



Infant Mortality

What is Infant Mortality?

Infant mortality is defined as the death of a baby before his or her first birthday. The infant mortality rate is the number of babies who died in the first year of life, per 1,000 live births. This rate is considered an important indicator of the overall health of a society.

Why are Babies Dying?

Most infant deaths occur when babies are¹:

- Born too small and too early (preterm births are those before 37 weeks gestation)
- Born with a serious birth defect
- Victims of Sudden Infant Death Syndrome (SIDS).
- Affected by maternal complications of pregnancy
- Victims of injuries (e.g., suffocation).

These top five leading causes of infant mortality together accounted for 63 percent of all infant deaths in Ohio in 2011.²

Some risk factors, such as smoking, may lead to more than one of the conditions in the list above. It is estimated that 23-34 percent of SIDS, and 5-7 percent of preterm-related deaths are attributable to prenatal smoking in the US³.

There are also many non-medical contributors to the death of babies, including poverty, lack of education, under-resourced neighborhoods, poor nutrition and race.

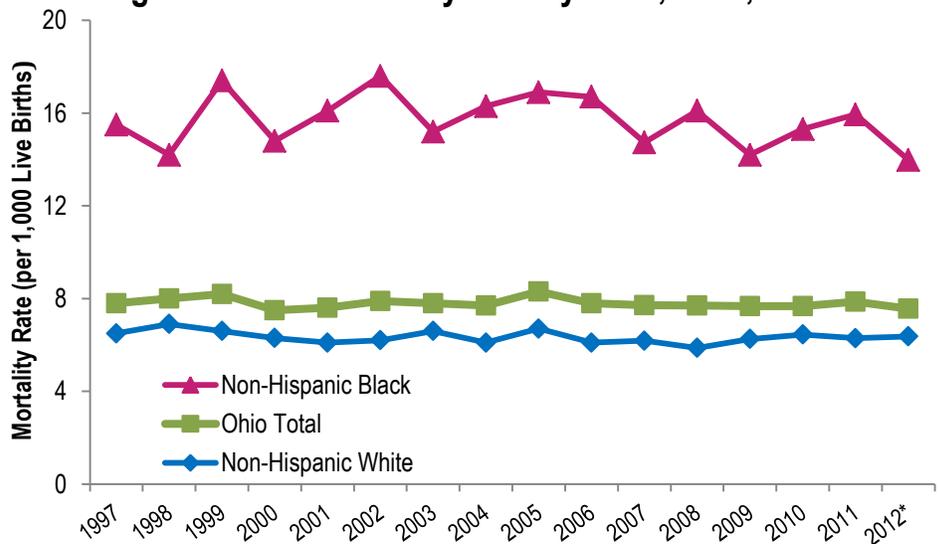
Unacceptable Disparities

There is a substantial difference in how infant mortality impacts different races. For example, Ohio's black babies die at more than twice the rate of white babies.

- Ohio's 2012 death rate for white infants was 6.4 per 1,000, compared to 14.0 per 1,000 for black infants (Fig. 1).
- While the large variation in the rates of black deaths from year to year may be explained by small counts, the disparity has been consistent.

This difference in the death rate for black babies compared to white babies is also found at the national level. Eliminating the disparity is a goal at the national, state and local levels.

Figure 1: Infant Mortality Rate by Race, Ohio, 1997-2012



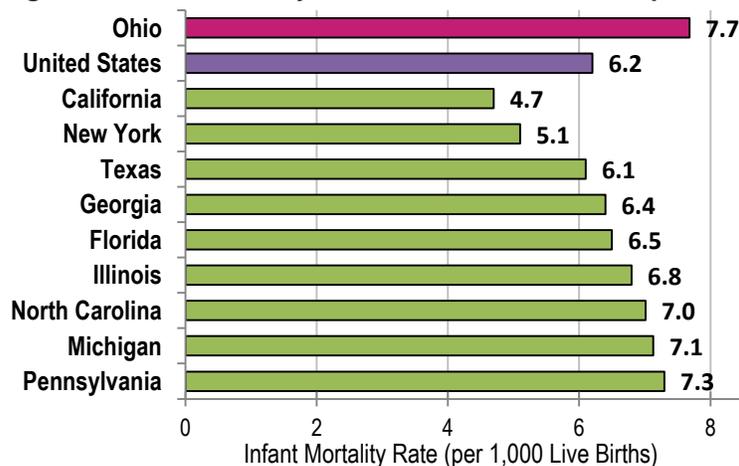
Source: Ohio Department of Health Vital Statistics *2012 Ohio data are preliminary

How is Ohio Doing?

- In 2012, 1,045 infants in Ohio died before their first birthday.
- Ohio's 2012 infant mortality rate was 7.56 per 1,000 live births, significantly higher than the national rate of 6.05 per 1,000.⁴
- Ohio's infant mortality rate has remained stagnant for over a decade (Figure 1).
- At the same time, the U.S. infant mortality rate experienced a twelve percent decline from 2005 through 2011.⁴
- Comparing the ten most populous states, all have lower infant mortality rates than Ohio (Figure 2).
- Sixteen states and the District of Columbia had statistically significant declines in their infant mortality rates from 2005 through 2010.¹

The Healthy People 2020 objective is to 6.0 per 1,000. This objective has been selected as a national Leading Health Indicator.

