

# DELAWARE VITAL STATISTICS ANNUAL REPORT INFANT MORTALITY, 2017

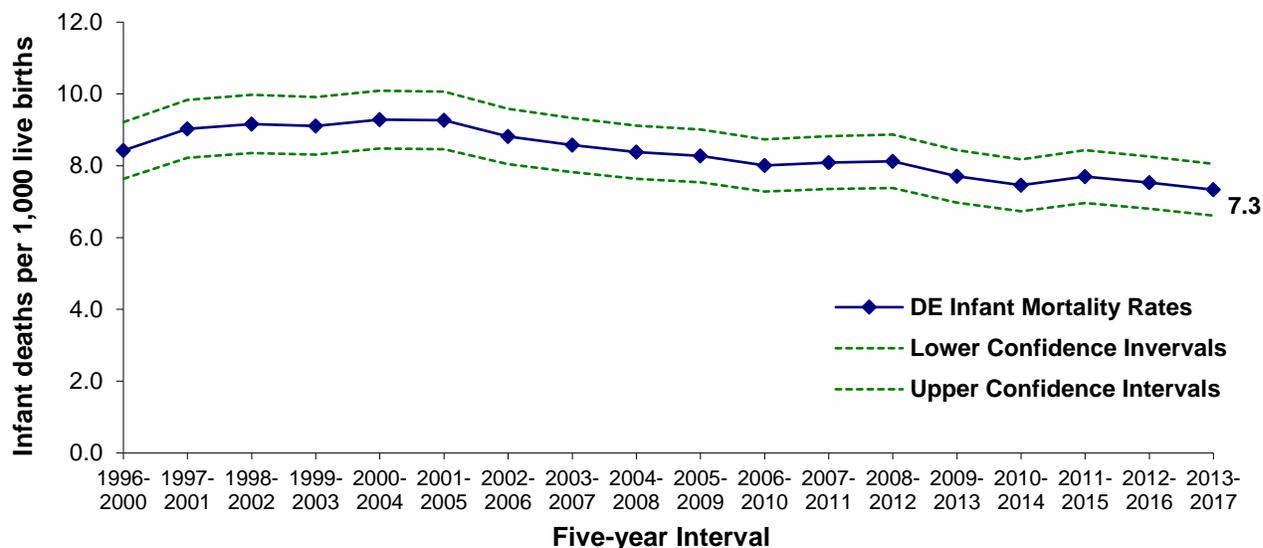


*Suggested Citation:*

Delaware Health Statistics Center. *Delaware Vital Statistics Annual Report, 2017*.  
Delaware Department of Health and Social Services, Division of Public Health: 2019.

In 2013-2017, Delaware's infant mortality rate (IMR) was 7.3 infant deaths per 1,000 live births, resulting in a total decline of 21.5 percent from the 2000-2004 rate of 9.3 infant deaths per 1,000 live births.

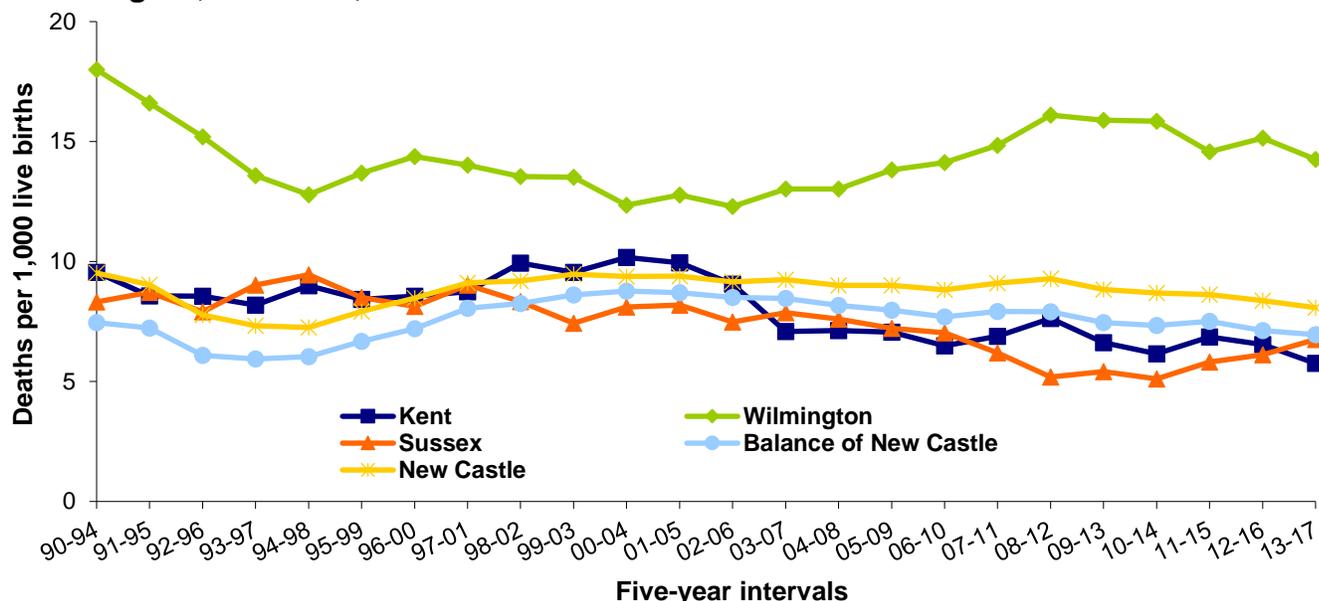
**Figure 27. Five-year Average Infant Mortality Rates with Confidence Intervals, Delaware, 1996-2017**



Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

Wilmington's IMR continued to be the highest in Delaware. The combination of Wilmington's high IMR and a higher IMR in the balance of New Castle County resulted in New Castle County's IMR being higher than the IMRs of both Kent and Sussex counties at 8.1 infant deaths per 1,000 live births. In 2013-2017 Kent County's IMR remained the lowest at 5.8 infant deaths per 1,000 live births. During the same time period the balance of New Castle County's IMR was 7.0 infant deaths per 1,000 live births; Wilmington's IMR was 14.3 infant deaths per 1,000 live births; and Sussex County's IMR was 6.7 infant deaths per 1,000 live births.

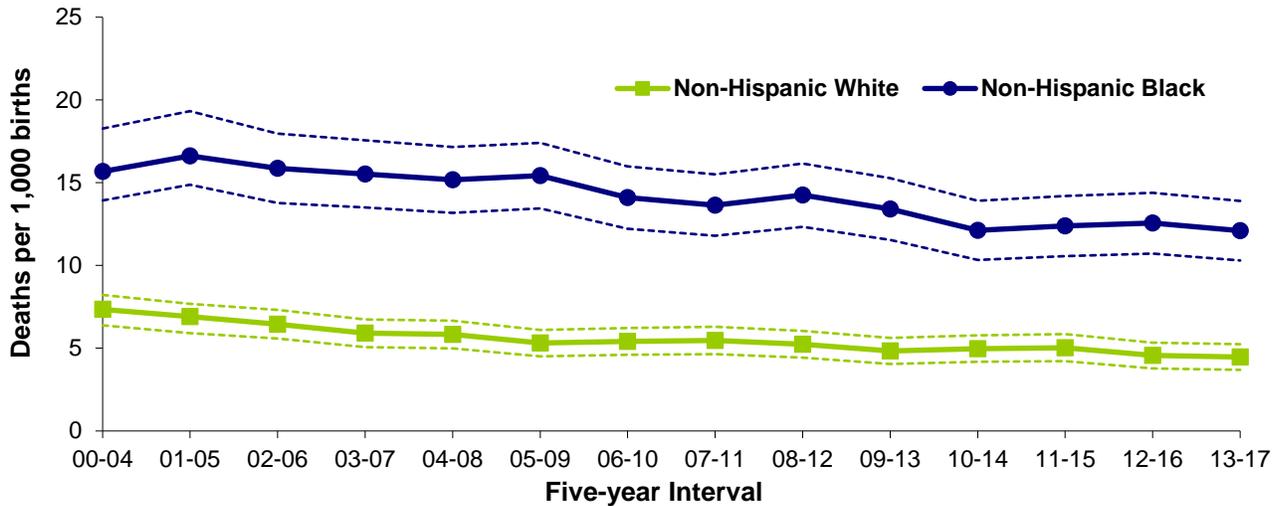
**Figure 28. Five-year Average Infant Mortality Rates, Delaware Counties and City of Wilmington, Delaware, 1990-2017**



Source: Delaware Health and Social Services, Division of Public Health, Delaware Health Statistics Center

Non-Hispanic black infants experienced a lower percentage of decrease in mortality rates than non-Hispanic white infants. In 2013-2017 the non-Hispanic black IMR of 12.1 infant deaths per 1,000 live births was a 23 percent decrease from the 15.7 rate in 2000-2004. Non-Hispanic white IMR decreased 38 percent from 7.3 in 2000-2004 to 4.5 infant deaths per 1,000 live births in 2013-2017.

