CONTINUATION REVIEW OF PROGRAMS

MATERNAL AND CHILD PROGRAMS

INTERIM REPORT

SESSION LAW 2015-241

SECTION 6.20.(a)

North Carolina
Department of Health and Human Services

December 1, 2015

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Introduction

Session Law 2015-241, Section 6.20.(a). describes the legislatively enacted Continuation Review Program (the Programs). The Program is intended to assist the General Assembly in reviewing funds, agencies, divisions, and programs financed by State government, and to assist the General Assembly in determining whether to continue, reduce, or eliminate funding for them.

The legislation further requires state departments and agencies identified for the Continuation Review Program to report on preliminary findings of the continuation review to the Fiscal Research Division no later than December 1, 2015, and to submit a final report to the Fiscal Research Division no later than April 1, 2016. Continuation review reports are required to include the following information:

> (1) A description of the fund, agency, division, or program mission, goals, and objectives, including statutorily required functions and functions performed without specific statutory authority.
> (2) The performance measures for the fund, agency, division, or program and the problem or need addressed.
> (3) The extent to which the fund, agency, division, or program objectives and performance measures have been achieved.
> (4) A detailed accounting of all sources of funds for the fund, agency, division, or program.
> (5) Recommendations for statutory, budgetary, or administrative changes needed to improve efficiency and effectiveness of services delivered to the public.
> (6) The consequences of discontinuing funding.
> (7) Recommendations for improving services or reducing costs or duplication.
> (8) The identification of policy issues that should be brought to the attention of the General Assembly.
> (9) Other information necessary to fully support the General Assembly's Continuation Review Program along with any information included in instructions from the Fiscal Research Division.

In addition, the Department of Health and Human Services (DHHS) received a guidance letter from the Fiscal Research Division (FRD) of the North Carolina General Assembly on November 2, 2015 for further guidance as related to scope and reporting expectations. Whereas DHHS offers an array of services that are intended to improve birth outcomes and children's health, DHHS is reporting on programs from the divisions outlined by FRD across the Divisions of Medical Assistance, Public Health, and Mental Health, Developmental Disabilities and Substance Abuse Services FRD provided guidance on components to be included in this Interim Report, as well as in the Final Report due April 1, 2016.

The Department of Health and Human Services' (DHHS) Maternal and Child Health (MCH) Programs were identified for continuation review in Session Law 2015-241. Unless otherwise noted, information on performance measures and funding sources for programs included in the review is provided for State Fiscal Year (SFY) 2014-2015. Funding sources provided do not include non-DHHS resources. Each program is also referenced with its associated DHHS Open

Window Service, since some Open Window Services contain multiple programs. Full time equivalent (FTE) estimates are made in cases where positions serve multiple Open Window Services' programs.

The Secretary of the Department of Health and Human Services (DHHS) is the agency head responsible for DHHS' programs addressing maternal and child health. Programs described in this report are organizationally located in the Division of Mental Health, Developmental Disabilities, and Substance Abuse Services (DMHDDSAS); the Division of Public Health (DPH); and the Division of Medical Assistance (DMA).

Based on 2013 North Carolina Infant Mortality data, Secretary Brajer has made addressing low birth weight and infant mortality a priority for the Department. North Carolina was ranked 41st within the United States for infant deaths in 2013. African American women of childbearing age in our State continue to experience an infant mortality rate more than double that of the white population.
The DHHS Deputy Secretaries further ensure cross divisional collaboration within DHHS maternal and child health programs, including initiatives to address low birth weight and infant mortality in 2016. These efforts will include collaborative efforts to target areas within the State with high prevalence of infant mortality using pilot projects.

The DHHS leverages Federal funds to support this priority of the Department. However, these federal funding sources are often prescribed for a very specific program, disease, or population, or through those, to serve a specific geographical area. For example, the federal Title V Maternal and Child Health Block Grant requires States to use at least 30% of Block Grant funds for children with special healthcare needs. Additionally, the Substance Abuse Prevention and Treatment Block Grant requires specialized services for pregnant women with substance use disorder, priority admission, a capacity management system and other procedural requirements. In light of the Secretary's priority, DHHS will continue to leverage these Federal funds and will identify additional opportunities to support a comprehensive Maternal and Children's Health Program in DHHS' final report.

In response to the direction provided by the Fiscal Research Division, this report presents the DHHS Maternal and Child Health programs by Division.

DPH carries out its responsibilities through State managed programs, 85 Local Health Departments (LHDs), and contracts with multiple statewide health partner organizations. Programs use evidence-based or evidence-informed strategies or interventions, or nationally accepted best practices. DPH's programs that provide services directly to citizens are frequently administered by a local agency, such as the LHD. These services address the health of the mother, including preconception and interconception health, as well as the health of children ages 0-5. When appropriate for the mother or child, LHDs link clients to other community resources through the strength of care managers and other LHD staffs who understand the individual needs of a mother and her child. These LHD staffs understand the resources their communities have available to address maternal and child health outcomes.

DMHDDSAS carries out its responsibilities through a system of local mental health authorities/managed care organizations known as Local Management Entities/Managed Care Organizations (LME/MCOs), as well as through contracts with local providers, advocacy organizations, and hospitals. The DMHDDSAS programs in this report focus on the mother's comprehensive substance use disorder treatment needs including arranging for appropriate behavioral health and primary and preventive care needs of her children. The children are routinely referred for specific services in their communities based on their individual needs. Examples of such referrals include Early Intervention services and primary healthcare services through local health departments, both administered by the Division of Public Health. Such referrals are customized, based on the child's needs, and coordinated by the substance use disorder provider working with the mother to ensure seamless services for both mother and child.

DMA ensures Medicaid beneficiaries can access maternal and child health services covered by Federal Law or NC State Plan. Likewise, North Carolina Health Choice (NCHC) beneficiaries have access to child services and if a NCHC beneficiary becomes pregnant, she becomes eligible for maternity services through the Medicaid Pregnant Women Program (MPW). Using State dollars, and leveraging Federal dollars, DMA contracts with vendors to deliver Pregnancy Medical Home services or through interagency agreements with DPH for Care Coordination for Children (CC4C) and/or Pregnancy Care Management. DMA oversees the clinical and financial deliverables and monitors for federal and state compliance.

Interagency agreements between DHHS divisions assist in defining responsibilities for all programs which cross DHHS divisions. DMHDDSAS and DPH have maintained such an agreement for over 20 years. DPH and DMHDDSAS jointly fund the Perinatal Substance Use Project to support pregnant women and women with dependent children, family members and professionals to identify substance use disorder treatment services and supports statewide. Additionally, this project provides training and technical assistance to Local Health Departments, pregnancy care managers, treatment providers and other stakeholders in the community regarding perinatal substance use and treatment resources. The state's capacity management to ensure timely access to care for this priority population is a requirement of the Substance Abuse Prevention Treatment Block Grant administered by DMHDDSAS. The capacity management system also addresses DPH's Women's and Children's Health Section mission to assure, promote and protect the health and development of families with an emphasis on women, infants, children and youth.

Likewise, a DPH/DMA interagency agreement in place for greater than 20 years ensures outcomes for shared programs are achieved by establishing guidelines for funding levels and guidelines for addressing targeted health conditions.

Examples of DHHS' interagency collaboration include, but are not limited to, the following:

- DMHDDSAS collaborates with the DMA Pregnancy Care Management program and developed clinical pathways using evidence based practices to address substance use during pregnancy and Pregnancy Care Management screening tool. There is ongoing collaboration to provide technical assistance to Pregnancy Medical Homes to implement the clinical pathways.

- DMA and DMHDDSAS participate in the DPH NC Perinatal Health Strategic Plan process with the goal of improving healthcare for women and strengthening families.
- All three Divisions provide statewide leadership and support to the Pregnancy and Opioid Stakeholders Workgroup developed to address the prevention, intervention, treatment and recovery needs of this priority population. This workgroup includes other State Agencies, non-governmental partners and local community stakeholders.

Staffs from DHHS Divisions addressing maternal and child health regularly collaborate with other DHHS Divisions to ensure integration of and synergy with these programs, including effectively leveraging all available resources to ensure the best stewardship of these resources. For citizens receiving services, this represents a seamless experience. As an example, Local Health Department clients receiving services from the Pregnancy Care Management or Care Coordination for Children (CC4C)programs receive the same care experience from their provider, regardless of their pay source (Medicaid or otherwise).

Staffs of all DHHS programs referenced in this report also collaborate, as needed, with other state agencies outside of DHHS to improve services and supports to our state's most vulnerable citizens.

Impacts on the Health of Mothers and Their Babies

Improving maternal and child health outcomes is neither simple nor straightforward. Causes of poor health outcomes in women and children involve multiple factors. This includes, but is not limited to:

- The availability of health resources (qualified providers) as well as the means to travel to appointments, including the ability to miss work (and associated wages) without fear of losing one's job.
- The health of women prior to pregnancy (a significant contributing factor to a child's health and infant mortality). Women with chronic conditions such as diabetes, hypertension, and obesity are at greater risk for poor pregnancy outcomes.
- The stresses and supports that impact women and children throughout their lives.

A life course perspective notes that health is an integrated continuum with various stages connected to each other. This perspective focuses on the interaction of social, environmental, and economic factors and how they contribute to health outcomes across a person's life course. A life course perspective builds on the public health research that each stage of life is influenced by the next and that social, environmental, and economic issues have an impact on individual health as well as population or community health.

Such an approach is a nationally accepted means to examining and addressing health outcomes. The life course approach also takes into consideration issues of health equity. With equity, to achieve equal outcomes, the resources and services may need to be different for different populations and communities.

Examples of contextual impacts on the health of women and children are:

- *Poverty* – Women and children who live in poverty are more likely:

    - To have less access to nutritious foods and to environments which promote physical activity.
    - To suffer from chronic diseases and therefore experience negative health outcomes.
    - To experience difficulty accessing health resources even when they are available.
- *Jobs* – The availability of jobs which pay a living wage impacts poverty levels of women and children.
- *Affordable quality child care* – Availability of child care impacts a child's parents' ability to work.
- *Transportation* – Affordable and accessible transportation impacts parents' abilities to maintain a job and to access health resources in their communities.
- *Education* –Affordable and accessible education impacts the families' ability to thrive. This is inclusive of early childhood education that supports the growth and development of children, as well as for adults seeking to further their education in order to secure jobs that can realistically support their families.
- *Environment* – Impacts include housing, domestic violence, as well as exposure to tobacco and other toxins.

Using a life course approach for examining and addressing maternal and child health outcomes also requires the efforts of not only public and private health partners in North Carolina, but also the efforts of multiple non-health partners (both public and private) in our state. Health improvement efforts should include non-health partners in sectors such as education, commerce, transportation, juvenile justice, foundations, faith entities, community action organizations, organizations addressing poverty, and culturally focused entities (such as the Commission on Indian Affairs).

The degree to which non-health partners in North Carolina are currently engaged in the health of mothers and children is varied and limited to certain sectors, programs or locales. Examples of current successful collaborations with non-health partners include:

- The DHHS Division of Public Health partners with over 10 universities (including Historically Black Colleges and Universities) to implement the preconception health peer education program. This involves training college students on maternal and child health issues, and they in turn share this information as Peer Educators with their college peers and the surrounding community. The focus is on women's and family's wellness to include reproductive life planning.
- DPH also partners with several faith entities in implementing a ministry of health initiative. This also involves family wellness to include community gardens and shared physical activity opportunities.
- DPH has developed a funders group which includes public and private funders who contribute to evidence-based programs focused on strengthening families and improving their abilities to successfully parent. This group includes the Kate B. Reynolds Charitable Trust, The Duke Endowment, and other foundation partners.
- DPH's Children and Youth Branch's system change efforts include partners from schools, police officers, juvenile justice, family members, parks and recreation, public transportation, libraries, and local Departments of Social Services.

In short, improving mother and child health outcomes is not just about money. This effort requires wholesale systems change. Systems change requires buy in from multiple health and non-health partners, and it does not occur over a short time frame.

Using Evidence to Guide Decision-Making

In addition to addressing the reporting elements required in Session Law 2015-241, this report also identifies programs regarding whether or not they use strategies or interventions that are **evidence-based, evidence-informed, best practice, or not supported by evidence in literature**. The North Carolina Institute of Medicine (NC IOM) Task Force on Implementing Evidence-Based Strategies in Public Health (2012) noted that, in general, programs and services that use evidence-based strategies (EBS) or interventions are more likely over time to be successful at achieving better health outcomes. The use of EBS also increases the likelihood of efficient utilization of public resources.

Nationally, public health agencies have for years evolved to use evidence-based, evidence-informed or documented best practices when choosing interventions or strategies to address the nation's most pressing public health problems. DHHS' Division of Public Health's programs are no different. Interventions are typically selected:

- Based on requirements of funding agencies to use evidence-based, evidence-informed, or documented best practices; and
- Based on a desire to choose interventions that have already worked, that have the potential to work in North Carolina if implemented with model fidelity and that demonstrate the best stewardship of public resources.

There are varied definitions for terms describing effectiveness of programs or quality of evidence to support the use of programs. The definition of the term "evidence-based" varies across disciplines (such as medicine, social work, juvenile justice, early childhood education, and public health). This variety makes it difficult to assign terms of effectiveness evenly across programs which have decidedly different purposes and anticipated outcomes.

For the purposes of this report, the following definitions (and additional clarification) are used:

Evidence-based strategies or interventions

- "Evidence-based strategies, including programs, clinical interventions, and policies, are those that have been evaluated and shown to produce positive outcomes." (NC IOM).
- The NC IOM further notes that evidence-based strategies should produce positive outcomes when replicated accurately and adequately.
- The Substance Abuse and Mental Health Services Administration (SAMHSA), a division of the U.S. Department of Health and Human Services, notes that the term evidence-based is in stark contrast to "approaches that are based on tradition, convention, belief, or anecdotal evidence."

Evidence-informed strategies or interventions

- Evidence-informed strategies or interventions are "well-informed by the best available research evidence." (World Health Organization)
- Bowen and Zwi (2005) reviewed relevant literature from health, public policy, and the social sciences, including policy analysis theory. Their publication can be summarized as follows:
  - Evidence-informed practice means ensuring that health practice is guided by the best research and information available.
  - Good evidence identifies the potential benefits, harms and costs of an intervention.
  - Evidence may be of a qualitative or quantitative nature.
  - Evidence informed decision making models advocate for research evidence to be considered in conjunction with clinical expertise, patient preferences and values, and available resources.

Best practice

- "Best practice" is a procedure or set of procedures that is preferred or considered standard within an organization, industry, or discipline. Such practices are based on well-documented outcomes.
- Best practices are generally published as guidelines from reputable sources. As more research occurs, best practices are refined and republished across time.
- For health outcomes, sources of best practice may be the Centers for Disease Control and Prevention (CDC), or the U.S. Preventive Services Task Force (USPSTF).
- Other examples of organizations that publish best practices are the American College of Physicians (ACP), the American Congress of Obstetricians and Gynecologists (ACOG), and the American Dental Association (ADA).

Not supported by evidence in literature

- These are strategies or interventions for which there is no evidence documented in literature that indicates the intended positive outcomes can be achieved.

For strategies and interventions which are evidence-based, evidence-informed, or best practice, citations in included in the Resources section of the report.

Division of Public Health Maternal Health Programs

17P Program
Open Window Service: Maternal Health

Current Environment

Description of Mission, Goals, Objectives and Functions:

- Preterm birth is a leading contributing factor for infant mortality and low birthweight births in North Carolina. The mission of the 17P program is to ultimately reduce infant mortality and low birthweight births in our state by reducing preterm birth.
- Research has shown that preterm birth (PTB) is reduced by the use of alpha 17 hydroxprogesterone caproate (17P) among high risk pregnant women, especially low income women.
- 17P is an intramuscular treatment administered on a weekly basis to pregnant women with a history of spontaneous preterm birth.
- 17P is an evidence-based strategy **(see Resources)** designed to reduce preterm births. It is administered by the University of NC at Chapel Hill Center for Maternal and Infant Health and is available statewide.

Program Activities:

- Funding has been used to provide 17P free of charge to North Carolina health care providers for prescriptions for eligible, uninsured pregnant women statewide along with coordination, technical assistance and educational materials.

Statutorily Required Functions:
None

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Maternal and Child Health Block Grant	Federal	$52,000
	GRAND TOTAL	$52,000

No state FTEs. Service is provided through a contract.

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

- Preterm birth is a leading contributing factor for infant mortality and low birthweight births in North Carolina.
- Research has shown that preterm birth (PTB) is reduced by the use of alpha 17 hydroxprogesterone caproate (17P) among high risk pregnant women, especially low income women.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

Outcome Performance Measures	Results
Provide information and technical assistance about 17P to approximately 200 maternal health providers	Contractor answered approximately 10 calls a month (90 contacts with providers) as well as gave presentations to over 100 Community Care of NC (CCNC) case managers.
Conduct telephone interviews with 30 mothers who declined 17P treatment or discontinued treatment to learn more about their reasons for their decisions and how we can better meet their needs. Translate the information learned from the interviews into actionable steps to help increase access to 17P and share these steps with Community Care of North Carolina (CCNC) and other partners	Conducted 31 interviews. Some of the conclusions to increase participation and adherence to the 17P treatment were: • Explore options for locations other than from primary prenatal care provider where shots can be offered. • Facilitate 17P training and provide educational materials for providers and care mangers. • Create or share YouTube videos and other information for nurses about how to administer 17P and treat side effects. • Learn how to better assist women in receiving needed services
Distribute at least 1,477 doses (covering approximately 98 women) of 17P free of charge to NC health care providers for prescriptions for eligible, uninsured pregnant women statewide	Approximately 200 doses (covering approximately 13 women) were distributed. **Due to increase in cost of medication, contractor was unable to purchase targeted dosage. However, contractor was able to work with manufacturer to facilitate maximum use of the company's program for uninsured women. This relationship resulted in 200 uninsured women covered.*

External Factors

Policy Issues or Other Relevant Information:
None

Carolina Pregnancy Care Fellowship
Open Window Service: Maternal Health

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- The mission of Carolina Pregnancy Care Fellowship (CPCF) is to equip, support and provide networking opportunities for member pregnancy resource centers that provide direct services in their local communities to women who face challenging pregnancy situations.
- Carolina Pregnancy Fellowship is administered by a nonprofit entity. It is available statewide. The centers served 7,236 clients with educational messages and support items such as diapers, baby wipes, and clothing.
- These centers provide one or more of the following services: confidential lay counseling and/or mentoring; pregnancy options education and decision making support; material assistance, such as maternity and baby clothing, food, and furniture; prenatal education, childbirth and parenting classes; referrals to other community agencies and medical resources; adoption information; medical services such as limited ultrasound and sexually transmitted infection (STI) testing available under physician supervision; and other related services necessary for the well-being of the mother and child.
- Much of the work is related to workshops/training opportunities regarding medical practices, marketing, and general support.
- This program is not supported by evidence in literature. The practices used by this vendor are not relevant to practices that are used for other maternal health programs described in this report and are not consistent with practices of other states' maternal and child health agencies.

Program Activities:

The contract provider is expected to:

- Provide operational support to 26 pregnancy resource centers in order to expand and improve program services. This includes, but is not limited to, the provision of supplies, equipment, software & hardware, curriculums, travel reimbursement, website upgrades and maintenance, outreach costs and staff development.
- Provide a minimum of 6 trainings in program implementation, client services and non-profit management for a network of 77 pregnancy resource centers (including satellite offices).
- Provide technical assistance in program implementation, client services and non-profit management to 77 pregnancy resource centers (including satellite offices) in the form of site visits, phone, and email interactions.

Statutorily Required Functions:

None

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Maternal and Child Health Block Grant	Federal	$300,000
	GRAND TOTAL	$300,000

No state FTEs. Service is provided through a contract.

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:
Funds were earmarked for this organization through the enacted budget.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

- Number of centers that purchased supplies/equipment - 19
- Number of centers that purchased office furniture - 7
- Number of centers that purchased office equipment - 11
- Number of centers that purchased IT (software/hardware) equipment - 15
- Number of centers that purchased website upgrades and/or maintenance – 8
- Number of centers that purchased client participation items (diapers, wipes, clothing, car seats, etc.) – 17
- Centers served 7,236 clients and provided 9,908 educational sessions.
- Trainings focused on legal aspects of pregnancy center organization and management, documentation, and client case management (all subcontractors required to attend): 3/25/15 and 3/26/15 (Cary &Winston Salem) - 47 people attended representing 32 pregnancy resource centers
- Regional Workshops focused on social marketing: 3/20/15 (Greenville) -16 attending from 9 agencies; 4/24/15 (Wilkesboro) - 15 attending from 5 agencies; 5/1/15 (Asheville) - 14 attending from 7 agencies; Medical Workshop focused on doing ultrasounds 3/21/15 (Mooresville) – 4 attendees
- Consultations with directors (approximately) - Number of phone consults- 560; Number of email consults - 3,380
- Number of site visits - 26 subcontractor visits; 16 other pregnancy centers
- Number of centers receiving technical assistance or training of some type - 74

External Factors

Policy Issues or Other Relevant Information:
None

Healthy Beginnings
Open Window Service: Community Focused Infant Mortality Reduction

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- The Healthy Beginnings program's goals are to improve the overall health of minority women, reduce minority infant morbidity and mortality, and strengthen minority families and communities.
- Healthy Beginnings funds public and nonprofit agencies to implement programs that will impact the reduction of minority infant mortality and low birthweight births in their communities and thereby improve minority birth outcomes. Services are currently provided in the following counties: Buncombe, Columbus, Forsyth, Gaston, Granville, Guilford, Hertford Lee, Northampton, Pitt, Rowan, and Vance counties. Ten sites cover 12 counties.
- Healthy Beginning is evidence-based, evidence-informed, and best practice **(see Resources)**. It is administered by local health departments and nonprofit community organizations.

Program Activities:

The Healthy Beginnings Program incorporates many evidence-based and evidence-informed screenings and interventions in order to promote healthy birth outcomes. These include the following:

- Assessment of tobacco use by pregnant and postpartum women through utilization of the 5A's Method (ask, advise, assess, assist, arrange) for counseling and referral for smoking cessation.
- Screening of pregnant and postpartum women for domestic violence using three recommended American Congress of Obstetricians and Gynecologists (ACOG) screening questions.
- Screening of pregnant and postpartum women for alcohol and illicit drug use using the Institute for Health and Recovery's evidence-informed 5Ps (partners, peers, parents, past, present) screening questions.
- Assessment of all postpartum women with CDC's evidence-informed reproductive life planning questions. These initial questions lead to ensuring that women who are not planning a pregnancy are using an effective birth control method. This intervention helps decrease short interval births and unplanned pregnancies.
- Assessment of folic acid use among all pregnant and postpartum women and provision of counseling and education to encourage this evidence-based intervention that decreases the incidence of neural tube defects.
- Provision of breastfeeding education, counseling and referral for all participants to encourage breastfeeding initiation and maintenance.
- Provision of counseling about healthy weight utilizing the following evidence-informed interventions: 1) pregnant women – staff counsel participants about adequate weight gain during pregnancy based on their pre-pregnancy BMI; 2) staff promote consumption of fruits and vegetables and physical activity to maintain healthy weight for both pregnant and postpartum participants; and 3) staff promote breastfeeding with participants.
- Provision of evidence-based education and support to promote safe sleep practices utilizing the evidence-based practices of: 1) back-to-sleep, 2) eliminating tobacco exposure, 3) eliminating bed sharing, and 4) crib safety.

- Promotion and support of compliance with well-child visits. Staff provides education and support so that mothers take their children to well-child visits. Children who are seen at the health department are seen by providers who follow the evidence-based and evidence-informed Bright Futures guidelines for preventive health services for children. Other children who have Medicaid (and are seen by providers outside the local health department) are seen by providers that follow the Health Check preventive care guidelines which are also evidence-informed and evidence-based.
- Promotion and support of compliance with prenatal care visits. Staff provides education and support so that mothers are compliant with early prenatal care entry and continuous prenatal care.

Statutorily Required Functions:
None

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Maternal and Child Health Block Grant	Federal	$435,869
Appropriations	State	$437,852
	GRAND TOTAL	**$873,721**

1 FTE

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:
- A racial disparity remains in the state with the African American population having an infant mortality rate 2.5 times higher than the White population, and the American Indian population having a 1.8 times higher infant mortality rate that the White population.
- The Healthy Beginnings program provides minority pregnant and postpartum women with evidence-based and evidence-informed interventions and screenings to improve maternal and birth outcomes.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:
There are 10 Healthy Beginnings program sites.
- Each program was required to serve a minimum of 34 participants each year (goal of 340 served). Total participants served in SFY 2014-2015: 526
- 90% of all pregnant women shall receive all prenatal care visits. SFY 2014-2015 achieved: 85.2%
- 40% of new mothers shall initiate breastfeeding and maintain for at least six weeks. SFY 2014-2015 achieved: 32%
- 80% of enrolled participants shall gain an increased knowledge in education topics contributing to favorable birth outcomes. SFY 2014-2015 achieved: 83.4%

External Factors
Policy Issues or Other Relevant Information:
None

March of Dimes
Open Window Service: Maternal Health

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- The March of Dimes NC Preconception Health Campaign promotes folic acid consumption using training, education, media and the distribution of multivitamins to low-income women of childbearing age.
- The March of Dimes also trains health care providers, community lay advisors, and consumers on tobacco cessation for women, the importance of medical homes and early prenatal care, healthy weight for women, reproductive life planning, and the health consequences of early elective delivery.
- The March of Dimes program is evidence-based or evidence-informed **(see Resources),** administered by a nonprofit entity, and available statewide.

Program Activities:

- Provide preconception and folic acid education for women before pregnancy to reduce birth defects, preterm birth, and infant mortality.
- Provide leadership for preconception health activities in North Carolina.
- Increase folic acid consumption.
- Increase preconception health knowledge and behaviors among women and men of childbearing age in North Carolina.
- Increase knowledge of the risks of early elective delivery among pregnant women.

Statutorily Required Functions:
None

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Maternal and Child Health Block Grant	Federal	$350,000
	GRAND TOTAL	**$350,000**

No state FTEs. Service is provided through a contract.

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

- More than half of all infant mortality in North Carolina can be attributed to the health of the mother prior to pregnancy. Preconception health interventions aim to provide access to knowledge and services that allow for improved health prior to pregnancy, thereby positively impacting birth outcomes, including the reduction of birth defects and preterm birth.
- As supported by several recent national health guidelines, preconception health education is a critical mechanism to reduce infant mortality and birth defects.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

- Number of multivitamins purchased to prevent neural tube defects (NTDs) - **40,345**

- Percent of health care providers receiving training who shall provide folic acid/preconception health education and distribute multivitamins to women of childbearing age - **97%**
  Folic acid supplementation has been shown to prevent NTDs by up to 70%; recent report showed that 1,300 births with birth defects were averted yearly by this practice.

- Number of consumer participants educated on the importance of preconception health - **6,794**
  Use of lay health educators can help foster greater adherence to risk reduction recommendations and overall preconception health promotion; self-reported daily multivitamin consumption among Hispanic women in NC increased from 24% at baseline to 71% four months post-intervention.

- Number of health care providers who received training on how to integrate preconception best practices into clinical care - **2,365**
- Percent of participants educated who increase their knowledge of preconception health - **80%**
  The mounting evidence of the clinical components of preconception care and the associated risk reduction strategies has guided the preconception health promotion efforts of the March of Dimes NC Preconception Health Campaign.

- Number of media placed to promote preconception health and daily folic acid consumption to prevent neural tube defects - **4,573**
  There is a growing body of evidence about the effectiveness of preconception health communication strategies to improve health outcomes; education and awareness is the foundation for affecting long-term behavior change.

External Factors

Policy Issues or Other Relevant Information:
None

Maternal Health Clinical Services (including high risk pregnancy services)

Open Window Service: Maternal Health

Description of Mission, Goals, Objectives, and Functions:

- Each local health department (LHD) must provide, contract for the provision of, or certify the availability of maternal health services for all individuals within the jurisdiction of the local health department.
- LHD Maternal Health clinics provide prenatal care based on evidence based practices to promote the health of women during their pregnancy and to ensure healthy birth outcomes.
- These clinics ensure that all pregnant women in the state have access to early and continuous prenatal care, regardless of income.
- These services are evidence-based, evidence-informed, and best practice **(see Resources),** administered by local health departments and East Carolina University, and available statewide.
- The number of pregnant women served in SFY 2014-2015 was 32,082. The number of services provided to pregnant women in SFY 2014-2015 was 469,710.

Program Activities:

- Services provided by the local health departments include clinical prenatal care, screenings, referral for Medicaid and WIC services, provision of tobacco cessation counseling for pregnant women, administration of 17-P (17-hydroxprogesterone injections) for preterm birth prevention, and provision or referral for nutrition consultation.
- In addition, maternal care skilled nurse home visits are provided for women with high risk pregnancies. Newborn/postpartum home visits are also provided by nurses.
- Ten local health departments and East Carolina University are also provided limited funding to provide high risk maternity clinic services.

Statutorily Required Functions:

General Statute 130A-124 requires the Department to establish and administer a maternal and child health program for the delivery of preventive, diagnostic, therapeutic and habilitative health services to women of childbearing years, children and other persons who require these services. The program may include, but shall not be limited to, providing professional education and consultation, community coordination and direct care and counseling.

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Appropriations	State	$3,248,499
Maternal and Child Health Block Grant	Federal	$2,227,700
	GRAND TOTAL	**$5,476,199**

3 FTEs

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

- North Carolina's infant mortality rate was 7.1 per 1000 live births in 2014. The African American infant mortality rate was 12.8 compared to the White infant mortality rate of 5.1 in 2014.
- The greatest contributors to infant mortality are low birthweight and prematurity. Local health departments provide and/or assure access to high quality prenatal care for women in their community.
- Each year, over 500 women die from pregnancy related conditions in the United States. North Carolina averages annually about 15 women who die from those conditions. It is estimated that 1 in 3 pregnancies are affected by one or more high risk conditions, which may need high risk management.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

Maternal Health Process Outcome Objectives	CY11	CY12	CY13
Percentage of women having live births who had adequate prenatal care as defined by Kessner Index.	65.85	65.29	64.17
Percentage of women having live births who smoked during pregnancy.	10.93	10.63	10.29

External Factors

Policy Issues or Other Relevant Information:

- Local health departments (LHDs) receive federal Maternal and Child Health Block Grant (MCHBG) funding to provide prenatal care services for low income women who do not qualify for Medicaid.
- Beginning in SFY 2011-2012, the final state budgets enacted in North Carolina have reduced these funds to LHDs by approximately 11% to fund other set aside items placed in the MCHBG Plan. As these funds have been reduced, the ability for LHDs to provide this care is diminishing. The number of women served and number of services provided by LHDs have declined. In SFY 2012, 42,700 unduplicated patients were served by LHDs through Maternal Health Clinical Services. This number dropped to 32,088 in SFY 2015.

  Notes on Data

  LHDs are also seeing a greater number of uninsured patients (for which they receive no reimbursement) as more private providers are willing to accept Medicaid in some communities (and as a result of Pregnancy Medical Home outreach efforts).

NC Baby Love Plus

Open Window Service: Community Focused Infant Mortality Reduction

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- The purpose of this federal Healthy Start grant program is to improve perinatal health outcomes as well as reduce racial and ethnic disparities in perinatal health outcomes by using community-based approaches to service delivery, and to facilitate comprehensive health and social services for women, infants and their families.
- The NC Baby Love Plus Healthy Start program aims to reduce disparities in infant mortality and reduce adverse perinatal outcomes by 1) improving women's health, 2) promoting quality services, 3) strengthening family resilience, 4) achieving collective impact, and 5) increasing accountability through quality improvement, performance monitoring, and evaluation.
- NC Baby Love Plus uses evidence-based strategies **(see Resources)** and is administered by Edgecombe County Health Department, Forsyth County Health Department, Halifax County Health Department, Nash County Health Department, Pitt County Health Department, and Piedmont Health Services and Sickle Cell Agency. Services are available in the following counties: Edgecombe, Forsyth, Guilford, Halifax, Nash, and Pitt counties.

Program Activities:

- Edinburgh Postnatal Depression Scale
- Patient Health Questionnaire
- Ages and Stages Questionnaires (ASQ-3 and ASQ:SE-2)
- Motivational Interviewing
- 5As Smoking Cessation (ask, advise, assess, assist, arrange) - for counseling and referral for smoking cessation services

Statutorily Required Functions:

None

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Healthy Start Grant	Federal	$1,670,604
	GRAND TOTAL	**$1,670,604**

5 FTEs

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

- North Carolina is one of several southern states with high rates of infant mortality and morbidity. North Carolina was ranked 41st in the U.S. in 2013.

