



Wake County Public Health

Maternal and Child Health Issue Brief: Infant Mortality

OVERVIEW

Health outcomes during the first year of life provide important context for maternal and infant health. Infant mortality is defined as the death of an infant before their first birthday (0 to 364 days of life). An infant mortality rate, typically measured as the number of infant deaths per 1,000 live births, is widely used as an indicator of maternal health, infant health, and overall population health.¹ Each infant death represents the profound loss of a child for a family and has lasting emotional, social, and economic impacts on the community.

Monitoring infant mortality over time and across different population groups helps public health professionals identify patterns, track progress, and better understand where additional support and prevention efforts are needed. When comparing with other high-income countries, the United States ranked 32nd out of 38 countries for infant mortality in 2023, reflecting ongoing opportunities for improvement in maternal and infant health.² Despite advances in medical care, overall infant mortality rates in North Carolina have shown little change since 2010.³

The U.S. Global Standing

No. 32 out of 38

in infant mortality when comparing with other high-income countries.²

Wake County Racial Disparities

3x

From 2019 to 2023, infant mortality rates in Wake County were more than three times higher among Black non-Hispanic infants than White non-Hispanic infants.⁴

INFANT MORTALITY RATES VARY ACROSS RACIAL AND ETHNIC GROUPS

- National, state, and local data consistently show higher infant mortality rates among Black infants compared with other groups.^{1,4}
- These differences are influenced by a range of factors, including access to care, social and economic conditions, chronic stress, and structural inequities.
- Understanding these differences supports informed public health planning, community partnerships, and effective intervention efforts.

INFANT DEATH BY TIMING

Infant mortality can also be examined based on when the death occurs during the first year of life. Looking at timing helps distinguish between risks that occur shortly after birth and those that arise later in infancy. In the United States, about two-thirds of infant deaths occur during the neonatal period (the first 28 days of life) and about one-third occur during the post-neonatal period (28 days to 364 days of life). These two time periods often reflect different underlying causes and different opportunities for prevention.

Neonatal deaths are more commonly associated with conditions related to pregnancy and birth such as pre-term birth, complications during delivery, congenital anomalies (birth defects), and maternal health conditions.

Post-neonatal deaths are more often associated with external or environmental factors, including unsafe sleep environments, infections, injuries, and other preventable causes.²

LEADING CAUSES OF INFANT DEATH

Most infant deaths are attributed to a small number of causes. The leading causes may vary depending on the timing of death and underlying health conditions. In the United States, the most common causes of infant death include¹:

1	2	3	4	5
CONGENITAL ANOMALIES (BIRTH DEFECTS)	PRETERM BIRTH & LOW BIRTH WEIGHT	SUDDEN INFANT DEATH (SIDS)	UNINTENTIONAL INJURIES	MATERNAL PREGNANCY COMPLICATIONS

Congenital anomalies (birth defects) are structural or functional conditions present at birth. They may affect how a baby's body forms or functions and can lead to physical, developmental, or intellectual disabilities.⁵ Congenital anomalies are the leading cause of infant death in the United States.¹ Some severe birth defects can be life-threatening, particularly if not detected or treated early. Causes may include genetic conditions, chromosomal abnormalities, infections during pregnancy, or certain environmental exposures.⁵

Preterm birth and low birth weight are the second leading cause of infant death in the United States affecting 1 in 10 births.⁶ Preterm birth refers to babies born before 37 weeks of pregnancy. Low birth weight is defined as weighing less than 2,500 grams (5.5 pounds) at birth. Babies born too early or too small face increased risks due to underdeveloped organs, difficulty regulating body temperature, feeding challenges, and increased vulnerability to infections.⁷

Sudden infant death syndrome (SIDS) is the sudden and unexplained death of an infant younger than one year of age that remains unexplained after investigation. It is one category within Sudden Unexpected Infant Death (SUID), which also includes accidental suffocation and other sleep-related deaths.⁸ Safe sleep practices are an important prevention strategy.

Unintentional injuries may include motor vehicle crashes, drowning, suffocation, or other injuries that occur in the home or caregiving environment.¹ Many injury-related deaths are preventable through safety practices and supervision.