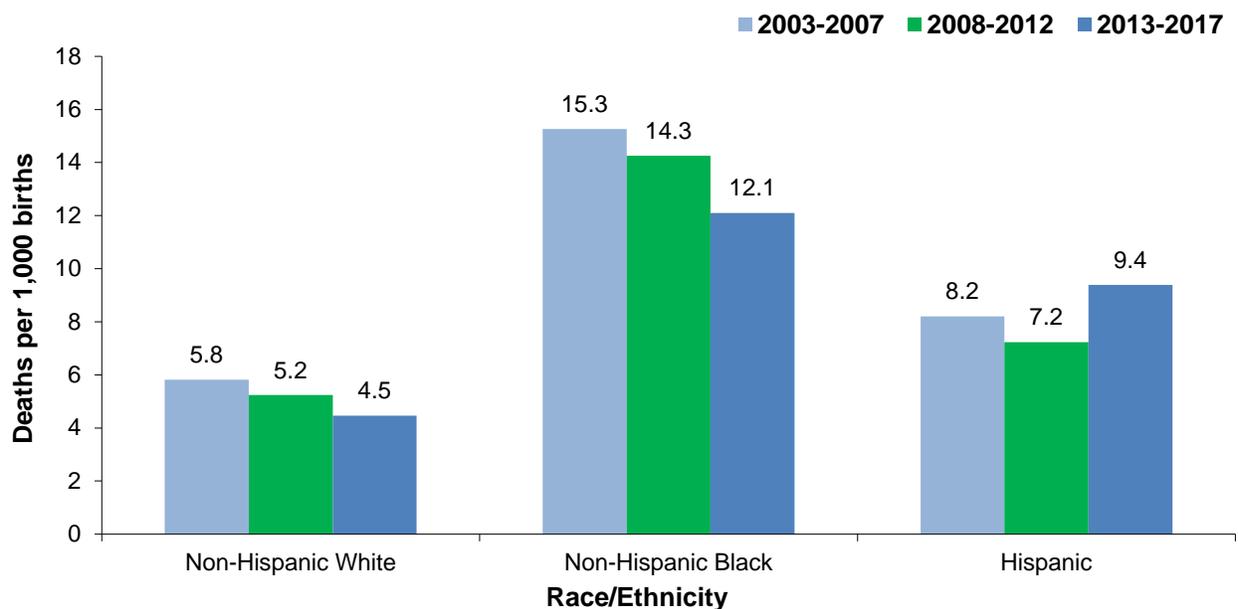
**Figure 29. Five-year Average Black and White Infant Mortality Rates with Confidence Intervals, Delaware, 2000-2017**



Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center  
 Note: Dashes represent upper or lower confidence intervals

Significant disparities existed between non-Hispanic black and non-Hispanic white infant mortality rates. The non-Hispanic black rate in 2013-2017 was nearly three times that of the non-Hispanic white rate but only 1.2 times higher than the Hispanic rate of 9.4 infant deaths per 1,000 live births. Non-Hispanic black IMRs were highest in all three time periods depicted below with the highest rate of 15.3 infant deaths per 1,000 live births in 2003-2007. Hispanic IMRs were two times higher than the non-Hispanic white IMRs in 2013-2017. From 2003-2007 to 2013-2017 the Hispanic IMR increased 15 percent (8.2 to 9.4 infant deaths per 1,000 live births).

