

Giving Birth in North Carolina Is Still a Risky Business

Promoting Women's Health to Improve Birth Outcomes

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Introduction

Safe pregnancies and healthy babies are inextricably tied to the pre- and post-conception health of mothers. Data show that maternal health factors are a leading contributor to birth outcomes such as fetal viability and infant mortality.¹ Unfortunately in North Carolina, barriers to affordable and consistent healthcare for women pre- and post-conception contribute to stubbornly high rates of fetal and infant death each year, despite advances in clinical care.

In 2016, NC Child published a brief outlining the potential positive benefits of expanded health care coverage on infant mortality. This brief builds upon that work, exploring the similar potential of expanded women's health insurance access and utilization to affect fetal outcomes as a result of improved maternal health.

Fetal and infant mortality occur at similar rates in North Carolina² and are thought to be driven by similar causes with roots in maternal well-being. Because babies born to healthy mothers are most likely to survive, health insurance that protects and promotes maternal health can move the needle on these birth outcomes. New

research has shown substantial improvement in infant mortality in states that have broadened Medicaid eligibility under the Affordable Care Act. By expanding health care access and utilization for women of childbearing age, the state can influence both fetal and infant mortality simultaneously, effectively doubling the positive impact for North Carolina families.

This brief will present policy options to reach that potential and help ensure that every child in North Carolina has a strong start in life.

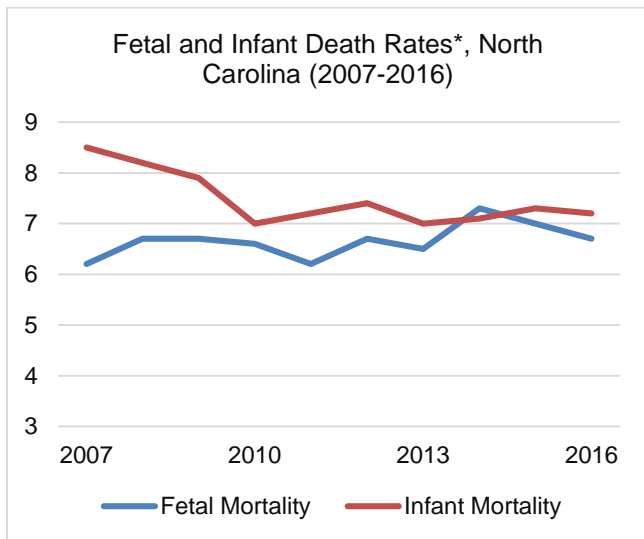
Fetal and Infant Mortality Rates Remain High in North Carolina

North Carolina lags behind other states in the reduction of infant mortality, ranking 39th in the nation in 2016.³ While this outcome has prompted statewide work to promote infant health, less attention has been given to the related experience of fetal mortality. In 2016, nearly as many fetal deaths (818) as infant deaths (873) occurred in North Carolina, adding a new dimension to current prevention research efforts.

Fetal mortality is reported as death prior to complete expulsion or extraction from a

mother’s womb and occurring at 20 or more weeks of gestation. In 2016, the fetal mortality rate was 6.7 per every 1,000 live births plus fetal deaths in North Carolina.

The Centers for Disease Control report that fetal mortality rates in the U.S. stagnated between 2006 and 2012, despite a significant decline in infant mortality during the same period. North Carolina mirrors the nation in this regard. The number of fetal deaths in the state has ranged from 753 to 895 per year over the past decade, and the fetal mortality rate fluctuated very little in the state between 2007 and 2013. The rate rose sharply between 2014 and 2015 and fell in 2016, but has yet to decline past 2007 levels despite increased statewide interest and investment in infant and maternal health.



SOURCE: NC Department of Health and Human Services State Center for Health Statistics, Division of Public Health. North Carolina Selected Vital Statistics: 2007-2016. *Infant mortality rate per 1,000 live births; fetal mortality rate per 1,000 live births + fetal deaths.

In 2016, there were 818 reported fetal deaths statewide. Counties exhibiting the highest rates of fetal death between 2012 and 2016 (see Appendix 1) were: Anson County (17.4), Washington County (15.7), and Jones County (14.9). These outcomes contrast sharply with counties exhibiting the lowest rates over the same period: Camden County (0), Ashe County (2.6), and Dare County (2.9).

In addition to geographic disparities, stark contrasts in fetal mortality persist by race and ethnicity. Between 2012 and 2016, the rate of fetal deaths for Black (non-Hispanic) mothers was more than twice the rate for Latina/Hispanic and White (non-Hispanic) mothers.