- In 2014, the state's infant mortality rate was 7.1 deaths per 1,000 live births, a slight increase from 2013.
- While there have been improvements in the infant mortality rate overall, racial disparities in infant mortality still persist. African American women of child bearing age (15-44 years) in North Carolina continue to experience an infant mortality rate more than double that of the White population, with a 2014 rate of 12.8 infant deaths per 1,000 live births.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

Performance Measure	Annual Target	SFY 2014-2015
Number served- women, infants and children.	750	749
Percentage of children age 0-18 participating in MCHB-funded programs who receive care within a medical home.	Increase to 88%	98.7%
Percentage of women participating in MCHB supported program who have an ongoing source of primary and preventive services.	Increase to 60%	77.4%
Percentage of women participating in MCHB supported programs who required a referral, received a completed referral.	Increase to 62%	87.5%
Percentage of pregnant program participants in MCHB funded programs receiving prenatal care in the first trimester of pregnancy.	Increase to 65%	58.2%
Percentage of completed referrals among women in MCHB-funded programs.	Increase to 68%	74.7%
Percentage of women participating in MCHB-funded program who smoke in the last 3 months of pregnancy.	Reduce to 11%	11.3%
Percentage of very low birth weight infants among all live births.	Reduce to 3.7%	1.6%
Percent of live singleton births weighing less than 2,500 grams among all live births.	Reduce to 14.2%	11.8%
The infant mortality rate for program participants per 1,000 live births.	Reduce to 15.8 per 1000 live births	6.8 per 1000 live births
The neonatal mortality rate for program participants per 1,000 live births.	Reduce to 11.8 per 1000 live births	2.3 per 1000 live births
The post-neonatal mortality rate for program participants per 1,000 live births.	Reduce to 4.0 per 1000 live births	4.5 per 1000 live births
The perinatal mortality rate for program participants per 1,000 live births.	Reduce to 15.5 per 1000 live births	4.5 per 1000 live births
The percent of mothers who breastfeed their infants at 6 months of age.	Increase to 7.5%	12.1%

External Factors

Policy Issues or Other Relevant Information:
None

Perinatal Quality Collaborative of NC (PQCNC)
Open Window Service: Maternal Health

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- Mission - Identify key opportunities for improving perinatal care and execute time limited statewide quality initiatives.
- Goal - Meet legislative intent by supporting hospitals with the overall goal of improving perinatal health to NC families.
- Objectives - Consistently and constantly seek to develop strategies that spread best practice, reduce unnecessary variations in care, promote partnership with families and patients and optimize resources.
- The work of the PQCNC is all based on evidence-based and best practice strategies **(see Resources)** as supported by American College of Obstetricians and Gynecologists (ACOG).
- The services are administered by University of North Carolina at Chapel Hill and are available statewide.

Program Activities:
Provide quality improvement training on maternal, nursery and neonatal quality initiatives for 1,020 unduplicated healthcare professionals. More specifically, the three initiatives were:

- Conservative Management of Preeclampsia (CMOP)
- Treatment of Neonatal Abstinence Syndrome (NAS) in the Nursery
- Screening for Critical Congenital Heart Disease (CCHD)

Trainings on these initiatives were offered through quarterly Learning Sessions, webinars and weekly e-mail updates.

Statutorily Required Functions:
None

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Maternal and Child Health Block Grant	Federal	$350,000
GRAND TOTAL		$350,000

No state FTEs. This service is provided through a contract.

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:
North Carolina has a high rate of infant mortality (ranked 41th in the U.S. in 2013), as well as a number of medical providers who are in need of perinatal health education.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:
Vendor contract performance measures are number of webinars held, number of learning sessions held, number of health care providers receiving perinatal health education and number of maternal, nursery and neonatal quality initiatives developed and implemented.

- Reached 93% of the target providers to be served in SFY 2014-2015 (1,100 target and served 1,020, likely secondary to provider schedules or interest in the issue presented).
- 6 learning sessions held (target 2); 3 maternal, nursery and neonatal quality initiatives held (target 3); 18 webinars held (target 24).

External Factors

Policy Issues or Other Relevant Information:
None

Pregnancy Care Management (for Women Ineligible for Medicaid)

Open Window Service: Maternal Health

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- The goal of the Pregnancy Medical Home (PMH)/Pregnancy Care Management model is to improve the quality of maternity care, improve birth outcomes, and reduce costs.
- A preterm birth prevention initiative, this program seeks to reduce costs as a result of more babies being born at term or closer to full term, thereby requiring fewer costly healthcare interventions, such as neonatal intensive care and pediatric specialty care and therapies.
- The model engages obstetrical providers as Pregnancy Medical Homes and local health departments as providers of Pregnancy Care Management services.
- This value added public-private partnership is a new and innovative approach to comprehensive patient-centered maternity care. These funds are utilized in serving women who are ineligible for Medicaid.
- Pregnancy Care Management uses evidence-based and evidence-informed interventions **(see Resources)** and is administered by health departments in the following counties that were funded: Buncombe, Cabarrus, Chatham, Duplin, Durham, Guilford, Henderson, Johnston, Mecklenburg, Montgomery, Moore, New Hanover, Pitt, Sampson, and Wake counties.
- The number of non-Medicaid pregnant and postpartum women serve by these 15 counties in SFY 2014- 2015 was 1,049.

Program Activities (provided to all women served):

- 17 alpha-hydroxyprogesterone caproate (17P)
- Motivational Interviewing
- 5As Smoking Cessation
- Pregnancy Care Management Standardized Plan - Care Management Standards and Common Pathway
- Depression Screening Tool-Patient Health Questionnaire (PHQ-9)
- Intimate Partner Violence/Sexual Abuse Screening Tool
- Drug Abuse Screening Test (DAST-10)
- Alcohol Use Disorders Identification Test(AUDIT)
- Substance Abuse Screening Tool-Screening, Brief Intervention, and Referral to Treatment (SBIRT)

Statutorily Required Functions:
None

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Maternal and Child Health Block Grant	Federal	$195,882
Appropriations	State	$325,980
	GRAND TOTAL	**$521,862**

No FTEs, as program is carried out through local health department allocations

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:
Preterm births in North Carolina account for 11.6% of the total births in the state in 2014. Preventing preterm births reduces costly healthcare interventions, such as neonatal intensive care and pediatric specialty care and therapies.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

- The number and percent of unique patients contacted (at least one home visit, practice encounter, or community encounter with the patient) within 30 days of the date of a positive initial risk screen was 1,705/2,372 = 71.2% (target is 80-100%).
- The number and percent of unique patients who were engaged and assigned an active case status within 30 days after the date of the positive initial risk screening was 941/2,372 = 39.6% (target is 80-100%).

  Some LHDs had vacancies and difficulty in hiring bilingual staff to implement the program. Two of the 15 sites met the threshold for this measure, while another 4 of the sites were in the 70th percentile. Each of the sites that are below the threshold will receive a follow up within the next 2 months to include a performance improvement plan with a corrective action plan. If they are unable to meet the minimal requirements, the funds will be redistributed to sites that are able to meet the requirements.
- The number and percent of unique patients who were deferred for "Unable to Contact" annually was 127/3,134 = 4.1% (target 0-5%).

- The number and percent of unique patients who were deferred for "Refused Services" annually was 93/3,134 = 3.0% (target 0-5%).

External Factors

Policy Issues or Other Relevant Information:

None

Young Families Connect

Open Window Service: Maternal Health

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- The program assists both young expectant and parenting women and men with the objective that they overcome challenges and achieve personal life goals, thus altering their life trajectories in a positive direction.
- The Young Families Connect Program (YFC) provides services that promote self-sufficiency, health and wellness, and parenting skills for expectant and parenting women and men ages 13-24 years living in Bladen, Onslow, Robeson, Rockingham and Wayne counties.
- YFC: 1) incorporates evidence-informed and evidence-based practices; 2) provides support services that are easily accessible; 3) creates effective local systems of care for young expectant and parenting women and men; and 4) identifies lessons learned from local initiatives to implement improvements in other programs serving young parents in North Carolina.
- Young Families Connect uses Evidence-based and evidence-informed strategies **(see Resources).**
- The following agencies are implementing the YFC program: Bladen County Health Department, Onslow County Partnership for Children, Robeson County Committee on Domestic Violence, Inc., Rockingham County Partnership for Children, and Wayne County Health Department. They provided the program to 467 participants in SFY 2014-2015 in Bladen, Onslow, Robeson, Rockingham and Wayne counties

Program Activities:

To achieve its goals, they YFC Program uses the following evidence-based or evidence-informed interventions with participants: Incredible Years Parenting Program; Motivational Interviewing; Reproductive Life Plan; and Read Set Plan Toolkit (which includes educational materials and resources that are used by program staff to promote preconception health and health care to women and men during the child bearing years as recommended by the Centers for Disease).

Statutorily Required Functions:

None

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Young Families Connect Grant	Federal	$1,355,610
	GRAND TOTAL	**$1,355,610**

1 FTE

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

- North Carolina has one of the highest infant mortality rates in the country.
  - In 2014, there were over 120,000 births with an infant mortality rate of 7.1 per 1,000 live births.
  - A racial disparity remains in the state with the African American population having an infant mortality rate 2.5 times higher than the White population, and the American Indian population having a rate 1.8 times higher infant mortality rate that the White population.
  - Additionally, over 19% of women did not receive adequate prenatal care.
- The teen pregnancy rate for 2013 was 35.2 per 1,000 girls ages 15-19.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:
The federal granting agency requires grantees to report on 12 performance measures for all participants and 6 measures for expectant and parenting participants under age 19. All YFC program objectives have been achieved for Year 2 (August 1, 2014-July 31, 2015).

Program performance measure data is listed in the table below.

All Young Families Connect Participants

Performance Measure	Performance Question	Response
0.01 Number and percentage distribution of eligible participants enrolled in the program, by participant category	How many eligible participants received at least one activity? Indicate the total number in each category below.	
	a) Expectant female teens (19 years and younger)	46
	b) Expectant male teens (19 years and younger)	4
	c) Parenting teen mothers (19 years and younger)	39
	d) Parenting teen fathers (19 years and younger)	4
	e) Expectant women (20 years and older)	85
	f) Expectant men (20 years and older)	13
	g) Parenting women (20 years and older)	240
	h) Parenting men (20 years and older)	36
	i) Children (of expectant or parenting participants [reported in a to h above)	515
0.02 Number and percentage distribution of non-participant extended family members	How many non-participant extended family members received at least one activity? Indicate the number served in each category.	
	a) Parent or Guardian of the expectant or parenting participant	4
	b) Grandparent of the expectant or parenting participant	1
	c) Spouse of the expectant or parenting participant	3
	d) Partner of the expectant or parenting participant	3
	e) Other Specify: sibling	1

0.03 Number and percentage distribution of expectant and parenting participants, by age group	What is the age of expectant and parenting participants? Indicate the total number in each category below.	
	a) 12 years and younger	0
	b) 13 years old	1
	c) 14 years old	0
	d) 15 years old *(This is a corrected total from the 6 month report.)*	4
	e) 16 years old	4
	f) 17 years old	13
	g) 18 years old	33
	h) 19 years old	38
	i) 20-24 years	347
	j) Over 24 years old (*These are YFC participants who entered the program at age 24 but turned 25 during Year 1 of their enrollment. This is a correct total from the 6 month report.)*	27
0.04 Number and percentage distribution of expectant and parenting participants, by Hispanic or Latino ethnicity	What is the ethnicity of expectant and parenting participants? Indicate the total number in each category below.	
	a) Hispanic or Latino	34
	b) Not Hispanic or Latino	244
	c) Unknown or not reported	189
0.05 Number and percentage distribution of expectant and parenting participants, by race	What is the race of expectant and parenting participants? Indicate the total number in each category below.	
	a) Asian *(This is a correct total from the 6 month report)*	1
	b) Black or African American	237
	c) American Indian or Alaska Native	49
	d) Native Hawaiian or Other Pacific Islander	2
	e) White	110
	f) More than one race (*This is a corrected total from the six month report.*)	32
	g) Unknown or not reported	36

0.06 Number and percentage distribution of expectant and parenting participants, by their current relationship status	What is the current relationship status of expectant and parenting participants?	
	a) Married	61
	b) Not married (never married, divorced, separated, or widowed) but living with a boyfriend/girlfriend/partner (cohabiting)	89
	c) Neither married nor cohabiting	258
	d) Missing	59
0.07 Number of expectant and parenting participants, by their current living arrangement at program entry	What is the current living arrangement of expectant and parenting participant? Indicate the total number in each category.	
	a) Lives alone or with child/children	172
	b) Lives with spouse/partner	117
	c) Lives with parent(s)	134
	d) Lives with spouse's/partner's parent(s) or other related adult(s)	32
	e) Lives with other unrelated adult(s)	23
	f) Lives in foster or group home	1
	g) Homeless/no permanent residence	5
	h) Other (Specify: grandparent(s), siblings, aunt)	13
	i) Missing	4

0.08 Number of expectant and parenting female participants that receives (in the last 4 weeks) financial or social support for themselves or their (youngest) child from the child's father	How many expectant or parenting female participants received any financial or social support for themselves or their (youngest) child from the child's father in the last 4 weeks? Indicate the total number in each category:	
	a) Financial support (examples include giving the teen or woman money, child support payments, buying clothes, diapers or other supplies for the baby, paying for doctors' visits?)	238
	b) Social support (examples include assisting with child care, going to doctor's visits, helping with chores, assisting with transportation)	232
0.09 Number of expectant and parenting male participants that provides (in the last 4 weeks) financial or social support for their (youngest) child or the child's mother	How many expectant and parenting male participants provided financial or social support for their (youngest) child or the child's mother in the last 4 weeks? Indicate the total number in each category:	
	a) Financial support (examples include giving the teen or woman money, child support payments, buying clothes, diapers or other supplies for the baby, paying for doctors' visits?)	47
	b) Social support (examples include assisting with child care, going to doctor's visits, helping with chores, assisting with transportation)	48

0.10 Number of expectant and parenting participants and their dependent children that received services directly from program staff, by type of services received	How many expectant and parenting participants received any of the following services directly from program staff? Indicate the number in each category below.	
	a) Health care services (including prenatal care, postpartum care, reproductive health, pediatric care, and primary care)	46
	b) Education support services (including tutoring services, credit recovery, individualized graduation plans, flexible scheduling, homebound instruction for extended absences, GED registration and enrollment, school re-enrollment assistance, college application assistance, financial aid resources or application assistance, dropout prevention services)	129
	c) Child care services	113
	d) Transportation Services	190
	e) Parenting skills information	187
	f) Healthy relationships information	146
	g) Concrete supports (such as food, housing, clothing, furniture)	155
	h) Case management services	467
	i) Home visitation services	128
	j) Vocational Services (including job training, career counseling, resume writing assistance)	29
	k) Other Specify: Disaster Clean Kit, Graduation incentives, Health insurance information, smoking cessation.	17

0.11 Number of expectant and parenting participants and non-participant extended family members that were referred for service(s) by program staff, by type of service referrals offered (NOTE: Category 3 grantees should enter any services for Violence Against Women in question 3.1)	How many expectant and parenting participants and non-participant extended family members were referred by program staff at least once for any of the following services? Indicate the number referred in each category below.	
	a) Health care services (including prenatal, post-partum care, reproductive health, pediatric care, and primary care)	85
	b) Education support services (including tutoring services, credit recovery, individualized graduation plans, flexible scheduling, homebound instruction for extended absences, GED registration and enrollment, school re-enrollment assistance, college application assistance, financial aid resources or application assistance, dropout prevention services)	152
	c) Child care services	44
	d) Parenting skills information	9
	e) Transportation Services	78
	f) Healthy relationships information	35
	g) Concrete supports (such as food, housing, clothing, furniture)	56
	h) Case management services	0
	i) Home visitation services	63
	j) Vocational Services (including job training, career counseling, resume writing assistance)	45
	k) Intimate Partner Violence Prevention services	58
	l) Other Specify: Court advocacy, Child Protective Services advocacy, Custody Clinic, Department of Social Services, electricity, English as a Second Language, Faith Based Organization, Immigration forms, Immigration services, Legal Aid, legal services, Literacy Project, Physical activity, Pre-Kindergarten, Pregnancy Group Home, Red Cross Emergency Assistance, rent, School System, YWCA.	31

0.12 Number of extended family members of expectant and parenting participants that were referred for service(s) by program staff	How many extended family members of the expectant and parenting participants were referred by program staff at least once for any services? Indicate the total number referred. (Extended family members may include any family member who is not eligible for services, such as the participants' parents, legal guardians, grandparents)	
	a) Health care services (including prenatal, post-partum care, reproductive health, pediatric and primary care)	6
	b) Education support services (including tutoring services, credit recovery, individualized graduation plans, flexible scheduling, homebound instruction for extended absences, GED registration and enrollment, school re-enrollment assistance, college application assistance, financial aid resources or application assistance, dropout prevention services)	4
	c) Child care services	1
	d) Parenting skills information	7
	e) Transportation Services	3
	f) Healthy relationships information	7
	g) Concrete supports (such as food, housing, clothing, furniture)	8
	h) Case management services	0
	i) Home visitation services	2
	j) Vocational Services (including job training, career counseling, resume writing assistance)	2
	k) Intimate Partner Violence Prevention services	0
	l) Other Specify: Faith Based Organization, Department of Social Services, Immigration, Legal Aid, Male Involvement, Physical activity	4

Young Families Connect - Expectant and Parenting Participants ages 19 and younger

Performance Measure	Performance Question	Response
2.1 Number and percentage distribution of expectant and parenting participants, by high school enrollment status and grade level	What is the number of expectant and parenting participants by their high school enrollment status? Indicate the number for each category below.	
	a) Enrolled, Freshman	2
	b) Enrolled, Sophomore	2
	c) Enrolled, Junior	5
	d) Enrolled, Senior	20
	e) Preparing for General Education Diploma (GED)	24
	f) Not enrolled in high school or preparing for the GED	34
2.2 Number and percentage of expectant and parenting high school students served that drops out during the school year	How many expectant and parenting high school students served dropped out of high school during the school year?	3
2.3 Number and percentage of expectant and parenting high school seniors served that graduates at the end of the school year	How many expectant and parenting students served who were high school seniors at enrollment or at the beginning of the program year that graduated from high school at the end of the school year?	8

2.4 Number and percentage of expectant and parenting participants that passes the GED exam during the program year	How many expectant and parenting participants passed the GED exam during the program year?	3
2.5 Number and percentage of expectant and parenting participants who either graduate from high school or obtain a GED that is accepted into an IHE during the program year	How many expectant and parenting participants who either graduated from high school or obtained a GED that are accepted into an IHE?	21
2.6 Number of parenting participants 19 years and younger that reports a new pregnancy during the program year	How many parenting participants 19 years and younger reported a new pregnancy during the program year?	2

External Factors

Policy Issues or Other Relevant Information:
None

Division of Public Health Child Health Programs

Care Coordination for Children, or CC4C (for Children Ineligible for Medicaid)

Open Window Service: Children's Preventive Health Services

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- CC4C is a population-based care management program for children birth to 5 years of age who are not eligible for Medicaid.
- It focuses on assuring access to high-quality, family-centered, preventive care for children who are likely to have long-term health and developmental concerns.
- CC4C uses evidence-informed interventions **(see Resources)** around follow-up of medical needs, development of care management plans, initial assessments, developing family centered goals and community referrals and follow-up. This information is based on recommendations for certification from the Case Management Society of America.
- CC4C is administered by local health departments and is available statewide.

Program Activities:

- Local Health Departments provide care management services to children based on the amount of funding they receive for non-Medicaid children, which includes children age birth to five years who are:
  - Children with special health care needs
  - Neonatal Intensive Care Unit (NICU) babies
  - In foster care and not linked to a medical home
  - Exposed to toxic stress in early childhood
  - High cost / high users of services
- Care managers:
  - Use assessments to identify the needs of the child and family.
  - Assure the child is well-linked to a medical home that serves as the "home" for all of the patient's care, and coordinates all the care needed by the patient.
  - Work with the family and medical home to develop a plan to address the identified needs.
  - Link the family with services in their communities to assist in meeting any identified needs.
  - Use available resources to promote self-management and in so doing, empowers the family to develop a vision of how they can assume responsibility managing their child's health.
  - Educate patients, medical homes and community organizations

- Contact patients identified as being in the CC4C Priority Population through claims data analysis or through a CC4C Referral Form.
- Develop a list of community resources available to meet the specific needs of the population as a locally-developed resource manual.
- Communicate regularly with the medical homes serving children.
- Prioritize face-to-face family interactions
- Identify and coordinate care with community agencies/resources to meet the specific needs of the population
- Continually assess whether interventions are reaching the desired goal(s) and if progress is not being made, determine whether revisions are needed, or whether deferral should be considered.
- Work with local Community Care Network to ensure program goals are met.

Statutorily Required Functions:
SUBCHAPTER 45C - PUBLIC HEALTH SERVICES. 10A NCAC 45C .0101, ESSENTIAL PUBLIC HEALTH SERVICES, G.S. 130A-1.1(b) establishes categories of essential public health services and directs the Department to assure, within the resources available to it, that these services are available and accessible to all citizens of the state. Child care coordination is a specific service listed in statute to be provided under these essential public health services.

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Maternal and Child Health Block Grant	Federal	$1,140,833
Appropriations	State	$855,724
	GRAND TOTAL	**$1,996,557**

4.25 FTE State and Regional Consultants

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:
- For SFY 2011-2012, 20% of children in North Carolina were identified as having special health care needs, or 81,842 children. Of those, approximately 38.8% were non-Medicaid eligible or 31,754 children. (*Source: Kids Count and the North Carolina State Center for Health Statistics*).
- For SFY 2014-2015, the rate of children ages 0 to 5 in foster care was 6.7 per 1,000, or 4,067 children (*Duncan et al; see Resources section*).

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

- North Carolina Community Care Networks (NCCCN) is paid a Per Member Per Month (PMPM) for the CC4C program for the Medicaid beneficiaries, including the reporting on Medicaid beneficiaries receiving CC4C services. Previously, NCCCN produced reports for DPH on non – Medicaid individuals at no cost. Reduction of the NCCCN PMPM affected NCCCN's ability to continue to provide reporting on non-Medicaid individuals to DPH.

- Data for the Performance Measures is therefore not available for SFY 2014-2015. However, Data Dashboard Measures for SFY 2014-2015 are outlined below.

Data Dashboard Measures for SFY 2014-2015

Percent of non-Medicaid children age 0 to 5 contacted by CC4C care manager
Benchmark: 5%
Target Range is: 8-12%
Actual March 2015: 8.2%

Percent of non-Medicaid children age 0 to 5 in CC4C heavy/medium case status contacted by CC4C care manager
Benchmark: 3%
Target Range: 5-7%
Actual March 2015: 4.9%

Percent of non-Medicaid children age 0 to 5 initially identified with a task of CC4C care manager and deferred for "unable to contact"
Benchmark: 8.5%
Target Range: 0-5%
Actual March 2015: 5%

Percent of non-Medicaid children ages 0 to 5 initially identified with a task by CC4C care manager and deferred for "refused services"
Benchmark: 8.5%
Target Range: 0-5%
Actual March 2015: 1.3%

External Factors

Policy Issues or Other Relevant Information:
None

Child and Adult Care Food Program (CACFP)

Open Window Service: Child and Adult Care Food Program

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- The mission of the Child and Adult Care Food Program (CACFP) is to ensure that children and adults who attend non-residential care facilities receive nutritious meals.
- The goals, objectives, and functions of the CACFP are to increase the participation, increase the number of breast-feeding friendly child care facilities participating in the CACFP, and increase access to healthy foods.
- Resources were developed in North Carolina as a part of a U.S. Department of Agriculture Team Nutrition Grant: CACFP Kids Eat Smart and Move More Nutrition Standards for Child Care
    - Physical Activity Standard for Child Care
    - Healthy Menus Planning Toolkit
- The CACFP is administered by the DHHS Division of Public Health and through schools and organizations including child care centers, family day care homes, at-risk after school programs, homeless shelters and adult day care centers. Services are provided statewide.

Program Activities:

This program provides financial support to non-residential care facilities to provide supplemental foods and nutrition education. Specific areas of focus include:

- Approving applications for at least 685 childcare institutions annually
- Monitoring and providing technical assistance to at least 33.3% of participating Institutions
- Increasing the number of Breastfeeding-Friendly Child Care facilities by 20%
- Increasing access to healthy foods by increasing the number of meals served by 600,000
- Providing nutrition and physical activity training to at least 50% of the Institutions participating on the CACFP
- Providing programmatic training to at least 50% of the Institutions participating on the CACFP

Statutorily Required Functions:

7 Code of Federal Regulations (CFR) Part 226

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Child and Adult Care Food Program Grant	Federal	$101,515,767
Appropriations	State	$307
	GRAND TOTAL	**$101,516,174**

27 FTEs

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:
There are approximately 113,500 children annually enrolled in day care institutions participating in the Child and Adult Care Food Program. The Child and Adult Care Food Program provides reimbursement to institutions to serve nutritious meals to their enrolled participants. This program provides healthy meals to children and adults who may otherwise not have access to healthy meals.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:
The SFY 2014-2015 performance measure is as follows:

Average daily attendance of 130,000 participants
SFY 2014-2015 actual: 116,000 participants

External Factors

Policy Issues or Other Relevant Information:
None

Child Health Services (Local Health Department Clinics)
Open Window Service: Children's Preventive Health Services

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- The mission of Child Health Services clinics in local health departments (LHDs) is to promote improved child health by focusing on providing access to preventive health care for underinsured or uninsured children and Medicaid recipients. In providing this care, child health clinics:
  - Utilize Best Practice models in clinical service by adhering to Bright Futures (American Academy of Pediatrics standard of care for preventive health) guidelines in delivery of child health services.
  - Provide program services that are evidence-based or evidence-informed and targeted to local child health issues as identified by review of Action for Children County Reports, Eat Smart Move More data, local community assessment and other data sources.
  - Adhere to the Medicaid Health Check policies in delivery of care.
  - Use evidence based health literacy strategies in child health clinics and home visits for newborn assessment and care to assure parents and clients can read, understand, and apply health information to make informed decisions to improve health outcomes.
- In addition to providing preventive care for children, Child Health Services' functions also include:
  - Using data for strategic planning to improve community level child health services.
  - Encouraging community partnerships, particularly between LHDs and Community Care of North Carolina, to address local issues regarding access and care.

- Aligning workforce requirements and training to assure continuing competency for nurses.
- Using continuous quality improvement models to focus on and improve clinic efficiency through Regional Child Health Consultants support.
- Participating in Regional Child Health Meetings that provide a community forum for information and discussion about clinical topics, policy, data and other relevant issues.
- Participating in Child Health Enhanced Nurse Training that provides registered nurses (RNs) an avenue for certification that allows them to deliver Medicaid for Children (HealthCheck/ EPSDT) periodic well-child checkups.
- Maintaining a written agreement with the local school district(s)/Local Education Agency (LEA) within its service area to reflect joint planning which includes:
  - Program goals and objectives;
  - Roles and responsibilities defined for each agency including a formal plan for emergency and disaster use of school nurses;
  - A description of the process for developing written policies and procedures; and
  - Provisions for annual revision of the agreement.

- Local health departments use best practices in clinical care and they use evidence-based or evidence-informed services in their community work **(see Resources).**
- Child Health Services are administered by 85 local health departments (LHDs) in collaboration with the North Carolina DPH Children and Youth Branch. Each LHD either serves directly as the child's medical home (those providing primary care) or links children, whenever possible, to a medical home. The children seen in LHD are usually children who are unable to pay and not served by the private medical providers.
- Services are available statewide.

Program Activities:

- Direct health care services include:
  - Child health information, referral, immunizations, and hemogloginopathy screening upon request.
  - Follow-up of infants with conditions identified through newborn metabolic screening (e.g. PKU, hypothyroidism) upon request or as needed.
  - Routine periodic well-child preventive care to children not served by another health care resource.
    - Routine periodic well-child preventive care includes at a minimum: initial and interim health history; physical assessment and laboratory services; developmental evaluations; nutrition assessment; counseling, including anticipatory guidance; and referrals for further diagnosis and treatment.
    - In compliance with North Carolina Administrative Rules (10A NCAC 46.2040), LHDs may assure the provision of routine periodic well-child preventive care instead of providing them by maintaining a Memorandum of Understanding/Agreement with local health care providers documenting how these services are provided by them.
- In addition to direct medical services for the non-Medicaid population, local health departments can elect to use some of their funding for other evidence-based or evidence-informed child health initiatives. The following is a menu of initiatives from which they may choose, based on their communities' needs:
  - Innovative Approaches for Children with Special Health Care Needs

- Child Fatality Prevention Strategies
- School Nursing / School Nurse Supervision
- Child Care Health Consultation
- School Nurse Case Management
- Whole School, Whole Community, Whole Child Model
- Reach Out and Read
- Triple P (Positive Parenting Program)
- Family Connects Home Visiting
- Nurse-Family Partnership Home Visiting
- Healthy Families America Home Visiting
- Youth Mental Health First Aid
- Child and Adolescent Depression Screening
- Obesity Prevention (Energizers, Families Eating Smart and Moving More, Eat Smart Cook Smart)
- Adolescent Pregnancy Prevention Programs (Straight Talk, Making Proud Choices, Wise Guys, Draw the Line/Respect the Line)
- Asthma Prevention Coalition Activities
- Child Injury/Death Prevention (Bike Helmet Education and Distribution, Car Seat Education and Distribution, Safe Child Care Programs, Safe Sleep Campaigns)

Statutorily Required Functions:

- **SUBCHAPTER 45C - PUBLIC HEALTH SERVICES. 10A NCAC 45C .0101, ESSENTIAL PUBLIC HEALTH SERVICES, G.S. 130A-1.1(b)** establishes categories of essential public health services and directs the Department to assure, within the resources available to it, that these services are available and accessible to all citizens of the state. Child health services are listed in statute to be provided under these essential public health services.
- **SECTION .0200 - STANDARDS FOR LOCAL HEALTH DEPARTMENTS, 10A NCAC 46 .0201, MANDATED SERVICES** lists mandated services, including Child Health Services, which are required to be provided in every county of the state (and which local health departments shall provide, or ensure the provision of these services).

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Maternal and Child Health Block Grant	Federal	$2,993,065
Appropriations	State	$2,450,829
	GRAND TOTAL	**$5,443,894**

5 State and Regional FTEs

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

- Limited access to preventive health care for uninsured and Medicaid eligible children results in late identification of preventable illness and injury creating poor quality of life and unnecessary medical costs.
- Per the Kaiser Family Foundation State Health Facts and based on the March 2014 Current Population Survey: Annual Social and Economic Supplements, North Carolina's child uninsured rate is 7.8%.
- Per the Centers for Medicare and Medicaid Services (CMS) 416 data for FY14 (divided by the population estimates for CY14), the percent Medicaid eligible is 46.6% for children birth to age 20.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

- Unduplicated Non-Medicaid clients that had a well-child visit, age 0-21:
  Baseline=9,923
  Target=11,806
  Actual SFY14-15=16,105
- Unduplicated Non-Medicaid clients that had a pediatric primary care visit, age 0-21:
  Baseline=10,930
  Target=11,454
  Actual SFY14-15=15,461

External Factors

Policy Issues or Other Relevant Information:
None

NC Childhood Lead Poisoning Prevention Program (NC CLPPP)

Open Window Service: Environmental Health

Current Environment

Description of Mission, Goals, Objectives and Functions:

- The goal of the NC Childhood Lead Poisoning Prevention Program (NC CLPPP) is coordinating clinical and environmental services and primary prevention activities aimed at reducing and eliminating childhood lead poisoning.
- Programmatic activities work towards assuring healthy and safe housing conditions and appropriate testing of children at risk for lead exposure.
- The program's objectives to meet this goal include providing preventive education and establishing screening guidelines; collecting, processing, and analyzing laboratory blood lead test results; monitoring and assisting in early case identification and medical follow-up; training investigators, contractors, and environmental health specialists in exposure source identification and remediation; and coordination of other activities related to lead poisoning prevention.

- NC CLPPP functions to provide for early identification, surveillance, clinical case management, health education, environmental investigation, and remediation enforcement in regards to children with elevated lead exposure.
- The program uses evidence-informed strategies or interventions and best practices **(see Resources)** set forth by the Centers for Disease Control and Prevention, U.S. Department of Housing and Urban Development Office of Lead Hazard Control and Healthy Homes, and the Environmental Protection Agency.
- The program is administered by the Division of Public Health, Environmental Health Section, Children's Environmental Health Unit, and is available statewide. Populations served include health care providers of services to children, child-occupied facilities, Head Start agencies, blood lead testing laboratories, property owners, housing contractors, expectant parents and families of young children including Medicaid recipients.

