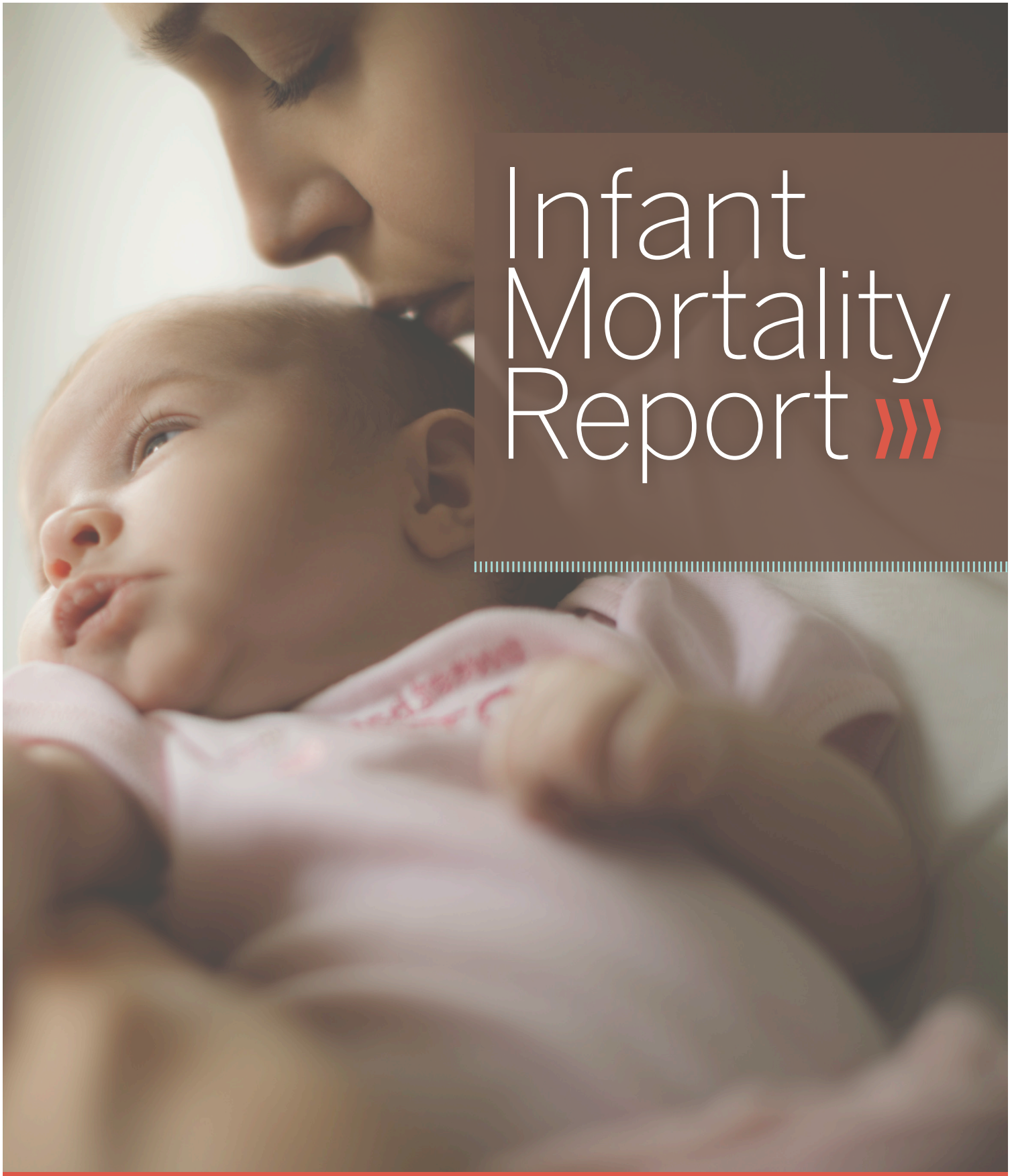


Infant Mortality Report

Learn more about infant mortality at: dph.georgia.gov/infant-mortality

GEORGIA DEPARTMENT OF PUBLIC HEALTH

Infant Mortality Report

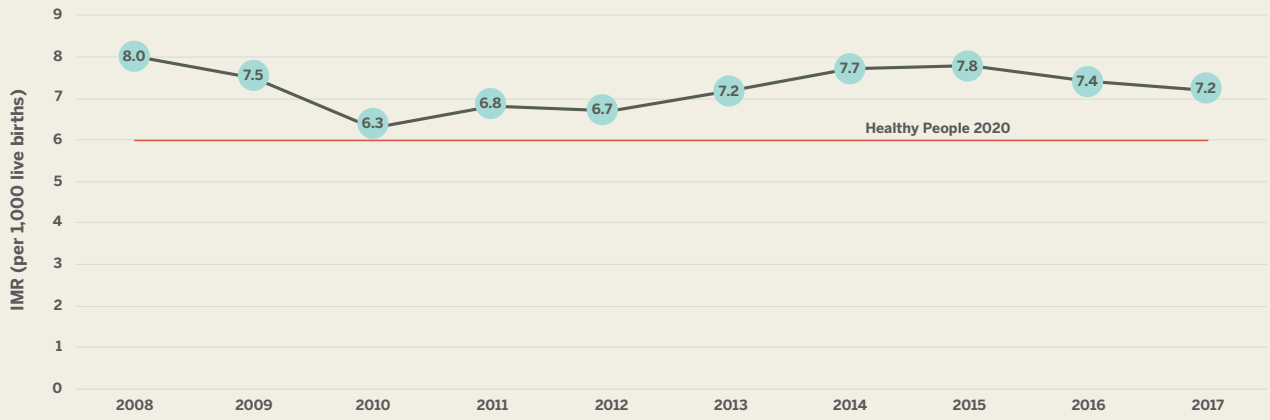
Learn more at: dph.georgia.gov/infant-mortality