Fetal Death Rate* by Race/Ethnicity, North Carolina (2016, 2012-2016)

		2016		2012-2016
		N	Rate	Rate
Total		818	6.7	6.9
Race / Ethnicity				
	White, Non-Hispanic	357	5.3	5.2
	African American, Non-Hispanic	335	11.7	12.0
	Latino/Hispanic	88	4.8	5.4

SOURCE: NC Department of Health and Human Services State Center for Health Statistics, Division of Public Health. North Carolina Reported Pregnancies-2016. *Rate per 1,000 live births + fetal deaths.

Maternal Health Drives Birth Outcomes

Fetal and infant health is directly tied to maternal health status preconception and during the gestational period. Nearly half of the primary causes of infant mortality in North Carolina (e.g. preterm labor, congenital malformations, and complications of pregnancy, labor, and delivery) have been linked to maternal risk factors occurring prior to pregnancy.⁴ Similarly, while direct causes of fetal mortality are less understood in most cases, studies have also found maternal health conditions to be leading risk factors for fetal death.⁵

In North Carolina, conditions that increase the risk of negative birth outcomes are widespread among women of childbearing age:

- More than half (58%) are overweight or obese;
- Six percent have been diagnosed with diabetes;
- More than three out of four (78%) report not consuming recommended levels of fruits and vegetables;
- Nearly 10 percent (9.8%) have asthma;
- Approximately 16 percent have been diagnosed with hypertension;
- Twelve percent report binge drinking; and
- One in five are current smokers.⁶

These risk factors are all strongly influenced by the social, economic, and environmental conditions that impact women before, during, and after pregnancy. Negative social determinants of health, such as high poverty and the experience of racial discrimination, can cause and exacerbate health conditions that lead to poor birth outcomes. These determinants are suspected to contribute to ongoing disparities in fetal and infant mortality due to their impact on maternal health behavior and access to care.⁷

Lack of Access to Health Care Increases Risk of Poor Maternal Health

Access to health care can mediate risk factors in a woman's life and help to ensure a healthy pregnancy and delivery.⁸ Because many factors have the potential to influence fetal well-being, it is important for women of childbearing age to remain healthy even before becoming pregnant. Access to care is critical in achieving this goal of overall health, as early recognition of health concerns and risk behaviors can prevent severe pregnancy-related complications. **Unfortunately, one in every five women of reproductive age in North Carolina is uninsured, leaving both**

maternal and fetal health at high risk during a pregnancy.

Uninsured women are less likely than their insured peers to receive treatment or counseling for a variety of pregnancy risk factors, including mental health concerns and the physical health conditions referenced earlier in this report.⁹ Uninsured adults are twice as likely as their insured peers to forgo seeing a doctor when they are sick, and are less likely to receive services to help them manage chronic disease or major health conditions.¹⁰ Lack of health care coverage has been widely associated with poor health status and decreased use of prenatal care for women. Although little research has been done on the direct link between maternal health insurance coverage status and fetal mortality, extensive studies have associated the related outcome of infant mortality to insurance coverage for expectant mothers.¹¹

The primary causes of infant mortality – premature birth and low birthweight – are known to be influenced by gaps in insurance coverage and limited access to quality prenatal care. Newborns of mothers with no prenatal care are three times more likely to have a low birth weight and five times more likely to die than children born to mothers who do receive prenatal care. Access to prenatal services is particularly vital in the first trimester of pregnancy. Unfortunately in 2016, nearly one-third (31 percent) of women in North Carolina did not receive prenatal care during this critical period.¹²

Cost is a major barrier for many women despite the health risks of forgoing care. Nearly 40 percent of mothers nationally report that they delayed prenatal care because they lacked the money or insurance to cover their costs.¹³

North Carolina Can Ensure More Women Receive Health Coverage

Health insurance is a fundamental intervention to address the health causes of fetal mortality. A healthy pregnancy begins before conception, and establishing primary care during childbearing years can help women to maintain well-being, eventually leading to healthier pregnancies with fewer complications. In addition, having an established medical home can aid women in acquiring the skilled care they need during the postpartum period to regain full health and ensure the ability to meet the needs of a new baby.

Medicaid is a particularly vital source of health coverage for pregnant women that could be strengthened to improve outcomes in North Carolina. Currently, the Medicaid for Pregnant Women program is available to all pregnant women under 196 percent of the Federal Poverty Line (FPL) with guidelines including coverage for prenatal care and delivery as well as 60 days of postpartum support. Nationally, pregnancy-related services account for the largest share of the program's hospital charges.¹⁴ In North Carolina, Medicaid covers more than half (54 percent) of all births.¹⁵

While Medicaid for Pregnant Women is a critical program, it is insufficient in providing all of the preconception and early pregnancy coverage women need to promote healthy pregnancies. As detailed earlier in this report, women need health insurance prior to becoming pregnant to address chronic health conditions, promote a healthy lifestyle, and mitigate risk factors.