Program Activities:

- Conducting environmental state of practice workshops for local health department (LHD) staff concerning the content, organization and delivery of program services to ensure program goals are met in accordance with appropriate practice standards.
- Conducting clinical workshops for LHD staff and private health care providers concerning testing of children for lead poisoning and appropriate clinical follow-up and case management of children with elevated blood lead levels.
- Providing environmental investigations statewide for children with elevated blood lead levels and proactively at child-occupied facilities with suspected lead hazards.
- Providing technical assistance to property owners and managers in developing a remediation plan to reduce and safely control identified lead hazards.
- Managing a statewide surveillance system with an automated notification system used by clinical and environmental health care providers for identification of children in need of clinical and environmental follow-up services. The system also provides tracking of properties identified with lead hazards and those remediated.
- Providing ongoing consultation and technical assistance to LHDs and private health care providers to assure a coordinated system of service provision for all children including referral of children to WIC and the Children's Developmental Service Agency as appropriate and to Social Services and housing authorities as needed for lead-safe housing or additional medical and family support services.
- Providing ongoing technical assistance to blood lead testing laboratories for timely reporting of all blood lead test results for children under the age of 6 and technical support for electronic reporting including the maintenance of a secure site for upload of confidential laboratory files.
- Providing ongoing technical assistance, training and site consultation to parents, guardians, property owners, housing contractors and others on residential lead-safe maintenance, renovation and repair practices, and demonstrating methods to effectively and safely reduce environmental lead hazards.
- Providing ongoing surveillance of properties previously identified with lead poisoning hazards to ensure all maintenance and renovation activities are in compliance with an approved remediation plan.

- Assisting Head Start Agencies with meeting Program Performance Standards 45 CFR 1304.20(a)(1)(ii) by providing blood lead test results for children enrolled in Head Start.

Statutorily Required Functions:

- Monitoring of blood lead test results for children under 6 years old, which are received through a mandatory laboratory reporting requirement (N.C. General Statute 130A-131.8)
- Performing risk assessments and inspections to determine the presence of lead-containing hazards when the Department learns of a child with an elevated blood lead level or suspects lead hazards at a child-occupied facility (N.C. General Statute 130A-131.9A)
- Approving remediation plans for lead hazards found during these inspections (N.C. General Statute 130A-131.9C)
- Verification of compliance with remediation requirements and annual monitoring when necessary (N.C. General Statute 130A-131.9D and E)

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014*):

SFY 14-15 Funding Source	Funding Type	Amount
Medicaid	Federal	$1,262
Appropriations	State	$156,409
	TOTAL	**$157,671**

***Additional resources not captured in SFY 14-15 certified budget as of 9/18/2014**

CDC Childhood Lead Poisoning Prevention Surveillance Grant	Federal	$311,705
Appropriations	State	$336,513
Medicaid Federal Financial Participation (FFP)	Federal	$165,195

9 FTEs

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

- As North Carolina housing stock ages, lead paint becomes accessible to children through the dust in their homes, direct mouthing of paint, and ingesting lead from the soil.
- In addition, the program continues to find non-paint related sources of lead exposure such as jewelry, toys, imported spices, herbal remedies and candy, and parental hobbies and occupations.
- Therefore, the program continues to monitor and coordinate blood lead testing of children ages 1 to 5 and environmental inspection of homes and child-occupied facilities, with the goal of prevention and reduction of health effects for children at risk for lead poisoning.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

Outcome Performance Measure	Results
The number of children tested for lead poisoning, ages 1 and 2 in SFY 2014-2015, out of the number of live births of North Carolina children in the previous years. Explanation: GS 130A-131.8 requires all laboratories doing business in NC to report all blood lead test results for children less than six years of age and for individuals whose ages are unknown. Reports shall be made within five working days after test completion.	Data are not yet complete for this time period. To date, our reporting system indicates that approximately 48% of 1- and 2-year-old children were tested for lead poisoning in calendar year 2014; however, this is likely an underestimate. ***(See Notes on Data below)***

Notes on Data

- *Prior to 2013, the screening rate had increased every year since 1995. For 2013, it was 52.3%; and for 2012, it was 55.6%.*
- *Test results from the State Laboratory of Public Health, LabCorp and Mayo feed directly into the program's surveillance system.*
    - *Results from other laboratories must be manually processed to conform to certain file specifications before being uploaded to the system. Therefore, there is a lag time before these results are incorporated.*
    - *In addition, the availability of a point-of-care (POC) blood lead analyzers has resulted in a growing number of health care provider offices also serving as blood lead laboratories. Data quality from many of these POC laboratories is incomplete or inaccurate and requires considerable labor intensive follow-up by state program staff. This follow up can result in back-logs for data entry.*
- *Additional funding for support positions has been awarded through a grant from the Centers for Disease Control and Prevention (CDC). One new epidemiologist position was recently established and filled utilizing these federal funds; thus, the follow-up of incomplete/inaccurate data will be feasible going forward.*
- *A communication clarifying proper usage of the POC analyzers and reporting requirements was sent to all Medicaid providers in September 2015.*
- *Other trainings in October and November 2015 and new technical assistance resources have been added to the NC CLPPP website aimed at improving overall data quality as well.*

External Factors

Policy Issues or Other Relevant Information:
The Centers for Disease Control and Prevention (CDC) is scheduled to reevaluate the current reference value (blood lead action level) in 2016. Any changes to the current reference value of 5 ug/dL could have substantial impact on public and private health care providers since the number of children requiring clinical case management is determined by this action level.

Childhood Lead Poisoning Prevention Program – Laboratory Component

Open Window Service: State Laboratory Services – Testing, Training and Consultation

Description of Mission, Goals, Objectives, and Functions:

- The laboratory component of the Childhood Lead Poisoning Prevention Program (CLPPP) is partially conducted by the State Laboratory of Public Health (NCSLPH), which follows prescribed procedures to ensure high-quality screening and communication of results and information.
- This ensures follow up as previously described, including appropriate mitigation and education activities.
- The State Laboratory of Public Health's Blood Lead Lab provides laboratory testing results to the North Carolina Childhood Lead Poisoning Prevention Program. The laboratory provides outputs to the Program which, in turn, develops evidence-based or evidence-informed strategies, best practice recommendations, and outcomes **(see Resources).**
- The service is statewide. The number of blood lead tests performed in SFY 2014-2015 was 92,856.

Program Activities:

- Performing blood lead test results for Medicaid-eligible children under 6 years old and in compliance with N.C. General Statute 130A-131.8.
- The laboratory administers a Quality Assurance Office that addresses quality issues associated with blood lead testing. The Office assures that the laboratory participates in proficiency testing, training, support, technical assistance, and consultation to blood lead testing stakeholders.

Statutorily Required Functions:

N.C. General Statute 130A-131 references the performance of blood lead test results for Medicaid-eligible children under 6 years old.

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Medicaid	Federal	$422,844
	GRAND TOTAL	**$422,844**

4 FTEs

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

See previous description

Performance Measures Defined and State Fiscal Year 2014-2015 Status:
NCSLPH provides outputs which, in turn, assist with the development of evidence-based or evidence-informed strategies, best practice recommendations, and outcomes.

External Factors

Policy Issues or Other Relevant Information:
None

Cochlear Implant Services
Open Window Service: Genetics and Newborn Screening

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- The purpose of this contract is to support comprehensive and multidisciplinary evaluation and treatment of communicative disorders related to hearing loss for children in North Carolina ages birth to 21.
- The contract pays for certain hearing-related equipment, physician, audiological, and speech-language services for families who cannot afford the high costs of these devices or services, and who do not qualify for other public assistance programs.
- The goal of early hearing detection and intervention (EHDI) is to maximize listening and language competence, school readiness, and literacy development for children who are deaf or hard of hearing.
    - Children with hearing impairment will fall behind their hearing peers in communication, cognition, reading, and social-emotional development without appropriate access to sound and opportunities to learn language.
    - Children diagnosed with significant hearing loss frequently need costly hearing-related equipment, otolaryngologic, audiologic, or speech-language services to achieve these goals.
    - While this hearing-related equipment may not restore or create normal hearing, it does give a deaf person a useful auditory understanding of the environment and/or help him/her to understand speech and learn language.
    - In order to be effective, the use of hearing-related equipment must be accompanied by appropriate and ongoing intervention services which include, but are not limited to, on-going audiologic management, speech-language services, and otolaryngologic management.
- Medical best practices are utilized in these services **(see Resources).**
- The services are administered by the University of North Carolina (UNC) at Chapel Hill, which has the only resident cochlear implant team in the UNC system. Services are available to citizens statewide.

Program Activities:

- Provide hearing devices, including cochlear implants, hearing aids, and, when not provided by other resources, Frequency Modulation systems to children for whom these devices are medically appropriate and are enrolled in the program.
- Provide assistance to parents of children with cochlear implants in educational planning and placement.
- Provide ongoing audiological care of children with cochlear implants.
- Provide audiological evaluations of children who are deaf or hard of hearing. Many, but not all, evaluations will determine cochlear implant candidacy.
- Provide communication assessments on children who are deaf or hard of hearing. Enroll by the end of the contract period at least 35 new children not previously served by the program.
- Ensure by the end of the contract period that 100% of newly enrolled children receive hearing devices and that 75% of total enrolled children receive otologic, audiologic, or speech related services at UNC Hospitals.
- Ensure by the end of the contract period that 17 newly enrolled children have or are candidates for cochlear implant.
- Ensure by the end of the contract period that 50% of newly enrolled children who are candidates for cochlear implantation will be age birth to three years.

Statutorily Required Functions:
None

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Maternal and Child Health Block Grant	Federal	$519,919
	GRAND TOTAL	**$519,919**

No state FTEs. This service is provided through a contract.

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

- The North Carolina Office of State Budget and Management 2012 State Population Projections indicated North Carolina had 2,732,181 residents under age 21 years.
- Women's and Children's Services (WCS) Web data indicated an incidence of hearing loss for infants born in North Carolina in 2011 of 1.6/1000.
- Based on this data, at least 4,371 children in North Carolina have significant hearing loss.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

- The number of unduplicated clients to receive comprehensive and multi-disciplinary treatment was projected at 250. 236 children were actually served.
- Percent of clients who achieved maximum communication competence through the use of hearing-related equipment and/or services, regardless of communication modality, by

showing positive speech, language and listening outcomes as measured by routine assessments in the their individualized case plans = 100%
- Cost per unduplicated client = $2,079.68.
- Clients enrolled in Medicaid significantly increased in the contractor's overall caseload and those without coverage decreased. Since the program only pays for those children without another source of coverage, the contractor's caseload was 14 children short of the projected services for the contract. The contractor served all those without insurance who presented for care.

External Factors

Policy Issues or Other Relevant Information:
None

Craniofacial Services
Open Window Service: Genetics and Newborn Screening

Current Environment

Description of Mission, Goals, Objectives, and Functions:
- The purpose of the Craniofacial Disorders Center contract is to provide optimal care for children birth to 21 with cleft lip, cleft palate, and other craniofacial anomalies through an interdisciplinary team-oriented approach.
- The service uses medical best practices **(see Resources)** determined for multiple disciplinary fields and an interdisciplinary, child/family-centered team approach.
- The University of North Carolina at Chapel Hill provides craniofacial treatment, and services are available to citizens statewide.

Program Activities:
- Provide quality comprehensive specialty medical care that is otherwise unavailable to children with cleft palate and other craniofacial anomalies. According to the American Cleft Palate-Craniofacial Association, these children are best managed by a multidisciplinary team with extensive experience in diagnosis and treatment of craniofacial anomalies.
- Provide multiple services, such as social work, pediatric dentistry, orthodontics, pediatric otolaryngology, pediatric genetics, craniofacial surgery, oral and maxillofacial surgery, plastic surgery, speech and language pathology, and psychology.
- Provide requisite ongoing comprehensive follow-up by a multidisciplinary team devoted to patient and family-centered care. This level of clinical expertise and multidisciplinary support is not locally available to most children and families in this state. Support provided through this contract improves access to this level of clinical expertise and multi-disciplinary follow-up for children throughout the state.

Statutorily Required Functions:
None

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Maternal and Child Health Block Grant	Federal	$234,846
Appropriations	State	$52,225
	GRAND TOTAL	**$287,071**

No state FTEs. This service is provided through a contract.

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

- The American Academy of Pediatrics defines children with special health care needs (CSHCN) as children or youth who have or are at risk for chronic physical, developmental, behavioral or emotional conditions that require health and related services of a type or amount beyond that generally required. It is estimated that 16-18% of children age birth to 21 who have craniofacial anomalies would meet this definition.
- Genetic and environmental factors are the leading cause of birth defects; 5.7% of NC babies are born with a birth defect.
- Birth defects are the leading cause of infant mortality in North Carolina.
- Seventy percent of admissions to children's hospitals are due to genetically caused or influenced medical problems.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

Genetic Craniofacial Contract:

Name	Measures	Baseline	Targets	Actuals
UNC-CH Craniofacial Genetic Center	Number of unduplicated patients who shall receive genetic evaluation, genetic counseling, and/or genetic test(s) with no other reimbursement mechanism	285	285	# of Unduplicated Clients—396 # of Units of Service Provided--2220

External Factors

Policy Issues or Other Relevant Information:

None

Early Intervention
Open Window Service: Early Intervention

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- The Early Intervention Branch (EI Branch) is the lead agency for North Carolina's Infant-Toddler Program which is implemented through local lead agencies, called Children's Developmental Services Agencies (CDSAs).
- Early Intervention's role is to provide supports and services to families and their children, from birth to three years of age, who have developmental delays with the ultimate goal of children achieving their maximum potential for learning.
- Early intervention services are designed to meet the developmental needs of an infant or toddler with a disability and the needs of the family to assist appropriately in the infant's or toddler's development, as identified by a team including the family, in any one or more of the following areas:
  - Physical development
  - Cognitive development
  - Communication development
  - Social or emotional development
  - Adaptive development
- Research shows that the 0-3 time period is critical. It offers a window of opportunity to make a positive difference in how a child develops and learns.
- Evidence-based, evidence-informed, and best practices **(see Resources)** suggest that providing routines-based assessments and interventions in children's natural environments are most effective in helping families of children with disabilities and serve to empower families to parent and teach their infants and toddler most effectively.
- The Early Intervention program is administered by the DHHS' Division of Public Health, Women's and Children's Health Section, Early Intervention Branch administers 12 of the Children's Developmental Services Agencies, and contracts out services for 4 of the CDSAs.
- Services are available statewide. 16 Children's Developmental Services Agencies (CDSAs) serve all children ages birth to age three with developmental disabilities and their families, in all 100 counties. Each CDSA covers a multi-county catchment area, with the exception of Raleigh and Mecklenburg, which each cover one county.

Program Activities:

- There are 16 local agencies, CDSAs that cover North Carolina's 100 counties. 12 of the 16 CDSAs are State CDSAs and 4 are contracted.
- Each CDSA has similar responsibilities and is required to, at a minimum:
  - Determine program eligibility
  - Inform and explain to families what early intervention services are, explain billing processes, inform and explain parents' legal rights under IDEA
  - Provide eligibility evaluations or conduct assessments if an infant or toddler has an established condition that has a high probability of resulting in developmental delay

    - Provide service coordination and ensure a smooth transition from early intervention services to Part B services or other appropriate related or other services.
- Types of early intervention services include:
    - Assistive technology devices
    - Audiological services
    - Provision of auditory training and aural rehabilitation, speech reading and listening devices, orientation and training, and other services; provision of services for prevention of hearing loss and determination of child's individual amplification needs
    - Family training, counseling and home visits by social workers, psychologists, and other qualified personnel to assist the family of an infant or toddler with a disability in understanding the special needs of the child and enhancing the child's development;
    - Health services
    - Medical services
    - Nursing services
    - Nutrition services
    - Occupational therapy
    - Physical therapy
    - Psychological services
    - Service coordination (i.e., services provided by a service coordinator to assist and enable an infant or toddler with a disability and the child's family to receive the services and rights, including procedural safeguards, required under part C. Each infant or toddler with a disability and the child's family must be provided with a service coordinator).
- The EI Branch, as the identified lead agency for the State, helps to ensure compliance with the Individuals with Disabilities Education Act, as amended (IDEA), and specifically, with part C of the IDEA and its implementing regulations (34 Code of Federal Regulations, or CFR § 303.1 through § 303.734).
- The EI Branch ensures compliance with these federal regulations through quality assurance and monitoring activities, including, but not limited to:
    - Reporting state performance on regulatory based indicators and annual progress on both compliance and results to the federal Office of Special Education Programs (OSEP) at the United States Department of Education and to the public via its website and other public means
    - Maintaining a state data system
    - Providing technical assistance, training and financial support to local programs
    - Ensuring that state and federal funds are spent timely and appropriately
    - Ensuring that appropriate early intervention services are based on scientifically based research, to the extent practicable, and are available to all infants and toddlers with disabilities and their families, including Indian infants and toddlers with disabilities and their families residing on a reservation geographically located in the State and infants and toddlers with disabilities who are homeless children and their families
    - Maintaining a comprehensive child find system
    - Maintaining a central directory that is accessible to the general public and includes accurate, up-to-date information about – public and private early intervention services, resources and experts in the State; professional and other groups (including parent support, and training and information centers) that provide assistance to infants and toddlers with disabilities eligible under IDEA Part C and their families

- Includes a comprehensive system of personnel development

Statutorily Required Functions:
Individuals with Disabilities Education Act (IDEA), Part C's implementing regulations (34 Code of Federal Regulations, CFR § 303.1 through § 303.734)

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Infant and Toddler Grant	Federal	$12,193,146
Appropriations	State	$20,665,452
Medicaid	Federal	$34,116,759
Insurance & Family Payments	State receipts	$265,203
	GRAND TOTAL	**$67,240,560**

674 FTEs

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:
- According to population data from North Carolina (April 30, 2015), there are 358,709 children ages birth to three in the State. Early Intervention provides services to slightly more than 10,100 children, which equates to about 2.8% of the population in this age group. The North Carolina Early Intervention program is at approximately the national median, in terms of percent of population served.
- From July, 2015 through October, 2015, there have been over 7,600 referrals to the Early Intervention program.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:
Required federal Annual Performance Reporting Indicators which are reported to the granting agency are:
1. Percent of Infants and toddlers with Individualized Family Service Plans (IFSPs) who receive the early intervention services on their IFSPs in a timely manner (within 30 days).
2. Percent of infants and toddlers with IFSPs who primarily receive early intervention services in the home or community-based programs.
3. Percent of infants and toddlers with IFSPs who demonstrate improved:
   a. Positive social-emotional skills (including social relationships)
   b. Acquisition and use of knowledge and skills (including early language communication)
   c. Use of appropriate behaviors to meet their needs
4. Percent of families participating in Part C who report that early intervention services have helped the family:
   a. Know their rights
   b. Effectively communicate their children's needs
   c. Help their children develop and learn
5. Percent of infants and toddlers birth to 1 with IFSPs compared to national
6. Percent of infants and toddlers birth to 3 with IFSPs compared to national

7. Percent of eligible infants and toddlers with IFSPs for whom an evaluation and assessment and an initial IFSP meeting were conducted within Part C's 45-day timeline.
8. Percent of all children exiting Part C who received timely transition planning to support the child's transition to preschool and other appropriate community services by their third birthday, including:
   a. IFSPs with transition steps and services
   b. Notification to LEA, if child potentially eligible for Part B
   c. Transition conference, if child potentially eligible for Part B
9. Percent of hearing requests that went to resolution sessions that were resolved through resolution session settlement agreements.
10. Percent of mediations held that resulted in mediation agreements.
11. The State's State Performance Plan (SPP)/Annual Performance Report (APR) includes a State Systemic Improvement Plan (SSIP) that meets the requirements set forth for this indicator.

The above 11 indicators are reported on annually, in addition to data collection reports that are submitted. For FFY 2014-15, the U.S. Department of Education determined that North Carolina "meets requirements" of the IDEA.

- This determination was based on submission of the Annual Performance Report (Indicators 1-10), and
- The submission of the State Systemic Improvement Plan (Indicator 11).

External Factors

Policy Issues or Other Relevant Information:

Over the last few state fiscal years, the Early Intervention Branch has experienced a loss of positions and state appropriations, with the most recent reduction of 160 FTEs and $10 million in state appropriations in SFY 2013-2015.

These financial and personnel losses have negatively impacted how CDSAs interact with families within their catchment areas.

- Staff caseloads have increased approximately 20%.
  - In November 2015, 56% (9 of 16) of the CDSAs reported increased caseloads for their Service Coordinator staff since funding reductions occurred. All 9 of these CDSAs are state-owned and operated CDSAs, which were significantly more impacted by funding reductions as compared to the 4 contract CDSAs.
  - This has resulted in less frequent contact with families and challenges in monitoring the compliance of service delivery by community providers (see **Figures 1 and 2**).
  - As noted in Figure 2, additional reduced revenues to the program (from Targeted Case Management billing) are an unintended but factual consequence of previous funding reductions.
- CDSAs are functioning without personnel that can focus on continuous quality improvement and direct resources towards self-assessment activities that would lead to improved services, better results for families, and increased compliance with federal performance indicators. Since the funding reductions, the number of Quality Improvement/Assurance staff in the

CDSAs has declined from 16 to 7. The task of ensuring quality services and data falls onto other staff positions, which often do not have the time or knowledge/skills to effectively serve in that role. **Figure 3** depicts an increase in the percentage of CDSAs with findings of federal non-compliance between SFY 2011-2012 and SFY 2014-2015.

- CDSAs have had to ask families to come to their offices in order to meet regulatory timelines, which is a practice contrary to what is known to be evidence-based and better for infants, toddlers and their families. Evidence supports the delivery of early intervention services in natural environments. **Figure 4** depicts this negative service delivery trend.

Figure 1: Total minutes of Early Intervention Targeted Case Management Provided FY 11-12 to FY 14-15

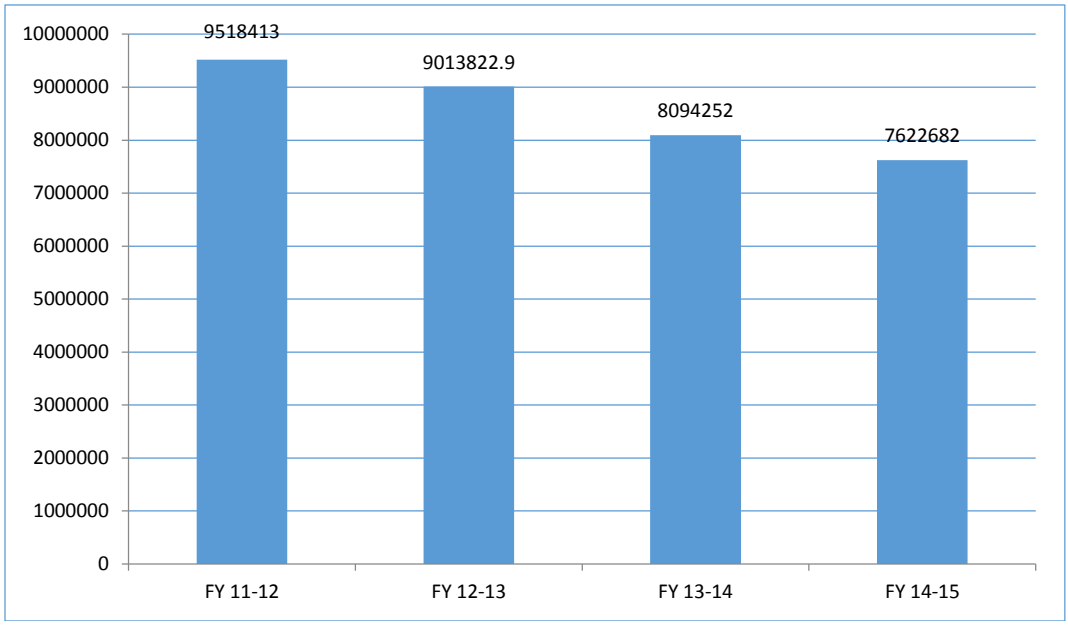
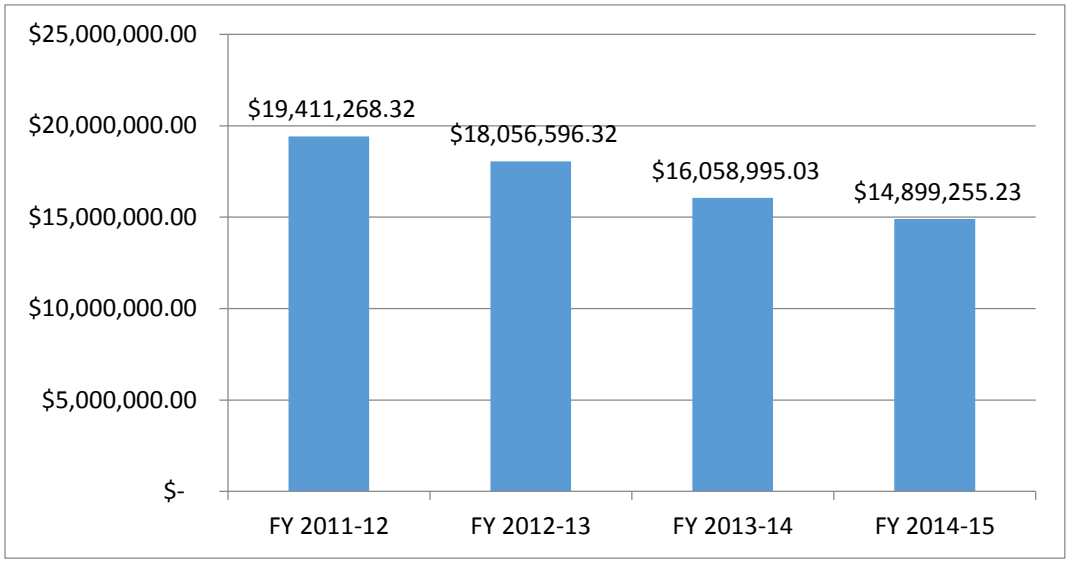


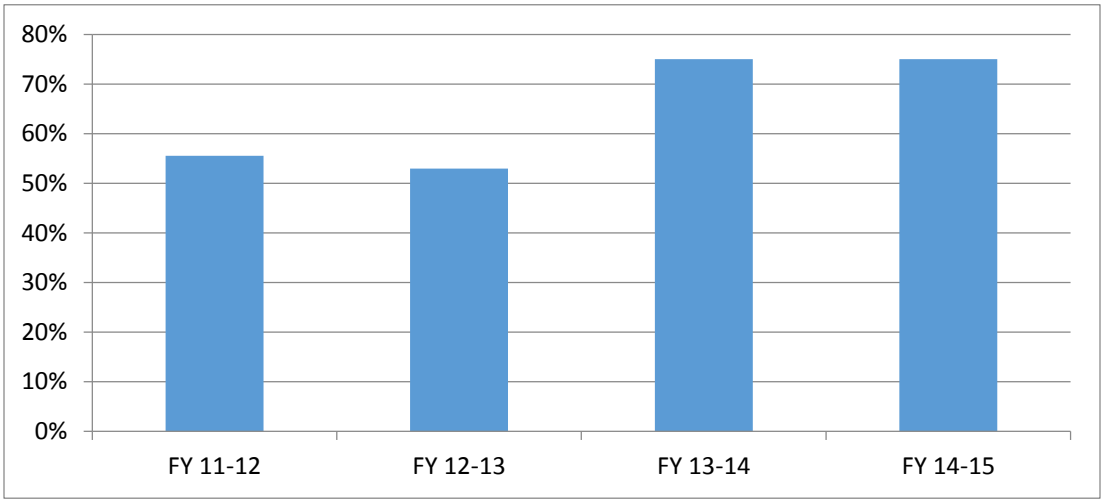
Figure 2: Total revenue from Targeted Case Management FY 11-12 to FY 14-15



Both charts indicate there has been a significant reduction in the amount of Targeted Case Management delivered by CDSAs in 2014-2015 when compared with 2011-2012. This reduction can be attributed to fewer Service Coordinators, who are the primary providers of Targeted Case Management. In addition, the remaining Service Coordinators are experiencing greater caseloads, and therefore are not able to see families for Targeted Case Management as often as needed.

Data Source: DPH Early Intervention Branch

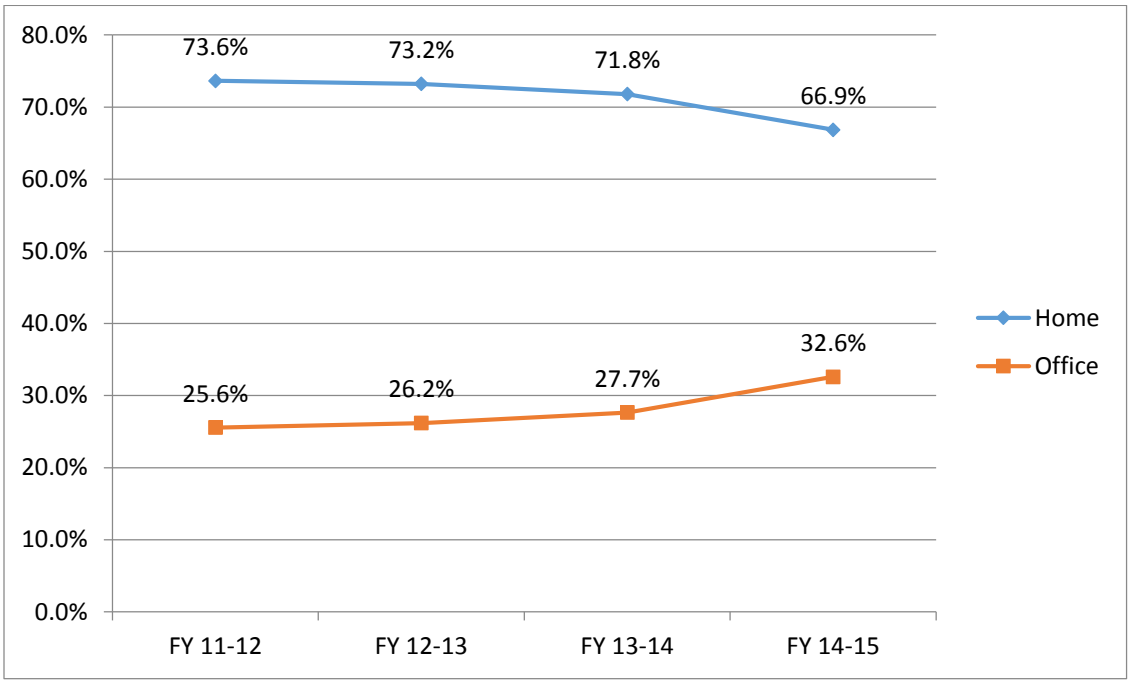
Figure 3: Percentage of CDSAs with Findings of Federal Non-Compliance FY 11-12 to FY 14-15



There has been an increase in the number of CDSAs with findings of non-compliance. As CDSAs are faced with staff and provider shortages, a larger number are having difficulty meeting federal Individuals with Disabilities Education Act (IDEA) requirements, such as referral, service delivery and transition timelines, timely and accurate entry of data into the State data system (HIS), and compliance with other statutory requirements as identified during monitoring activities.

Data Source: DPH Early Intervention Branch

Figure 4: Location of CDSA Evaluations FY 11-12 to FY 14-15



The percentage of evaluations for developmental delays being done in the Office setting has increased 27% (from 25.6% to 32.6%) from FY 2011-2012 to FY 2014-2015.
Data Source: DPH Early Intervention Branch

- Budget reductions have prompted program staff to examine the current Early Intervention model and how services might be delivered more effectively and efficiently with the program's current resources. As part of the State Systemic Improvement Plan (SSIP), an analysis has been conducted on many aspects of the State program, including financial resources, governance, professional development and the overall infrastructure.
  - One of the 5 implementation teams working on the SSIP, utilizing principles of implementation science, is focusing on the State's infrastructure and how to support the CDSAs to enable better and timelier provision of services to infants, toddlers and their families with current resources.
  - The program has examined other states' Early Intervention models, practices and systems. While some states have similar programs as North Carolina, the model we have is quite unique and any improvements to it will require a North Carolina solution. We are using this information to inform our State Systemic Improvement Plan.
  - The EI Branch is also exploring the use of technology similar to telehealth to provide services to families in areas where there are insufficient numbers of clinical providers to meet the needs of families.
  - Additionally, the EI Branch is exploring utilization of a centralized billing process that will serve to maximize reimbursement levels from insurance.
  - While these are positive steps, it will likely take several years before benefits are yielded.

