Mississippi State Department of Health

Infant Mortality Report 2018

The Health Services Office of Health Data and Research compiles the report annually as required under § 41-3- 15.(1)(c)(viii), MS Code of 1972, as annotated

Total Births 2017:
37,370

Total Infant Deaths 2017:
326

Infant Mortality Rate:

8.72

Infant deaths per 1,000 live births

INCREASED

This represents a 1.7% rate increase from the 2016 rate of 8.57

Mississippi Rank:

*US, 2016, National Vital Statistics Report 67(5), 2018

Healthy People 2020 Target Infant Mortality Rate:

6.0

Introduction

Infant mortality is defined as the death of a baby before his or her first birthday and is considered an important indicator of the overall quality of health and health care of a population. This report is based upon infant deaths in Mississippi in the year 2017. Infant mortality is closely related to important social determinants of health such as poverty, education and race. Mississippi has persistently had one of the highest infant mortality rates in the nation with nearly 9 infants deaths for every 1,000 that are born.

The most recent United States infant mortality rate is 5.87 deaths per 1,000 live births.* In Mississippi, the infant mortality rate (IMR) in 2017 was 8.72. This was not a statistically significant change from 2016. Racial disparities in infant mortality are significant, with the black infant mortality rate at 11.9 deaths per 1,000 live births compared to the white rate of 6.2. The leading causes of infant mortality remain preterm birth, birth defects and sudden unexpected infant deaths, particularly related to unsafe sleeping practices.