The Affordable Care Act (ACA) passed in 2010 designated funding to allow states to expand Medicaid coverage to all adults up to 133

percent FPL (\$16,146/year for a single adult in 2018). Because North Carolina has not yet expanded income eligibility for Medicaid under the ACA provisions, many women of childbearing age fall in the “coverage gap,” earning too much to qualify for Medicaid and too little to afford private health insurance (see Appendix 3).

INSURANCE EXPANSION LINKED TO DECLINE IN INFANT MORTALITY

A recent analysis published in the *American Journal of Public Health* found that infant mortality had the greatest decline in states that expanded access to insurance coverage through Medicaid than in those that did not. The decline in the study was greatest among Black (non-Hispanic) infants, a population highly vulnerable to negative birth outcomes in North Carolina.

SOURCE: Bhatt, C. B., & Beck-Sagué, C. M. (2018). Medicaid Expansion and Infant Mortality in the United States. *American Journal of Public Health*, (0), e1-e3.

More than 20 percent of all women of reproductive age in North Carolina earn too little (<100% FPL) to afford coverage in the Marketplace, and only a small percentage qualify for Medicaid. Among all nonelderly, uninsured adult women in the state, four in every 10 (43 percent) fall in the coverage gap, with no affordable options for obtaining health insurance.¹⁶

RECOMMENDATION

To improve the preconception health of mothers and to address the persistent problem fetal mortality, North Carolina policymakers should take advantage of available federal funding to expand health coverage to all adults under 133 percent FPL.

North Carolina has two primary options to expand coverage: it can extend eligibility for

the traditional Medicaid program or it can create a state-specific program to provide affordable care to individuals up to 133 percent FPL. The North Carolina General Assembly is currently considering a proposal to close the coverage gap. The bill, HB662, directs the North Carolina Department of Health and Human Services (NC DHHS) to create the Carolina Cares program, which would expand care to all individuals earning less than 133 percent FPL.

The proposal currently includes work requirements for beneficiaries (with some exceptions) and a premium of two percent of household income.

Work requirements would likely prevent some future mothers from accessing medical care. While most of those who would gain coverage under the Carolina Cares proposal are already working, a work requirement would add a level of bureaucracy to the program that will act as a barrier to insurance for eligible individuals.

For potential Carolina Cares recipients who are unemployed, health problems are often the reason for their unemployment. According to a recent study of the Medicaid expansion population in Michigan, approximately 75 percent of recipients who were out of work suffered from a chronic health condition, such as cancer, asthma, or diabetes. The Carolina Cares legislation exempts “individuals determined to be medically frail,” but the definition of “medically frail” and the determination process remains unclear. Research has also shown that work requirements do not improve employment

outcomes, and in some cases, can have the unintended consequence of being a barrier to employment. Medicaid expansion enrollees in Ohio and Michigan reported access to Medicaid made seeking and retaining employment easier.

Premiums would also mitigate some of the benefit of expanded coverage. Research shows that imposing premiums on very low-income populations only reduces access to coverage. Premiums cause individuals to lose health care coverage, cause delays in care, and ultimately create more costly care.

Despite these shortcomings, this legislation has potential to provide currently unavailable health care options for women of childbearing age at high risk of experiencing fetal or infant mortality.

Conclusion

Fetal and maternal health begins far ahead of conception. Women are more likely to give birth to healthy babies when they are healthy themselves, and North Carolina should not miss the current opportunity to promote safer births statewide. Racial disparities in fetal mortality rates will persist if the underlying impacts of social determinants on health care access are not addressed. Closing the Medicaid coverage gap is a promising strategy to help level the playing field for childbearing women and promote women’s health across the state. Adopting this policy has significant potential to decrease fetal mortality rates and ensure a strong start for every child in North Carolina.