AS DEFINED BY THE WORLD HEALTH ORGANIZATION, the infant mortality rate (IMR) is the number of deaths that occur in the first year of life per 1,000 births. IMR is a measure of how well a society ensures the health of its people, particularly its women and children. In **2017**, Georgia's IMR was **7.2 per 1,000** live births; **932** Georgia infants died before their first birthday.

DATA OVERVIEW

- From 2008 to 2017, **9,707** Georgia infants died before their first birthday
- Between 2013 and 2017, **prematurity** was the leading cause of infant deaths in Georgia
- The infant mortality rate among Black, non-Hispanic infants is **2 times higher** than White, non-Hispanic or Hispanic
- Between 2013 and 2017, **over half** of infant deaths occurred within the first **6 days of life**

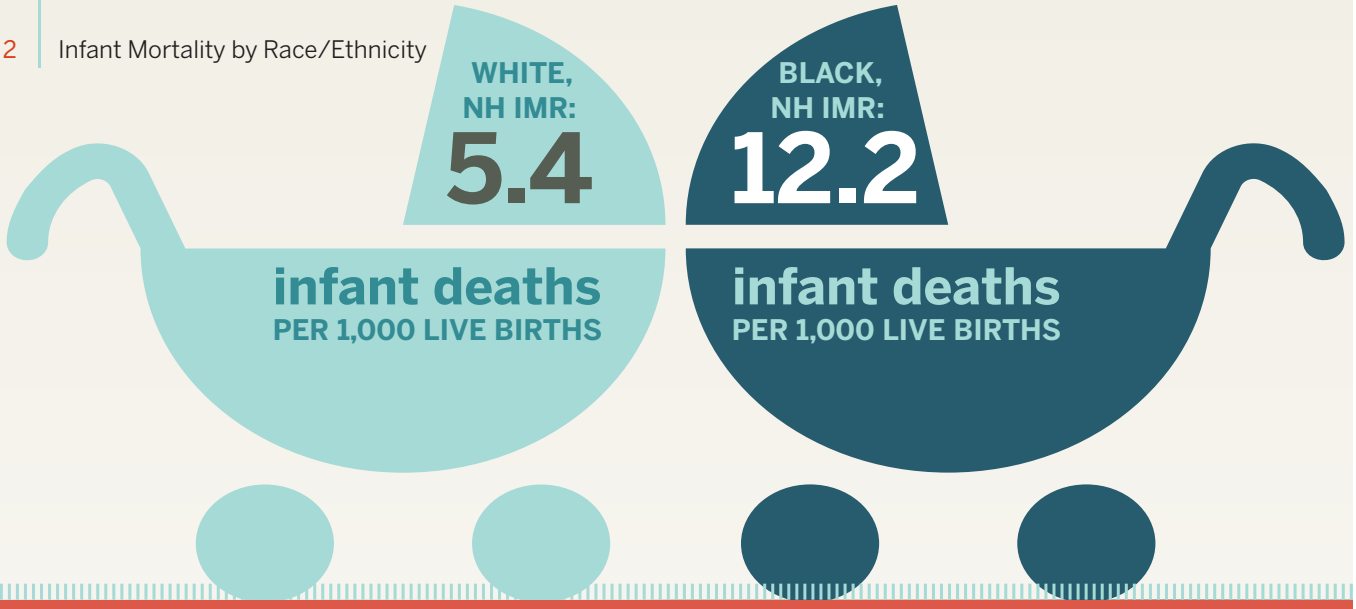
FIGURE 1 | Infant Mortality Rate in Georgia, 2008-2017



REDUCING THE INFANT MORTALITY RATE is a priority nationally and in Georgia. From 2008 to 2017, Georgia did not achieve the Healthy People 2020 target of 6 infant deaths per 1,000 live births. Over that decade, Georgia's infant mortality rate fluctuated between **6.3 and 8.0 deaths** per 1,000 live births.