Genetic Counseling Services

Open Window Service: Genetics and Newborn Screening

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- Many genetically inherited or influenced abnormalities are not detectable immediately at birth and may take weeks, months or years to develop signs. The earliest possible detection of birth defects and genetic disorders may lead to the reduction of severity and prevention of complications which can save families and the State costly services for medical care, lost productivity and institutionalization.
- Early diagnosis and genetic counseling benefits patients and families by preventing or reducing the severity of complications, increasing treatment compliancy, and by understanding a disorder's risk of recurrence.
- The purpose of Genetic Counseling is to:
  - Reduce mental retardation, mortality, and morbidity from genetic disease and birth defects.
  - Provide genetic counseling follow-up to families and individuals for newborns with inherited metabolic or cystic fibrosis disorders and for children/family members with identified genetic diseases.
  - Promote awareness, prevention, and treatment of genetic diseases through education, early identification, diagnosis and intervention.
  - Coordinate genetic satellite clinics (12-30) per year - a safety net for North Carolina residents living in rural areas of the state.
  - Provide local health care professionals with information regarding appropriate reasons for a genetic referral and the importance of timeliness in making referrals, and serve as a resource for helping them determine when and how referrals are made.
- Use of best practices in clinical settings **(see Resources)** is based on the American Academy of Pediatrics (AAP) and the American College of Medical Genetics and Genomics (ACMG).
- Genetic counselors in North Carolina must be Board Certified through the national board of certification exam which is administered by the American Board of Genetic Counseling (ABGC).
- The DPH Children and Youth Branch lacks requisite facilities, technology and medical staff to provide the clinical services directly and it is more cost-efficient and effective to contract with facilities that have the appropriate infrastructure to provide such service. Administering agencies include private and public medical centers and state and private universities, the North Carolina State Laboratory of Public Health for metabolic testing, and state-funded genetic counselors. The services are available statewide.

Program Activities:

- The contract supports diagnostic, clinical management and genetic counseling services for infants and children with highly complex needs and their families.
- Contracted genetic services are intended to serve children (0-21) and their families statewide who are at-risk for or have a genetic, teratogenic, or metabolic disorder and who are uninsured or underinsured as "payment of last resort."

- Provide clinical genetic services, genetic counseling services, and genetic testing for patients from a variety of referral sources with highly complex needs and their families regardless of their ability to pay. Services conducted at medical facilities and outreach satellite clinics include clinical evaluations/services, laboratory studies, genetic counseling, follow-up, and management.
- Genetic services are provided to patients for:
  - Hereditary diseases such as neurofibromatosis, cystic fibrosis, and Marfan syndrome.
  - Hereditary and teratogenic induced deafness and blindness.
  - Congenital anomalies, chromosome defects and dysmorphic syndromes.
  - Intellectual Disabilities, autism and developmental delays.
  - Late onset genetic disorders including but not limited to hereditary cancer.
- Metabolic services are provided to patients with diagnoses identified through Tandem Mass Spectrometry Screening.

Statutorily Required Functions:
SUBCHAPTER 45C - PUBLIC HEALTH SERVICES. 10A NCAC 45C .0101, ESSENTIAL PUBLIC HEALTH SERVICES, G.S. 130A-1.1(b) establishes categories of essential public health services and directs the Department to assure, within the resources available to it, that these services are available and accessible to all citizens of the state. Genetic services is a specific service listed in statute to be provided under these essential public health services.

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Maternal and Child Health Block Grant	Federal	$967,601
Appropriations	State	$239,239
	GRAND TOTAL	**$1,206,840**

4 FTEs

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:
- Birth defects are a leading cause of infant mortality in North Carolina [NC State Center for Health Statistics, Birth Defects Monitoring Program, 2014].
- About one in every 33 babies is born with a birth defect [CDC, Center on Birth Defects and Disabilities, 2014].
- Forty percent of neonatal deaths are due to problems that are genetically based or influenced [National Centers for Health Statistics, 2012].

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

Name of Contractor	Counties Served	Target # of Unduplicated Clients	# of Unduplicated Clients
UNC-Chapel Hill	All counties	2,030	3,715
East Carolina University	33 counties	76	11
Mission Hospital	16 counties	180	196
Carolinas Medical Charlotte	10 counties	900	747
Wake Forest Baptist Hospital	20 counties	800	715

Genetic Counseling Services 4 genetic counselors

Pediatric Encounters A "pediatric encounter" may be to facilitate genetic services for families, to explain a genetic diagnosis or testing, to arrange needed follow–up, to share resources or assist in a referral to another agency/support group, or any other contacts to assist the family who has a child with a confirmed or suspected genetic disorder	1051
Specialty Clinics / Satellite Clinics Specialty clinics are conducted by entities such as Cystic Fibrosis clinic, muscular dystrophy clinics, neurology, etc. where are genetic counselors take the opportunity to meet families on their caseloads while they already have an appointment to help reduce the days parents have to miss work. Satellite clinics are genetic travel clinics that are coordinated by Regional Genetic Counselors and staffed by genetic centers medical geneticists.	176
Consultations with Medical Providers about genetic information	95
Intake services such as obtaining family histories	207
Number of educational presentations (providers, schools, grand rounds, etc.)	24
Number trained at educational presentations	500

External Factors

Policy Issues or Other Relevant Information:
None

Healthy Families America (Home Visiting)
Open Window Service: Children's Preventive Health Services

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- To work with overburdened families who are at-risk for adverse childhood experiences, including child maltreatment, abuse, and neglect.
- To support pregnant woman and parents of young children with the goal of preventing family violence, increasing self-sufficiency, and enhancing school readiness.
- Improve pregnancy outcomes by helping women engage in preventative health practices, including obtaining prenatal care, improving diet and nutrition, and reducing use of tobacco, alcohol, and drugs.

- To identify and provide comprehensive services to improve outcomes for families who reside in at risk communities.
- HFA uses documented evidence-based strategies and interventions **(see Resources).**
- This evidence-based home visiting model is being implemented by the following three agencies in North Carolina:
    - Non-profit entity: The Center for Child and Family Health, Inc. administers Healthy Families Durham (HFD) and serves approximately 55 families in Durham County within the East Durham Children's Initiative Neighborhood.
    - Non-profit entity: Barium Springs Home for Children administers Catawba Valley Healthy Families (CVHF) and serves approximately 45 families in Burke County in the Lesser Burke Geographic Catchment Area
    - Local Health Department: Toe River District Health Department administers Mitchell-Yancey Healthy Families America (MYHF) and serves approximately 41 families in Mitchell and Yancey County.

Program Activities:
The funded Contractor is expected to serve a specific number of eligible families based on funding amount and to operate a Healthy Families America (HFA) program with model fidelity.

- Maintain a specific number of FTEs per staff type, including supervision, with staffs that meet the minimum education, background, and experience required by the Healthy Families America model developers.
- Complete orientation to the program and required HFA education sessions.
- Maintain resource and referral systems.
- Conduct outreach activities to educate community partners on the Healthy Families America program.
- Facilitate and support a leadership team and community advocacy board, and maintain an active community HFA advisory committee that is diverse, representative of counties served and not limited to health and human services professionals.
- Achieve HFA accreditation through the model developer within three years of implementation.
- Family Support Workers carry a caseload of no more than 25 families at any given time and provide home visits to enrolled participants per HFA model and with the prescribed frequency and duration. This includes weekly visits for at least the first six months after the child's birth or after enrollment if the family enrolls after the infant is born; visits after this time period may be less frequent. Home visits should, at a minimum, last one hour.
- Participate in ongoing training and technical assistance, and collect and review data using appropriate software.

Statutorily Required Functions:
None

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Grant	Federal	$1,015,946
	GRAND TOTAL	**$1,015,946**

1 FTE
In addition, there are 5 FTE MIECHV staff that provide support for both Nurse Family Partnership and HFA (MIECHV sites only)

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

- In SFY 2013-14, 128,005 children received assessments for child maltreatment in North Carolina. Of these children, 23,529 were substantiated.
- HFA aims to address needs of families who may have histories of trauma, intimate partner violence, mental health, and/or substance abuse issues

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

- Decrease the percentage of children who have Emergency Department and/or urgent care visits related to child injuries, abuse and neglect, and/or maltreatment.
  Baseline: 29%, Target: 0, Actual 2014: 36%.
- Increase the percentage of pregnant women entering prenatal care in the 1st or 2nd trimester.
  Baseline: 88%, Target: 100%, Actual 2014: 98%.
- Increase the percentage of well-child visits received between birth and six months of age:
  Baseline: 65%, Target: 100%, Actual 2014: 67%.

Notes on Data

- *For the federally-supported (MIECHV) parenting programs, DPH maintains aggregate data for reporting purposes so HFA data and Nurse Family Partnership data (next section) are assessed jointly,*
- *Emergency room usage is very difficult to affect positively in North Carolina because many emergency departments (EDs) actually advertise to the general public encouraging them to choose EDs over regular medical homes as the best avenue for medical care.*
- *The 2nd and 3rd data outcomes are both showing progress, but still need more work. Targets are values set which the program would like to attain over time. Trend data shows how much progress is being made, but it takes years to start seeing the desired impacts.*

External Factors

Policy Issues or Other Relevant Information:
None

Nurse Family Partnership (Home Visiting)

Open Window Service: Children's Preventive Health Services

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- The Nurse Family Partnership (NFP) is an evidence-based home visiting program developed on the basis of randomized controlled trial research to yield certain benefits for low-income, first-time mothers and their children. These benefits include helping mothers develop behaviors that enable them to have healthier pregnancies, to be better parents, to have emotionally and physically healthier children, and to attain greater economic self-sufficiently.
- Outcomes are achieved by implementing or enhancing evidence-based home visitation programs, replicated with model fidelity, that fill gaps to meet the needs of these families living in high risk communities in the state. Outcomes include, but are not limited to: improved pregnancy outcomes, prevention of child abuse and neglect, improved child health, and improved readiness for school.
- NFP uses documented evidence-based strategies or interventions **(see Resources)** and was administered by the following local health departments and non-profits in SFY 2014-2015 (11 state-funded Nurse Family Partnership sites covered 19 counties)
  - Gaston County NFP served 131 families
  - Robeson County NFP (Robeson and Columbus) served 119 families
  - Buncombe County NFP served 167 families
  - Northeast NFP (Northampton, Halifax, Hertford and Edgecombe Counties) served 128 families
  - R-P-M District Health Department NFP (Rutherford, Polk and McDowell Counties) served 123 families
  - Wake County NFP served 136 families
  - Guilford County NFP served 42 families
  - Southwest Partnership for Children NFP (Jackson, Macon, Swain and Haywood Counties) served 31 families
  - Rockingham Partnership for Children (Rockingham County) served 38 families
  - CareRing NFP (Mecklenburg County) served 90 families

Program Activities:

The funded Contractor is expected to serve first-time low-income mothers along with their children within a specified area and with model fidelity. This includes:

- NFP program staffs require prior approval from the National Service Office – Nurse Family Partnership (NSO-NFP) in collaboration with DPH. Minimum requirements for all nurse home visitors includes a Bachelor's degree in Nursing and current North Carolina Registered Nurse license. In addition, the nurse supervisor must hold a Master's degree in Nursing (or related degree).
- Mandatory education sessions include introduction to the theory base of the program model and model fidelity, research findings, client centered principles and therapeutic relationships.
- Maintain resource and referral systems that are kept current and made accessible to the team of nurse home visitors.

- Conduct outreach activities to educate community partners.
- Continue to maintain an active community NFP advisory board/committee that is diverse and not limited to health and human services professionals.
- Enroll first-time, low-income mothers in the NFP program. Nurse home visitors shall carry a caseload of no more than 25 mothers at any given time. Ideally, participants are enrolled early in the second trimester (14-16 weeks gestation); however, participants must be enrolled by 28 weeks gestation.
  - Provide home visits to enrolled participants per NFP curriculum and with the prescribed frequency and duration:
  - Data specified by the State and model developer must be collected for eligible families who receive services funded through this agreement addendum.
  - Each benchmark area required by the Federal funding includes multiple constructs. Funded sites must collect data for all constructs under each benchmark area.
- Nurses make weekly home visits with the mothers starting no later than the 28th week of gestation until their child's second birthday. Nurse-Family Partnership is a voluntary program and includes fathers whenever possible.

Statutorily Required Functions:

- There are no statutorily required functions.
- The Appropriations Act of 2013 appropriated $509,018 of Title V funds and $675,000 of state line-item appropriation for a total of $1,184,018 to support Nurse Family Partnership in North Carolina. State appropriations were non-recurring for the biennium.

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Maternal and Child Health Block Grant	Federal	$1,080,418
Appropriations	State	$1,103,600
	GRAND TOTAL	**$2,184,018**

2 FTEs (1 FTE funded by Maternal and Child Health Block Grant/State Match; 1 FTE funded by 100% Federal Maternal, Infant and Early Childhood Home Visiting Grant-MIECHV)
In addition, there are 5 FTE MIECHV staff who provide support for both NFP and HFA (MIECHV sites only)

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

- In SFY 2014-2015, there were 20,454 first-time low-income mothers who gave birth in North Carolina.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

The following chart provides NFP program measures and results for SFY 2014-2015:

Nurse-Family Partnership Site	Health Department or Non-Profit	Total # Families Served	Total Nurse Home Visitor (NHV) FTEs	MIECHV NHV FTEs	Families served by MIECHV FTEs	Title V (Federal/State Match) NHV FTEs	Families served by Title V FTEs	General Assembly (GA) Appropriation (OO, AR, 1V) NHV FTEs	Families served by State GA FTEs	Non-State/Federal NHV FTEs	Families Served – Non-State/Federal Funding
Forsyth	Health Dept.	155	5							5	155
*Gaston	Health Dept.	131	4	4	131						
*Robeson / Columbus	Health Dept.	244	8	4	119					4	125
*Buncombe	Health Dept.	219	8	1	36	1.5	37	3	94	2.5	52
*NE NFP Collaborative	Health Dept.	128	4	4	128						
Cleveland	Health Dept.	129	4							4	129
Pitt	Health Dept.	114	4							4	114
*Rutherford /Polk/McDowell	Health Dept.	123	4			4	123				
*Wake	Health Dept.	136	4			4	136				
*Guilford	Non-Profit	165	5					1.5	42	3.5	123
*SW Child Development	Non-Profit	62	4					2	31	2	31
*Rockingham Partnership for Children	Non-Profit	38	2					2	38		
*CareRing	Non-Profit	206	7					3	90	4	116
Eastern Band of Cherokee	Tribal	69	2							2	69
NFP Totals		**1919**	65	13	414	9.5	296	11.5	295	31	914

*State-funded, in whole or part.
MIECHV = Maternal, Infant and Early Childhood Home Visiting Grant
NHV = Nurse Home Visitor
FTE = Full-Time Equivalent
Title V = Maternal and Child Health Block Grant with State Match
1V/00 = State Appropriation; AR = 100% Federal Title V

Additional NFP Measures and Results are as follows:

- Increase the percentage of pregnant women entering prenatal care in the 1st or 2nd trimester. **Baseline: 88%, Target: 100%, Actual 2014: 98%.**
- Increase the percentage of well-child visits received between birth and six months of age: **Baseline: 65%, Target: 100%, Actual 2014: 67%.**

Notes on Data

- *For the federally-supported (MIECHV) parenting programs, DPH maintains aggregate data for reporting purposes so HFA data and Nurse Family Partnership data (next section) are assessed jointly,*
- *Emergency room usage is very difficult to affect positively in North Carolina because many emergency departments (EDs) actually advertise to the general public encouraging them to choose EDs over regular medical homes as the best avenue for medical care.*
- *The 2nd and 3rd data outcomes are both showing progress, but still need more work. Targets are values set which the program would like to attain over time. Trend data shows how much progress is being made, but it takes years to start seeing the desired impacts.*

Additional Outcome Data for January – December 2014

- There was a 15.2% reduction in clients who reported at 36 weeks gestation having smoked one or more cigarettes in the previous 48 hours and those same clients who reported at intake that they had smoked one or more cigarettes in the previous 48 hours.
- 84.6% of clients initiated breastfeeding at birth. Two years (2012, last year reported) after the launch of a North Carolina Department of Health and Human Services program aimed at encouraging breastfeeding at hospital maternity centers, a new report released by the U.S. Centers for Disease Control and Prevention (CDC) shows that 68.2 percent of all new mothers in North Carolina start breastfeeding. That number is up from 67.3 percent in 2011.
- 96.6% of children were up-to-date with immunizations at 24 months.
- 99.7% of children received a Ages and Stages; Questionnaire: Social Emotional (ASQ:SE, a developmental evaluation tool) at 6 months of age; 98.7% received an ASQ:SE at 12 months of age; 99.4% received an AQ:SE at 18 months of age; and 99.1% received an ASQ:SE at 24 months of age.

Notes on Data

- *January – December 2014 was the last special request data set that DPH received from the NFP National Service Office.*
- *The NFP National Service Office is currently not accepting any special data requests as their data system is undergoing a major revision. Special data requests will not be available until early 2016.*

External Factors

Policy Issues or Other Relevant Information:
None

Immunization Program

Open Window Service: Vaccine Distribution and Administration

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- The DHHS Division of Public Health's Immunization Branch promotes public health through the identification and elimination of vaccine-preventable diseases like polio, hepatitis B, measles, chickenpox, whooping cough, rubella (German measles), meningitis and mumps (using the national Advisory Committee on Immunization Practices, or ACIP, guidelines).
- The Immunization Branch's goals, objective and functions are to promote a core public health function in North Carolina through partnership and collaboration with local partners, collectively striving to eliminate the transmission of vaccine preventable diseases through effective immunization programs and outbreak control measures.
- The program uses evidence-based strategies and best practices as recommended by the U.S. Advisory Committee on Immunization Practices, or ACIP **(see Resources).** It is administered by 85 local health departments and greater than 1,200 private providers across the state, and is available statewide.

Program Activities:

- The program provides support to over 1,200 private and public medical providers for statewide vaccine program. This includes all North Carolina Local Health Departments, nearly all Pediatricians, and a significant number of Family Practices.
- The DPH Immunization Branch's activities provide a link between the federal Vaccines for Children (VFC) and Section 317 Programs, which helps families by providing vaccines at no cost to children who might not otherwise be vaccinated because of inability to pay.
    - The Centers for Disease Control and Prevention (CDC) buys vaccines at a discount and distributes them to state health departments — which in turn distribute them at no charge to those private physicians' offices and public health clinics registered as VFC providers.
    - Enrolled VFC providers are able to order VFC vaccine through the N.C. Immunization Program (NCIP) and receive ACIP routinely recommended vaccines at no cost. This allows them to provide routine immunizations to eligible children without high out-of-pocket costs.
- The program further:
    - Enrolls willing and eligible providers in the statewide NCIP.
    - Assesses provider and statewide inventories and ordering patterns, making adjustments in inventory to avoid vaccine waste.
    - Monitors providers for compliance with state and federal requirements regarding vaccine management and storage, as well as administrative and reporting requirements.
    - Assists providers with strategies to increase immunization rates and avoid missed opportunities.
    - Assesses immunization rates in schools and childcare centers and colleges, and conducts record audits to assure compliance with state immunization requirements.

- Conducts vaccine-preventable disease surveillance and case investigation, provides clinical and medical consultation to Local Health Departments and monitors occurrences of vaccine preventable diseases and reported disease cases to the CDC.
- Investigates outbreaks occurring in schools, child care and institutional facilities, and offers control efforts through provision of vaccine in public clinics or by referrals to primary health care providers in outbreak settings.
- Develops and conducts education for:
  - Providers to help assure providers understand program requirements and strategies to reach children, adolescents and adults to assure more immunizations are administered to more people.
  - The public to help them better understand the benefits of vaccines and vaccine requirements for schools and child care facilities.
  - For schools for distribution to parents concerning the benefits of vaccines.
- Collaborates with Division of Public Health Office of Public Health Preparedness and Response to:
  - Develop a community based response plan for vaccine distributed to VFC and community vaccinators during a pandemic event.
  - Exercise these pandemic plans.
  - Develop and maintain a database of community vaccinators and critical infrastructure personnel that may be prioritized for vaccination in a severe pandemic scenario.
- Maintains a website with 3 separate components: 1) providers – This portion of the website includes information on program requirements, strategies to increase immunization rates, vaccine administration techniques, available resources, report forms, memorandums and educational opportunities; 2) school and childcare centers – This portion of the website includes immunization laws and rules and reporting requirements; 3) public – This portion of the website includes information about vaccine preventable diseases, benefits of vaccines, vaccines recommended for children, adolescents and adults, vaccines required for travel abroad, immunization requirements and how to locate immunization records.
- Provides on-call services. On call registered nurses answer questions from providers and the public related to vaccines, vaccine safety, vaccine administration and vaccine preventable diseases.
- Maintains a reminder/recall system of infants enrolled in the perinatal hepatitis B prevention program so that they receive all required vaccine doses of the hepatitis B vaccine series on schedule.
- Maintains a statewide secure, web-based immunization registry (NCIR) which is available for all providers enrolled in the program.
  - The NCIR supports the NCIP by tracking vaccine orders, shipments, transfers and doses administered reporting, and VFC eligibility.
  - Providers generate reminder recall notifications for patients due or overdue for immunizations, and track doses administered data to help determine vaccine needs, vaccination coverage reports.
  - Local Health Departments (LHD) utilize the NCIR to track immunization coverage of children 19-35 months old, that reside in the county and children being served at the LHD annually.

- Data integrity and quality is of the utmost importance as the registry serves as the official Certificate of Immunization for providers, and individuals.
- Schools use the registry to assess immunization status of students for school entry.

Statutorily Required Functions:

- Federal Public Law: Section 317(j) of the Public Health Service Act (42 U.S.C. 247b(j)) reauthorized in Section 4204 of the Patient Protection and Affordable Care Act.
- Federal Public Law: Social Security Act, Title XIX, Section 1928, 42 U.S.C. 1396s - Vaccines for Children Program (VFC)
- State Administrative Rules: Section .0400 - Immunization 10A NCAC 41A .0401
- North Carolina General Statutes 130A 152 through 130A 157.

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Immunization Grant	Federal	$7,294,800
Infrastructure and Performance Grant	Federal	$1,023,484
Appropriations	State	$1,184,039
Vaccine Restitution	State Receipts	$2,000
	GRAND TOTAL	**$9,504,323**

54 FTEs

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

- Infants are particularly vulnerable to infectious diseases; it is critical to protect them through immunization. Each year, over 120,000 babies are born in North Carolina who will need to be immunized before age two against 14 vaccine-preventable diseases.
- The largest category of children eligible for the VFC program is Medicaid-enrolled children. Children who are eligible for VFC vaccines are entitled to receive all vaccines recommended by the Advisory Committee on Immunization Practices (ACIP). These vaccines protect babies, young children, and adolescents from 16 diseases.
- Failure to vaccinate is costly. Vaccines are one of the most successful and cost-effective tools available for protecting the public's health, both at individual and population levels.
  - According to an extensive cost-benefit analysis by the CDC, every dollar spent on immunization saves $6.30 in direct medical costs.
  - When including indirect costs to society (a measurement of losses due to missed work, death and disability) as well as direct medical costs, the CDC notes that every dollar spent on immunization saves $18.40.
  - Another recent economic report indicated that vaccination of each U.S. birth cohort with the current childhood immunization schedule prevents approximately 42,000 deaths and 20 million cases of disease annually, with net savings of nearly $14 billion in direct costs and $69 billion in total societal costs.
    - When comparing these costs to the 2014 population of North Carolina, it is estimated that vaccination prevents approximately 1,300 deaths and 620,000 cases of disease in

North Carolina annually. Similarly, net savings are estimated at $434,000,000 in direct medical costs and over 2 billion in total societal costs (CDC).

- An important component of an immunization provider's practice is ensuring that the vaccines reach all people who need them.
  - While attention to appropriate administration of vaccinations is essential, it cannot be assumed that these vaccinations are being given to every person at the recommended age.
  - Immunization levels in North Carolina are high, but gaps still exist, and providers can do much to maintain or increase immunization rates among patients in their practice.
  - There is a need for increasing immunization levels and educating providers on strategies that providers can adopt to increase coverage in their own practice.
- Resurgence of some vaccine-preventable diseases such as pertussis, expanded recommendations for influenza vaccination and HPV vaccination, and gaps in sustainable immunization efforts highlight the need to focus on immunization rates.
  - The viruses and bacteria that cause vaccine-preventable disease and death still exist and can be passed on to unprotected persons or imported from other countries, as demonstrated by pertussis outbreaks that occurred in 2010.
  - Diseases such as measles, mumps, or pertussis can be more severe than often assumed and can result in social and economic as well as physical costs: sick children miss school, parents lose time from work, and illness among healthcare providers can severely disrupt a healthcare system.
  - Levels of disease are a late indicator of the soundness of the immunization system. Immunization coverage levels are the best early indicator for determining if there is a problem with immunization delivery.

Performance Measures Defined and State Fiscal Year 2014-2015 Status

The following are the 2014 measurable performance targets tracked by the calendar year (federal funds awarded on a calendar year schedule; 2015 performance data will not be available until March 2016):

- Ensure that provider returns are submitted to CDC's centralized distributor within six months of expiration of product.
  Percent of returns entered into CDCs tracking system. Target = 100% (MET)
- Conduct compliance visits to each enrolled VFC provider at least every other year.
  Number of active and enrolled provider sites receiving VFC compliance site visits during the calendar year. Target = 687 (MET)
- Conduct unannounced storage and handling visits based on awardee selection methodology.
  Number of provider sites receiving unannounced storage and handling visits during the calendar year. Target = 31 (MET)
- **Number of provider sites receiving unannounced storage and handling site visits during the calendar year that are non-compliant for one or more storage and handling compliance related questions. Target = 21 (MET)**
- Ensure routine disease surveillance; submit timely and complete electronic case and/or death notifications to CDC for cases that are reportable. Notify CDC about cases immediately by phone and electronically transmit complete case reports and supplemental surveillance information to CDC via the National Notifiable Diseases Surveillance System (NNDSS) within one month of diagnosis for CRS, diphtheria, measles, polio, rubella, and pediatric (<18 years of age) influenza deaths. Collect and electronically transmit complete case

reports and supplemental surveillance information to CDC via NNDSS within one month of diagnosis for Haemophilus influenzae, meningococcal disease, mumps, pertussis, invasive pneumococcal disease, tetanus, hepatitis A, hepatitis B, and varicella.
Case notifications provided to CDC through North Carolina Electronic Disease Surveillance System (NC EDSS), Target = 100% (MET)

- Evaluate timeliness and completeness of each case/death investigation, reporting and notification for cases of VPDs that are reportable in the jurisdiction. Monitor the quality of VPD surveillance by reviewing surveillance data and surveillance indicators to identify problems and strategies to resolve the problems. Assess the proportion of measles cases with complete vaccination history, the proportion of measles cases or chains of transmission that have an imported source, and implement activities to ensure appropriate case investigation and completeness of data.
  Proportion of measles cases with complete vaccination history. Target = 100% (MET)
- Work with stakeholder organizations that focus on prenatal, postpartum, and pediatric care to develop and disseminate education on screening all women during every pregnancy for HBsAg which is the surface antigen of the hepatitis B virus (HBV). HBsAg educational content should include: when to test; what serologic markers to order in test; how to interpret results; and what steps to implement when a pregnant woman's HBsAg results are positive.
  Change in percent of identified births to HBsAg-positive women by awardee compared to expected births to HBsAg-positive women by awardee. Target = 2% (MET)
- Assess NCIR progress towards meeting IIS Functional Standards of operations.
  Percentage of functional standards attained. Target = 90% (MET)
- Develop and implement a data quality process for incoming NCIR data feeds.
  Percentage of records that are accurate (IIS data reflects what occurred during the encounter), complete, and submitted in a timely manner. Target = 75% (MET)
- Perform vaccination coverage assessments for local areas (e.g., counties, Census tracts, zip codes, etc.) by age group and vaccine/vaccine series, using NCIR to identify areas of lagging coverage and/or pockets of need.
  Number of vaccination coverage assessments conducted using NCIR. Target = 300 (MET)

External Factors

Policy Issues or Other Relevant Information:
Development of interface technology between the North Carolina Immunization Registry (NCIR) and electronic health records is currently being piloted.

National Society to Prevent Blindness North Carolina Affiliate, Inc.
Open Window Service: School Health Services

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- The Mission of the National Society to Prevent Blindness North Carolina (PBNC) Affiliate, Inc. is to prevent blindness and preserve sight.
- The Agency provides vision screening, education, advocacy, and training, and supports research.
- In North Carolina, the Affiliate provides Pre-K vision screening and training/certification for volunteers and school staff including school nurses who will then screen and refer school age children grades K-6 for vision problems.
- Prevent Blindness North Carolina is the only organization in the state uniquely positioned to address the rising demand for free or low-cost eye care services. The program offers access to a full continuum of vision care through screening, screener certification and a voucher program for eye glasses and professional eye care.
- The pre-school contract serves the following North Carolina Counties: Alamance, Brunswick, Buncombe, Burke, Cabarrus, Caldwell, Cumberland, Durham, Edgecombe, Forsyth, Greene, Franklin, Granville, Guilford, Harnett, Henderson, Johnston, Lee, Lenoir, Mecklenburg, Nash, New Hanover, Orange, Pender, Robeson, Rowan, Rutherford, Sampson, Stanly, Stokes, Wake, Wayne, Wilkes and Wilson.
- The contract providing training and certification of vision screeners serves all 100 counties.
- The program uses documented evidence-based strategies or interventions from the U.S. Preventive Services Task Force (USPSTF) and the American Association for Pediatric Ophthalmology and Strabismus **(see Resources).** Screenings conducted by trained vision screeners based on recommendations from the USPSTF and the American Association for Pediatric Ophthalmology and Strabismus.

Program Activities:

Pre K

Screen approximately 29,500 unduplicated preschool age children in the Pre-K Program through the following activities:

- Train and certify screeners in the use of photo-refractive or auto-refractive technology.
- Contact child care centers in 34 counties across the state to provide onsite vision screening for preschoolers ages two to no later than six months prior to enrollment into kindergarten. Parents of preschoolers receive educational materials prior to the screening and receive the actual photo and/or interpretation following the screening.
- Track and report referrals and confirmed care as a result of screening efforts.
- Make available to qualified referred children in financial need, free eye examinations and glasses.
    - Financially needy children not qualified for Medicaid or Health Choice are offered help through in-kind vouchers from Vision Service Plan, National Society to Prevent Blindness North Carolina Affiliate, Inc. (NSPBNC) Donor Docs Program or the Healthy Eyes Eyeglass Program upon meeting eligibility requirements.

- NSPBNC conducts extensive phone and mail follow-up with all referred children to ensure that they have been seen by an eye doctor.

Training Screeners

- Certify 2,058 unduplicated vision screeners in the Star Pupils/Kenneth Royall Vision Screening Improvement Program.
- Conduct vision screening for approximately 332,400 local school children in grades K-6 for possible vision problems.
- Maintain a training and certification program for participants in 100 counties.
- Provide screening materials and charts needed to conduct screenings and record results. Provide a Resource Guide outlining follow-up resources for obtaining free or low-cost medical eye care. Invite school designated personnel and nurses in health departments to register to attend the courses. Provide certified personnel with a certificate upon completion of the course. The certification shall be good for two years.
- Collect screening data from county coordinators in each county.
- Offer access to vision care through Prevent Blindness North Carolina voucher programs for financially needy children referred through school vision screening for comprehensive eye care.
- Identify children in financial need through collaboration with school staff.
- Process applications, match children to appropriate resources, notify and provide redemption instructions.
- Track vouchers issues, redeemed and program success stories.

Statutorily Required Functions:

- There are no statutorily required functions.
- Session Law 2013-360, Section 12.A.2 directed DHHS to implement a competitive grants process beginning SFY 2014-2015 for nonprofit organizations that had a capacity to provide services statewide which were consistent with the State's health and wellness initiatives. The legislation also included a list of specific services to be covered through non-profit services, and vision screening was included in this list. Funds were made available for a nonprofit Request for Applications (RFA), and The National Association to Prevent Blindness, North Carolina Affiliate, Inc. applied to that RFA and was awarded funds.

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014*):

SFY 14-15 Funding Source	Funding Type	Amount
Maternal and Child Health Block Grant	Federal	$560,837
	TOTAL	**$560,837**

No state FTEs. This service is provided through a contract.