County Rates

IMR 2013-2017 by Race for 20 Most Populated Counties

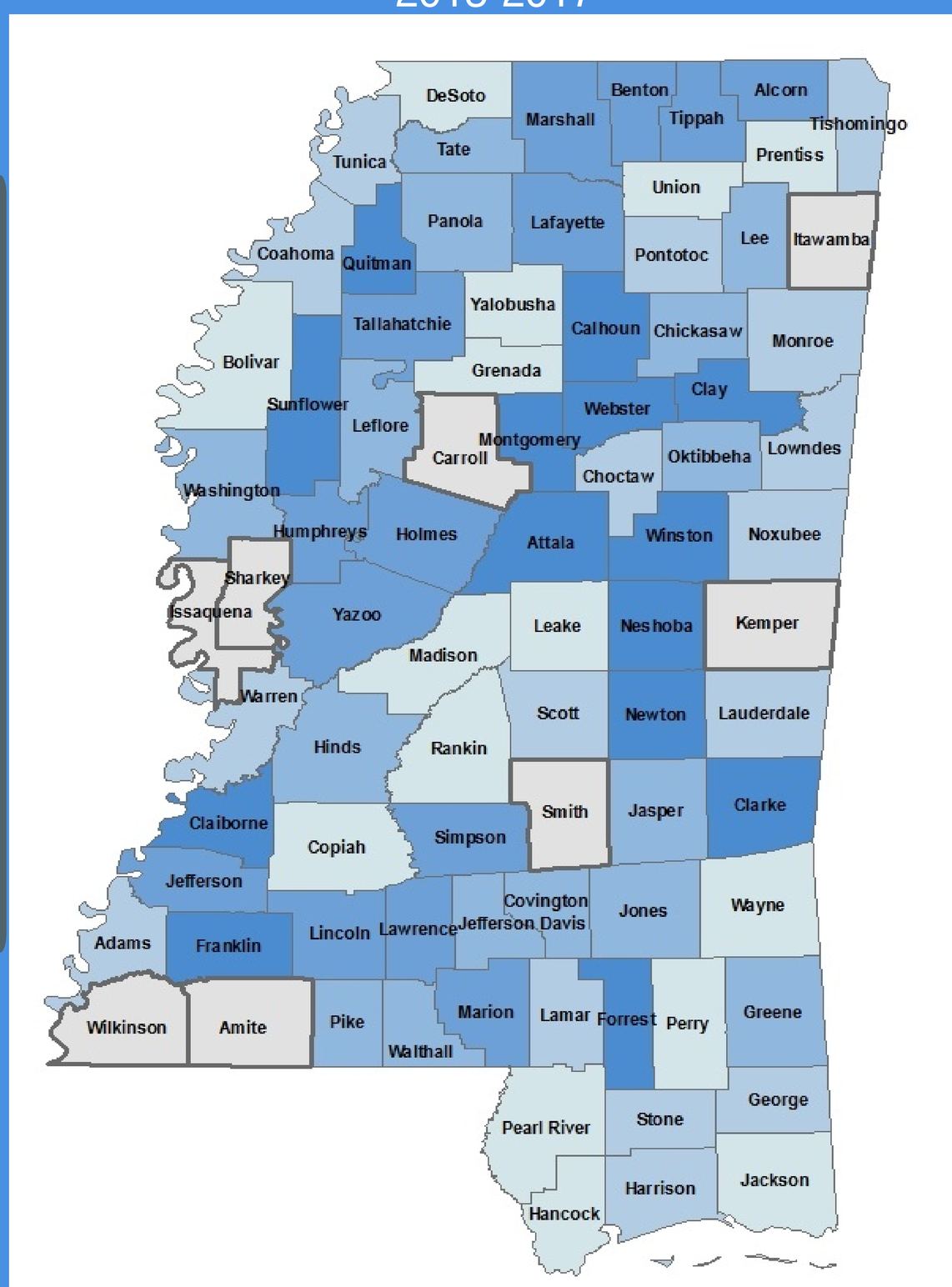
	Total	Black	White
Hinds:	9.1	10.1	6.2
Harrison:	8	12.4	6.3
DeSoto:	5.9	7.7	5.2
Rankin:	4.7	8.2	3.5
Jackson:	6.0	9.0	4.7
Madison:	5.8	7.3	5.2
Lee:	10.1	18.1	5.4
Lauderdale:	7.5	11.0	4.1
Forrest:	11.1	12.2	9.9
Jones:	8.8	11.3	7.6
Lowndes:	8.4	11.2	5.5
Lamar:	7.9	9.3	7.0
Pearl River:	5.4	16.5	3.4
Lafayette:	11.6	23.5	5.8
Washington:	9.5	11.8	-
Oktibbeha:	10.3	18.7	3.6
Warren:	8.4	9.4	7.1
Hancock:	7.3	5.0	7.8
Pike:	10.4	12.6	6.9
Alcorn:	11.5	23.3	8.3

Infant Deaths per 1,000 Live Births 2013-2017

- 4.4 - 7.3
- 7.4 - 8.7
- 8.8 - 10.5
- 10.6 - 12.0
- 12.1 - 21.0
- Suppressed*

* Rates not reported due to small values that may lead to unreliable estimates

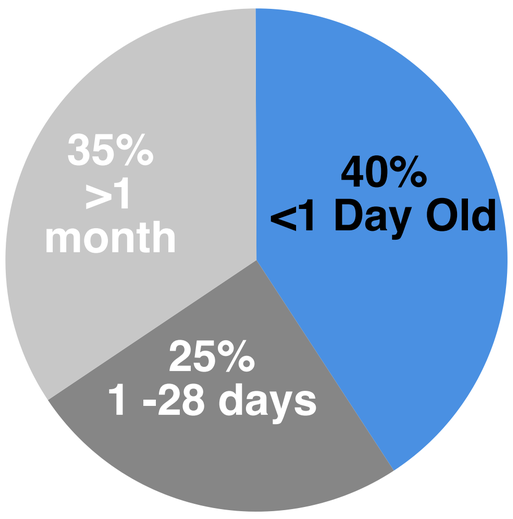
Mississippi County Average Infant Mortality Rate, 2013-2017



Source: Mississippi Vital Statistics, 2013-2017

Timing

40% of all infant deaths happened on the first day of life. Another 25% happened within the first month. The remainder occur among babies over 1 month old.