INFANT MORTALITY | by Race/Ethnicity

FIGURE 2 | Infant Mortality by Race/Ethnicity



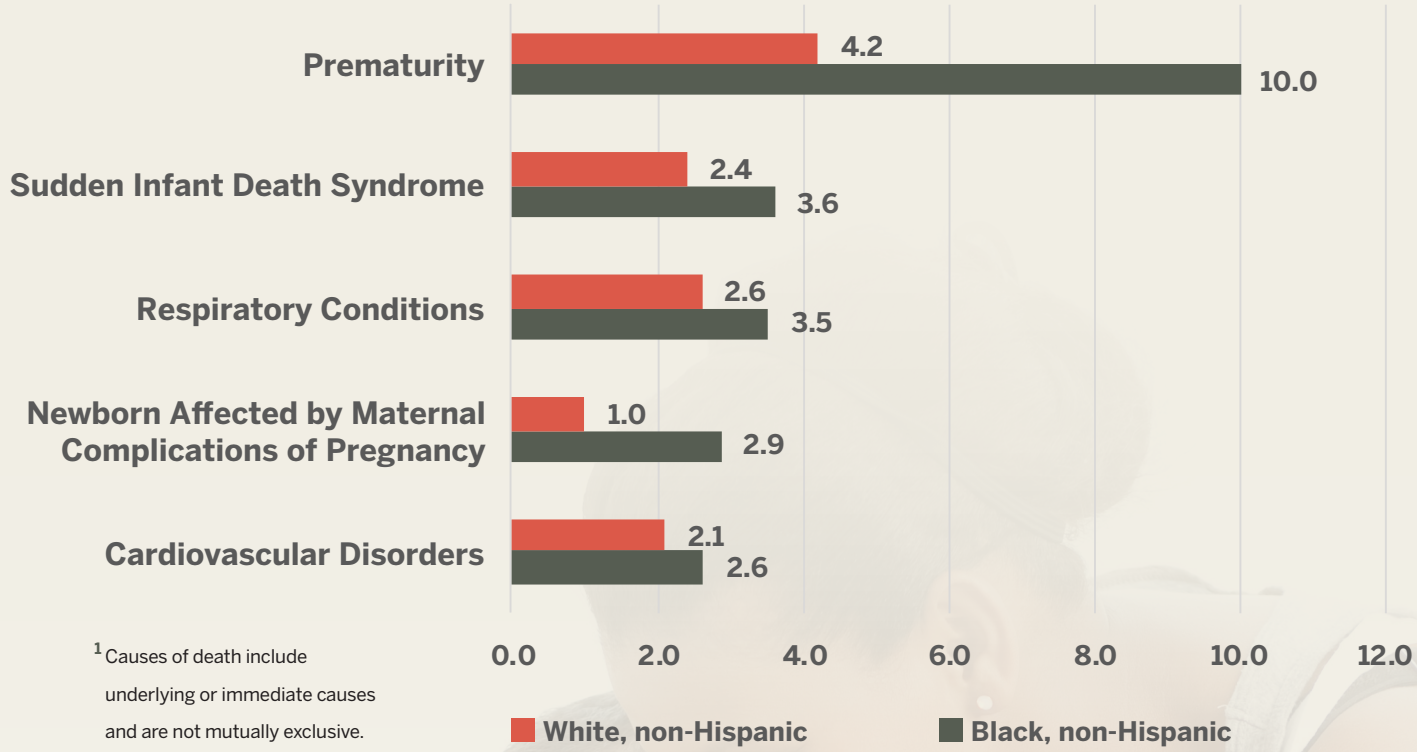
The infant mortality rate among Black, non-Hispanic infants is **twice** that of White, non-Hispanic or Hispanic infants. This **racial disparity** mirrors the national trend.