*In addition to the Title V funds specified above, Session Law 2013-360 made $456,926 dollars of state appropriations available to support the Pre K portion of the work accomplished by Prevent Blindness making the combined total $1,017,763

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

- Vision problems impact 1 in 20 preschoolers increasing to 1 in 4 school-age children.
- Amblyopia, strabismus and significant refractive error are the most common children's visual disorders, which may cause permanent damage to children's eyes and negatively impact success in school, athletic performance and self-esteem.
- Vision screening is an efficient and cost-effective method to identify children with vision problems or eye conditions.
- Program effectiveness depends on well-trained staff, strong parental education, follow-up processes and routine evaluation of program quality. Successful visual acuity testing using a vision chart is highly dependent on patient age and screener experience;
    - In children younger than 3 years, few professionals can reliably determine acuity in each eye by using a vision chart.
    - Instrument-based screening is quick, requires minimal cooperation of the child, and is especially useful in the preverbal, preliterate, or developmentally delayed child.
    - For 3 to 5 year-old children, the preferred methodology is instrument-based detection of risk factors for amblyopia.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

- 3, 372 vision screeners (volunteers, school staff, and school nurses) were certified in vision screening protocols in SFY 2014-2015, and 181 workshops were held in 91 counties with attendees drawn from all 100 counties.
- During SFY 2014-2015, the Pre-K vision screening activities of PBNC provided screening for young children in pre-K classrooms in 36 counties using 20 contracted vision screeners. There were 30,182 children screened and 3,016 were referred for follow-up vision care. 75% of children referred confirmed follow-up care.
- 471,051 school aged children (K-6th grade) were screened by the certified vision screeners. Of those screened, 37,232 were referred for follow-up professional care. These follow-up services are provided and tracked by school nurses across the state.
- There were 601 vouchers issued by PBNC as part of the Sight for Students Program for students who could not afford professional eye care follow-up.
- The Healthy Eyes Eyeglass Program provided eye glasses for 248 children.
- During SFY 2014-2015, 132 doctors volunteered to donate a total of 413 eye exams and 274 pairs of glasses to students who could not otherwise afford them as part of the Donor Docs program at PBNC.

External Factors

Policy Issues or Other Relevant Information:

None

Newborn Screening – Laboratory

Open Window Service: State Laboratory Services – Testing, Training and Consultation

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- The laboratory component of the Newborn Screening Program is conducted by the State Laboratory of Public Health (SLPH), which follows prescribed procedures to ensure high-quality screening and communication of results and information with other segments of the newborn screening system, including the Follow-up Program, hospitals and health-care practitioners.
- The State Laboratory of Public Health also plays an important role in conducting translational research by identifying and validating new newborn screening tests and focusing on quality improvement of current screening tests.
- The State Laboratory of Public Health's Newborn Screening Lab is one of multiple elements of the Newborn Screening Program. The laboratory provides outputs to the Newborn Metabolic Screening Follow Up Program which, in turn, uses documented evidence-based strategies or interventions **(see Resources).** The program provides statewide services, and the number of newborns screened in SFY 2014-2015 was 137,709.

Program Activities:

- A dried blood spot specimen is required by state law to be submitted to the North Carolina SLPH for each infant born in North Carolina.
- The specimen is tested for conditions that may cause mental retardation or death, if untreated. These conditions include:
    - **Amino Acid Disorders**
        - Argininosuccinic aciduria (ASA)
        - Citrullinemia (CIT I)
        - Homocystinuria (cystathionine beta synthase) (HCY)
        - Maple syrup urine disease / Branched-chain ketoacid dehydrogenase (MSUD)
        - Phenylketonuria / Hyperphenylalaninemia (PKU)
        - Tyrosinemia type II (TYR-II)
        - Tyrosinemia type III (TYR-III)
    - **Organic Acid Disorders**
        - Glutaric acidemia type I (GA-I)
        - Multiple carboxylase deficiency (MCD)
        - 3-Hydroxy-3-methylglutaryl-CoA lyase deficiency (HMG)
        - Isobutyryl-CoA dehydrogenase deficiency (IBD)
        - Isovaleric acidemia / Isovaleryl-CoA dehydrogenase deficiency (IVA)
        - Beta-ketothiolase (BKT) / Short-chain keto acylthiolase deficiency (SKAT)
        - Methylmalonic aciduria (MMA)
        - 2-Methylbutyryl-CoA dehydrogenase deficiency (2-MBD)
        - 3-Methylcrotonyl-CoA carboxylase deficiency (3-MCC)
        - Propionic acidemia (PPA, PROP)

- **Fatty Acid Disorders**
    - Carnitine uptake defect/carnitine transport defect (CUD)
    - Carnitine/acylcarnitine translocase deficiency (CAT)
    - Carnitine palmitoyltransferase II deficiency (CPT II)
    - Medium-chain acyl-CoA dehydrogenase deficiency (MCAD)
    - Multiple acyl-CoA dehydrogenase deficiency (GA-II)
    - Long-chain 3-hydroxyacyl-CoA dehydrogenase deficiency (LCHAD)
    - Short-chain acyl-CoA dehydrogenase deficiency (SCAD)
    - Trifunctional protein deficiency (TFP)
    - Very long-chain acyl-CoA dehydrogenase deficiency (VLCAD)
- **Disorders detected by biochemical and other technologies**
    - Biotinidase deficiency (BIO)
    - Congenital adrenal hyperplasia (CAH)
    - Cystic Fibrosis
    - Galactosemia/ galactose-1-phosphate uridyl transferase deficiency (GALT)
    - Primary congenital hypothyroidism (CH)
    - Hemoglobin C disease (FC)
    - Hemoglobin E disease (FE)
    - Sickle cell disease (FS, HB S/S)
    - Sickle/hemoglobin C disease (FSC, HB S/C)
    - Sickle/hemoglobin E disease (FSE, HB S/E)

- The SLPH administers a Quality Assurance Office that addresses quality issues of dried blood spot measurements for all conditions for which newborn screening is available. The Office assures that the laboratory participates in proficiency testing, training, support, technical assistance, and consultation to newborn screening stakeholders.

Statutorily Required Functions:
General Statute 130A-125 addresses screening of newborns for metabolic and other hereditary and congenital disorders

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Newborn Screening Fees	State Receipt	$1,655,701
Medicaid	Federal	$1,525,478
	GRAND TOTAL	**$3,181,179**

30 FTEs

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:
See Newborn Metabolic Screening Follow Up.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:
- See Newborn Metabolic Screening Follow Up Program.

- NCSLPH provides outputs to the Program which, in turn, assists with the development of evidence-based or evidence-informed strategies, best practice recommendations, and outcomes.

External Factors

Policy Issues or Other Relevant Information:

- Prior to SFY 2000-2001, the North Carolina SLPH Newborn Screening lab was fully funded with state appropriations.
- Since SFY 2000-2001, the final state budgets enacted have eliminated appropriations and replaced them with Medicaid reimbursement and Newborn Screening fee receipts.

Newborn Metabolic Screening Follow Up

Open Window Service: Genetics and Newborn Screening

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- The primary purpose of the Newborn Screening follow-up program is to collaborate with the State Laboratory of Public Health (SLPH) to provide follow-up for infants born in North Carolina who have abnormal newborn metabolic screening results.
- The follow-up program is responsible for the reporting of abnormal newborn metabolic screening results to the appropriate health care provider and providing recommendations for diagnostic testing and referral recommendations.
- Follow-up duties are divided among the Division of Public Health (DPH) Children and Youth Branch (congenital hypothyroidism, congenital adrenal hyperplasia, galactosemia, biotinidase deficiency, and cystic fibrosis), the DPH Women's Health Branch (sickle cell anemia and Hemoglobinopathies), and the University of North Carolina at Chapel Department of Genetics and Metabolism (amino acid, fatty acid oxidation, and acylcarnitine disorders detected by tandem mass spectrometry). The follow-up coordinators make recommendations for confirmatory testing and continue to monitor outcomes until a normal result is received or until a medical specialist has determined diagnosis and appropriate treatment has been initiated.
- The goal of this program is to provide Newborn Screening Follow-up in a time sensitive manner in order to prevent devastating physical or neurological consequences for the newborn, thereby reducing neonatal morbidity and mortality and associated health care costs.
- The program uses documented evidence-based strategies or interventions **(see Resources),** is administered by DHHS' Division of Public Health (Children and Youth and Women's Health Branches) and UNC-Chapel Hill, and is available statewide.

Program Activities:

Division of Public Health

- Report abnormal Newborn Screening results and recommendations to primary care providers.
- Develop and revise follow-up protocols in collaboration with state laboratory staff, medical specialists, and the newborn metabolic screening advisory committee.
- Document follow-up activities, diagnostic testing, and medical interventions.
- Provide technical assistance and training to health care professionals related to Newborn Screening results and follow-up recommendations.
- Participate in meetings of the Newborn Screening Advisory Committee and consult with staff at the SLPH and the DPH Health Genetics and Newborn Screening Unit.

UNC Chapel Hill (contract)

- Provide expertise and consultation to the SLPH on technical and medical content regarding tandem mass spectrometry.
- Provide expertise and consultation to the SLPH on follow-up care for infants identified through tandem mass spectrometry.
- Provide expertise and consultation to the DPH Genetics and Newborn Screening Unit on follow-up coordination for newborn screening through tandem mass spectrometry and other conditions (e.g., biotinidase deficiency and galactosemia).
- Monitor results of screening and provide timely interpretation of normal, abnormal, and borderline screens.
- Provide expertise and consultation and follow-up to primary care providers and families of infants identified with conditions through tandem mass spectrometry according to established medical protocols.
- Provide expert content knowledge to the Newborn Screening Advisory Committee and its sub committees.
- Participate in meetings of the Newborn Screening Advisory Committee and consult with staff at the SLPH and the DPH Health Genetics and Newborn Screening Unit.
- Confirm suspected diagnoses identified in the state newborn screening laboratory.
- Provide inpatient dietary services including mixing of formula and extra teaching.
- Provide consultation to referring healthcare providers regarding patient diagnosis, care, and management.

Statutorily Required Functions:

General Statute 130A-125 addresses screening of newborns for metabolic and other hereditary and congenital disorders.

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014*):

SFY 14-15 Funding Source	Funding Type	Amount
Maternal and Child Health Block Grant	Federal	$848,805
Appropriations	State	$1,237,923
	GRAND TOTAL	**$2,086,728**

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

- Babies are at risk for death or poor health outcomes if metabolic disorders are not identified and addressed as soon as possible after birth.
- Over time, poor health outcomes for these babies financially impact the state's Medicaid program.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

Hospitals screen newborns and results are sent to the State Laboratory of Public Health for testing. The program usually receives screening results on about 97+ % of infants born. Several factors may impact this reporting:

- Death of the infant
- Parent declines the service
- Home births (although the program does work with the midwives to include these births as frequently as possible)
- Hospital does not provide screening for various reasons and babies to lost to follow-up
- Delays or missed screening because babies are in the NICU or they have moved to a different location and switch hospitals

Most recent performance data is:

Year	Measure	Number
2013-2014	Number of births	120,948
2013-2014	Newborns screened for conditions that may cause serious illness, disability, or death (metabolic disorders).	117,801 (97.4%)
2013-2014	Newborns confirmed to have a condition	*220*

External Factors

Policy Issues or Other Relevant Information:

None

Newborn Hearing Screening

Open Window Service: Genetics and Newborn Screening

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- Hearing loss is the most common congenital birth defect, affecting as many as three infants per thousand born.
  - Left undetected, hearing loss in infants can negatively impact speech and language acquisition, academic achievement, and social and emotional development.
  - If detected, however, these negative impacts can be diminished and even eliminated through early intervention.
- The goal of early hearing detection and intervention (EHDI) is to maximize listening and language competence, school readiness, and literacy development for children who are deaf or hard of hearing by:
  - Ensuring that all infants are screened for hearing loss by 1 month of age.
  - Ensuring that children with congenital hearing loss are identified by 3 months of age.
  - Ensuring that children identified with congenital hearing loss are provided access to appropriate audiological, educational, and medical intervention by 6 months of age.
- The primary objective of the North Carolina EHDI Program is to:
  - Support birthing facility universal newborn hearing screening programs, in order to ensure that infants receive additional hearing screening and follow-up when needed.
  - Support families through the process if necessary.
  - Provide consultation, technical assistance and resources to public and private agencies for the development and implementation of effective Early Hearing Detection and Intervention programs.
- The program uses documented evidence-based strategies or interventions **(see Resources)**; is administered by the North Carolina Division of Public Health, public and private birthing facilities, public and private health care providers, public and private early intervention agencies and providers; and is available statewide.

Program Activities:

- Provide technical assistance to birthing facilities for hearing screening, rescreening and tracking of infants born at each facility.
- Provide consultation and technical assistance to public and private agencies (other stakeholders) focusing on identification and intervention for children with hearing loss or communication delays.
- Develop and maintain a sustainable, centralized tracking and surveillance system capable of accurately identifying, matching, collecting, and reporting data on all births that is unduplicated and individually identifiable through the three components of the EHDI process (screening, diagnosis, and early intervention).
- Provide technical assistance regarding the Women's and Children's Services Web (WCSWeb) Hearing Link, North Carolina's direct data entry and tracking system.
- Coordinate regional educational and networking meetings about newborn hearing screening for personnel from birthing facilities and other involved stakeholders.

- Keep track of data concerning the efficiency and effectiveness of each birthing facility in the region and intervene when a facility appears to be missing hearing screenings on children or has an excessive number of children who fail the screening.
- Identify community resources and systems that identify and refer infants and children with suspected late onset or progressive hearing loss or communication deficits.
- Collaborate with care managers, private providers, local health departments, and others for the tracking of infants and children with or at risk for hearing loss.
- Supply educational materials about hearing loss and communication delays to agencies working with families of young children.
- Collaborate with community resources to screen children as part of special health promotion events or part of Head Start or other community mass screening initiatives.
- Provide support to individual families whose children have not had a newborn hearing screening or have failed a hearing screening to ensure that they obtain the needed repeat hearing screenings or diagnostic evaluations to determine the absence or presence of hearing loss.
- Provide support to individual families whose children have been diagnosed with hearing loss to ensure that they obtain the needed intervention services and family support services.
- Promote public awareness related to the benefits of early hearing detection and intervention.
- Coordinate with professionals in the Early Intervention program regarding service delivery and transition issues for children with hearing loss.
- Consult with public and private agencies and families in the selection and procurement of communication-related equipment and other assistive devices and technology.
- Implement use of quality improvement methodology to ensure high quality hearing health care for children.
- Ensure all infants and children with late onset, progressive, or acquired hearing loss will be identified at the earliest possible time.
- Develop and implement policies and procedures for the efficient collection, management, and analyses of childhood hearing health data.

Statutorily Required Functions:
General Statute 130A-125 addresses screening of newborns for metabolic and other hereditary and congenital disorders.

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014*):

SFY 14-15 Funding Source	Funding Type	Amount
Maternal and Child Health Block Grant	Federal	$346,545
Medicaid	Federal	$162,547
State Appropriations	State	$740,029
	TOTAL	**$1,249,121**

***Additional resources not captured in SFY 14-15 certified budget as of 9/18/2014**

Health Resources and Services Administration (HRSA) Universal Newborn Hearing Screening Grant	Federal	$285,883
CDC Early Hearing Detection and Intervention Cooperative Agreement	Federal	$163,962

10.8 FTEs

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

- In 2013, there were 3,904,742 infants born in the United States and Territories, and 3,794,124 (97.2%) were screened for hearing loss. The number of children diagnosed with significant hearing loss was 5,296 (a rate of 1.5 per 1,000 screened), according to Centers for Disease Control and Prevention (CDC) data.
  - The North Carolina Office of State Budget and Management 2015 State Population Projections indicated North Carolina had 2,734,100 residents under age 21 years.
  - WCSWeb data indicated an incidence of hearing loss for infants born in North Carolina in 2013 of 2.0 per 1,000.
  - Though from 2 different calendar years, this data indicates at least 5,469 children and youth under age 21 years in North Carolina would have significant hearing loss.
- In 2013, there were 120,551 children born in North Carolina and 119,399 (99.0%) were screened for hearing loss. The number of children diagnosed with significant hearing loss in North Carolina in 2013 was 238 (a rate of 2.0 per 1,000 screened).
- Preliminary data for infants born in North Carolina in 2014 indicate 199 (24.6%) infants who did not pass their final hearing screening were diagnosed with permanent hearing loss.
  - Of the 380 infants who received a diagnosis of either normal hearing or permanent hearing loss, 26.8% were diagnosed with permanent hearing loss by 3 months of age.
  - However, only 47% of the infants who needed follow-up testing completed their diagnostic evaluation.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

- *Number of live births that received initial hearing screening prior to one month of age*
  Baseline SFY 2014-2015: 92.8%
  Target value SFY 2014-2015: 95%

Actual data for SFY 2014-2015 will be available May 2016
Target value SFY 2013-2014: 95%
Actual data SFY 2013-2014: 97.9%

- *Percent of infants categorized as "loss to follow-up/documentation" who have not passed a physiological newborn hearing screening*

  Target value SFY 2014-2015: 30%
  Actual data for SFY 2014-2015 will be available in May 2016
  Target value SFY 2013-2014: 30%
  Actual data SFY 2013-2014: 34.2%

- *Proportion of newborns who receive audiologic evaluation no later than age 3 months for infants who did not pass the hearing screening*
  Target value SFY 2014-2015: 50%
  Actual data for SFY 2014-2015 will be available in May 2016
  Target value SFY 2013-2014: 50%
  Actual data SFY 2013-2013: 54.1%
- *Percent of infants with confirmed hearing loss who are enrolled in early intervention services by six months of age*

  Target value SFY 2014-2015: 50%
  Actual data for SFY 2014-2015 data will be available in May 2016.
  Target value SFY 2013-2014: 50%
  Actual data SFY 2013-2013: 54.1%

External Factors

Policy Issues or Other Relevant Information:
None

Safe Sleep
Open Window Service: Maternal Health

Current Environment

Description of Mission, Goals, Objectives, and Functions:
The Safe Sleep Campaign is a bilingual campaign that addresses infant health in regards to

- Safe sleep positioning and environments
- Co-sleeping and exposure to secondhand smoke in order to reduce the risk of Sudden Infant Death Syndrome (SIDS)
- Accidental infant asphyxiation, and suffocation deaths

The campaign's objective is to increase practices that reduce the risk of Sudden Infant Death Syndrome (SIDS) and which prevent other infant sleep-related deaths. It achieves this by

providing a media presence (through online, television and radio sources) and creating educational materials for the public using current research and information.

Safe Sleep activities are evidence-based (American Academy of Pediatrics; **see Resources),** administered by the North Carolina Healthy Start Foundation, and available statewide.

Program Activities:
The program disseminates infant safe sleep messages to pregnant women, parents, caregivers and also provides education, training, and technical support to healthcare providers, community-based organizations and hospitals in North Carolina.
Statutorily Required Functions:
None. The enacted budget directed spending for this program.

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Maternal and Child Health Block Grant	Federal	$45,000
Appropriations	State	$846
	GRAND TOTAL	**$45,846**

No state FTEs. This service is provided through a contract.

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:
- Since 1990, the overall rate of SIDS deaths has decreased by over 50% in the US. The trend is also consistent in North Carolina; however, in North Carolina deaths attributed to other sleep-related causes have increased. Since 2009, the number of SIDS death in our state has declined from 98 to 28 in 2014. Some of this improvement has been due to improved reporting and investigation processes.
- Educating families and caregivers about the importance of a safe sleeping environment have proved beneficial in helping to lower the risk for preventable infant sleep-related deaths.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

Outcome Performance Measures	Results
Provide a minimum of 2 exhibits to display safe sleep information on behalf of the Safe Sleep Campaign to improve knowledge and behavior about Safe Sleep.	3 exhibits were displayed at NC Society of Public Health Educators conference, Alamance Safe Kids and Greenville Maternity Fair that promoted Safe Sleep practices.
Provide a minimum of 1 exhibit and/or training in the community to improve knowledge and behavior about Safe Sleep practices and available resources.	There were 23 participants in Safe Sleep trainings; 50 cribs and sheets were purchased and distributed to complement safe sleep classes for families who were referred by local community agencies and attend training sessions.
Respond to 100% of the requests for information, statistics, interviews and referrals on safe sleep received by the public.	100% of requests for information, statistics, interviews and referral were responded to in a timely fashion. The contractor responds to 2-3 calls per month related to safe sleep efforts.

External Factors

Policy Issues or Other Relevant Information:
None

Triple P
Open Window Service: Children's Preventive Health Services

Current Environment
Description of Mission, Goals, Objectives, and Functions:

- The mission of Triple P is to strengthen parenting at a population level. The goals are to reduce out of home placements, reduce emergency department visits related to maltreatment injuries, and to reduce the number of substantiated child abuse cases. The objectives are to increase positive parenting, reduce coercive parenting, lower social emotional and behavioral health problems, improve parent-child relations, and decrease parenting stress.
- Triple P is a coordinated, multi-level system of programs that increase from a population-based social media information strategy in Level One to an intense one-on-one clinical intervention in Level Five. The program is delivered by trained professionals (anyone in a community that provides services to a family with a child, ages 0 to 16) through age-appropriate parenting and family support interventions by teaching 17 specific parenting skills.
- Triple P, when implemented to scale in a community, is a population health perspective that de-stigmatizes parenting support, is efficient and cost effective, provides families with easy

access to evidence-based preventive interventions, and achieves substantial penetration/reach within a community.

- Regarding the use of evidence-based strategies or interventions **(see Resources):**
  South Carolina clinical trials were completed in 2010 after four years of implementation with the following results:
  - Standardized prevention rates per 100,000 children ages 0-8 yrs.
  - 240 fewer out of home placements per year
  - Triple P counties were 16% lower than comparison counties
  - 60 fewer hospitalizations/emergency room visits for child maltreatment injuries per year
  - Triple P counties were 17% lower than comparison counties
  - 688 fewer substantiated child abuse cases/year
  - Triple P counties were 22% lower than comparison counties
- Triple P is administered by local health departments, and is available as follows:
  - For the SFY 14-15, Triple P served 33 counties including the following state funded counties: Alamance, Appalachian Health District (Alleghany, Ashe, Watauga), Albemarle Health District (Camden, Currituck, Chowan, Bertie, Pasquotank, Perquimans, Gates), Buncombe, Cabarrus, Durham, Washington, Mecklenburg, Nash, and Edgecombe, Beaufort, Hyde, Halifax, Hertford, Northampton, Lenoir, Greene, Jones, Greene, Martin, Tyrrell, Washington, Pitt, Vance, and Warren.

Program Activities:
The Triple P--Positive Parenting Program is a multilevel system of parenting and family support strategies for families with children from birth to age 12, with extensions to families with teenagers ages 13 to 16. The program is:

- Developed for use with families from many cultural groups, and
- Designed to prevent social, emotional, behavioral, and developmental problems in children by enhancing their parents' knowledge, skills, and confidence.

The program, which can also be used for early intervention and treatment, is founded on social learning theory and develops on cognitive, developmental, and public health theories. Triple P has five intervention levels of increasing intensity to meet each family's specific needs. Each level includes and builds upon strategies used at previous levels:

Level 1 (Universal Triple P) is a media-based information strategy to increase community awareness of parenting resources.
Level 2 (Selected Triple P) provides specific advice on how to solve common child developmental issues and minor child behavior problems Included are parenting tip sheets and videotapes that demonstrate specific parenting strategies.
Level 3 (Primary Care Triple P) targets children with mild to moderate behavior difficulties.
Level 4 (Standard Triple P and Group Triple P), an intensive strategy for parents of children with more severe behavior difficulties designed to teach positive parenting skills.
Level 5 (Enhanced Triple P) is an enhanced behavioral family strategy for families in which parenting difficulties are complicated by other sources of family distress.

Variations of some Triple P levels are available for parents of young children with developmental disabilities (Stepping Stones Triple P), parents of children who are overweight**,** and for parents of children who have been abused (Pathways Triple P).

The contracted local health department (LHD) coordinates training for individuals in a county who come in contact with children that provide a wide range of services. There are five levels of training becoming increasingly complex. Once trained, providers apply information they have learned that improve parenting skills and address behavioral problems in children. LHDs must:

- Adhere to standards set by Triple P America to ensure that the project is implemented with model fidelity.
- Collect and provide to the Division of Public Health and to Triple P America all required data to document delivery of services and outcomes as specified below.
    - Maintain and update as needed an implementation plan using the template provided by Triple P America with guidance from the Division of Public Health and Triple P America which includes:
        - A training schedule for providers to access the various levels of Triple to be implemented in the county
        - Identification of the target population in the county
        - Community education and media strategies
        - Written evaluation and sustainability plans beyond the current funding cycle.
    - Participate in the North Carolina Triple P State Learning Collaborative that will:
        - Share best practices
        - Determine cost effective strategies for addressing social marketing, and develop a statewide data reporting and evaluation plan.

Statutorily Required Functions:
None

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Maternal and Child Health Block Grant	Federal	$580,859
Appropriations	State	$662,438
	GRAND TOTAL	**$1,243,297**

1 FTE

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

- In SFY 2013-14, 128,005 children received assessments for child maltreatment in North Carolina. Of these cases, 23,529 were substantiated.
- In SFY 2013-2014, there were 8.25 per 1,000 children in foster care in North Carolina, or 14,697 children.

Performance Measures Defined and Status:

- ***In previous clinical trials, it took at least four years of full implementation of Triple P in a community before population-level indicators began to drop. In fact, rates of child maltreatment and out-of-home placements tended to rise during the initial years because it became more socially responsible to report abuse and neglect.***
- Cohort One (Alleghany, Ashe, Watauga, Cabarrus, and Madison) counties are just beginning their fourth year of implementation.

- In SFY 2012-2013, 5 counties were funded as Cohort One = Alleghany, Ashe, Watauga, Cabarrus, Madison.
- In SFY 2013-2014, an additional 28 counties were funded - Alamance, Beaufort, Bertie, Buncombe, Camden, Chowan, Currituck, Durham, Edgecombe, Gates, Greene, Halifax, Hertford, Hyde, Jones, Lenoir, Martin, Mecklenburg, Nash, Northampton, Pasquotank, Perquimans, Pitt, Tyrell, Vance, Wake, Warren, and Washington.

Measure: The incidence of child maltreatment (SFY 2014-2015 data is not available)

Child maltreatment rate SFY 2012-2013 (first year of implementation for Cohort One counties): Baselines for the 5 counties in Cohort One=10.35 incidence per 1,000

Child maltreatment rate SFY 2013-2014: 5 counties= 9.59 incidence per 1,000
Baseline for the 33 counties =8.45 incidence per 1,000

Measure: The incidence of out of home placements (SFY 2014-2015 data is not available)

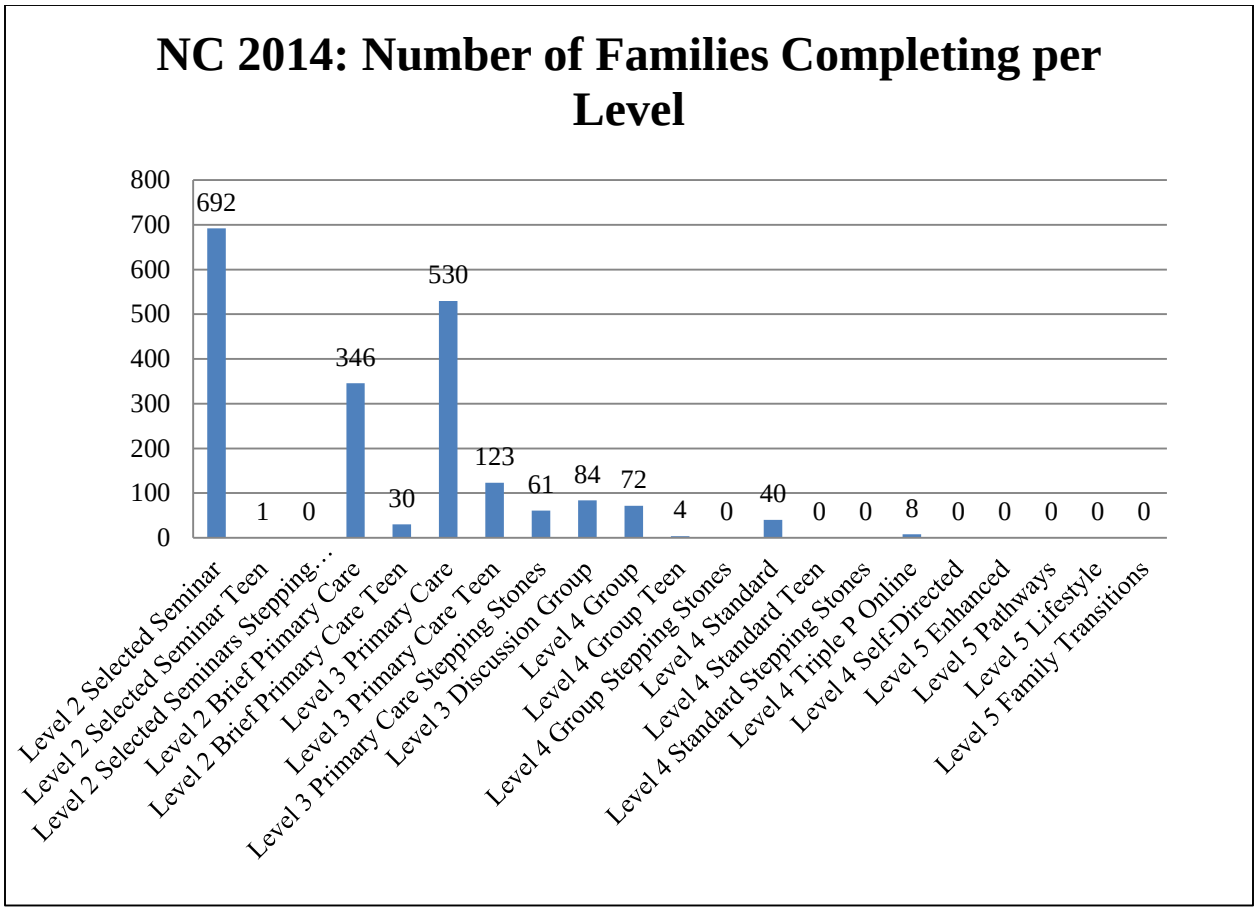
Out of home placement rate SFY 2012-2013 (first year of implementation for Cohort One counties): Baseline for the 5 Counties=4.78 incidence per 1,000

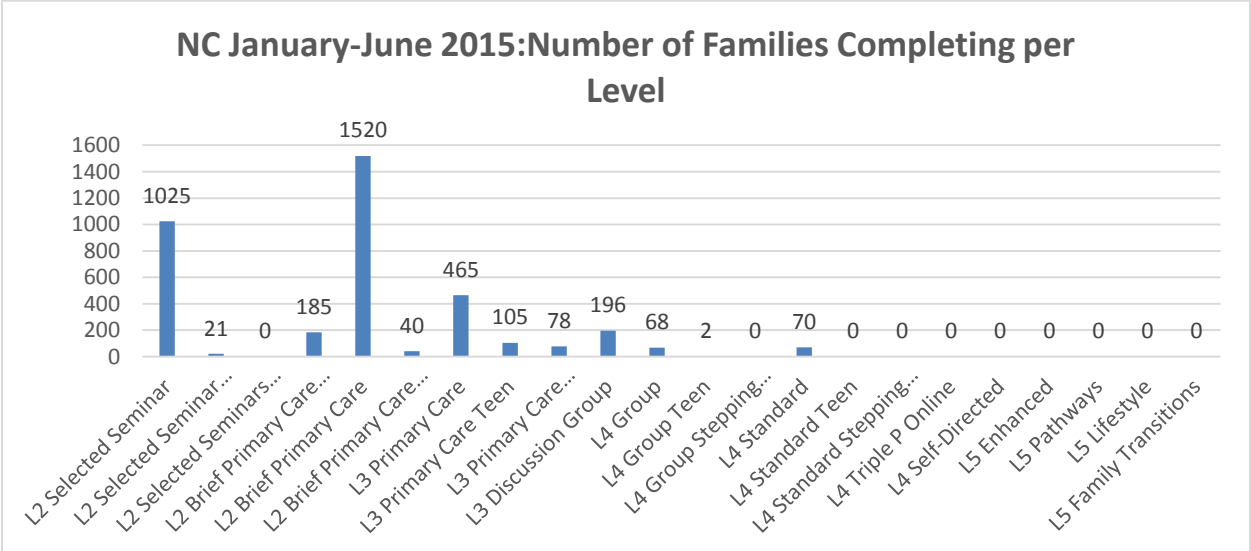
Out of home placement rate SFY 2013-2014: 5 counties=5.51 incidence per 1,000
Baseline for the 33 counties=4.87 incidence per 1,000