Appendix 1: Fetal and Infant Death Rates* by County, North Carolina (2012-2016)

County	Fetal Death Rate	Infant Death Rate
Alamance	7.2	8.8
Alexander	5.0	6.2
Alleghany	10.3	2.1
Anson	17.4	13.7
Ashe	2.6	7.0
Avery	11.2	8.5
Beaufort	10.1	11.9
Bertie	14.4	15.8
Bladen	10.0	10.7
Brunswick	6.0	6.4
Buncombe	6.4	6.4
Burke	6.3	6.4
Cabarrus	7.8	5.7
Caldwell	5.4	8.2
Camden	0	0
Carteret	5.0	7.3
Caswell	6.8	3.9
Catawba	6.4	6.0
Chatham	4.5	10.9
Cherokee	8.0	8.1
Chowan	8.3	7.0
Clay	4.6	4.6
Cleveland	8.7	8.8
Columbus	9.7	9.4
Craven	4.4	6.9
Cumberland	8.7	9.3
Currituck	4.0	4.8
Dare	2.9	4.0
Davidson	6.4	8.1
Davie	3.6	5.1
Duplin	7.7	8.3
Durham	7.1	7.0

Edgecombe	13.0	10.3
Forsyth	6.4	8.3
Franklin	7.5	8.5
Gaston	5.5	7.8
Gates	9.1	5.5
Graham	4.6	2.3
Granville	6.8	8.2
Greene	11.3	6.7
Guilford	7.1	8.1
Halifax	9.7	10.8
Harnett	6.9	8.2
Haywood	5.9	8.4
Henderson	6.8	5.6
Hertford	7.7	19.0
Hoke	4.3	5.6
Hyde	4.3	8.6
Iredell	6.2	7.9
Jackson	5.7	7.8
Johnston	4.5	6.6
Jones	14.9	2.2
Lee	6.8	7.4
Lenoir	7.6	7.6
Lincoln	3.8	4.9
McDowell	7.8	7.0
Macon	4.6	7.0
Madison	3.9	7.9
Martin	13.8	5.8
Mecklenburg	6.8	6.2
Mitchell	8.2	1.4
Montgomery	5.1	9.6
Moore	7.3	4.8
Nash	9.9	8.6
New Hanover	4.8	4.2
Northampton	12.8	10.8

Onslow	5.5	7.2
Orange	5.6	4.8
Pamlico	11.0	13.3
Pasquotank	6.4	6.1
Pender	6.2	7.8
Perquimans	6.3	3.2
Person	13.5	7.4
Pitt	9.2	11.4
Polk	8.3	5.6
Randolph	8.9	7.6
Richmond	7.9	9.1
Robeson	9.1	10.7
Rockingham	8.6	10.0
Rowan	7.5	7.5
Rutherford	6.5	6.9
Sampson	7.8	5.9
Scotland	9.3	9.8
Stanly	7.1	7.2
Stokes	5.0	6.1
Surry	5.6	5.6
Swain	8.0	7.1
Transylvania	5.1	5.2
Tyrrell	4.7	9.4
Union	7.1	5.3
Vance	5.7	7.5
Wake	5.8	5.6
Warren	6.5	10.9
Washington	15.7	8.0
Watauga	6.1	3.9
Wayne	8.0	6.4
Wilkes	5.8	9.0
Wilson	9.2	9.5
Yadkin	5.7	7.8
Yancey	7.1	3.6

SOURCE: NC Department of Health and Human Services State Center for Health Statistics, Division of Public Health. Vital Statistics: Infant Mortality Rates, Fetal Mortality Rates. Available from <http://www.schs.state.nc.us/data/vital/volume1/2016/>

*Fetal mortality rate per 1,000 live births + fetal deaths; infant mortality rate per 1,000 live births

Appendix 2: Health Insurance Coverage by County, Women Ages 18-44, North Carolina (2016)

