Report on Use of $1.575M for Evidence-Based Programs for Infant Mortality Reduction

Session Law 2017-57, Section 11L.1. (bb)

Report to the

House of Representatives Appropriations Committee on Health and Human Services

and

Senate Appropriations Committee on Health and Human Services

and

Fiscal Research Division

By

North Carolina Department of Health and Human Services

January 24, 2018

BACKGROUND

In state fiscal year (SFY) 2015-2016, the North Carolina General Assembly appropriated one million five hundred and seventy-five thousand dollars ($1,575,000) in the Maternal and Child Health Block Grant Plan to the Department of Health and Human Services' (DHHS) Division of Public Health (DPH) for each year of the 2015-2017 fiscal biennium to be used for evidence-based programs in North Carolina counties with the highest infant mortality rates. These funds were re-appropriated for the 2017-2019 fiscal biennium.

Session Law 2017-57, Section 11L.1. (bb) requires DPH to report on (i) the counties selected to receive the allocation, (ii) the specific evidenced-based services provided, (iii) the number of women served, and (iv) any impact on the counties' infant mortality rate. The legislation requires DPH to report its findings to the House of Representatives Appropriations Committee on Health and Human Services, the Senate Appropriations Committee on Health and Human Services, and the Fiscal Research Division no later than December 31, 2017.

ACTIONS AND RESULTS TO DATE

In June 2016, the Division of Public Health allocated funding for the Infant Mortality Reduction program to local health departments (LHDs) in counties that experienced the highest infant mortality rates during the five-year period of **2010-2014**. The 26 highest counties were selected. The funding distribution was based on the number of infant deaths per county during the 5-year period. Counties that had 75 or more deaths received an allocation of $113,750; counties with 20 – 74 deaths received $60,000; and counties with fewer than 20 deaths received $35,000. Two local health departments declined funding in fiscal year 2016-2017 (Bladen and Northampton) because they were unable to effectively implement the infant mortality reduction program due to staff vacancies. The declined funds were evenly distributed among the local health departments who previously received $60,000 and $35,000.

The following table lists the 24 local health departments that received funding in state fiscal year 2016-2017:

Local Health Department	Funding Amount
Alamance	$113,750
Albemarle Regional Health District	$38,500
Anson	$38,500
Beaufort	$63,500
Caldwell	$63,500
Cherokee	$38,500
Cleveland	$63,500
Columbus	$63,500
Forsyth	$113,750
Granville-Vance Health District	$63,500
Halifax	$63,500
Hertford	$38,500

Local Health Department	Funding Amount
Lee	$63,500
Lenoir	$63,500
Montgomery	$63,500
Pitt	$113,750
Richmond	$63,500
Robeson	$113,750
Rockingham	$63,500
Sampson	$63,500
Scotland	$63,500
Swain	$38,500
Warren	$38,500
Wilkes	$63,500

All local health departments were required to implement or expand upon at least one evidence-based strategy (EBS) that is proven to lower infant mortality rates. The following selected strategies have all proven to be an effective means to improve birth outcomes through addressing pregnancy intendedness, preterm birth, and/or infant death.

- 17P (alpha hydroxyprogesterone) injections are designed to help prevent a preterm birth for pregnant women who have had a previous preterm delivery.
- Through group prenatal care, CenteringPregnancy® has shown to have positive outcomes related to increased breastfeeding initiation and reduced preterm birth rates, both associated with decreased infant mortality.
- Reproductive life planning, inclusive of increased access to long acting reversible contraception (LARC), has demonstrated improvements in pregnancy intendedness, which is associated with improved birth outcomes.
- Nurse Family Partnership (NFP) has been shown to reduce child abuse and neglect, and has also demonstrated reductions in prenatal smoking among mothers, which significantly contributes to infant mortality.
- Improved infant safe sleep practices have resulted in reductions in Sudden Infant Death Syndrome (SIDS), and other sleep related deaths of infants.
- Smoking during and after pregnancy is associated with fetal and infant risks including low birth weight, preterm delivery, and sudden infant death syndrome. Successful treatment of tobacco dependence can have a significant impact on pregnancy-related outcomes.

Each of the evidence-based strategies was currently being implemented within some local health departments, and this funding served as an opportunity for expanding the reach in addressing infant mortality in these counties. These strategies were selected based on their ability to have the greatest impact within the communities served. These strategies have proven to be effective through local health department implementation, particularly for those where the capacity for execution already existed. The evidence-based strategies from which local health departments could select are summarized below.