Maternal pregnancy complications (certain maternal health conditions) during pregnancy can increase the risk of infant death. These may include high blood pressure, gestational diabetes, infections, preeclampsia, preterm labor, and untreated depression or anxiety.⁹ Access to quality prenatal care and management of maternal health conditions are critical prevention strategies.

RISK AND PROTECTIVE FACTORS

Certain maternal and infant characteristics are linked to higher rates of infant death. In public health, these characteristics are called “risk factors” because they are consistently associated with differences in infant mortality rates across populations. It is important to note that these factors do not directly cause infant death. Rather, they help us understand patterns and identify groups that may need additional support and resources.

Several factors are associated with improved infant survival and lower risk of infant death. These protective factors span the period before pregnancy, throughout pregnancy and delivery and during infancy. Strengthening these factors helps promote healthier outcomes for both mothers and babies.

RISK FACTORS

Commonly examined in infant mortality data include:^{4,10}

- Maternal race and ethnicity
- Gestational age (how early or late a baby is born)
- Birthweight
- Maternal age
- Plurality (single birth vs. twins, triplets, etc.)
- Access to prenatal care and healthcare services
- Social and economic conditions
- Structural inequities and chronic stress

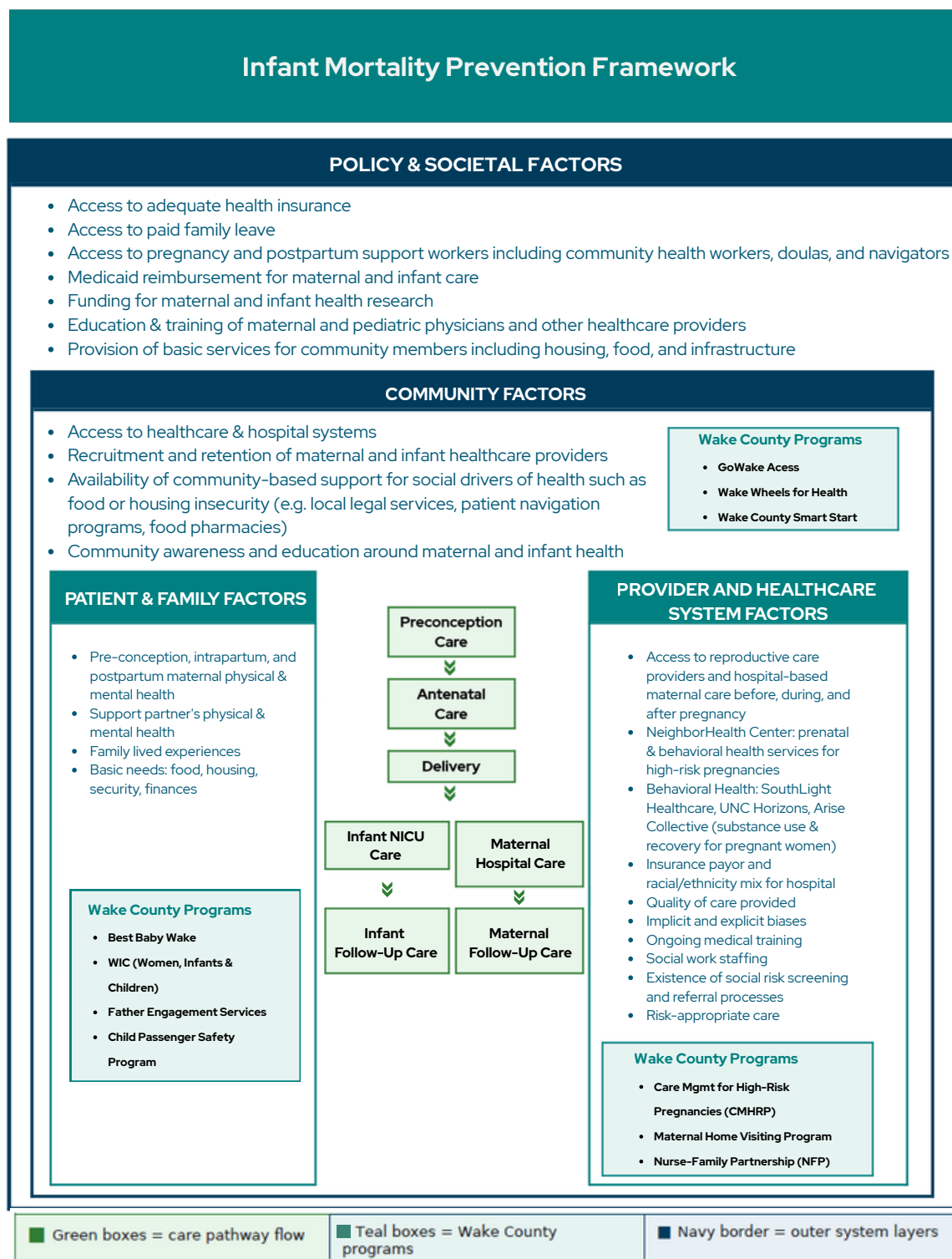
PROTECTIVE FACTORS

Associated with improved infant survival:¹¹

- Early and adequate prenatal care
- Management of maternal health conditions (hypertension, diabetes, pre-eclampsia)
- Access to skilled care during labor and delivery
- Safe sleep practices – back to sleep, firm sleep surface
- Timely pediatric care: well-child visits, immunizations, screenings
- Supportive home and caregiving environments
- Access to mental health screenings and services for postpartum depression and anxiety

PREVENTION