Maternal Health

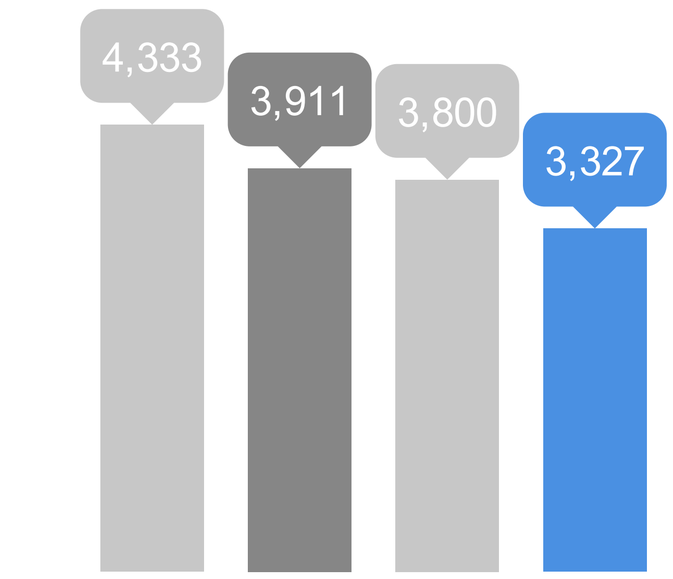
Women with high risk medical conditions before pregnancy are at risk of poor outcomes. Mississippi has a high rate of women with chronic medical conditions.

MS Females age 18-44, 2017

Obesity 38%
Hypertension 18 %
Diabetes 3%

Source, MS BRFSS, 2017

Tobacco Use in Pregnancy



8.9% Of all Mississippi women giving birth in 2017 smoked at some point during pregnancy