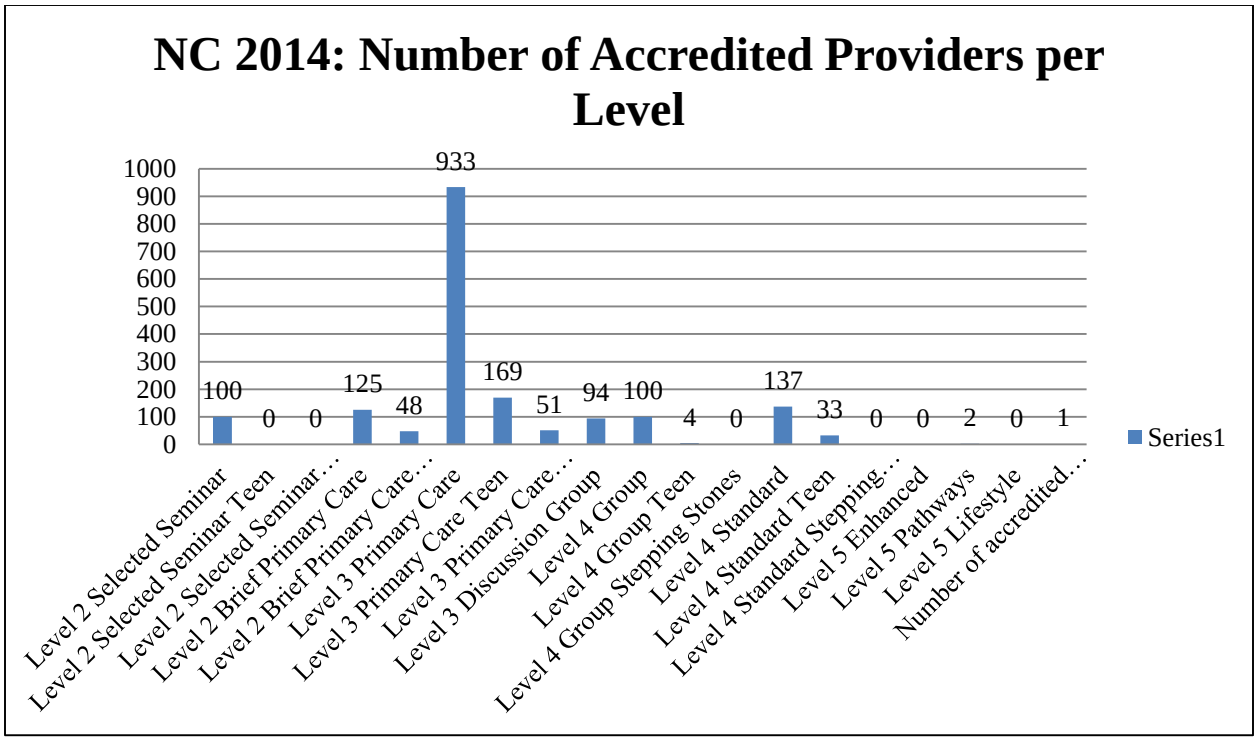
Service Data:

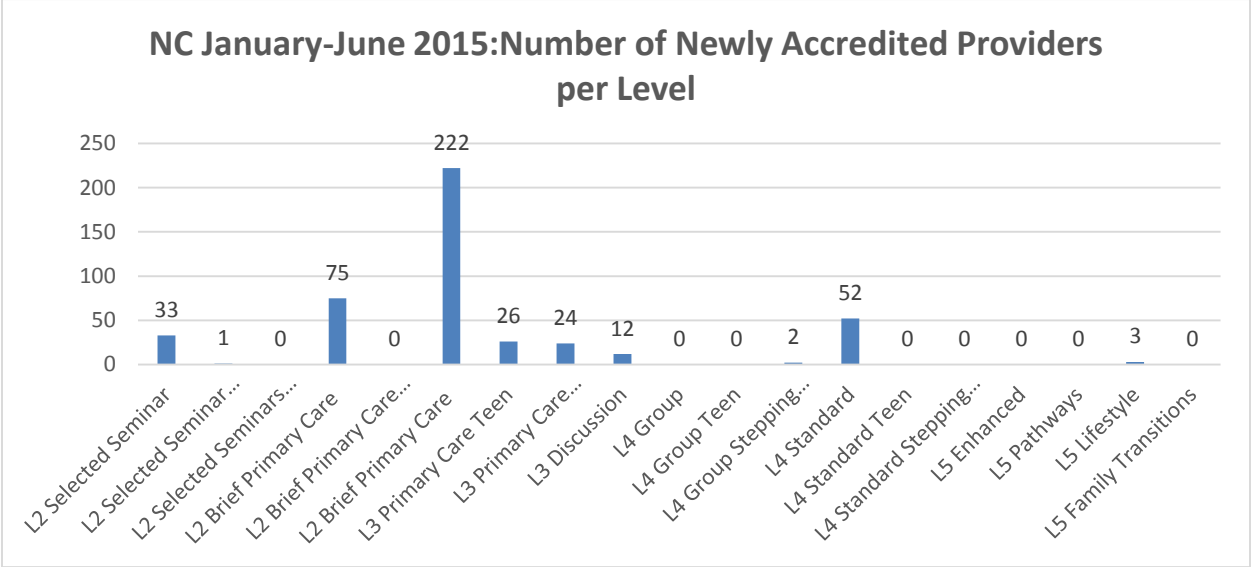
	Jan-Mar 2014	April-June 2014	July-Sept 2014	Oct-Dec 2014	Jan-Mar 2015	April-June 2015	Cumulative Total
# of newly accredited practitioners	481	389	516	411	242	257	2,296
# of caregivers served	786	873	1,446	1,750	1,860	2,247	8,962
# children served	1,209	1,153	1,310	2,097	3,254	2,584	11,607

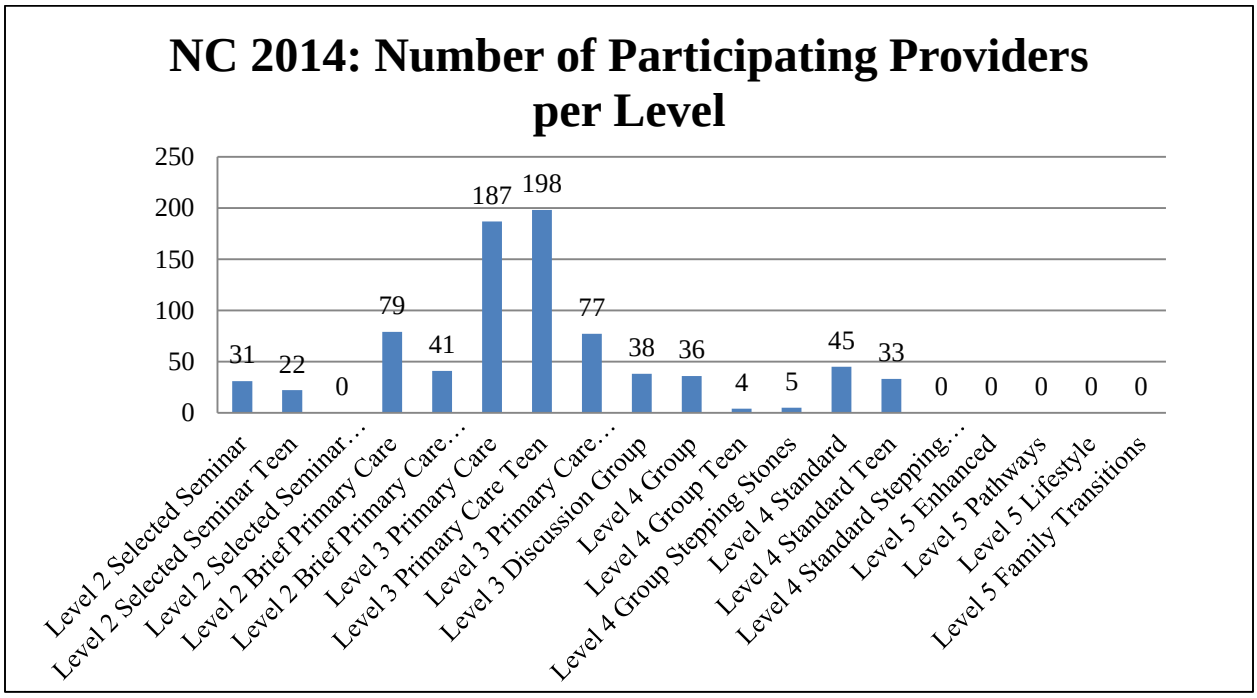
The following graphs provide additional service data detail for the Triple P program.

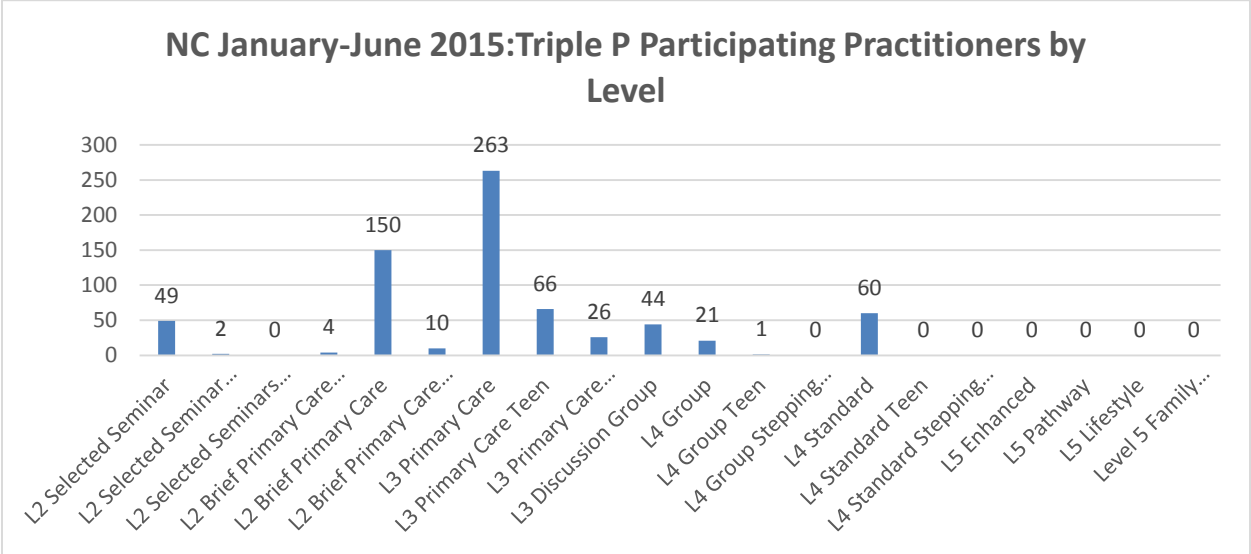

NC 2014: Number of Families Completing per Level
800
700
600
500
400
300
200
100
0
692
1
0
346
30
530
123
61
84
72
4
0
40
0
0
8
0
0
0
0
0
Level 2 Selected Seminar
Level 2 Selected Seminar Teen
Level 2 Selected Seminars Stepping…
Level 2 Brief Primary Care
Level 2 Brief Primary Care Teen
Level 3 Primary Care
Level 3 Primary Care Teen
Level 3 Primary Care Stepping Stones
Level 3 Discussion Group
Level 4 Group
Level 4 Group Teen
Level 4 Group Stepping Stones
Level 4 Standard
Level 4 Standard Teen
Level 4 Standard Stepping Stones
Level 4 Triple P Online
Level 4 Self-Directed
Level 5 Enhanced
Level 5 Pathways
Level 5 Lifestyle
Level 5 Family Transitions

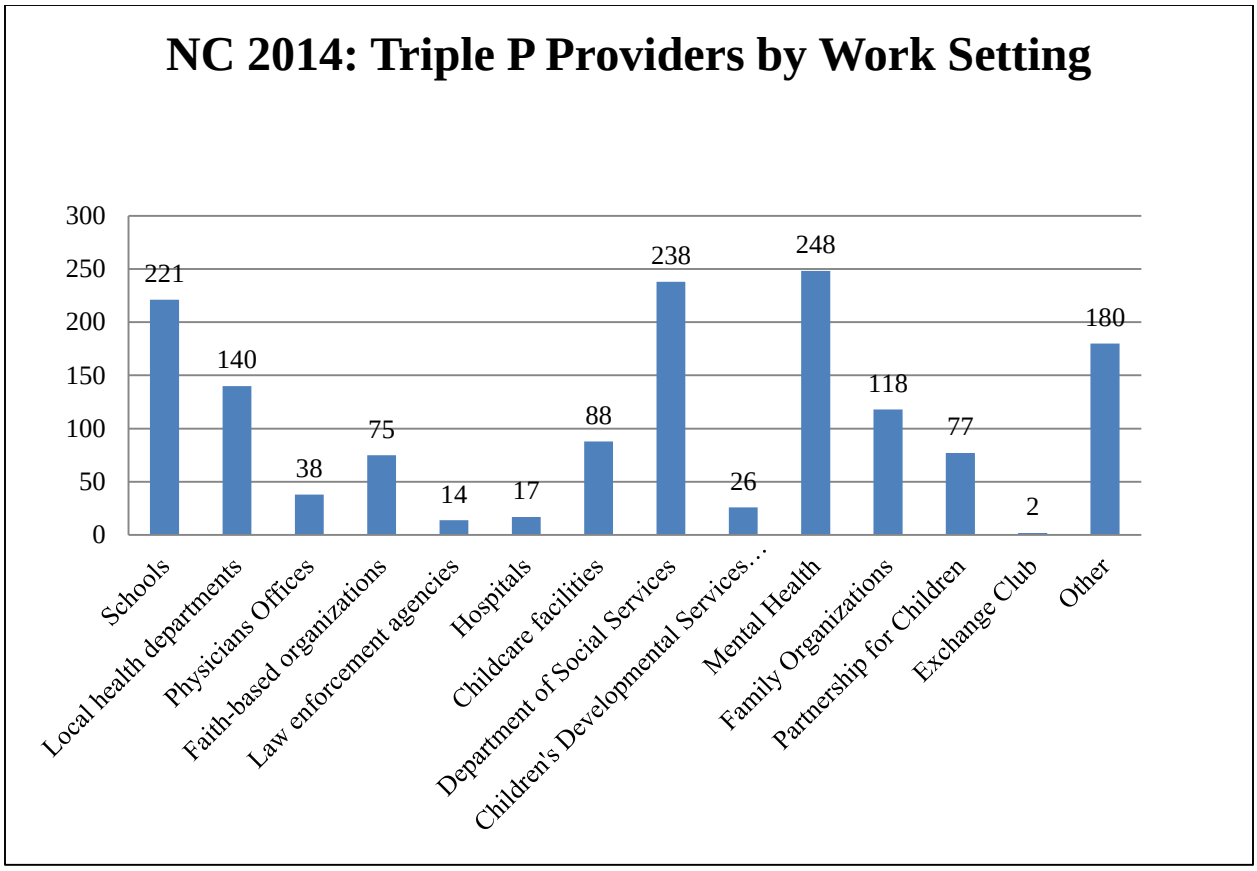

NC January-June 2015:Number of Families Completing per Level
1600
1400
1200
1000
800
600
400
200
0
1025
21
0
185
1520
40
465
105
78
196
68
2
0
70
0
0
0
0
0
0
0
0
L2 Selected Seminar
L2 Selected Seminar…
L2 Selected Seminars…
L2 Brief Primary Care…
L2 Brief Primary Care
L2 Brief Primary Care…
L3 Primary Care
L3 Primary Care Teen
L3 Primary Care…
L3 Discussion Group
L4 Group
L4 Group Teen
L4 Group Stepping…
L4 Standard
L4 Standard Teen
L4 Standard Stepping…
L4 Triple P Online
L4 Self-Directed
L5 Enhanced
L5 Pathways
L5 Lifestyle
L5 Family Transitions

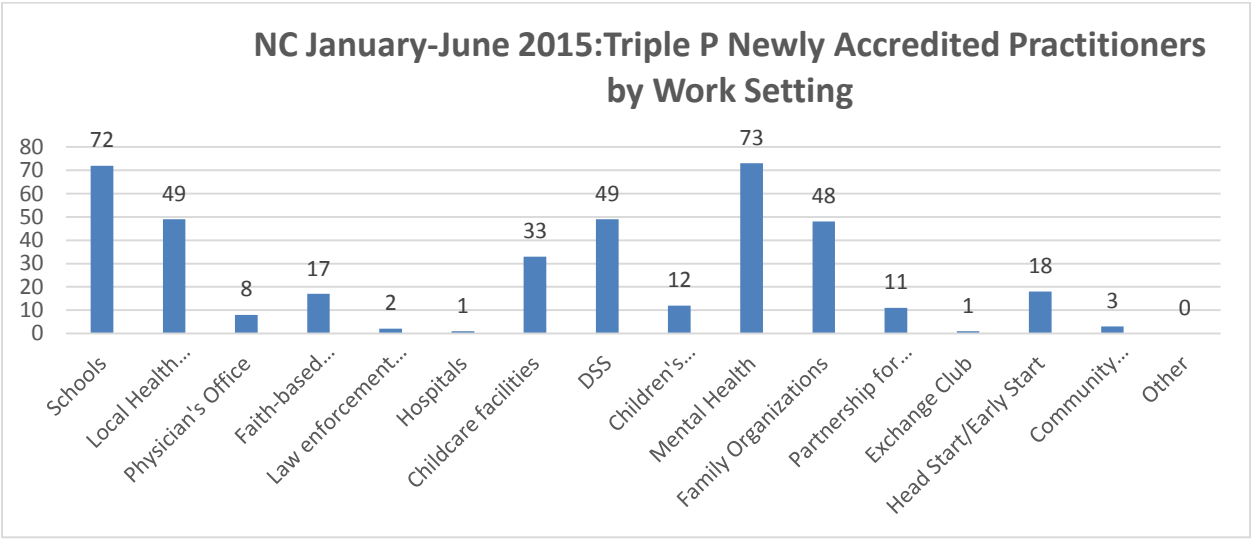

NC 2014: Number of Accredited Providers per Level
1000
900
800
700
600
500
400
300
200
100
0
100
0
0
125
48
933
169
51
94
100
4
0
137
33
0
0
2
0
1
Level 2 Selected Seminar
Level 2 Selected Seminar Teen
Level 2 Selected Seminar…
Level 2 Brief Primary Care
Level 2 Brief Primary Care…
Level 3 Primary Care
Level 3 Primary Care Teen
Level 3 Primary Care…
Level 3 Discussion Group
Level 4 Group
Level 4 Group Teen
Level 4 Group Stepping Stones
Level 4 Standard
Level 4 Standard Teen
Level 4 Standard Stepping…
Level 5 Enhanced
Level 5 Pathways
Level 5 Lifestyle
Number of accredited…
Series1

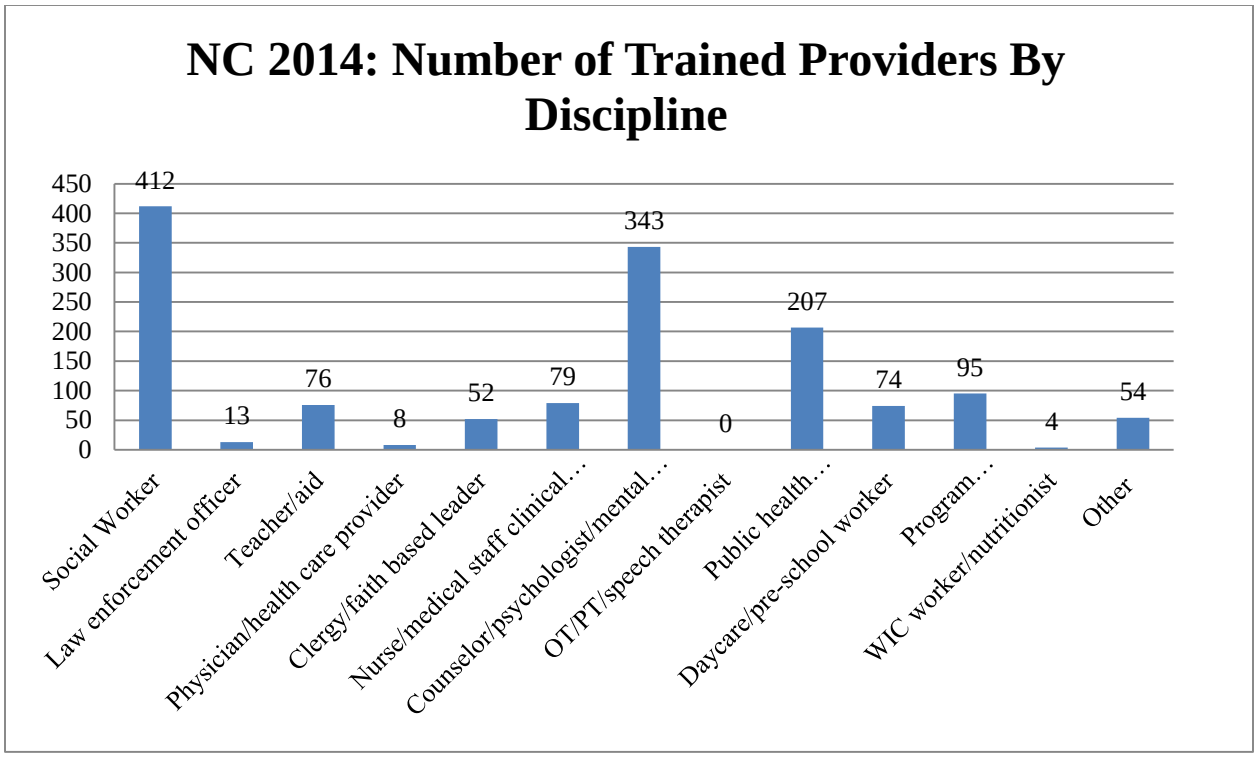

NC January-June 2015:Number of Newly Accredited Providers per Level
250
200
150
100
50
0
33
1
0
75
0
222
26
24
12
0
0
2
52
0
0
0
0
3
0
L2 Selected Seminar
L2 Selected Seminar…
L2 Selected Seminars…
L2 Brief Primary Care
L2 Brief Primary Care…
L2 Brief Primary Care
L3 Primary Care Teen
L3 Primary Care…
L3 Discussion
L4 Group
L4 Group Teen
L4 Group Stepping…
L4 Standard
L4 Standard Teen
L4 Standard Stepping…
L5 Enhanced
L5 Pathways
L5 Lifestyle
L5 Family Transitions

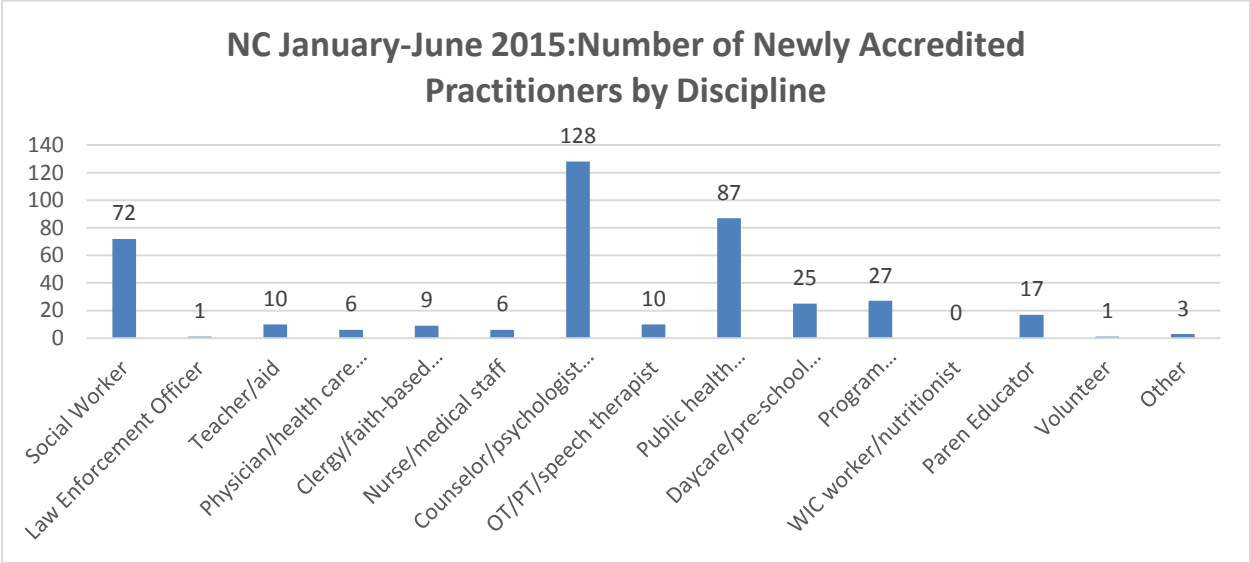

NC 2014: Number of Participating Providers per Level
250
200
150
100
50
0
31
22
0
79
41
187
198
77
38
36
4
5
45
33
0
0
0
0
0
Level 2 Selected Seminar
Level 2 Selected Seminar Teen
Level 2 Selected Seminar…
Level 2 Brief Primary Care
Level 2 Brief Primary Care…
Level 3 Primary Care
Level 3 Primary Care Teen
Level 3 Primary Care…
Level 3 Discussion Group
Level 4 Group
Level 4 Group Teen
Level 4 Group Stepping Stones
Level 4 Standard
Level 4 Standard Teen
Level 4 Standard Stepping…
Level 5 Enhanced
Level 5 Pathways
Level 5 Lifestyle
Level 5 Family Transitions


NC January-June 2015:Triple P Participating Practitioners by Level
300
250
200
150
100
50
0
49
2
0
4
150
10
263
66
26
44
21
1
0
60
0
0
0
0
0
0
L2 Selected Seminar
L2 Selected Seminar…
L2 Selected Seminars…
L2 Brief Primary Care…
L2 Brief Primary Care
L2 Brief Primary Care…
L3 Primary Care
L3 Primary Care Teen
L3 Primary Care…
L3 Discussion Group
L4 Group
L4 Group Teen
L4 Group Stepping…
L4 Standard
L4 Standard Teen
L4 Standard Stepping…
L5 Enhanced
L5 Pathway
L5 Lifestyle
Level 5 Family…


NC 2014: Triple P Providers by Work Setting
300
250
200
150
100
50
0
221
140
38
75
14
17
88
238
26
248
118
77
2
180
Schools
Local health departments
Physicians Offices
Faith-based organizations
Law enforcement agencies
Hospitals
Childcare facilities
Department of Social Services
Children's Developmental Services…
Mental Health
Family Organizations
Partnership for Children
Exchange Club
Other


NC January-June 2015:Triple P Newly Accredited Practitioners by Work Setting
80
70
60
50
40
30
20
10
0
72
49
8
17
2
1
33
49
12
73
48
11
1
18
3
0
Schools
Local Health...
Physician's Office
Faith-based...
Law enforcement...
Hospitals
Childcare facilities
DSS
Children's...
Mental Health
Family Organizations
Partnership for...
Exchange Club
Head Start/Early Start
Community...
Other


NC 2014: Number of Trained Providers By Discipline
450
400
350
300
250
200
150
100
50
0
412
13
76
8
52
79
343
0
207
74
95
4
54
Social Worker
Law enforcement officer
Teacher/aid
Physician/health care provider
Clergy/faith based leader
Nurse/medical staff clinical…
Counselor/psychologist/mental…
OT/PT/speech therapist
Public health…
Daycare/pre-school worker
Program…
WIC worker/nutritionist
Other


NC January-June 2015:Number of Newly Accredited Practitioners by Discipline
140
120
100
80
60
40
20
0
72
1
10
6
9
6
128
10
87
25
27
0
17
1
3
Social Worker
Law Enforcement Officer
Teacher/aid
Physician/health care...
Clergy/faith-based...
Nurse/medical staff
Counselor/psychologist...
OT/PT/speech therapist
Public health...
Daycare/pre-school...
Program...
WIC worker/nutritionist
Paren Educator
Volunteer
Other

Triple P Cumulative Caregiver Data (January 2014 – June 2015)	Cumulative Average
*In your opinion, "How is your child's behavior at this point?"[1] (Rate 1-7)	5.87
**Has Triple P helped you deal more effectively with your child's behavior? [2] (Rate 1-7)	6.24

Both of these caregiver questions are given post-intervention as part of the Client Satisfaction Survey.

*Caregiver question #1: 1=considerably worse. 7=greatly improved.

**Caregiver question # 2: 1=No, it made things worse. 7=Yes, it helped a great deal.

External Factors

Policy Issues or Other Relevant Information:

Since it is one of the few evidence-based programs that has been demonstrated to effectively reduce child maltreatment, state agencies in North Carolina that offer family strengthening initiatives would benefit from including Triple P as an evidence-based family strengthening option for local funding opportunities. DPH has shared this information with the DHHS Division of Social Services' staff to explore funding opportunities for its home visiting programs. Local Smart Start agencies are also beginning to provide funding for staff training for Triple P.

WIC, or Special Supplemental Nutrition Program for Women, Infants and Children

Open Window Service: Women, Infants and Children

Current Environment

Description of Mission, Goals, Objectives, and Functions:

- WIC Program's mission is to provide food to low-income pregnant, postpartum and breastfeeding women and their infants and children until the age of five, and offer a combination of nutrition education, supplemental foods, breastfeeding promotion and support, and referrals for health care.
- The WIC Program's goals, objective and functions are to improve pregnancy outcomes, reduce maternal and early childhood morbidity and mortality, and optimize the growth and development of children through improved nutritional status.
- WIC uses evidence-based and best practice strategies **(see Resources)** as follows:
  - Research shows that women who participate in WIC give birth to healthier babies who are more likely to survive infancy. There is a link between prenatal WIC participation and lower infant mortality.
  - While women participating in WIC are less likely to choose to breastfeed, the gap has narrowed in recent years. For example, the percentage of infants participating in WIC who were breastfed rose by 39 percent, from 44.5% to 67.1%, between 2000 and 2012.
  - Data shows that low-income children participating in WIC have vaccination rates comparable to higher-income children.

    - WIC has an important positive influence on participants' diets. Studies show that after WIC updated its food packages to reflect current dietary guidance, WIC participants buy and eat more fruits, vegetables, whole grains and low-fat dairy products. Studies also show that the newer requirements have increased the supply of healthy foods, especially in low-income communities.
    - With the support of sound nutrition provided during critical periods of growth, new research suggests that prenatal and early childhood participation in WIC is associated with improved cognitive development. Children whose mothers participated in WIC while pregnant scored higher on assessments of mental development at age 2 than similar children whose mothers did not participate.
- WIC is administered by 82 Local health departments and 3 non-profit health agencies (Tri-County Community Health Center, Lincoln Community Health Center, and Piedmont Health Services). It is available statewide.

Program Activities:
This program provides support to state and local agency WIC Program services to provide supplemental foods, nutrition education and breastfeeding support and promotion to serve pregnant, breastfeeding and, postpartum women, infants and children up to age five. Specific areas of focus include:

- Provide WIC Program Services to children 1 to 5 years of age enrolled in Medicaid
- Provide WIC Program Services to children 1 to 5 years of age who are served in Local Health Department Child Health Clinics
- Provide WIC Program Services to pregnant women who participated in WIC during the first trimester of pregnancy
- Provide WIC Program Services to children less than 12 months of age enrolled in Medicaid
- Provide WIC Program Services to Medicaid enrolled pregnant women
- Provide WIC Program Services to children less than 12 months of age who were served in the Local Health Department Child Health Clinic
- Provide WIC Program Services to pregnant women who participated in WIC during pregnancy and were recertified for WIC by 6 weeks postpartum

Statutorily Required Functions:
Code of Federal Regulations (CFR) - 7 CFR Part 246

Source of Funds (SFY 2014-2015 certified budget as of 9/18/2014):

SFY 14-15 Funding Source	Funding Type	Amount
Infant Formula Rebates	State Receipt	$64,893,718
Vendors Refunds	State Receipt	$288,094
Medicaid	Federal	$283,477
WIC Grant	Federal	$232,058,830
Farmer's Market Grant	Federal	$518,804
Breast Feeding Peer Counseling Grant	Federal	$2,379,884
Appropriations	State	$357,485
	GRAND TOTAL	**$300,780,292**

44 FTEs

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

- Low income WIC target population (pregnant, breastfeeding, and post-partum women, infants and children up to age 5) are at a higher risk of medical-based or dietary-based conditions. Examples of medical-based conditions include anemia, underweight or poor pregnancy outcomes such as, low birth weight, pre-term delivery and fetal death. Dietary-based conditions include a poor diet, which can lead to overweight and obesity.
- Studies have shown that low income families who participate in WIC have improved pregnancy outcomes, resulting in healthier babies and reduced newborn medical costs. WIC benefits the infants and saves Medicaid millions of dollars in intensive neonatal care.
- The WIC Program has proven effective in preventing and improving nutrition related health problems within its population.