Public health prevention efforts focus on strengthening these protective factors through improved healthcare access, education, community partnerships, and supportive policies. Infant mortality is influenced by multiple interconnected factors at the policy, community, healthcare system, and family levels. The framework below illustrates how these layers work together to shape maternal and infant health outcomes.



DATA NOTES

Infant mortality rates are calculated as the number of infant deaths per 1,000 live births during a specific time period. Data presented in this brief are based on North Carolina vital records birth and infant death files. To protect confidentiality and ensure privacy, counts and rates based on fewer than 10 infant deaths are suppressed and not displayed.

Infant Mortality Rate =	$\frac{\text{number of infant deaths during a specified time period}}{\text{number of live births during the same time period}} \times \text{rate multiplier}$	(e.g. per 1,000 live births).
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Infant mortality includes only deaths among live-born infants occurring before one year of age. Pregnancy losses and stillbirths are not included in infant mortality statistics and should be examined separately when assessing maternal and infant health outcomes.

COMMUNITY RESOURCES AND TOOLS

The following community resources and tools support ongoing efforts to reduce maternal and infant mortality in Wake County and strengthen access to care and community resources:



Best Baby Wake

hhs.bestbabywake@wake.gov



Care Management for High Risk Pregnancies (CMHRP)

919-250-1004



ph.mch@wake.gov



Care Management for At-Risk Children (CMARC)

919-250-1004



ph.mch@wake.gov



Nurse-Family Partnership

919-212-7210



nfpteam@wake.gov



Wake County Maternal Health Home Visiting Program

919-250-1004



ph.mch@wake.gov



Child Passenger Safety Program

919-250-1004



ph.mch@wake.gov



WIC Program

[919-250-4720](tel:919-250-4720)



Safe to Sleep: Helping to reduce the risk of Sudden Infant Death Syndrome (SIDS) and other sleep-related infant deaths.