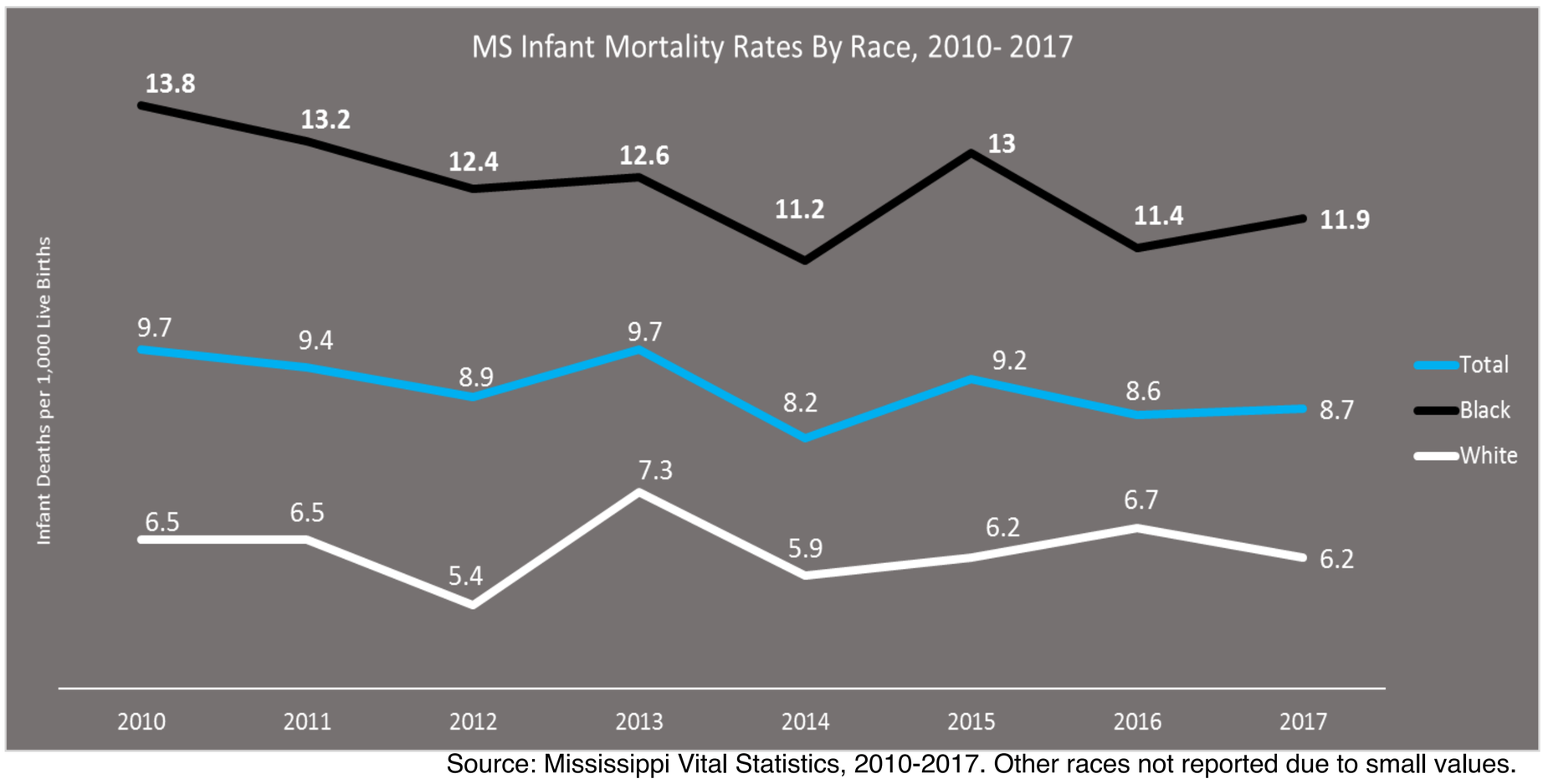
20% DECLINE IN SMOKING SINCE 2014

15% Of the mothers with an infant death smoked at some point during pregnancy

Source, MS Vital Statistics, 2014- 2017

Trends

In 2017, the overall infant mortality rate increased from 8.57 in 2016 to 8.72. However, the number of infant deaths went from 327 deaths in 2016 to 326 deaths in 2017. The white infant mortality rate declined from 6.7 deaths per 1,000 live births to 6.2. The black infant mortality rate increased from 11.4 deaths per 1,000 live births to 11.9 deaths per 1,000 live births. This widened the disparity between the black and white population compared to 2016.



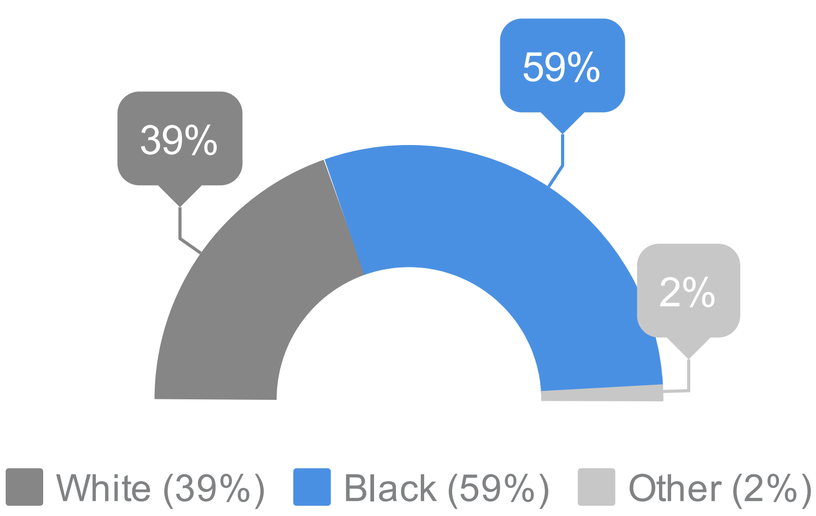
Source: Mississippi Vital Statistics, 2010-2017. Other races not reported due to small values.