Performance Measures Defined and State Fiscal Year 2014-2015 Status

There are 10 performance measures defined for each local health department and non-profit health agencies. The SFY 2013-2014 statewide performance measures results are as follows (SFY2014-2015 performance data will not be available until December 2015):

- 60.0 % of children 1 to 5 years of age enrolled in Medicaid who received WIC Program Services. SFY 2013-2014 achieved: 56.8%
- 75.0% of children less than 12 months of age enrolled in Medicaid who received WIC Program Services. SFY 2013-2014 achieved: 71.0%
- 75.0% of Medicaid enrolled pregnant women who received WIC Program Services. SFY 2013-2014 achieved: 73.9%
- 80.0% Percent of pregnant women who participated in WIC during pregnancy and were recertified for WIC by 6 weeks postpartum. SFY 2013-2014 achieved: 75.1%
- 28.1% of pregnant women who participated in WIC who received WIC program services during the first trimester of pregnancy. SFY 2013-2014 achieved: 28.1%
- 265,000 Average Monthly WIC Participation. SFY 2013-2014 achieved: 255,065
- 25.0% of infants enrolled in WIC are breastfeeding at six months of age. SFY 2013-2014 achieved: 20.0%

- 40.0% of infants enrolled in WIC are breastfeeding at six weeks of age. SFY 2013-2014 achieved: 36.1%
- 60.0% of women enrolled in WIC initiated breastfeeding. SFY 2013-2014 achieved: 58.6%

External Factors

Policy Issues or Other Relevant Information:
Not Applicable

Research Methodology

For the DHHS' Division of Public Health (DPH) maternal and child health programs, recommendations in the final report will be based on:

- Whether or not current programs use evidence-based, evidence-informed, or published best practices.
- Whether or not current programs are producing intended outcomes.
- The accepted timeframe for expected production of intended outcomes by a program, based on published evidence.
- Whether or not current programs are available statewide and, if not available statewide, whether or not they are appropriately scale able to statewide implementation.

Resources

General

Improving North Carolina's Health: Applying Evidence for Success (2012). Report of the North Carolina Institute of Medicine Task Force on Implementing Evidence-Based Strategies in Public Health.

SAMSHA's National Registry of Evidence-Based Programs and Practices. http://www.nrepp.samhsa.gov/. Accessed October 28, 2015.

World Health Organization (WHO) Evidence-Informed Policy-Making. http://www.who.int/evidence/about/en/. Accessed October 28, 2015.

Bowen, S, Zwi AB (2005). Pathways to "evidence-informed" policy and practice: A framework for action. PLoS Med 2(7):e166.

Life Course Perspective

Halfon N Hochstein M. Life course health development: An integrated framework for developing health policy, and research The Milbank Quarterly 2002;80(3):433-479.

Braveman P, Barclay C. Health disparities beginning in childhood: A life-course perspective**.** Pediatrics 2009; 124 Supplement: S163-S175.

Lu MC, Kotelchuck M, Hogan V, Jones L, Wright K, Halfon N. Closing the black-white gap in birth outcomes: A life-course approach. Ethn Dis 2010; 20(1) Supplement 2: S2-62-76.

Guyer B, Ma S, Grason H, Frick K, Perry D, Sharkey A, McIntosh J. Early childhood health promotion and its life course health consequences. Academic Pediatrics 2009;9(3), 142-149.

Evidence for 17P Program Interventions

Meis PJ. 17 hydroxyprogesterone for the prevention of preterm delivery. *Obstet Gynecol* 2005;105:1128-35.

Meis PJ et al. Prevention of recurrent preterm delivery by 17 alpha-hydroxyprogesterone caproate. *N Eng J Med* 2003;348:2379-85.

Da Fonseca EB, et al. Prophylactic administration of progesterone by vaginal suppository to reduce the incidence of spontaneous preterm birth in women at increased risk: A randomized placebo-controlled double-blind study. *Am J Obstet Gynecol* 2003;188:419-24.

Evidence for Carolina Pregnancy Care Program

None found in the literature.

Evidence for Healthy Beginnings Interventions

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Evidence for Health Families America Interventions

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"Effectiveness of Home Visiting in Improving Child Health and Reducing Child Maltreatment." (Pediatrics, vol. 132, supplement 2, November 2013.) Subscription required.

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Evidence for Nurse Family Partnership Interventions

"Supporting Replication and Scale-Up of Evidence-Based Home Visiting Programs: Assessing the Implementation Knowledge Base." (American Journal of Public Health, vol. 104, no. 9, September 2014.) Subscription required.

"Effectiveness of Home Visiting in Improving Child Health and Reducing Child Maltreatment." (Pediatrics, vol. 132, supplement 2, November 2013.) Subscription required.

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Evidence for Immunization Program Interventions

The U.S. Advisory Committee on Immunization Practices (ACIP) provides expert external advice and guidance to the Director of the Centers for Disease Control and Prevention (CDC) and the Secretary of the Department of Health and Human Services (HHS) on use of vaccines and related agents for control of vaccine-preventable disease in the U.S. civilian population.

The Assessment Feedback Incentives eXchange (AFIX) approach incorporates strategies proven reliable to improve providers' immunization service delivery and raise vaccination coverage levels. AFIX is widely supported as an effective and recommended strategy for improving immunization rates and practices in both public and private provider settings. AFIX is supported by the Task Force on Community Preventive Services, ACIP, and the federal Healthy People 2020's objectives and goals.

Evidence for Prevent Blindness

Evidence Based Need for Preschool Vision Screening

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Division of Mental Health, Developmental Disabilities and Substance Abuse Services Maternal Health Programs

The Division of Mental Health, Developmental Disabilities and Substance Abuse Services is the State agency charged with responsibility for developing, providing and overseeing publicly supported and regulated mental health, developmental disabilities, and substance abuse services in North Carolina. The Division collaborates with other agencies (DPS, DPI, DHSR, DSS, DMA, county commissioners, DPH) to ensure adequate services for the underinsured, uninsured, and Medicaid recipients. The DMHDDSAS carries out its responsibilities through a system of local mental health authorities/managed care organizations known as Local Management Entities/Managed Care Organizations (LME/MCOs), as well as through contracts with local providers, advocacy organizations, and hospitals. The DMHDDSAS collaborates with other state agencies within and outside of NC DHHS to improve services and supports related to mental health, substance use and intellectual and other developmental disabilities.

A 2003 national cross-site evaluation report of programs that provided comprehensive, residential treatment for substance abusing women and their children showed a reduction in preterm delivery, low birth weight, and infant death compared to women in the general population and estimates of the outcomes had the clients continued using substances during pregnancy. For women in treatment, the rate of preterm delivery was 7.3 per 100 live births, compared to 27.0 for the substance abuser comparison group and 11.4 for the general population. Low birth weight was 5.8 per 100 live births for the treatment group, compared to 34.0 for the substance abuser comparison group and 7.5 for the general population. Lastly, the infant mortality rate for the treatment group was 0.4%, compared to 1.2% for the substance abuser comparison group and 0.7% for the general population (Caliber Associates, 2003). These findings indicate that appropriate treatment for pregnant women with a substance use disorder can directly benefit the infant. In addition to infant health and societal benefits, such as reducing criminal justice and child welfare involvement, gender specific substance use disorder treatment improves parenting skills and reduces parental health risks associated with substance use, reduces risk of repeated experience of trauma, homelessness for women and children, and risks associated with HIV infection.

The NC Perinatal and Maternal Substance Use Initiative and CASAWORKS for Families Residential Initiative has had a long standing commitment to providing gender-specific, trauma informed, and evidence-based practices. While specific practices are encouraged and endorsed by the Division of MH/DD/SAS through its work with the North Carolina Practice Improvement Collaborative (NC PIC), specific models are not required. Rather, programs are educated about and encouraged to adopt models found to be promising or proven to be effective with their specific target populations (gender, age, culture, urban/rural, trauma, co-occurring, parenting, etc.). While there are some universal principles generally accepted for treatment for women and women with children, a one-size-fits-all approach or over restricting approval of treatment approaches has not been found to be effective. The approach of education and support along with creating a culture of expectation of excellence while being sensitive to the unique needs of our very diverse North Carolina communities has been found to be the most effective. To that end, programs in the Initiative select the gender appropriate and trauma informed evidence based and promising treatment and prevention models to use that they deem a best-fit for the needs of the

individuals and families they serve. Another key resource for programs is US DHHS Substance Abuse and Mental Health Services Administration's National Registry of Evidence-based Programs and Practices (NREPP). NREPP is a searchable online database of mental health and substance use disorder treatment interventions (http://www.nrepp.samhsa.gov/Index.aspx). Program managers and clinical supervisors use both the NC PIC and SAMHSA NREPP as resources for identifying promising and evidence based practice models.

Evidence based and promising treatment models used by the programs in the initiative include, but are not limited to, the following:

- Seeking Safety
- Beyond Anger and Violence
- Circle of Security
- Beyond Trauma Cognitive Behavioral Therapy for PTSD
- Helping Women Recover
- The Matrix Model
- Beyond Trauma
- Cognitive Behavior Therapy
- Contingency Management
- Motivational Interviewing
- A Healing Journey for Women

Promising Recovery Support Models:

- CENAPS® Model of Relapse Prevention
- A Woman's Way Through the 12 Steps
- There is an interest and a few sites are exploring peer support recovery models.
- All programs refer clients to community self-help 12 step recovery programs and many communities also have churches that offer ongoing life/recovery support. Women have a choice of what long term recovery supports they endorse as part of their aftercare.

Parenting and Prevention Models used with mothers with children:

- Nurturing Program for Families in Substance Abuse Treatment and Recovery
- Strengthening Families Program
- Celebrating Families!
- Triple P – Positive Parenting Program

Child Mental Health Models:
A few of the programs have grants for child mental health services and in addition to basic psychiatric assessment and child or family therapy, offer these models:

- Trauma Focused Cognitive Behavioral Therapy
- Child Play Therapy

As reported by the FASD Center for Excellence supported by the Substance Abuse and Mental Health Services Administration (SAMHSA), prenatal alcohol use is the leading known *preventable* cause of birth defects and intellectual disabilities in the United States. The North Carolina Fetal Alcohol Prevention Program (FASDinNC) was created to address the problem of alcohol exposed pregnancies within North Carolina and to focus its outreach education on preventing alcohol use during pregnancy.

NC Perinatal & Maternal Substance Use Initiative, CASAWORKS for Families Residential Initiative and the Perinatal Substance Use Project

Current Environment

Description of Mission, Goals, Objectives, and Functions:

I. NC Perinatal and Maternal Substance Use Initiative and CASAWORKS for Families Residential Initiative:

Mission: The mission of the NC Perinatal and Maternal Substance Use Initiative and CASAWORKS for Families Residential Initiative is to provide comprehensive gender-specific, family-centered substance use disorder treatment and recovery services and supports to pregnant and parenting women with substance use disorders and their children.

Goal 1: The NC Perinatal and Maternal Substance Use Initiative and CASAWORKS for Families Residential Initiative will assure that North Carolina women have access to needed evidence based, trauma informed, and gender appropriate substance use disorder treatment services and recovery supports.

Objectives:

- Provide gender specific substance use disorder treatment and other therapeutic interventions for women that address issues of relationships, sexual and physical abuse, parenting, and necessary child care while the women are receiving these services;
- Provide a continuum of evidence based, evidence informed treatment and assure best practices to pregnant and parenting women with substance use disorders and co-morbidities;
- Adhere to best practices and evidence based treatments when addressing prenatal substance use disorder medication assisted treatment and neonatal abstinence syndrome;
- Assure access to treatment through cross-area services for pregnant and parenting women that supports their role as mothers;

- Provide safe therapeutic recovery residential services for women where their infant and young children can stay with them when ASAM criteria are met for this level of care;
- Provide necessary transportation, child care, and other basic living supports to pregnant and parenting women to assure their ability to access substance use disorder treatment services.

Goal 2: The NC Perinatal and Maternal Substance Use Initiative and CASAWORKS for Families Residential Initiative will assure substance use disorder treatment services in the Initiative are family- centered.

Objectives:

- Provide or arrange access to safe therapeutic recovery residential services for women where their infant and young children can stay with them when ASAM criteria are met for this level of care;
- Provide or arrange for access to evidence based parenting and prevention services for women and their children (who meet age requirements);
- Provide or arrange for access to trauma informed and relationship therapeutic services for women and children who have experienced sexual and interpersonal violence;
- Provide or arrange for childcare so that mothers can participate in treatment and attend recovery support activities;
- Provide sufficient case management and transportation to ensure that women and their children have access to services provided above.

Goal 3: The NC Perinatal and Maternal Substance Use Initiative and CASAWORKS for Families Residential Initiative will improve health and wellbeing of pregnant women and their children.

Objectives:

- Provide or arrange for therapeutic interventions for children in custody of women in treatment which may address their developmental needs, their issues of sexual and physical abuse and neglect, and other health or behavioral health concerns;
- Arrange for primary medical care for women including referral for prenatal care, and while the women are receiving such services, provide or arrange for necessary childcare;
- Arrange for primary pediatric care, including immunizations, for the children in physical custody of mothers while mothers are in treatment;
- Ensure priority admissions to substance use disorder treatment to pregnant women with substance use disorders, and pregnant women who use substances intravenously.

Goal 4: The NC Perinatal and Maternal Substance Use Initiative and CASAWORKS for Families Residential Initiative will support women in treatment toward preparing to meet their education and employment goals as a long-term aspect of living a life of recovery.

Objectives:

- Programs in the Initiative will ask women about their education and employment histories and goals at intake and during follow up assessments;
- Referral for GED, vocational rehabilitation services and other training and educational programs, in accordance with client goals, health, and therapeutic readiness, will be made;
- Work readiness topics will be addressed as part of substance use disorder treatment discussions about living a life of recovery;
- Where clinically appropriate, women will be referred to and supported in their efforts toward employment as part of their long-term recovery plan.

II. Perinatal Substance Use Project:

Mission: The Perinatal Substance Use Project's mission is to provide information, referral and advocacy for women who are pregnant or parenting and may have a substance use disorder. The project's mission includes providing outreach and education for local health, behavioral health and other treatment referral sources, regarding perinatal substance use.

Goal 1. Provide access to pregnant and parenting women with substance use disorders to services available throughout the state.

Objectives:

- Maintain a dedicated substance use disorder position, the perinatal substance use specialist.
- Maintain a toll free number at the Alcohol and Drug Council of NC to reach the perinatal substance use specialist during business hours.
- Provide telephonic verbal screening, information and referral to pregnant and parenting women.
- In the event treatment services are not available for a pregnant women, provide a referral for interim services.
- Provide gender-specific substance use training and technical assistance to local health department and other community agencies relative to screening, interventions, confidentiality and referral resources.
- Publicize and increase awareness of the availability of the NC Perinatal & Maternal Substance Use Initiative programs, CASAWORKS for Families Residential Initiative, the toll free number and other available services.

Goal 2. Maintain a statewide capacity management system for pregnant women and women with dependent children relative to the Substance Abuse Prevention and Treatment Block Grant Requirements in 45 CFR Part 96.

Objectives:

- Maintain a weekly listing of residential services beds available to pregnant women and women with children.
- Maintain and update the Alcohol and Drug Council of NC database regarding prevention, intervention and treatment services for pregnant women and women with dependent children who have substance use problems.
- Distribute electronic weekly listing of available beds and services to potential referral sources. Recipients of the listing include, but are not limited to, LME-MCOs, county DSSs, prenatal care providers, behavioral healthcare providers and court professionals.

The Division of Mental Health, Developmental Disabilities and Substance Abuse Services allocates funds to the Local Management Entity-Managed Care Organizations (LME-MCOs) to support the programs in the NC Perinatal and Maternal Initiative and CASAWORKS for Families Residential Initiative. LME-MCOs contract with non-profit community agencies to operate the programs under the initiative.

The Division of MHDDSAS contracts with the Alcohol and Drug Council of NC (non-profit) that operates an information and referral line for substance use services statewide and performs the Perinatal Substance Use Project activities.

The residential services that are a part of the NC Perinatal and Maternal Substance Use Initiative and the CASAWORKS for Families Residential Initiative are considered Cross Area Service Programs and are available to any pregnant or parenting women and her children who meet medical necessity for the services based on ASAM criteria. The outpatient only programs are offered to pregnant and parenting women who meet the ASAM criteria for this level of care in the specific LME-MCO catchment area.

The Perinatal Substance Use Project services are available across the state. The substance use specialist is accessible by a statewide toll-free number.

Program Activities:

I. NC Perinatal & Maternal Substance Use Initiative:
   - The programs provide comprehensive gender-specific, family-centered substance use disorder services that include, but are not limited to, the following: screening, brief intervention, assessment, case management, outpatient substance use disorder and mental health services, healthy family dynamics, parenting skills, transportation, childcare, residential services (or access to these services), referrals and coordination for primary and preventative health care for the women and children, and referrals for appropriate developmental, mental health and prevention services for the children.
   - The Initiative includes 11 residential programs that serve pregnant women and women with their children. These residential programs allow women meeting medical necessity for an American Society of Addiction Medicine (ASAM)

residential level of care to live in a family-responsive recovery environment with one or more of their children while engaging in intensive treatment and other services and supports. The residential programs are considered Cross Area Service Programs providing women and their children access to available services across the state regardless of their county of residence.

- The Initiative also includes gender-specific comprehensive outpatient services in 9 counties. These outpatient programs provide a range of evidence-based and trauma-informed treatment services.

CASAWORKS for Families Residential Initiative:

The NC CASAWORKS for Families Residential Initiative is a collaborative project between the Division of MH/DD/SAS and the Division of Social Services. This Initiative supports 6 comprehensive residential substance use disorder programs for women who are or would be eligible for Work First cash assistance and their children. The CASAWORKS for Families model was developed by the Center for the Study of Addiction and Substance Abuse (CASA) at Columbia University in response to the impact of welfare reform on families involved with substance use. The model proposes that the best way to help TANF families become economically self-sufficient is to provide an integrated and concurrent gender specific substance use and co-occurring treatment with job readiness and training.

II. Perinatal Substance Use Project:

The Perinatal Substance Use Project is a collaboration between DMHDDSAS and the Division of Public Health to ensure, promote and protect the health and development of families with an emphasis on women, infants and youth. This project includes the following activities:

- Provides screening, information and referral to pregnant and parenting women, family members, health/behavioral health professionals, community agencies, and others.
- Coordinates referral of pregnant and parenting women with a substance use disorder to needed services including prenatal care, substance use disorder services, interim services and other community supports.
- Provides advocacy for the individual seeking services and addresses potential and identified barriers to accessing care in a timely manner.
- Maintains a statewide capacity management system for residential services for pregnant and parenting women with substance use disorders and their children that is distributed to professionals and agencies statewide on a weekly basis.
- Publicizes and increases awareness of the availability of the NC Perinatal & Maternal Substance Use Initiative and CASAWORKS for Families Residential Initiative programs and the toll-free number and available services.
- Provides gender-specific substance use disorder training and technical assistance to local health departments and other community agencies relative to screening, intervention, confidentiality and referral resources.

Statutorily Required Functions:

Summary of US DHHS 45 CFR Part 96 Substance Abuse Prevention and Treatment Block Grants Regulations: The Substance Abuse Prevention and Treatment Block Grant (SAPTBG), 45 CFR Part 96.131, requires states to provide treatment services for pregnant women as required by section 1927 of the PHS Act. Section 1927 requires the state to ensure that each pregnant woman in the state who seeks or is referred for and would benefit from such services is given preference in admissions to treatment facilities receiving funds pursuant to the grant. The SAPTBG regulations require that all programs providing such services treat the family as a unit and admit both the mother and the children into treatment services, if appropriate. The state must ensure that, at a minimum, treatment programs receiving funding for such services also provide or arrange for the provision of the following service to pregnant women and women with dependent children including women who are attempting to regain custody of their children:

- Primary medical care for women including referral for prenatal care and, while the women are receiving such services, child care;
- Primary pediatric care, including immunizations, for their children;
- Gender specific substance use treatment and other therapeutic interventions for women which may address issues of relationships, sexual and physical abuse and parenting and child care while the women are receiving these services;
- Therapeutic interventions for children in custody of women in treatment which may, among other things, address their developmental needs, their issues of sexual and physical abuse and neglect; and
- Sufficient case management and transportation to ensure that women and their children have access to services provided above.

The state must ensure that the availability of treatment to pregnant women is publicized. The state is also required to ensure that a facility which serves women refers pregnant women to the state if the treatment facility has insufficient capacity to provide treatment services to any such pregnant woman who seeks services. This provision can be accomplished by establishing a toll-free number or other reasonable means to implement the provision. The state is required to refer the woman to a treatment facility that has the capacity to provide treatment services to the pregnant woman or if no treatment facility has capacity to admit the pregnant woman, to make available interim services to the pregnant woman, no later than 48 hours after she seeks the treatment service. This provision requires the state to have a tracking system that tracks all open treatment slots available to pregnant women in the state. Such a system must be continually updated to identify treatment capacity for any such pregnant woman.

The state must ensure that entities that serve women and who are receiving such funds provide preference to pregnant women. Grant funds shall give preference to treatment as follows:

1. Pregnant women who use substances intravenously
2. Pregnant women with substance use disorders
3. Individuals who use substances intravenously
4. All others

Source of Funds (State Fiscal Year 2014-2015):

SFY 14-15 Funding Source	Funding Type	Amount
APPROPRIATIONS, NAME OF GRANT, OR NAME OR RECEIPT	STATE, FEDERAL OR OTHER RECEIPT	
DMHDDSAS NC Perinatal & Maternal Substance Use Initiative	State Federal (SAPTBG funds)	$3,442,700 $2,729,316
DMHDDSAS CASWORKS for Families Residential Initiative	State Federal (SAPTBG funds)	$450,000 $2,700,000
NC Perinatal & Maternal Substance Use Initiative and CASAWORKS for Families Initiative	Federal (Medicaid)	$2,244,771
DMHDDSAS Perinatal Substance Use Project	State Federal	$45,000 $37,779
GRAND TOTAL		$11,649,566

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

The NC Perinatal and Maternal Substance Use Initiative and CASAWORKS for Families Residential Initiative addresses the treatment, health, and safety needs of a high risk group of women and children, reducing the impact of maternal and parental substance use on the health and wellbeing of women and their children and families through provision of gender specific, trauma informed, and evidence based or evidence informed treatment and health care services. Evidence based, evidence informed, and best practices for this population have been found in national clinical trials to reduce symptoms of neonatal abstinence syndrome for prenatally exposed infants, improve the health and wellbeing of children and their mothers, and reduce risk of criminal justice or child welfare involvement for families, thus having a positive impact on family wellbeing and reducing societal costs.

Families involved in the programs have a wide range of needs to be addressed as part of recovery, health and stability for their families. Many of the needs that are met outside the scope of the initiatives' direct services, are accomplished through linkages and active coordination with other services and programs. The services and programs that are most commonly a part of collaboration are:

- County Department of Social Services
- Pediatric health services
- Children's Developmental Services Agencies
- Child mental health services
- Primary health services including prenatal care
- Sexual assault and domestic violence services
- Family Drug Treatment Courts
- Child care services
- Food banks
- Evidenced based parenting programs
- Evidenced based prevention programs
- Hospitals
- Affordable housing coalitions

Effective collaboration with community agencies and coordination of care supports families in achieving their goals, without the duplication of services.

The Perinatal Substance Use Project provides an avenue for pregnant and parenting women, family members, professionals and others to receive information, referral, consultation and training to identify and access substance use disorder services statewide in accordance with the Substance Abuse Prevention and Treatment Block Grant.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

Perinatal and Maternal Substance Use and CASAWORKS for Families Residential Initiatives:

The Perinatal and Maternal and CASAWORKS providers submit an annual report that addresses the services and supports they provide for pregnant and parenting women and their children, how they meet the requirements of the SAPTBG regulations and they participate in the North Carolina Treatment Outcomes and Program Performance System (NCTOPPS). NCTOPPS data include a range of client specific clinical, social, and living context measures and are used in block grant reporting and in performance monitoring. The most robust NCTOPPS data is based on intake assessments. For a subset of clients and for a subset of measures there are update or discharge assessment data that allow DMHDDSAS to evaluate the impact of services on client and family outcomes.

In SFY 14-15, The Perinatal and Maternal Substance Use and CASAWORKS for Families Residential Initiatives served the following:

- 1,659 women received substance use disorder treatment services; 488 were pregnant upon admission
- 941 women received screening, brief intervention and/or referral; 238 were pregnant

In an effort to respond to this request, additional information was requested from the programs regarding the children in physical custody of their mother while receiving substance use disorder treatment services.

During SFY 2014 and SFY 2015, preliminary data shows that there were 1,466 children were in the physical custody of the mothers during treatment and 362 were between the ages of 0-5.

DMHDDSAS will be able to provide information on the following child outcomes for SFY 2014 and SFY2015:

- weeks of gestation at time of intake (if the child was born while the consumer was in treatment),
- receipt of regular pediatric/wellbeing care,
- number of weeks gestation at birth,
- birth weight;
- receipt of recommended health care services; and
- general health status as reported by mothers.

Mother's health and wellbeing impacts the health and wellbeing of their children. From client level and aggregate data, we will be able to provide information on the following perinatal or maternal outcomes and contextual information for consumers for SFY 2014 and SFY 2015:

- engage mother in prenatal care at any point during pregnancy, and consumer's receipt of regular health care treatment while in treatment;
- reduce substance use, increase engagement in recovery supports such as mutual recovery support through a sponsor; and enhance presence and level of support for treatment from family and friends;
- reduce HIV risk behaviors;
- reduce interpersonal physical and sexual violence victimization during duration of treatment;
- reduce in mental health symptoms;
- increase levels of well-being (emotional, physical, interpersonal relationships, and housing) during duration of treatment;
- reduce hospitalization, emergency room visits and psychiatric hospitalizations while engaged in treatment;
- reduce criminal justice involvement;
- improve quality of life, such as through decreasing symptoms, supporting family reunification, increasing hopeful future expectations, increasing internal locus of control, improving educational status, improving housing status, or improving vocational status.

Summary of Outcomes for the NC Perinatal and Maternal and CASAWORKS for Families Residential Initiatives Source – NCTOPPS SFY 13-14

- Outcomes based on NC TOPPS data for SFY 13-14 for women served in Perinatal/Maternal and CASAWORKS out-patient and residential programs shows the average number of days in treatment during this period was 104.
- Overall statistically significant reduction was observed in the following areas:
    - Alcohol and other drug use
    - Severity of mental health symptoms between intake and discharge
    - Experiences of physical abuse through their tenure in treatment.
    - Sexual risk taking (HIV risk behaviors) for women receiving treatment.
    - Arrests for women in the month prior to discharge as compared to before intake to treatment.
- 96% of the minor children, in custody of their mothers, were confirmed to be receiving preventative and primary health care.
- 26% women were pregnant at the time they entered treatment in SFY 13-14.
- There were 205 births reported of these there were 203 births for which we have data. Data reported are for 147 births that occurred after intake to treatment and 56 just prior to intake to treatment.
    - Of the 147 births occurring after intake into treatment, 81% were full term.
    - The average gestational age for those born after intake to treatment was 38.4 and the median 39 weeks.
    - Of the women who gave birth after being admitted to one of the Initiative programs, 99.32% reported having received prenatal care.
- When asked to report on their babies' health, mother's reported the following:
    - 87.5% reported that their babies were in good health.
    - 9.72% said fair health
- Of the women who had babies just before entering treatment or while in treatment, 97.96% reported that their babies are receiving regular Well Baby/Health Check services.

Perinatal Substance Use Project:

The Perinatal Substance Use Project submits progress reports on a quarterly basis. The purpose of these reports is to evaluate the programs' performance with regard to the goals and objectives. The report describes the activities and deliverables during the reporting period. In SFY 14-15, activities and deliverables included the following:

- Provided referrals to substance use disorder treatment for 253 individuals from 51 counties statewide.
- Maintained and distributed the Bed Availability List to approximately 600 professionals across the state on a weekly basis. (Forty-seven new individuals were added to the distribution list serve this fiscal year.)

- Facilitated conference exhibits and/or information sessions regarding gender specific substance use disorder services and resources for pregnant and parenting women were provided reaching over 1,800 individuals.
- Provided training on pregnancy, substance use and statewide resources at 12 conferences or other events reaching over 420 participants.
- Provided ongoing technical assistance and consultation to 11 public health and behavioral health workgroups and task forces regarding gender specific substance use disorder services and resources for pregnant and parenting women located throughout the state.

External Factors

Policy Issues or Other Relevant Information:
None

North Carolina Fetal Alcohol Prevention Program (FASDinNC)

Current Environment

Description of Mission, Goals, Objectives, and Functions:

Mission:
The North Carolina Fetal Alcohol Prevention Program (FASDinNC) was created to address the problem of alcohol exposed pregnancies within North Carolina and to focus its outreach education on preventing alcohol use during pregnancy.

Goal:
The goal of the NC Fetal Alcohol Prevention Program (FASDinNC) is to provide the statewide community with education and awareness information on Fetal Alcohol Spectrum Disorders and other teratogens to pregnant women, women of child-bearing age, their significant others, and the professionals who work with them.

Objectives:
- Increase awareness of birth defects, developmental disabilities and behavioral problems caused by prenatal exposure to alcohol and other harmful agents; by educating professionals and the general public about referral, diagnosis, intervention, and prevention efforts.

- Provide information and facilitate appropriate referrals for women who are concerned that they have exposed their child to a harmful agent.

- Provide training for professionals and caregivers of individuals with a FASD as well as information and resources to help prevent secondary disorders from developing, such as mental health or substance abuse problems.

- Serve as a resource of information and referrals for professionals and families regarding individuals with a suspected or confirmed diagnosis of Fetal Alcohol Syndrome (FAS) or as an FASD.

Mission Healthcare Foundation, Inc., (Fullerton Genetics Center) in Asheville, NC with administrative management from Smoky Mountain LME /MCO.

Services are available statewide.

Program Activities:

- Continue to increase awareness of FASD in support of FASD Awareness Day (which is held on September 9th) by partnering with the FASD Collaborative of NC and the FASD Committee of Mecklenburg, This will include, but is not limited to, various educational activities, awareness campaigns, support of a Governor's proclamation (if applicable) and promoting media exposure in all four (4) regions of the State.

- Provide presentations/educational/training sessions, exhibits and/or network at a minimum of 12 (twelve) seminars, conferences or training events to a variety of disciplines throughout North Carolina about the dangers of drinking alcohol while pregnant, by providing information about FASD as it presents across the lifespan, and/or providing information and resources to help prevent secondary disabilities from developing in individuals with an FASD.

- Maintain the www.MothertoBabyNC.org and www.FASDinNC.org websites in order to provide up-to-date information about FASD for women of child bearing years, families of individuals with a FASD and the professionals that work with them.

Statutorily Required Functions:
None

Source of Funds (State Fiscal Year 2014-2015):

SFY 14-15 Funding Source	Funding Type	Amount
NC Fetal Alcohol Prevention Program (FASDinNC)	**FEDERAL- Substance Abuse Prevention and Treatment Block Grant (SABG).** Authorized by section 1921 of Title XIX, Part B, Subpart II and III of the Public Health Service (PHS) Act. Title 45 *Code of Federal Regulations* Part 96	$71,083

Discussion and Analysis of Performance Measures and Data

Problem or Need Addressed:

- Address the problem of alcohol exposed pregnancies within North Carolina.
- Focus its outreach education on preventing alcohol use during pregnancy.
- Serve as a resource to professionals working with women of childbearing age.

Performance Measures Defined and State Fiscal Year 2014-2015 Status:

The Program Coordinator, employed by Mission Hospitals' Fullerton Genetics Center, prepares and submits Progress Reports quarterly by the 10th of the month following the 3rd month of each quarter (October, January, April, and July). The purpose of these reports is to evaluate the program performance with regard to the goals and objectives. As such, the reports describe the contractor's activities and deliverables during the reporting period and identifies specific contract goals and objectives that these activities or deliverables address.