INFANT MORTALITY | by Race/Ethnicity

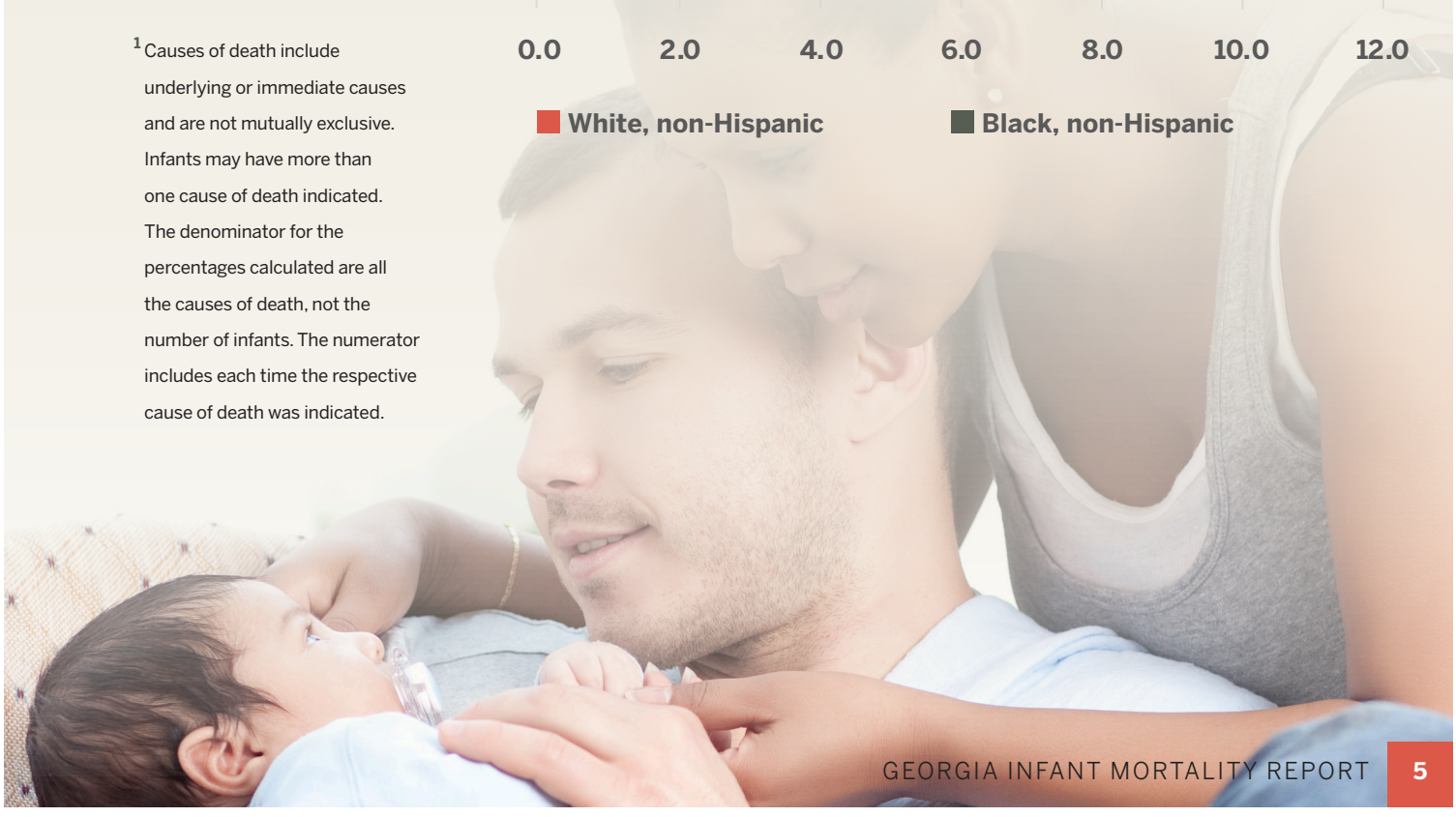
LEADING CAUSES[1] OF INFANT DEATH BY RACE/ETHNICITY

The **top five causes** of death are the same for White, non-Hispanic and Black, non-Hispanic infants. However, Black, non-Hispanic infants are disproportionately impacted by each of these causes, especially **prematurity**.

FIGURE 3 | The Top Five Causes of Death in White, Non-Hispanic and Black, non-Hispanic Infants, Georgia, 2013-2017



[1] Causes of death include underlying or immediate causes and are not mutually exclusive. Infants may have more than one cause of death indicated. The denominator for the percentages calculated are all the causes of death, not the number of infants. The numerator includes each time the respective cause of death was indicated.