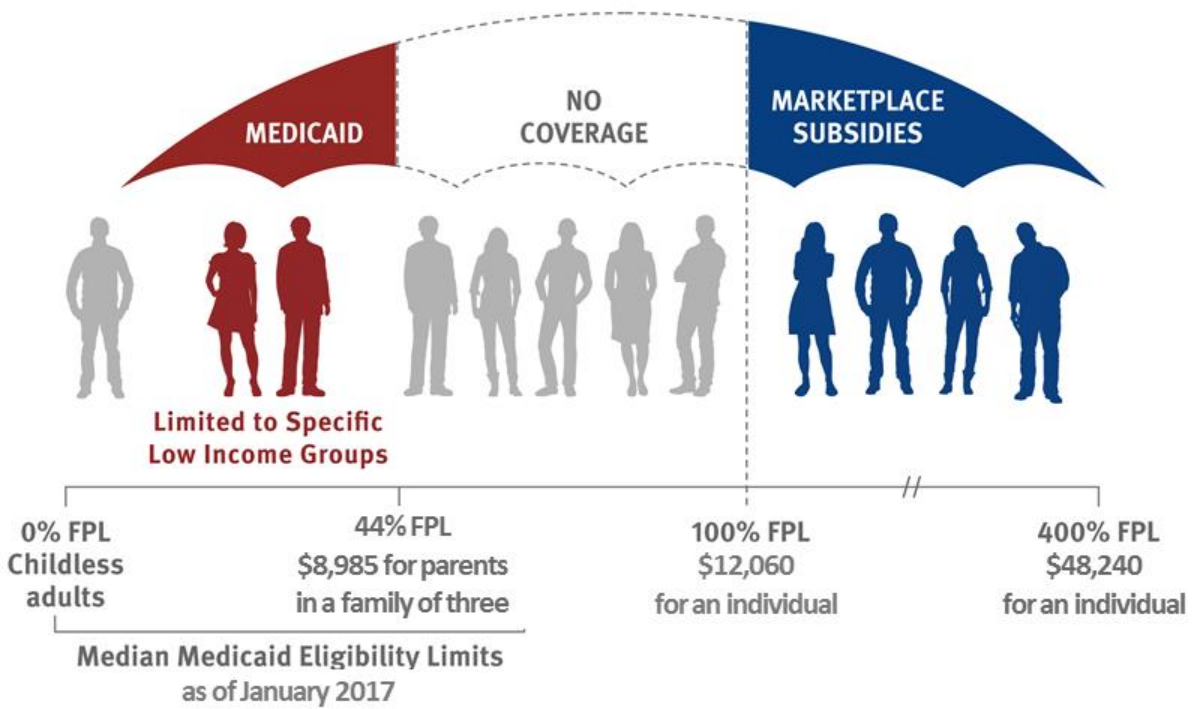
County	Percentage Uninsured
Alamance	24.7%
Alexander	17.7%
Alleghany	30.0%
Anson	22.5%
Ashe	24.5%
Avery	27.7%
Beaufort	18.5%
Bertie	20.7%
Bladen	27.4%
Brunswick	28.3%
Buncombe	21.7%
Burke	22.2%
Cabarrus	16.3%
Caldwell	26.7%
Camden	17.6%
Carteret	22.4%
Caswell	21.8%
Catawba	20.8%
Chatham	23.6%
Cherokee	37.9%
Chowan	28.2%
Clay	40.1%
Cleveland	22.6%
Columbus	26.6%
Craven	21.8%
Cumberland	17.8%
Currituck	19.3%
Dare	30.9%
Davidson	19.7%
Davie	19.5%
Duplin	36.9%
Durham	18.0%
Edgecombe	22.5%

Forsyth	20.5%
Franklin	22.0%
Gaston	20.9%
Gates	15.8%
Graham	31.3%
Granville	18.7%
Greene	25.2%
Guilford	19.0%
Halifax	19.1%
Harnett	19.1%
Haywood	27.3%
Henderson	23.7%
Hertford	18.9%
Hoke	20.5%
Hyde	31.8%
Iredell	21.4%
Jackson	14.9%
Johnston	22.9%
Jones	29.0%
Lee	24.7%
Lenoir	26.0%
Lincoln	21.0%
McDowell	23.6%
Macon	34.5%
Madison	14.8%
Martin	26.8%
Mecklenburg	18.8%
Mitchell	20.5%
Montgomery	29.6%
Moore	17.4%
Nash	22.9%
New Hanover	17.6%
Northampton	28.5%
Onslow	15.3%

Orange	10.4%
Pamlico	33.9%
Pasquotank	22.9%
Pender	24.8%
Perquimans	30.7%
Person	17.2%
Pitt	18.1%
Polk	25.7%
Randolph	24.5%
Richmond	24.4%
Robeson	26.6%
Rockingham	21.4%
Rowan	22.9%
Rutherford	23.4%
Sampson	28.7%
Scotland	22.6%
Stanly	22.3%
Stokes	23.4%
Surry	25.6%
Swain	31.2%
Transylvania	36.8%
Tyrrell	46.6%
Union	17.5%
Vance	22.0%
Wake	14.4%
Warren	26.7%
Washington	28.3%
Watauga	12.0%
Wayne	25.5%
Wilkes	21.0%
Wilson	25.2%
Yadkin	26.6%
Yancey	26.8%

SOURCE: United States Census Bureau, American Fact Finder, 2012-2016 American Community Survey 5-year Estimates. Available from https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_16_5YR_B27001&prodType=table

Appendix 3: Visualizing the Health Insurance Coverage Gap



SOURCE: Garfield, R. & Damico, A. (2017). Kaiser Family Foundation. Gap in Coverage for Adults in States that Do Not Expand Medicaid under the ACA. Available at <https://www.kff.org/uninsured/issue-brief/the-coverage-gap-uninsured-poor-adults-in-states-that-do-not-expand-medicaid/>

End Notes

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