- Two FASD Proclamations, one signed by the Governor and one by the Mayor of Charlotte.
- Comprehensive social media campaign delivered 9/1/14 – 9/9/14
- Distributed an electronic FASD Awareness Program to 26 NC Perinatal Maternal & CASAWORKS Initiative programs throughout the state.
- FASD Awareness Day Press Release resulted in media coverage of the event both regionally and statewide via CBS and Time Warner networks (projected outreach of 4,000).
- Over 50 Participants participated in the FASD Awareness Day Event.
- The Program Coordinator reached 2,028 individuals through 39 outreach opportunities during FY 2014-2015.
- There were a total of 5,507 hits to FASDinNC.org, with 400 hits to the MothertoBabyNC/teratogen page for FY 2014-2015.

External Factors

Policy Issues or Other Relevant Information:
None

Malbin, D.: Findings from the FASCETS Oregon Fetal Alcohol Project: Efficacy of a neurobehavioural construct; interventions for children and adolescents with Fetal Alcohol Syndrome/Alcohol-Related Neurodevelopmental Disabilities (FASD). Unpublished manuscript, 2002

Malbin, Diane: Fetal Alcohol Syndrome and Fetal Alcohol Effects: Trying Differently Rather Than Harder, 1999 revised 2002 available through FASCETS www.fascets.org

Division of Medical Assistance Maternal Health Programs

Pregnancy Medical Home

One MCH program administered by DMA with Medicaid federal and State matched funding is the Pregnancy Medical Home (PMH). In 2011, DHHS and the Division of Medical Assistance (DMA) implemented the Pregnancy Medical Home. The PMH program is designed to: increase Medicaid beneficiaries' access to early, quality, and regular prenatal care; prevent unnecessary Cesarean deliveries; and improve birth outcomes in the Medicaid population (reduce health care costs by reducing the rates of preterm deliveries and low birth weight infants). Approximately 120,000 deliveries occur in North Carolina each year. More than 55% of *births* are covered by NC Medicaid, while 48% of NC pregnancies are covered by NC Medicaid for prenatal, delivery and postpartum care. Emergency Medicaid covers 7% of deliveries for low-income women who are not eligible for other Medicaid coverage. The Pregnancy Medical Home (PMH) is designed to coordinate care for the high-risk Medicaid beneficiary, achieve positive clinical outcomes, and ensure the health of the mother during the prenatal and postnatal periods. Among Medicaid covered deliveries, more than 90% of the pregnant Medicaid beneficiaries are enrolled in a PMH practice. Among Medicaid patients who received prenatal care in a PMH practice in SFY2015, women used private medical offices (67%), participating local health departments (18%), and other sites such as academic medical centers OB clinics and federally qualified health centers (14%). Identifying and caring for high-risk pregnancies early in the prenatal period impacts the outcomes for the woman and potentially the newborn, and can yield health care cost savings.

North Carolina Community Care Networks (NCCCN) utilizes PMH-eligible providers, including medical professionals such as family physicians and obstetricians, certified nurse midwives, nurse practitioners and physician assistants. PMH providers who enroll in the PMH program agree to meet a set of clinical expectations. Provider engagement is promoted through financial incentives from Medicaid when achieving clinical outcomes for the pregnant Medicaid recipient, as well as education and technical assistance from their local NCCCN network, practice-level operational and outcomes data from NCCCN's Informatics Center, and partnership with a pregnancy care manager. Each network has a PMH physician and nurse team who share evidence-based guidance with the practices in their network. NCCCN's informatics system, including outcome, quality and utilization data, enables each network's PMH team to identify best practices and outliers and provide feedback to individual practices. This is the only program that engages the entire community of providers who take care of pregnant Medicaid beneficiaries across the state to meet clinical expectations and to implement best practice models of care. Identifying high risk pregnancies early in the prenatal period impacts the outcomes for the woman and potentially the newborn. Once identified, the Pregnancy Care Management program is offered to all women with one or more PMH priority risk factors to reduce the number of preterm births. NCCCN networks contract with local health departments for pregnancy care management services, provided by nurses and social workers who work with prenatal care providers to support the prenatal care plan. NCCCN and the NC Division of Public Health work in collaboration to oversee the quality and quantity of services provided by local health department pregnancy care managers.

Using the standardized Pregnancy Medical Home Risk Screening Form, PMH providers identify patients at elevated risk of preterm birth and refer them for pregnancy care management. Approximately 70% of the pregnant Medicaid population has at least one preterm birth risk factor, and more than 50% of pregnant Medicaid patients receives pregnancy care management services during their pregnancy. At any given moment in time, more than 16,000 pregnant Medicaid beneficiaries are actively engaged in pregnancy care management, or more than 50,000 annually.

Evidence-based practices in the Pregnancy Medical Home model

Certain evidence-based practices are required of PMH providers in the participation agreement (contract) that they sign with NCCCN when they join the PMH program. These include: Avoidance of **elective delivery before 39 weeks** of gestation - The Joint Commission, National Quality Forum, the American College of Obstetrics and Gynecology (ACOG), the March of Dimes, and others have supported this practice following a major study in 2009.

Utilization of **17alpha hydroxyprogesterone** (17p) for prevention of recurrent preterm birth among women with a history of spontaneous preterm birth or preterm rupture of the membranes – ACOG, March of Dimes and other professional societies promote the use of 17p following a major randomized controlled trial published in 2003.

Reduction in the **rate of primary cesarean delivery** (women having their first cesarean) – World Health Organization and U.S. Healthy People 2020 set targets to reduce the primary cesarean delivery rate in order to prevent surgical complications and risk of complications in subsequent pregnancies, given accumulating evidence showing the increased risk of morbidity and mortality with an increasing number of cesarean deliveries.

Standardized risk screening using the PMH Risk Screening Form – ACOG promotes a set of validated questions to screen for domestic violence, which are included in the PMH Risk Screening Form; ACOG and the American Society of Addiction Medicine endorse the use of a universal verbal/written screening tool for substance use; the "Modified 4 P's", a substance use screening instrument validated for use with pregnant women, is included on the PMH Risk Screening Form.

Depression screening, using a depression screen validated for use with pregnant women, during the postpartum period – ACOG

Collaboration with **pregnancy care management** – several studies have shown a link between community- and/or home-based care management services and a reduced risk of poor birth outcomes, particularly among low-income women.

Other evidence-based and emerging practices are addressed in PMH Care Pathways, documents that NCCCN network physician leadership of the PMH program create to establish standards and best practices for all PMH providers. Evidence-based practices in the PMH Care Pathways include:

Induction of labor among nulliparous patients - use of cervical ripening to reduce the risk of cesarean delivery and the establishment of criteria under which induction of labor is indicated.

Management of hypertensive disorders of pregnancy – conservative management of non-severe preeclampsia and gestational hypertension/avoidance of scheduled delivery <37 weeks in the absence of other complications to prevent preterm delivery; scheduled delivery at 37-38 weeks to minimize risk of disease progression once at term; management of severe preeclampsia in appropriate setting, with criteria for inpatient management.

Management of perinatal tobacco use – use of evidence-based interventions to address tobacco use in order to increase the likelihood of smoking cessation, including appropriate use of pharmacotherapy in prenatal and postpartum care.

Use of progesterone and cervical length measurement – established criteria for the use of cervical ultrasound screening to prevent overutilization and to ensure high-risk patients are screened appropriately; established criteria for the use of progesterone therapy based on patient's risk factors.

Postpartum care – identifies key components of the comprehensive postpartum visit, including appropriate timing for initiation of various contraceptive methods; creates guidelines for which patients need to be seen within 2 weeks of delivery based on medical/psychosocial risk factors (e.g., hypertension, depression); promotes transition to primary care to improve inter-conception health and reduce risk of poor pregnancy outcomes in subsequent pregnancies, especially among women with preterm birth risk factors

Source of funds- Pregnancy Medical Home
(Data source BD 701)

Pregnancy Medical Home Fee for Service

SFY 14-15 Funding Source	Funding Type	Amount
State Appropriations	Non-Federal	$2,210,573
	Federal	$4,264,306
	TOTAL	**$6,474,879**

Pregnancy Medical Home per Member per Month

SFY 14-15 Funding Source	Funding Type	Amount
State Appropriations	Non-Federal	$8,294,480
	Federal	$13,720,499
	TOTAL	**$22,014,979**

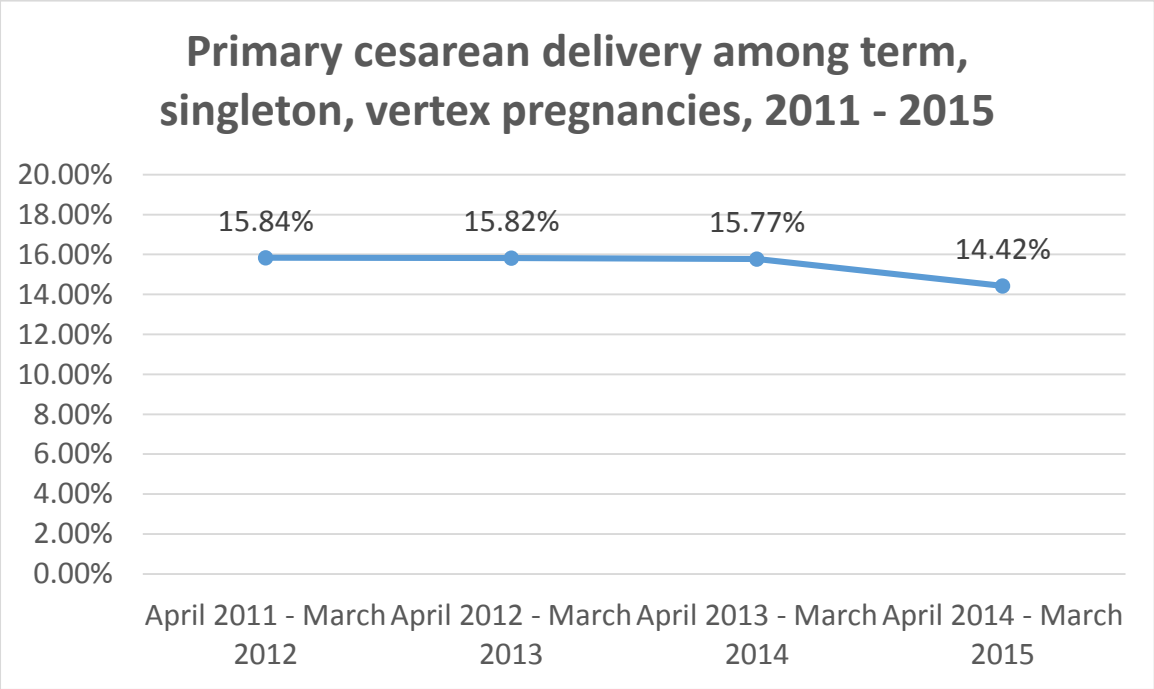
GOALS

The PMH program goals include

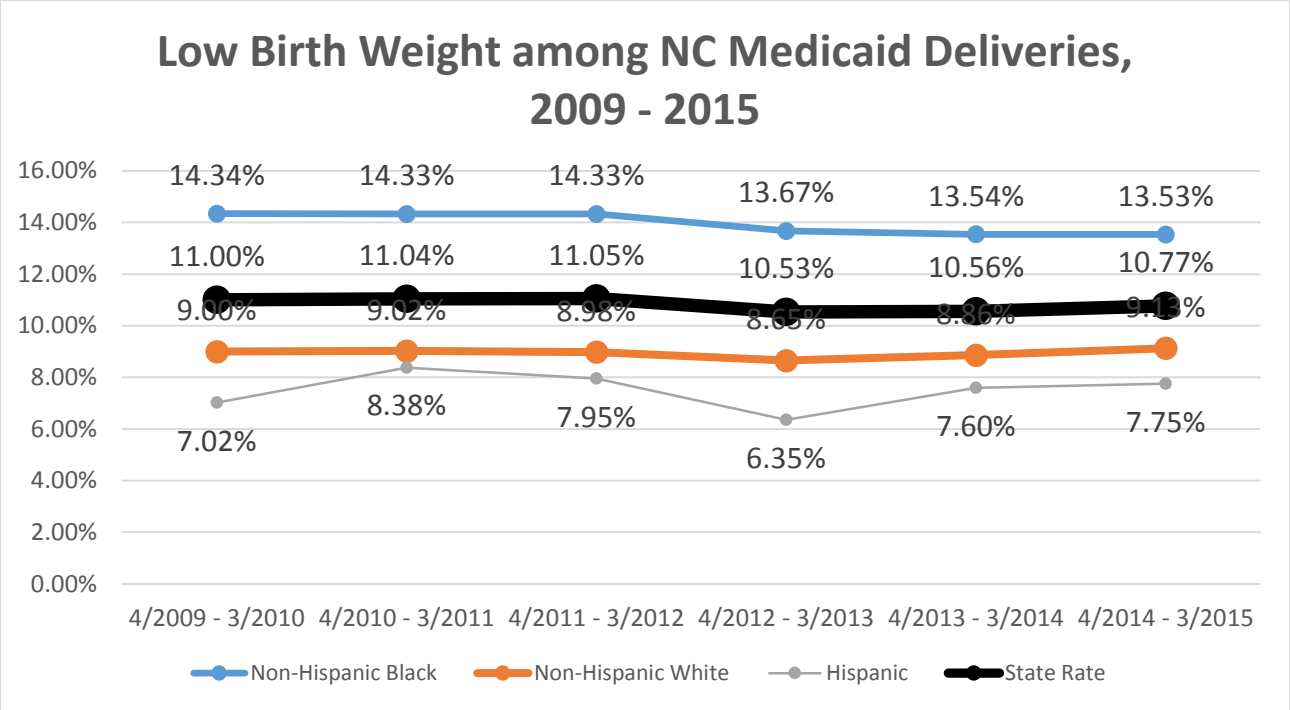
1) Maintain the rate of Cesarean section deliveries in women never delivered by C-section for a term pregnancy below 16%.
2) Reduce the rate of low birth weight (LBW) among Medicaid live births.
3) Reduce the number of very low birth weight (VLBW) among Medicaid live births.
4) Increase the number of women enrolled in the Pregnancy Care Management program.

FINDINGS

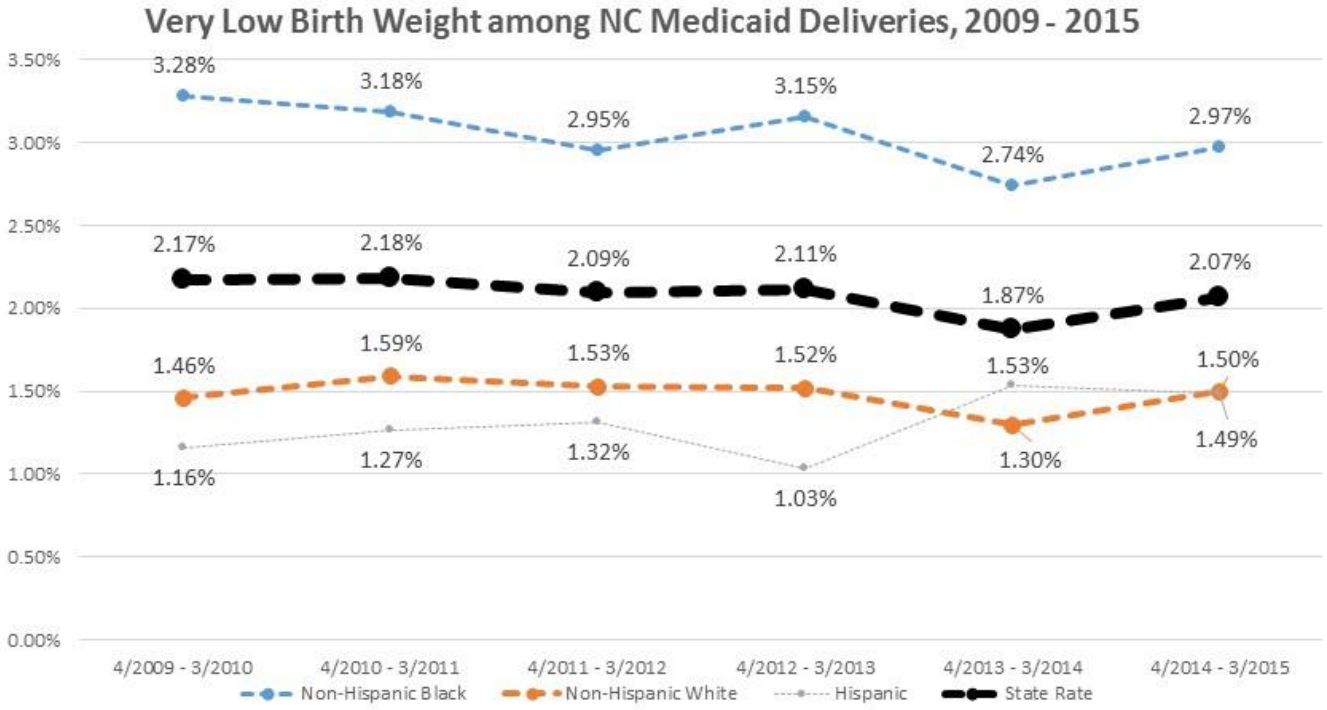
The graphs and commentary on each below present the trends in PMH and PCM measures over several years. Positive impact is demonstrated for all measures.



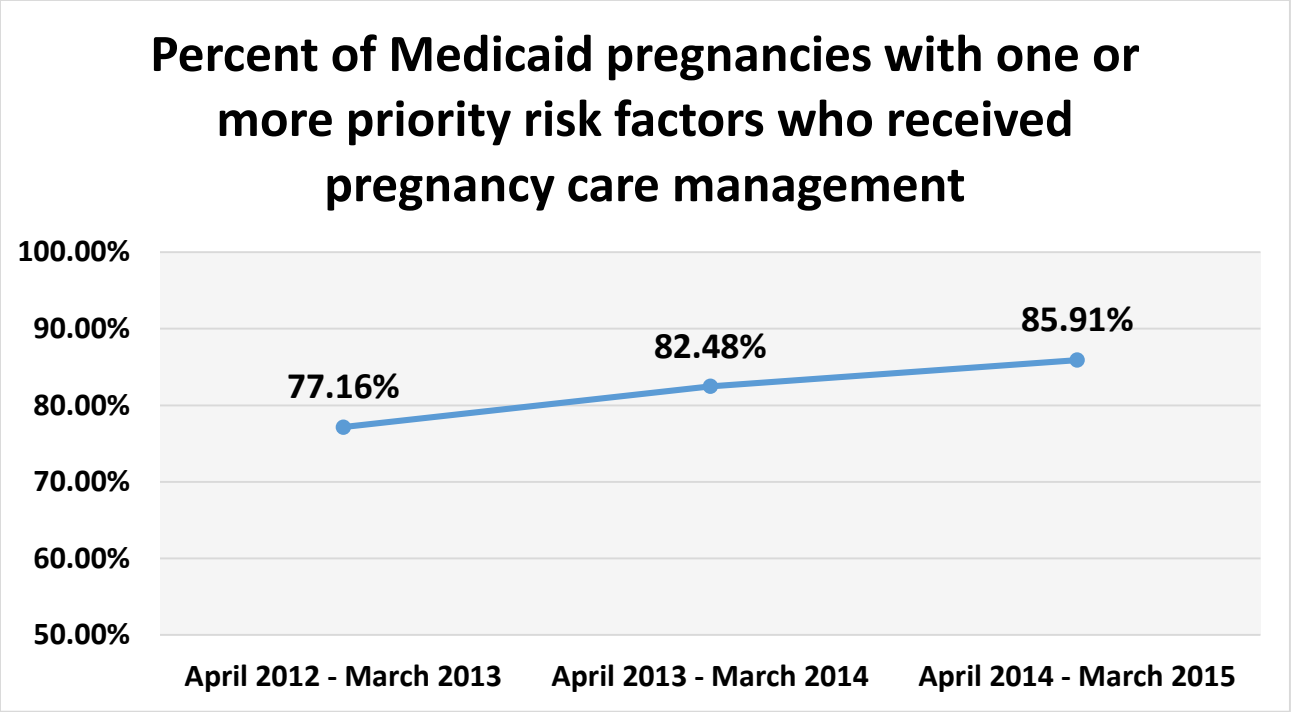
The cesarean delivery rate among women who have not had a previous C-section has decreased steadily since the launch of the Pregnancy Medical Home program in April 2011, resulting in cost savings and reduced risk of complications in future pregnancies for these patients.



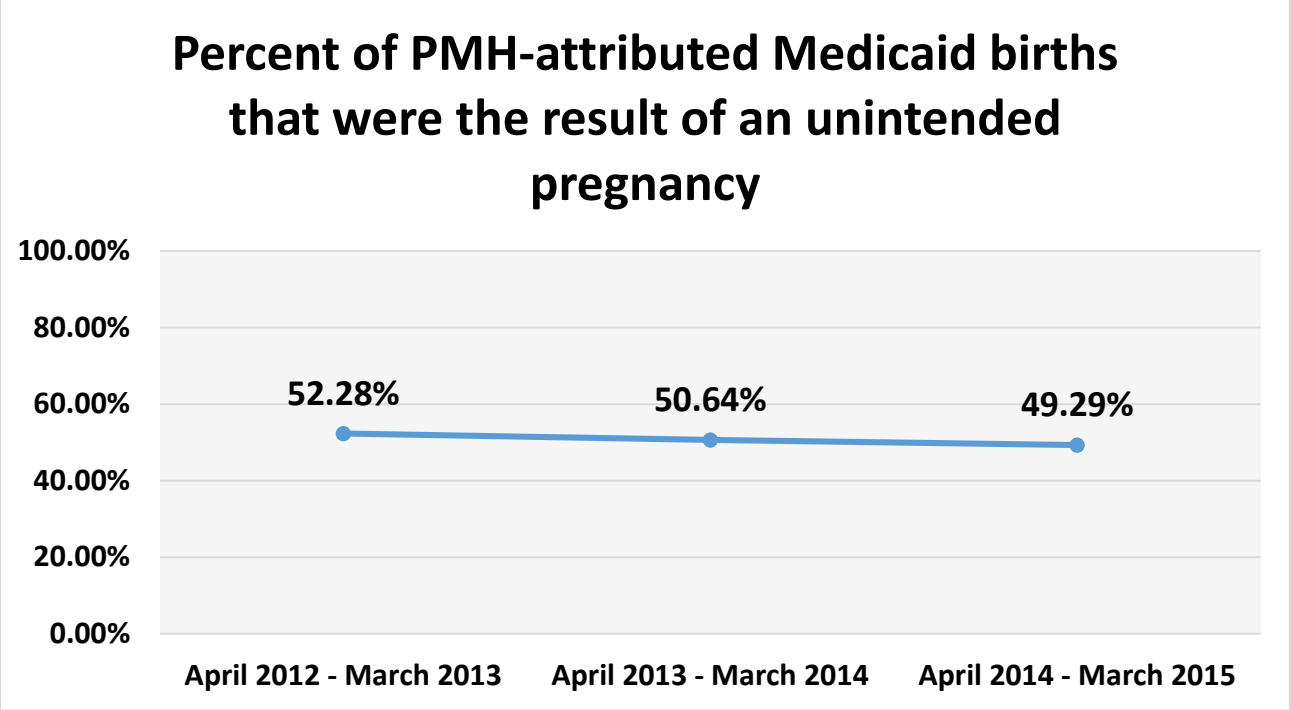
The rate of low birth weight (LBW) babies born weighing less than 2,500 grams or 5.5 pounds, among Medicaid births (excluding deliveries covered by Emergency Medicaid) has declined steadily since the launch of the PMH program in April 2011. Especially important is the decrease in LBW among African-American births. The small number of Hispanic births results in greater variability in the LBW rate for this population. Additional data analysis over the coming year will evaluate whether the slight uptick in the year ending March 2015, limited to White and Hispanic births, is statistically significant. The slow but steady decline is likely a result of more consistent use of evidence-based practices across the state, including the avoidance of elective delivery before 39 weeks of gestation and the use of progesterone to prevent recurrent preterm birth, both of which are contractual performance expectations of PMH providers. A low birth weight infant typically has an initial newborn admission that is ten times more expensive than a normal weight newborn admission.



The rate of very low birth weight (VLBW) babies born weighing less than 1500 grams or 3.3 pounds, has experienced a modest decrease since the launch of the PMH program. Due to the small number of VLBW infants, these rates are subject to instability and need to be evaluated over an extended period of time. Given that it has been believed that very low birth weight could not be impacted, this is a promising finding. These are the costliest and sickest infants, so even slight changes in this rate result in significant cost savings and improved health outcomes across the life span. The disproportionately greater improvement among African-American births should have a direct impact on the racial/ethnic disparity in the rate of infant mortality in North Carolina.



There has been an increase in the number of patients who received pregnancy care management among women receiving prenatal care in a PMH practice who were identified as having at least one priority risk factor. Pregnancy care managers have become increasingly skilled and innovative at locating and engaging patients to address risk factors for preterm birth and low birth weight. Pregnancy care managers and PMH providers have developed strong partnerships to ensure patients in greatest need receive pregnancy care management services.



The rate of unintended pregnancy in the North Carolina Medicaid population has decreased to <50% since the launch of the PMH program, while it remains 51% nationally across the entire population (not limited to Medicaid). The PMH program has focused on improved access to highly effective contraception in the postpartum period. Unintended pregnancies include pregnancies that were either mistimed or unwanted.

Cost savings in the PMH Program: Prenatal Care

The cost per Medicaid patient for prenatal care is based on any paid claims during the pregnancy for patients with non-Emergency Medicaid who had a live birth during the time period.

Total Prenatal Costs per pregnancy have decreased by birth year.

Note: Includes prenatal component from OB package claims.

April 2009 – March 2010	**$409.15**
April 2010 – March 2011	**$390.91**
April 2011 – March 2012	**$390.29**
April 2012 – March 2013*	**$376.33**

***Updated analysis pending, due to issues with data completeness following NC Tracks Transition in July 2013.**

Cost savings in the PMH Program: Delivery

The cost per delivery for all deliveries covered by Medicaid (Emergency and non-Emergency coverage) has decreased year over year. This includes all physician and hospital costs while the patient is hospitalized for delivery of the infant.

Delivery Year	Delivery Count	Average Length of Stay (days)	Total Costs	Avg Cost
April 2009 – March 2010	68,104	2	$211,370,468.69	$3,103.64
April 2010 – March 2011	64,890	2	$200,565,770.62	$3,090.86
April 2011 – March 2012	64,754	2	$194,658,023.05	$3,006.12
April 2012 – March 2013	62,941	2	$184,903,322.80	$2,937.72
April 2013 – March 2014*	62,176	2	$180,119,265.96	$2,896.93

Source for all preceding tables and graphs: North Carolina Community Care Networks.

Care Coordination for Children (CC4C)

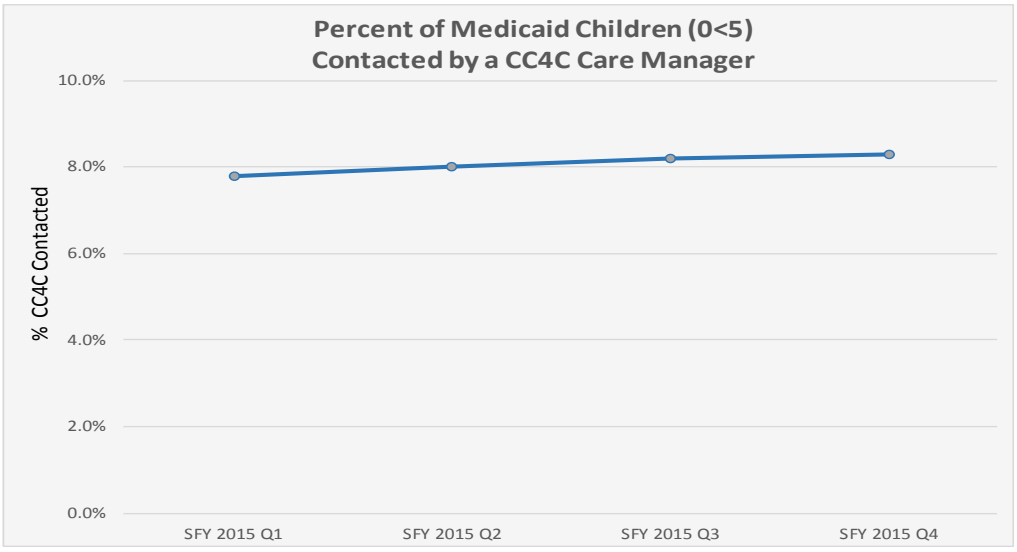
Another MCH program administered by DMA with Medicaid federal and State matched funding is Care Coordination for Children (CC4C). CC4C identifies and provides at risk care management for children who meet the Federal definition of children with special health care needs such as children in the Neonatal Intensive Care Unit who need assistance to transition back to the community and link into a medical home and/or early intervention services children identified as high utilizers of preventable hospital services children in the custody of the Local Department of Social Services (DSS) needing primary medical home services such as health screenings and follow up medical care.

CC4C is a specific service listed as an essential public health service. Expenditures for Children with Special Health Care Needs are required for the State to receive Maternal and Child Health Block Grant funds and this program helps to meet that need while meetings goals to decrease preventable hospital costs. Without this program, children and their parent would not get timely access to services necessary to improve the child's health outcomes and reduce costs to Medicaid. There would be an increase in hospital costs for children who are potential high utilizers of inpatient services without outpatient management of their Medical issues and without support and assistance in navigating the medical and health care system. Children could experience delays in receiving Early Intervention Services which would not benefit from EI services which serve to ameliorate developmental disabilities and increase likelihood of later success in school. Additionally in its role of linking children to medical homes, this program facilitates the state in meeting the outcomes for increased compliance with EPSDT standards and child health outcomes.

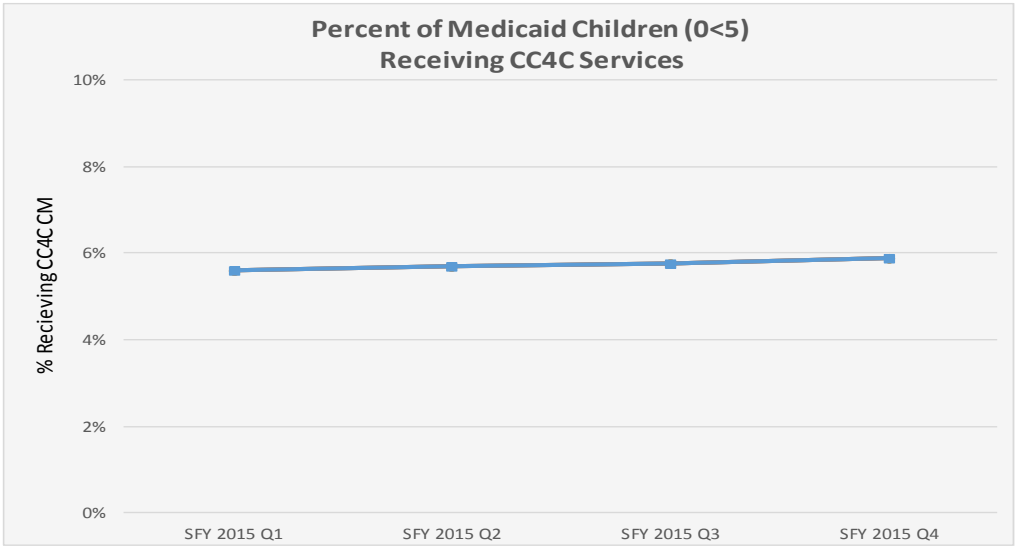
CC4C MEASURES

A key step is the screening of all age 0<5 children for special needs. Those who screen positive for risk or special needs are then contacted by a CC4C case manager. Some portion of those contacted will go on to receive CC4C services. These services include, but are not limited to, high risk screening, monitoring the child's development, assisting families with linking to community resources to support their child's developmental progress, and promoting a Medical Home.

Services



Each quarter is based ona 6 month data lookback



Each quarter is based ona 6 month data lookback

FUNDING

Source of funds- Per Member Per Month
(Data source BD 701)

SFY 14-15 Funding Source	Funding Type	Amount
State Appropriations	Non-Federal	$6,982,895
	Federal	$12,802,779
	GRAND TOTAL	**$19,785,675**

Federal and State law direct the Department of Health and Human Services to assure that the ten essential public health services are available and accessible to all citizens of the State [45 C.F.R. Part 156 and N.C.G.S. § 130A-1.1(b)]. Furthermore, the Title V Maternal and Child Health Services Block Grant legislation at 42 U.S.C. §705 requires States to use at least 30 percent of block grant funds for children with special health care needs and 30 percent of block grant funds for preventive and primary care services for children.