Racial Disparities

In 2017, the black infant mortality rate increased from 11.4 deaths per 1,000 live births to 11.9 and the white infant mortality rate declined from 6.7 to 6.2. In the United States, the black infant mortality rate is 11.7 and the white infant mortality rate is 4.8 deaths per 1,000 live births. Racial differences in the infant mortality are strongly influenced by the differences in preterm birth rates between black and white infants, with 16% of black babies being born before 37 weeks compared to 11.3% of white infants. Multiple social and medical factors drive these differences including poverty, education, access to medical care and maternal mental and physical health.

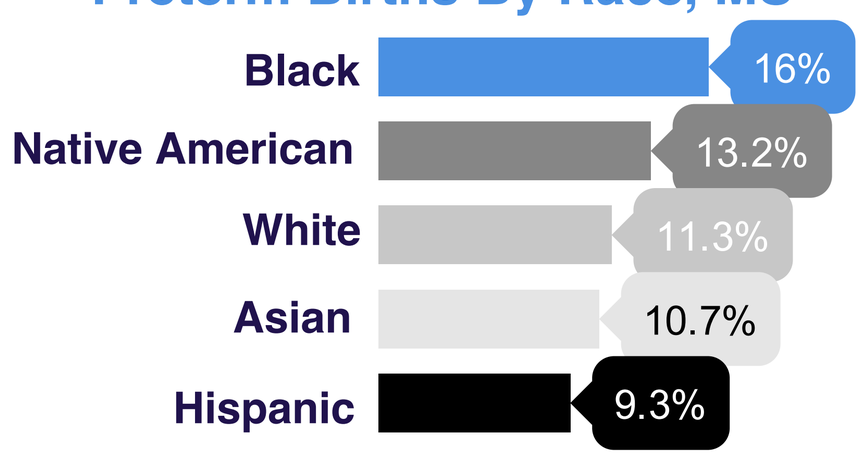
The Black Infant Mortality Rate is nearly Twice the White Infant Mortality Rate

Percent of Infant Deaths by Race, 2017

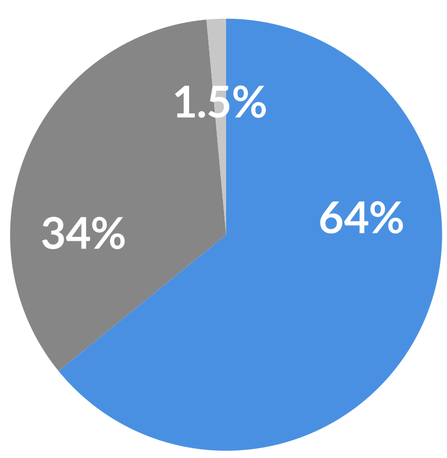


Black Infants Make Up 43% of Births in Mississippi but 59% of Infant Deaths

Preterm Births By Race, MS



64% of Very Preterm Births- 32 Weeks and Under are Black Infants



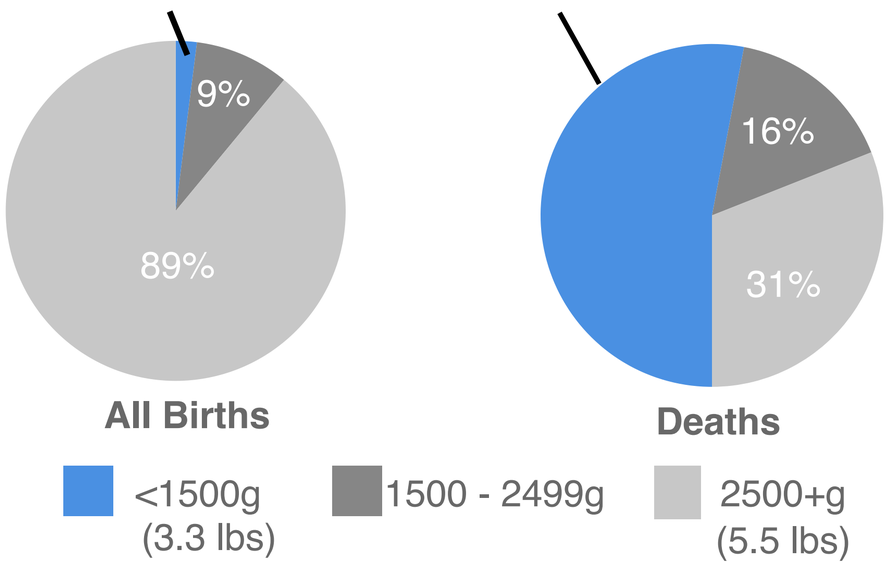
Source: MS Vital Statistics, March of Dimes Report Card 2018