Evidence-Based Strategy	Description
17P (alpha hydroxyprogesterone)	17P is a synthetic form of progesterone that has been shown to reduce the recurrence of preterm birth for women who have a history of preterm birth. The Local Health Department will identify, refer, and support women through education and resource referral and once identified, assist in coordination of services and encourage compliance to treatment plans.
CenteringPregnancy®	CenteringPregnancy® is a model of group prenatal care which incorporates three major components: assessment, education, and support. This model of group prenatal care promotes greater patient engagement, personal empowerment and community building, and has been shown to improve birth outcomes.
Reproductive Life Planning/Long Acting Reversible Contraception (LARC) Access	Increasing access to LARC methods provides reversible types of contraception that are highly effective for long periods of time, easy to use, and do not require any action on the part of the user.
Nurse Family Partnership (NFP)	Nurse-Family Partnership (NFP) is an evidence-based, home visiting program that helps transform the lives of vulnerable women pregnant with their first child. Each woman served by NFP is partnered with a registered nurse early in her pregnancy and receives ongoing nurse home visits that continue through her child's second birthday.
Infant Safe Sleep Practices	The American Academy of Pediatrics has issued an expansion of previous guidelines on safe sleep for babies that have been reviewed as evidence-based strategies to reduce the risk of Sudden Infant Death Syndrome (SIDS) and sleep-related deaths. The Local Health Department must designate staff to be trained on infant safe sleep practices to provide group and/or individual education sessions to parents and caregivers.
Tobacco Cessation and Prevention	The Local Health Department shall provide tobacco use screening (inclusive of electronic nicotine devices) and counseling to all adults and youth present at health care visits. Local Health Department staff shall be trained in the evidence-based 5A's (Ask, Advise, Assess, Assist, Arrange) method of tobacco cessation counseling. The Local Health Department shall designate staff to become certified tobacco treatment specialist to provide tobacco cessation counseling services to clients. Clients should be referred to QuitlineNC (1-877-QUIT-NOW) and/or appropriate community resources. The Local Health Department should counsel clients on, and engage in evidence-based policy support efforts, limiting secondhand smoke exposure.

The following is a summary of program activities, including the number of women served under each evidence-based strategy during the time-period of June 2016 to May 2017:

Evidence-Based Strategy (EBS)	# LHDs that Implemented EBS	# Patients Received Services	# Patients Educated	# LHD Staff Trained	# Home Visits Conducted
17P	3	5 (52 injections)	214	0	N/A
CenteringPregnancy®	3	125	N/A	12	N/A
Reproductive Life Planning/LARC access	22	1,563	15,622	187	N/A
Nurse Family Partnership (NFP)	4	220	N/A	5	1,352
Infant Safe Sleep Practices	14	4,773	2,439 (educational sessions)	25	N/A
Tobacco Cessation and Prevention	3	68 counseled; 185 QuitlineNC referrals	16,658 (screened)	7	N/A

Infant mortality is a multifactorial problem for which there is no one solution. It is influenced by the health of a woman before, during, and between pregnancies. It is also further shaped by determinants of health, including the social, economic, geographical, and physical environments in which people are born, grow, live, work, and age.

The following table lists the baseline 2010-2014 rates along with the 2012-2016 infant mortality rate (per 1,000 live births) for the state and the 24 counties that received funding for the Infant Mortality Reduction program:

Residence	2010-2014 Infant Mortality Rates*	2012-2016 Infant Mortality Rates*
North Carolina	**7.1**	**7.2**
Alamance	8.5	8.8
Albemarle Regional Health District (Bertie County)	10.8	15.8
Anson	9.2	13.7
Beaufort	10.5	11.9
Caldwell	10.4	8.2
Cherokee	10.0	8.1
Cleveland	9.0	8.8
Columbus	10.9	9.4
Forsyth	8.5	8.3
Granville-Vance Health District (Vance County)	9.7	7.5
Residence	**2010-2014**	**2012-2016**

	Infant Mortality Rate*	Infant Mortality Rates*
Halifax	10.9	10.8
Hertford	15.1	19.0
Lee	8.8	7.4
Lenoir	9.2	7.6
Montgomery	13.5	9.6
Pitt	10.8	11.4
Richmond	8.7	9.1
Robeson	12.0	10.7
Rockingham	9.6	10.0
Sampson	8.9	5.9
Scotland	11.7	9.8
Swain	10.2	7.1
Warren	10.7	10.9
Wilkes	9.2	9.0

*Source: North Carolina Center for Health Statistics (2010-2014, 2012-2016)

It should be noted that during this timeframe, local health departments received an overall reduction in their allocation of funding for maternal and child health services which also impact birth outcomes.

The current reporting timeframe is not sufficient to determine impact on infant birth outcomes, including infant mortality, given all the complex associated factors. In addition, to assess the effect of infant mortality requires the completion of pregnancy and the first year of life of the infant. Additionally, the $1.575M is only one source of funding the state's infant mortality efforts, and the impact on infant mortality should be taken in the full context of the counties' resources, given many counties have been experiencing other reductions related to their maternal and child health funding.

Funding was allocated to continue to support these evidence-based programs in state fiscal year 2017-2018. Each of the evidence-based strategies are included as part of a statewide, collaborative Perinatal Health Strategic Plan that is moving to implementation by DHHS and its partners.