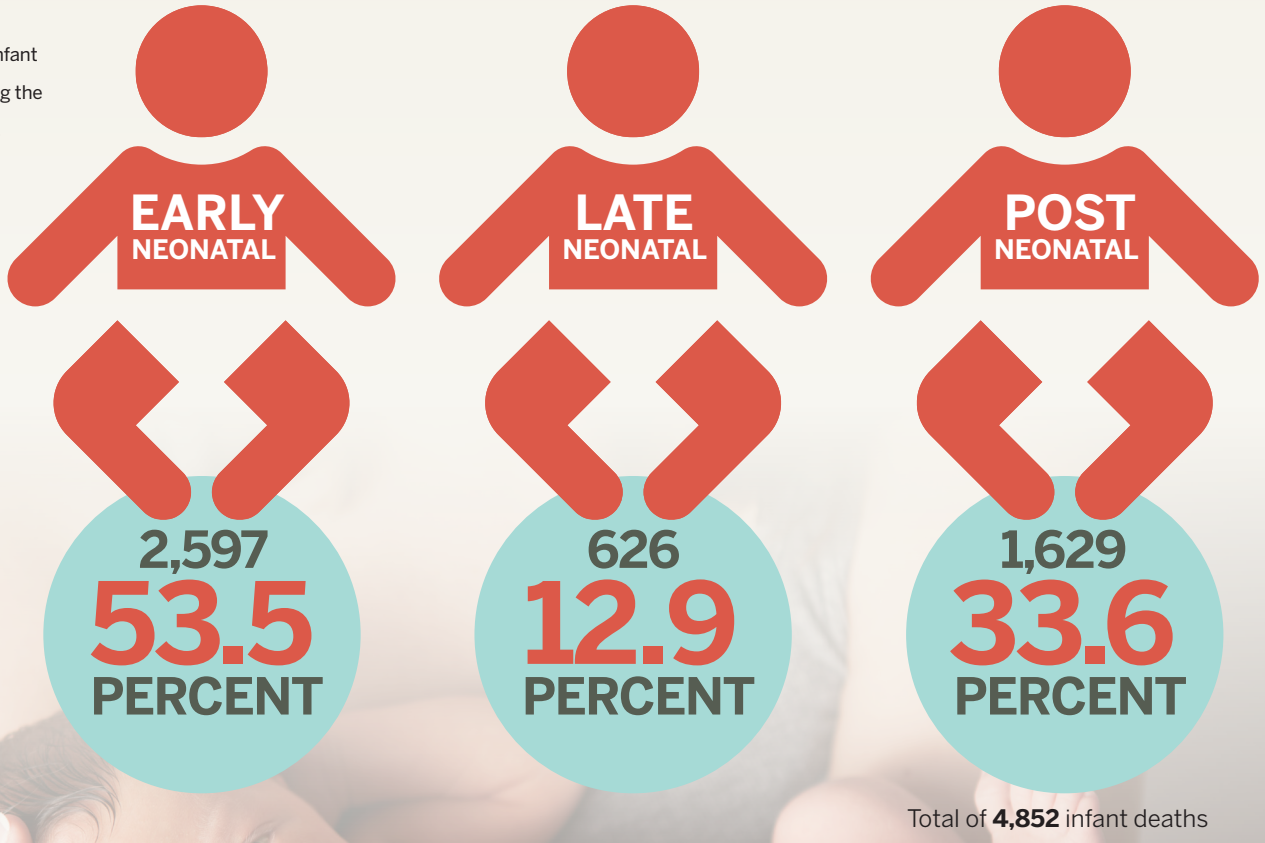


INFANCY PERIOD

The **first year** of an infant's life is characterized by many physiologic changes and developmental milestones. The *early neonatal period* indicates the time between **birth and six days** of life, the *late neonatal period* indicates time between **7 and 27 days**, and the *post neonatal period* indicates time between **28 and 364 days**.

FIGURE 4 | Infant Deaths by Infancy Period, Georgia, 2013-2017

More than half of infant deaths occur during the first six days of life.



Total of **4,852** infant deaths

LEADING CAUSES OF INFANT DEATH BY INFANCY PERIOD

The **top three conditions** underlying or leading to the immediate cause of death in infants by infancy period reflect the unique risks infants experience over the course of the **first 12 months** of life.

FIGURE 5 The Top Three Causes of Death in the Early Neonatal Infancy Period

Cause of Death	%
Prematurity	26.7
Respiratory conditions	9.8
Newborn affected by maternal complications of pregnancy	8.6

Prematurity comprises **over one-fourth** of the *early neonatal* causes of death.

FIGURE 6 The Top Three Causes of Death in the Late Neonatal Infancy Period

Cause of Death	%
Respiratory conditions	9.5
Cardiovascular disorders	9.0
Birth-related infections	7.5

Respiratory conditions and cardiovascular disorders each make up about **one in ten** *late neonatal* causes of death.

FIGURE 7 The Top Three Causes of Death in the Post Neonatal Infancy Period

Cause of Death	%
Sudden infant death syndrome	15.5
Suffocation	9.4
Other causes of death, unspecified	4.2

Sudden infant death syndrome **(SIDS) is the most common** *post neonatal* cause of death.

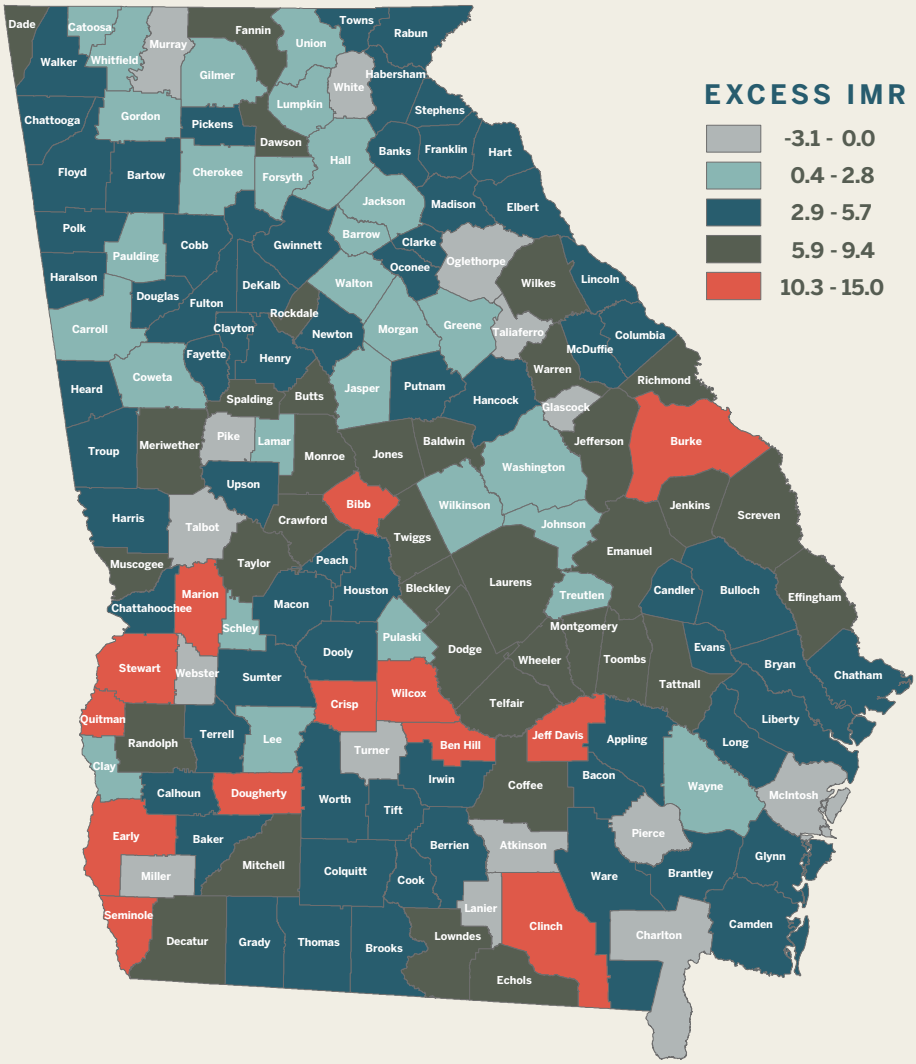
More than half of infant deaths occur during the **first six days** of life. Prematurity, respiratory conditions and cardiovascular disorders, along with sudden infant death syndrome (SIDS) are the most common causes of infant mortality in early, late and post neonatal infancy periods, respectively.