Leading Causes

Prematurity

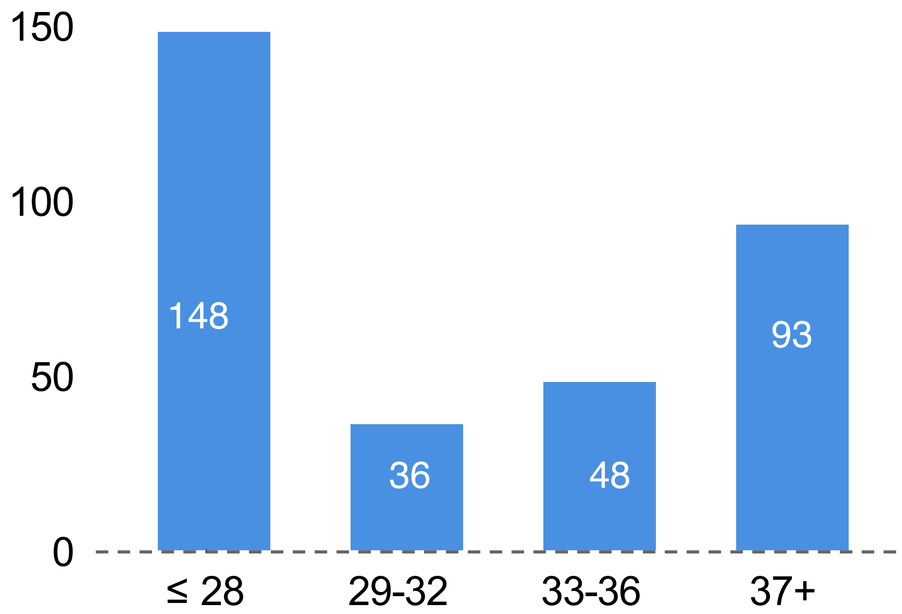
Preterm birth (delivery before 37 weeks of pregnancy) is the leading cause of infant death in Mississippi. Infants born preterm are at an increased risk of breathing complications, infections and brain injury. Preterm labor and prenatal complications from hypertension and other maternal medical conditions are the leading causes of preterm birth in Mississippi. In 2017, 13.6% of infants were born preterm in Mississippi compared to 9.9% for the United States.

Very Low Birth Weight Infants Make Up 2% of Births & 52% of Deaths



Mississippi Vital Statistics, 2017

45% of Infant Deaths are Among Extremely Premature Infants, Born at 28 weeks or Less



MS Infant Deaths by Gestational Age in Weeks, 2017

71%

OF INFANT DEATHS ARE AMONG PRETERM BABIES

Prematurity places infants at higher risk of death from multiple causes.

Average medical cost for a Healthy Term Baby:

$4,551

Average Medical Cost for a Preterm Baby:

$49,003

Source: Marchofdimes.org

https://www.marchofdimes.org/Peristats/pdfdocs/cts/ThomsonAnalysis2008_SummaryDocument_final121208.pdf

Birth Defects

Major structural birth defects are defined as conditions that 1) are present at birth, 2) result from a malformation or disruption in one or more parts of the body and 3) have a serious adverse effect on health, development, or functional ability. Some birth defects are related to genetic abnormalities. Many birth defects can be identified prenatally with genetic testing and detailed ultrasound. Early diagnosis and access to specialty services may reduce infant deaths from birth defects.