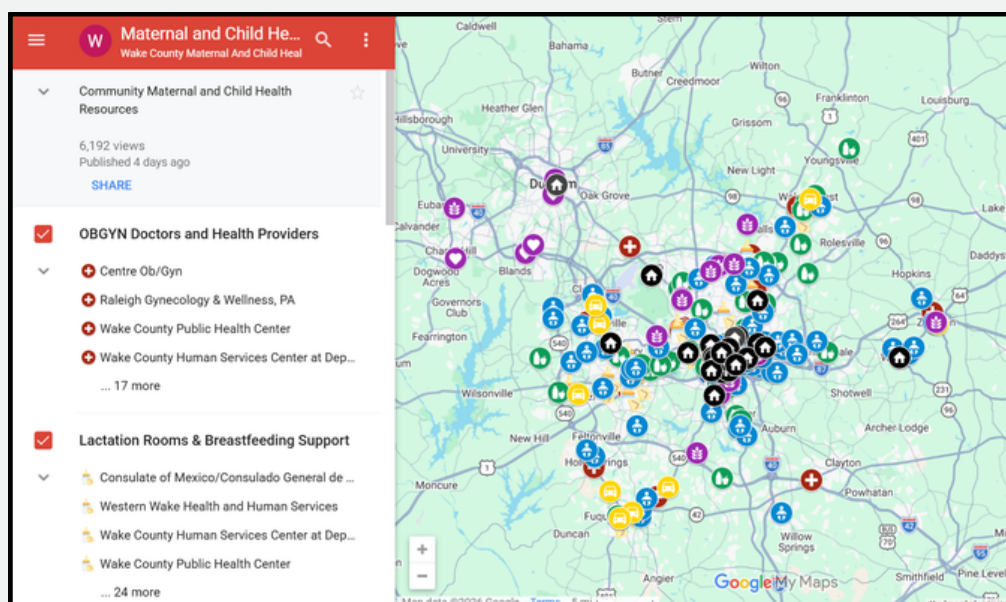
<https://safetosleep.nichd.nih.gov/>

This brief complements the [2025 Wake County Maternal and Infant Mortality Report](#) by highlighting infant specific drivers and opportunities for prevention across systems of care. The Maternal and Infant Mortality Report outlines priority areas for action, including expanding access to prenatal care, addressing social drivers of health, improving quality of care, and strengthening community partnerships. This brief builds on those recommendations by focusing specifically on infant mortality trends and prevention strategies.

Specific Focus Areas Aligned:

- **Focus Area 1: Quality Perinatal Health Services**
- **Focus Area 2: Women's Health Promotion and Education**
- **Focus Area 3: Community Engagement, Continuity of Care and Wrap-Around Care**
- **Focus Area 4: Early Childhood Education, Development, and Care**

In addition to clinical care, access to community-based resources play a critical role in improving maternal and infant outcomes. Wake County has developed a **Community Maternal and Child Health resource map** to help families and providers locate essential services including prenatal care, breastfeeding support, doulas, food assistance, housing support, and childcare services. View the interactive map [here](#):



REFERENCES

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²Centers for Disease Control and Prevention. CDC Grand Rounds: Public Health Approaches to Reducing U.S. Infant Mortality. August 9, 2013. Accessed February 18, 2026. <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6231a3.htm>

³North Carolina Child Fatality Task Force. Annual report to the Governor and General Assembly. February 2025. Accessed February 18, 2026. <https://webservices.ncleg.gov/ViewDocSiteFile/94479>

⁴North Carolina Department of Health and Human Services, Division of Public Health, Title V Office. Analysis of North Carolina resident death certificate and live birth certificate data. February 20, 2025. Accessed February 18, 2026.

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⁶Centers for Disease Control and Prevention. Preterm birth. November 8, 2024. Accessed February 18, 2026. <https://www.cdc.gov/maternal-infant-health/preterm-birth/index.html>

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⁸Centers for Disease Control and Prevention. About SUID and SIDS. September 17, 2024. Accessed February 18, 2026. <https://www.cdc.gov/sudden-infant-death/about/index.html>

⁹Centers for Disease Control and Prevention. Pregnancy complications. May 15, 2024. Accessed February 18, 2026. <https://www.cdc.gov/maternal-infant-health/pregnancy-complications/index.html>

¹⁰Ely DM, Driscoll AK. Infant Mortality in the United States, 2023: Data From the Period Linked Birth/Infant Death File. Natl Vital Stat Rep. Published online June 12, 2025. Accessed February 18, 2026. <https://www.ncbi.nlm.nih.gov/books/NBK618116/>

¹¹Eunice Kennedy Shriver National Institute of Child Health and Human Development. Are there ways to reduce the risk of infant mortality? Last reviewed May 15, 2024. Accessed February 18, 2026. <https://www.nichd.nih.gov/health/topics/infant-mortality/topicinfo/reduce-risk>