GEOGRAPHIC DISTRIBUTION OF EXCESS INFANT DEATHS *(excess infant mortality rate by county)*

A positive excess infant mortality rate denotes counties with a higher infant mortality rate than the reference group. The excess infant mortality rate by county was calculated by comparing the observed infant mortality rate for each county to the infant mortality rate for a reference group (*see Appendix A*).

The Georgia counties with the highest excess infant mortality rate between 2012 and 2016 are concentrated in the southern region of the state.

FIGURE 8 Excess Infant Mortality Rate by County of Residence, Georgia, 2012-16



Between 2012 and 2016, if all counties in Georgia had the same infant mortality rate as the reference group, **2,680** infant deaths could have been prevented in Georgia.

CenteringPregnancy

CenteringPregnancy, an innovative model of group prenatal care that integrates physical assessment with extensive health education and group support, has been demonstrated to improve several important pregnancy outcomes including preterm birth.

PRIORITY *Implement CenteringPregnancy programs in two additional public health districts.*

FAMILY PLANNING

The DPH Family Planning program supports the health-care needs of women and assists them with planning the number, timing and spacing of their children.

PRIORITY *Increase long-acting reversible contraceptive access and utilization.*

GEORGIA 5-STAR HOSPITAL INITIATIVE

The Georgia 5-STAR Hospital Initiative was developed to encourage hospitals to take steps toward becoming breastfeeding-friendly. Birthing hospitals are recognized for implementing evidence-based maternity care practices that promote and support breastfeeding with one star for every two breastfeeding-friendly steps completed.

PRIORITY *Increase the number of birthing hospitals that implement recommended steps to increase successful breastfeeding initiation and duration.*

GEORGIA PERINATAL QUALITY COLLABORATIVE (GAPQC)

GaPQC is a network of over 30 organizations led by DPH that are working to establish and maintain a robust statewide perinatal data and quality improvement system that engages stakeholders in evidenced based practice improvements.

PRIORITY *Increase the number of hospitals that implement quality improvement projects for maternal and neonatal care.*

HOME VISITING

Home Visiting offers support and comprehensive services to at-risk families through home visits and group socialization experiences to improve health outcomes, home and child safety, school readiness, family safety, and family economic self-sufficiency.

PRIORITY *Ensure evidence-based home visits*

MATERNAL AND NEONATAL LEVELS OF CARE DESIGNATIONS

Maternal and Neonatal Levels of Care Designations designate hospitals according to the level of care they provide for mothers and infants. The designations ensure mothers and infants receive care in the closest facility that is most appropriate for their level of risk.

PRIORITY *Increase the number of hospitals that have achieved a designation*

PERINATAL CASE MANAGEMENT (PCM)

PCM services are available to assist Medicaid eligible pregnant woman in gaining access to needed medical, nutritional and other services to improve maternal and infant health outcomes.

PRIORITY *Ensure deliveries occur at risk-appropriate facilities.*

PERINATAL REGIONALIZATION

There are six perinatal regions throughout Georgia, and each has one regional perinatal center. Services provided include high-risk maternal and neonatal medical care, medical transportation, perinatal consultation, and developmental clinics for infants born preterm, low birth weight, and at risk for neurological disorders.

PRIORITY *Ensure deliveries occur at risk-appropriate facilities.*

SAFE TO SLEEP CAMPAIGN

The Safe to Sleep Program coordinates statewide public health interventions intended to protect infants from sudden infant death syndrome and other sleep-related causes of death.