Number Infant Deaths due to Birth Defects in Mississippi 2017 : 69

2017 Causes of Infant Death from Birth Defects*

- Heart Defects: 12
- Chromosome: 14
- Brain Defects: 6
- Musculoskeletal: 14
- Kidney Defects: 4
- Respiratory: 7

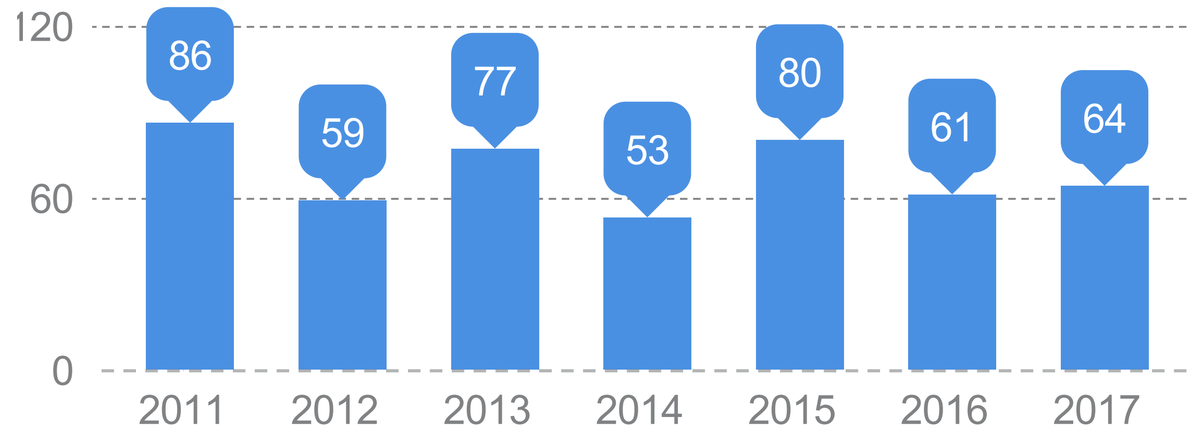
Other Systems or Not Specified: 12

* Source: MS Death certificate primary cause of death, 2017

SUID- Unsafe Sleep & SIDS

Sudden Unexpected Infant Death (SUID) describes the death of an infant where the cause is not immediately apparent before investigation. These deaths often occur while an infant is sleeping or in a sleep area. **Most SUID cases in Mississippi are in unsafe sleep environments causing suffocation, strangulation and overlay accidents.** Sudden Infant Death Syndrome (SIDS) is a form of SUID where no cause is identified, but is impacted by how babies are put to sleep. SUID is the leading cause of death for infants between 1 and 4 months of age.

Sudden Unexpected Infant Deaths, MS, 2011-2017



Source: MS Vital Statistics, 2011- 2017

Unsafe Infant Sleep Environments Found in Mississippi Death Cases

Source: MS Fetal Infant Mortality Review Program, Child Death Review, 2017

Strategies for Improvement

Reducing Preterm Birth & Preterm Related Mortality

- 'GOLDEN HOUR' NEONATAL CARE
  The care a preterm infant receives in its first moments of life can impact the risk of complications and death. The Mississippi Perinatal Quality Collaborative works with hospital teams across the state to support best practices in the care of fragile babies.

- LOW DOSE ASPIRIN
  Preeclampsia is a condition that causes severely high blood pressures in pregnant women and is one of the leading causes of preterm birth in MS. Low dose aspirin taken during pregnancy can help prevent preeclampsia. Learn more at: www.preeclampsiafoundation.org

- GROUP PRENATAL CARE
  Patient-centered, group prenatal care models have been shown to reduce preterm birth, increase breastfeeding and reduce smoking. Jackson-Hinds Comprehensive Health Center will be the first Centering group prenatal care site in Mississippi. Learn more at: https://www.centeringhealthcare.org

Comprehensive Care Before & After Pregnancy

- PERINATAL HIGH RISK MANAGEMENT/INFANT SERVICES SYSTEM (PHRM/ISS)

  PHRM/ISS is a case management program through MSDH for high-risk pregnant women and their babies less than one year old. PHRM/ISS provides enhanced access to health care, nutritional and psychosocial support, home visits, and health education.

