alone in crib, on her back, in a sleep sack. Sara incorporated the nurse instructions into action and created a safe sleep environment for her baby!

While Sara still faces many challenges as she raises a baby alone, she has proven that she can learn, act, and seek support in her relationship with her NFP nurse. Over a six month period Sara received 14 visits from her nurse. Often it is hard to see what poor outcomes have been prevented by early intervention. Possible poor outcomes that have been prevented by Sara's involvement with NFP include: not connecting with WIC and continuing with poor prenatal nutrition, relapse in smoking when life became stressful, physical abuse from the FOC due to lack of communication skills, poor infant weight gain and illness prevented by breastfeeding, early preterm birth due to infections and lack of knowledge of symptoms of preterm labor, and not graduating from high school due to lack of encouragement of the hard work needed.

Sara will continue to get visits from her nurse until the baby turns two years old. Sara's goals are to have her own apartment, attend Kellogg Community College and study Child Development, be a good mother, see her child grow and learn, and improve her relationship with her boyfriend. Continuing with NFP will be an important part of reaching these goals.

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Stories

Infancy

Katy is an 18 year old multiracial woman who is the mother of an 8 month old daughter, Emily. She enrolled in the NFP program at 19 weeks gestation in response to a referral from her OB provider. She lives with her mother, step-father, and younger siblings. The baby's father is inconsistently involved with the infant's life.

She was very motivated to graduate from high school on time in spite of her pregnancy. At the suggestion of her NHV, she enrolled half-time in the Alternative Education for Pregnant and Parenting Teen program. With this additional assistance along with half-time attendance at her home school, she was able to graduate on time four months after her baby's birth.

Katy had 11 visits with her NHV during pregnancy. She received education on nutrition, babies, and pets, breastfeeding, exercise, signs of premature birth, labor and delivery, infant care, safe sleep, and reading to baby. Katy was assessed for depression on intake and at 36 weeks gestation. Her scores showed borderline or mild depression. Her NHV explored her feelings and possible causes of depression. They discussed what to do if depressive symptoms worsened. Katy set and achieved goals such as eating healthier, getting more exercise, getting adequate sleep, stress management, and developing a birth plan. She delivered her daughter at full term after an uneventful pregnancy, labor, and delivery.

Katy and Emily have met with the NHV 20 times since Emily was born. Katy breastfed Emily for two months. Emily is growing well and is ahead on developmental milestones. She has attended all of her well child visits and is up to date on her immunizations. Because of their involvement in NFP, the family receives age-appropriate books on loan through the Raising A Reader program. They were also assisted in enrolling in the Imagination Library that provides children's books for the family to keep. The NFP program uses the PIPE (Partnering in Parenting Education) parenting curriculum. Katy and Emily have completed the modules on Attachment, Emotional Refueling, Patterns and Expectations, and Love Needs a Safe Base. These modules help the parent learn to respond to the child's emotional needs.

Katy is attending community college part-time. She passed the driver's test and now has a driver's license. She takes birth control pills daily and is being responsible with her new relationship. She is very child-focused and makes all decisions based on what is best for the baby. She continues to score slightly high on the depression scale and is considering visits with a counselor. Her nurse has discussed stress management skills that she has put in place. Katy has worked with her nurse on job skills. She has struggled with the relationship with the father of the baby. She is working towards establishing paternity and obtaining child support.

NFP has three main goals: healthy pregnancy, normal growth and development for the child and improved maternal self-sufficiency. Katy has met many of these goals such as improved prenatal nutrition, full term birth, no untreated postpartum depression, breastfeeding for two months, positive attachment between mother and child, no developmental delays in Emily, up-to-date on immunizations, completion of high school by Katy, continued education at community college, established contraception plan, economic plans including establishing paternity and obtaining child support, and no subsequent pregnancy.

Katy will continue to get visits from her NHV for another 11 months. Katy's goals for this time period are to have her own apartment, attend Kellogg Community College, get a car, be a good mother, see her child grow and learn, and create her own family. Support from her NFP nurse will encourage her continued growth in this direction.

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Nurse-Family Partnership®
Calhoun County Public Health Department
190 E. Michigan Avenue
Battle Creek, MI 49014
(269) 969-6392
www.calhouncountymi.gov/publichealth

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