PRIORITY *Prevent sleep-related infant deaths.*

EXCESS INFANT MORTALITY RATE CALCULATION

A reference group must be identified to calculate the excess infant mortality rate. Typically, a subpopulation with a low infant mortality rate is identified within the geographic area of interest. The reference group used in this report was selected based on guidance from subject matter experts. The reference infant mortality rate was calculated using the following maternal characteristics: **1** Georgia resident, **2** White, non-Hispanic, **3** 25 to 29 years of age, and **4** higher than a high school education. Approximately **2,680** excess infant deaths occurred over a 5-year period (2012-16). The infant mortality rate of the reference group was 3.2 infant deaths per 1,000 live births (2012-2016 birth cohort). The excess infant mortality rate and the excess infant deaths are calculated based on the infant mortality rate of the reference group; see the following formulas:

EXCESS INFANT MORTALITY RATE

$IMR - IMR_{REF}$

EXCESS INFANT DEATHS

Observed number of infant deaths — expected number of infant deaths =
Observed number of infant deaths — (number of births * IM_{REF} /1,000)

APP. B | INFANT MORTALITY MEASURES BY COUNTY OF RESIDENCE, GEORGIA, 2012-2016

County	Number of Births	Number of Infant Deaths	Infant Mortality Rate	Excess Infant Mortality Rate	Excess Infant Deaths
Appling	1,276	8	6.3	3.2	3
Atkinson	634	2	*	**	0
Bacon	754	6	8	4.9	3
Baker	161	1	*	**	0
Baldwin	2,259	24	10.6	7.5	16
Banks	969	8	8.3	5.2	4
Barrow	5,219	26	5	1.9	9
Bartow	6,532	53	8.1	5.0	32
Ben Hill	1,143	18	15.7	12.6	14
Berrien	1,200	10	8.3	5.2	6
Bibb	10,809	154	14.2	11.1	119
Bleckley	660	7	10.6	7.5	4
Brantley	1,086	8	7.4	4.3	4
Brooks	1,017	9	8.8	5.7	5
Bryan	2,561	16	6.2	3.1	7
Bulloch	4,343	37	8.5	5.4	23
Burke	1,605	22	13.7	10.6	16
Butts	1,300	14	10.8	7.7	9
Calhoun	257	2	*	**	1
Camden	4,000	25	6.3	3.2	12
Candler	705	5	7.1	4.0	2
Carroll	7,327	39	5.3	2.2	15
Catoosa	3,689	13	3.5	0.4	1
Charlton	597	1	*	**	0
Chatham	19,904	151	7.6	4.5	88
Chattahoochee	1,162	7	6	2.9	3
Chattooga	1,443	11	7.6	4.5	6
Cherokee	14,026	64	4.6	1.5	19
Clarke	6,856	45	6.6	3.5	23
Clay	173	1	*	**	0
Clayton	21,207	177	8.3	5.2	110
Clinch	504	9	17.9	14.8	7
Cobb	47,043	288	6.1	3.0	139
Coffee	2,955	27	9.1	6.0	17
Colquitt	3,280	25	7.6	4.5	14
Columbia	8,684	69	7.9	4.8	41
Cook	1,091	8	7.3	4.2	4
Coweta	8,183	41	5	1.9	15
Crawford	634	7	11	7.9	5
Crisp	1,471	25	17	13.9	20

APP. B | INFANT MORTALITY MEASURES BY COUNTY OF RESIDENCE, GEORGIA, 2012-2016

County	Number of Births	Number of Infant Deaths	Infant Mortality Rate	Excess Infant Mortality Rate	Excess Infant Deaths
Dade	843	8	9.5	6.4	5
Dawson	1,176	11	9.4	6.3	7
Decatur	1,831	19	10.4	7.3	13
DeKalb	55,043	396	7.2	4.1	222
Dodge	1,175	13	11.1	8.0	9
Dooly	548	4	*	**	2
Dougherty	6,416	97	15.1	12.0	76
Douglas	8,702	64	7.4	4.3	36
Early	672	11	16.4	13.3	8
Echols	322	4	*	**	2
Effingham	3,783	34	9	5.9	22
Elbert	1,121	8	7.1	4.0	4
Emanuel	1,571	15	9.5	6.4	10
Evans	785	5	6.4	3.3	2
Fannin	1,005	11	10.9	7.8	7
Fayette	4,248	28	6.6	3.5	14
Floyd	5,907	43	7.3	4.2	24
Forsyth	11,421	44	3.9	0.8	8
Franklin	1,329	9	6.8	3.7	4
Fulton	62,569	436	7	3.9	239
Gilmer	1,582	6	3.8	0.7	1
Glascock	138	0	0	-3.1	0
Glynn	4,889	35	7.2	4.1	19
Gordon	3,477	17	4.9	1.8	6
Grady	1,724	12	7	3.9	6
Greene	823	3	*	**	0
Gwinnett	57,943	365	6.3	3.2	182
Habersham	2,512	15	6	2.9	7
Hall	12,768	68	5.3	2.2	27
Hancock	350	3	*	**	1
Haralson	1,689	13	7.7	4.6	7
Harris	1,426	11	7.7	4.6	6
Hart	1,378	12	8.7	5.6	7
Heard	648	4	*	**	1
Henry	11,911	84	7.1	4.0	46
Houston	10,124	78	7.7	4.6	46
Irwin	504	4	*	**	2
Jackson	3,928	22	5.6	2.5	9
Jasper	843	4	*	**	1
Jeff Davis	1,046	14	13.4	10.3	10
Jefferson	1,037	13	12.5	9.4	9
Jenkins	496	5	10.1	7.0	3