Figure 2: Infant Mortality in the U.S. and 10 Most Populous States,



Source: National Center for Health Statistics

A package of **new** or **enhanced efforts** in Ohio's 2014-16 Executive Budget aim to combat infant mortality and are complimented by the Governor's Office of Health Transformation, working with the Ohio Department of Medicaid, Ohio Department of Health, and the Ohio Department of Mental Health and Addiction Services and other human services agencies. Learn more at 1.usa.gov/1e3lchh.

- The Ohio Collaborative to Prevent Infant Mortality (OCPIM) <http://tinyurl.com/OhioCPIM>, a diverse group of public health officials, policy makers, advocates, providers, and other stakeholders, formed in 2009 to prevent infant mortality throughout Ohio.
 - Workgroups address specific issues: coordinated healthcare, disparities/racism, data, education/outreach and public policy.
- Ohio has accepted the Association of State and Territorial Health Officials' (ASTHO) President's Challenge, the *Healthy Babies Initiative*, to improve birth outcomes by reducing infant mortality and prematurity in the U.S. The goal is to decrease prematurity by 8 percent by 2014.
- ODH and Medicaid have formed a state team participating in HRSA's Collaborative Improvement and Innovation Network (CoIIN). CoIIN provides a platform across states to facilitate collaborative learning and adoption of proven quality improvement principles and practices.
- Evidence-based smoking cessation counseling using 5 As (Ask, Advise, Assess, Assist and Arrange) is being expanded in WIC and other programs to connect women to the assistance needed to quit smoking. Further perinatal smoking cessation activities include implementing a mass media campaign, and expanding provider education and Quitline protocols for perinatal women and families with young children.
- To impact minority populations with the highest infant mortality, community-based HUBS are being expanded. The HUB model acknowledges that social factors (e.g., transportation, housing, access to care) may influence pregnancy outcomes and uses community health workers to identify women at-risk and connect them to care using "pregnancy pathway" map of actions to address each identified need.
- Ohio and partners are developing a comprehensive media campaign to spread a unified message to decrease sleep-related infant deaths, which account for the majority of infant deaths after the 28th day of life. The messages include the following:
 - Place infants for sleep wholly on the back for every sleep, nap time and night time.
 - Use a firm sleep surface. A firm crib mattress is the recommended surface.
 - Room sharing without bed sharing is recommended. The crib should be in the parents' bedroom, close to the parent's bed.
 - Keep soft objects, loose bedding and bumper pads out of the crib.
 - Do not smoke during pregnancy. Avoid exposure to secondhand smoke.
- Ohio has expanded Medicaid eligibility for family planning services to women and men who are otherwise ineligible for the program.
- Expanded allowance children or pregnant women to receive medical care covered by Medicaid while their application is officially processed.
- Infant mortality is one of four health improvement priorities in Ohio's state health improvement plan.

The Ohio Perinatal Quality Collaborative (OPQC) is a statewide, multi-stakeholder network dedicated to improving perinatal health in Ohio.⁵ Successes and new quality improvement initiatives include the following:

Obstetric

- Efforts to prevent scheduled births prior to 39 weeks of gestational age resulted in an estimated 31,600 births moving from <39 weeks to 39 weeks or greater gestation, thereby preventing an estimated 950 NICU admissions as of October 2012. OPQC has expanded this project to all maternity hospitals in Ohio.
- Launching a progesterone (P17) project to reduce preterm births. Providers will be better able to identify, screen, and track outcomes for women eligible for progesterone treatment, which is safe, easily-administered, low-cost and effective.
- Increasing the use of antenatal corticosteroids (ANCS), an evidence-based therapy that reduces mortality and morbidity among preterm infants, for women at risk of delivering a baby between 24 and 34 weeks gestation.

Neonatal

- Efforts focused on reducing bloodstream infections resulted in a sustained 20 percent decrease among premature infants with 22 to 29 weeks gestation in 24 neonatal intensive care units (NICUs). Bacterial infections for premature infants significantly increase the risk for prolonged hospitalization, significant morbidities and death.
- To further reduce bloodstream infections in premature infants through increasing the use of human milk, which contains antibodies that help to fight germs in a number of different ways.

References:

1. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6231a3.htm>
2. <http://www.odh.ohio.gov/odhPrograms/cfhs/cfr/cfr1.aspx>
3. Dietz PM, England LJ, Shapiro-Mendoza CK, Tong VT, Farr SL, Callaghan WM. Infant morbidity and mortality attributable to prenatal smoking in the United States Am J Prev Med 2010;39(1):45–52.
4. MacDorman MF, Hoyert DL, Mathews TJ. Recent declines in infant mortality in the United States, 2005–2011. NCHS data brief, no 120. Hyattsville, MD: National Center for Health Statistics. 2013.
5. <https://opqc.net/>

Data Contact:
Missy Vonderbrink
missy.vonderbrink@odh.ohio.gov

Program Contact:
Lori Deacon
lori.deacon@odh.ohio.gov