Identifying Birth Defects

- CRITICAL CONGENITAL HEART DISEASE SCREENING (CCHD)

  The MSDH Newborn Screening program ensures that every infant born in Mississippi is appropriately screened for CCHD after birth. MSDH trains hospital staff, conducts site visits to ensure screening accuracy and quality and offers education to clinicians and the public about CCHD. The goal is to identify CCHD early so that life saving treatment can be provided and families receive necessary support.

Reducing SIDS & Sleep-Related Deaths

- COMMUNITY EDUCATION

  MSDH was awarded a project grant from the National Institute for Children's Health Equity to work with Arkansas, Tennessee and New York on strategies to reduce sleep related deaths. MSDH is providing safe sleep education through multiple community venues including churches, day cares, medical offices and community centers.To learn more visit the website wwwsafesleepms.org

- TOBACCO CESSATION

  The MSDH Office of Tobacco Control trains providers in evidence-based techniques to assist pregnant women to stop smoking. Smoke-Free Air policies help reduce second-hand exposure. The Office of Tobacco Control is currently supporting 'Baby and Me Tobacco Free', an evidence-based project that provides structured counseling and incentives to help pregnant women quit smoking.

Increase Breastfeeding

- HOSPITAL & COMMUNITY TRAINING

  Breastmilk has been proven to reduce the risk of neonatal illness and SIDS. Breast milk is particularly beneficial to preterm and low birthweight infants, by improving nutrition and preventing life threatening infections. MSDH is working with multiple partners to strengthen breastfeeding support within hospitals and communities.

  Mississippi now has 8 hospitals designated as 'Baby Friendly', an international recognition of quality care in breastfeeding support and education. Learn more at: www.babyfriendlyusa.org

Key Partnerships & Programs

NATIONAL FIMR FETAL–INFANT MORTALITY REVIEW PROGRAM

The Fetal-Infant Mortality Review Program uses local case review teams and community action teams to identify solutions for infant mortality. Mississippi now has three active FIMR programs and is expanding to include more through local partnerships with Healthy Start Programs across the state.

MSPQC Mississippi Perinatal Quality Collaborative

The Mississippi Perinatal Quality Collaborative is a multi-stakeholder partnership dedicated to improving birth outcomes through evidence-based clinical quality improvement initiatives. MSPQC participants are currently working to improve the care of high-risk newborns during the first hour of life, reduce maternal mortality caused by obstetric hemorrhage and improve breastfeeding rates. Mississippi was awarded a 5 year, $1 Million grant from the Centers for Disease Control to further develop the MSPQC.

march of dimes

The March of Dimes works with MSDH, families, researchers and providers across Mississippi and the United States to support research and programs dedicated to improving infant health, reducing preterm birth and infant mortality. Among many projects, March of Dimes is supporting projects to reduce tobacco use in pregnancy and promote interconception health.

CHAMPS

Communities and Hospitals Advancing Maternity Practices is an initiative geared toward improving maternal and child health outcomes through the promotion of the Baby-Friendly Hospital Initiative (BFHI). The BFHI is a global program launched to encourage and recognize hospitals that offer an optimal level of care for infant feeding and mother/baby bonding. MSDH is working with CHAMPS as well as Blue-Cross Blue Shield of Mississippi to support hospitals pursuing Baby-Friendly status in Mississippi and increase breastfeeding rates across the state.

Acknowledgements

The Mississippi State Department of Health first acknowledges the families touched by infant death each year. This report is generated with the goal of preventing these tragic losses. Data for this report are made available by the Office of Vital Records and the Office of Health Data and Research.

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