APP. B | INFANT MORTALITY MEASURES BY COUNTY OF RESIDENCE, GEORGIA, 2012-2016

County	Number of Births	Number of Infant Deaths	Infant Mortality Rate	Excess Infant Mortality Rate	Excess Infant Deaths
Johnson	454	2	*	**	0
Jones	1,517	14	9.2	6.1	9
Lamar	999	4	*	**	0
Lanier	702	1	*	**	-1
Laurens	3,205	33	10.3	7.2	22
Lee	1,782	10	5.6	2.5	4
Liberty	7,317	60	8.2	5.1	36
Lincoln	393	3	*	**	1
Long	1,359	10	7.4	4.3	5
Lowndes	7,974	79	9.9	6.8	53
Lumpkin	1,490	7	4.7	1.6	2
McDuffie	1,455	12	8.2	5.1	7
McIntosh	600	3	*	**	1
Macon	682	5	7.3	4.2	2
Madison	1,703	12	7	3.9	6
Marion	443	7	15.8	12.7	5
Meriwether	1,270	12	9.4	6.3	8
Miller	331	0	0	-3.1	-1
Mitchell	1,339	16	11.9	8.8	11
Monroe	1,380	13	9.4	6.3	8
Montgomery	481	6	12.5	9.4	4
Morgan	932	4	*	**	1
Murray	2,506	3	*	**	-4
Muscogee	15,385	170	11	7.9	121
Newton	6,618	43	6.5	3.4	22
Oconee	1,679	12	7.1	4.0	6
Oglethorpe	779	2	*	*	0
Paulding	9,379	55	5.9	2.8	25
Peach	1,474	12	8.1	5.0	7
Pickens	1,524	12	7.9	4.8	7
Pierce	1,189	3	*	**	0
Pike	806	2	*	**	0
Polk	2,788	19	6.8	3.7	10
Pulaski	441	2	*	**	0
Putnam	1,162	9	7.7	4.6	5
Quitman	124	2	*	**	1
Rabun	759	5	6.6	3.5	2
Randolph	414	4	*	**	2
Richmond	14,719	164	11.1	8.0	117

APP. B | INFANT MORTALITY MEASURES BY COUNTY OF RESIDENCE, GEORGIA, 2012-2016

County	Number of Births	Number of Infant Deaths	Infant Mortality Rate	Excess Infant Mortality Rate	Excess Infant Deaths
Rockdale	4,948	62	12.5	9.4	46
Schley	246	1	*	**	0
Screven	875	8	9.1	6.0	5
Seminole	484	8	16.5	13.4	6
Spalding	4,085	40	9.8	6.7	27
Stephens	1,575	10	6.3	3.2	5
Stewart	220	4	*	**	3
Sumter	1,926	12	6.2	3.1	5
Talbot	262	0	0	-3.1	0
Taliaferro	74	0	0	-3.1	0
Tattnall	1,371	13	9.5	6.4	8
Taylor	435	5	11.5	8.4	3
Telfair	648	6	9.3	6.2	3
Terrell	596	4	*	**	2
Thomas	2,887	24	8.3	5.2	14
Tift	2,858	22	7.7	4.6	13
Toombs	1,977	19	9.6	6.5	12
Towns	431	3	*	**	1
Treutlen	389	2	*	**	0
Troup	4,556	38	8.3	5.2	23
Turner	574	1	*	**	0
Twiggs	471	5	10.6	7.5	3
Union	820	4	*	**	1
Upson	1,631	11	6.7	3.6	5
Walker	3,727	24	6.4	3.3	12
Walton	5,280	31	5.9	2.8	14
Ware	2,423	19	7.8	4.7	11
Warren	272	3	*	**	2
Washington	1,178	5	4.2	1.1	1
Wayne	1,982	9	4.5	1.4	2
Webster	116	0	0	-3.1	0
Wheeler	319	3	*	**	1
White	1,327	4	*	**	0
Whitfield	6,948	31	4.5	1.4	9
Wilcox	454	7	15.4	12.3	5
Wilkes	528	5	9.5	6.4	3
Wilkinson	517	2	*	**	0
Worth	1,286	10	7.8	4.7	5
TOTALS	**650,672**	**4,798**			**2,680**

**The infant mortality rate is not calculated for counties with 1-4 infant deaths*

***The excess infant mortality rate is not calculated for counties with 1-4 infant deaths*

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