**Figure 30. Five-year Average Infant Mortality Rates by Race and Hispanic Origin, Delaware 2003-2017**

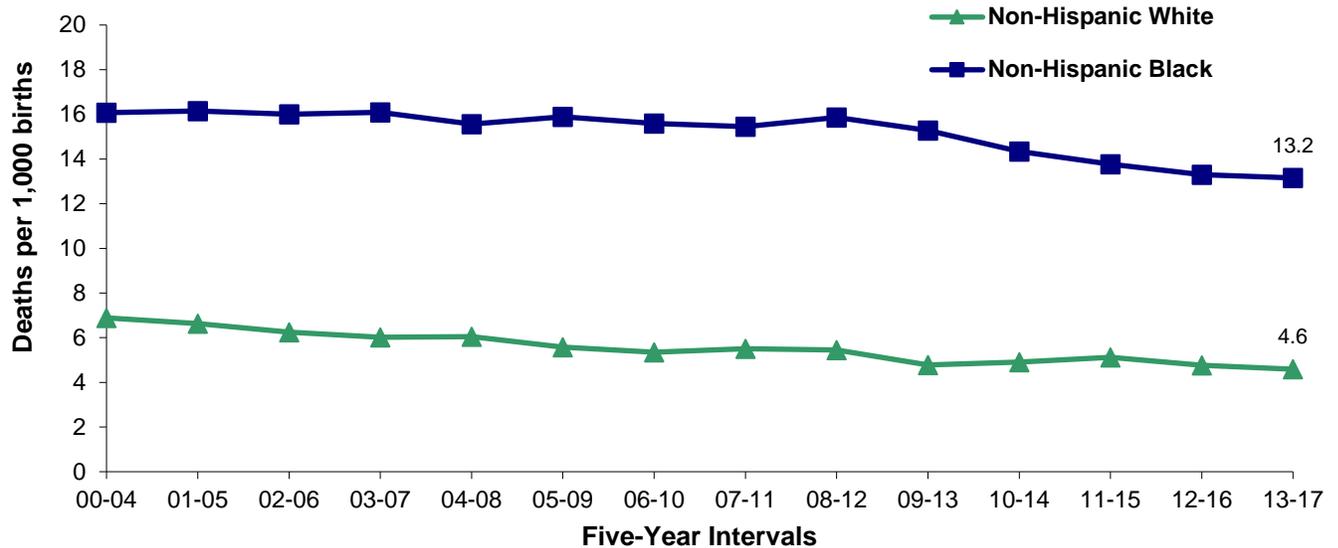


Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

## INFANT MORTALITY- Leading Causes of Death

In 2013-2017, New Castle County had the highest IMRs and Kent County had the lowest. Non-Hispanic black IMRs in New Castle County were stable at 16 infant deaths per 1,000 live births from 2000 to 2014, and decreased the last five time periods to 13.2 infant deaths per 1,000 live births.

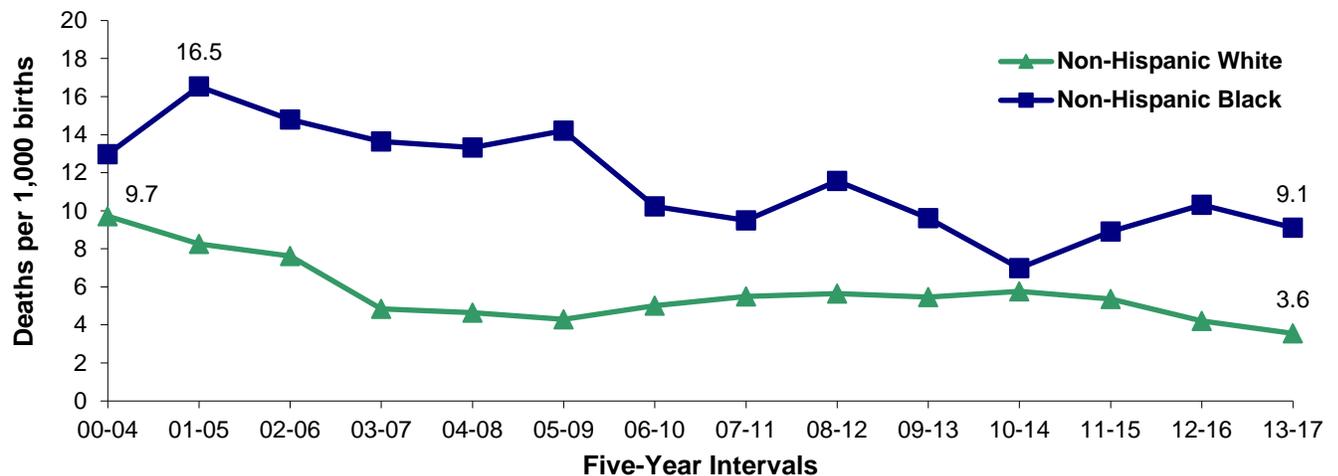
**Figure 31. Five-year Average Infant Mortality Rates by Race, New Castle County, Delaware, 2000-2017**



Source: Delaware Health and Social Services, Division of Public Health, Delaware Health Statistics Center

Non-Hispanic black IMRs in Kent County peaked at 16.5 infant deaths per 1,000 live births in 2001-2005. The IMR decreased 45 percent to 9.1 infant death per 1,000 live births in 2013-2017. The non-Hispanic white IMR had a 63 percent decrease from its peak in 2000-2004 to 2013-2017 (9.7 to 3.6 infant deaths per 1,000 live births).

**Figure 32. Five-year Average Infant Mortality Rates by Race, Kent County, Delaware, 2000-2017**

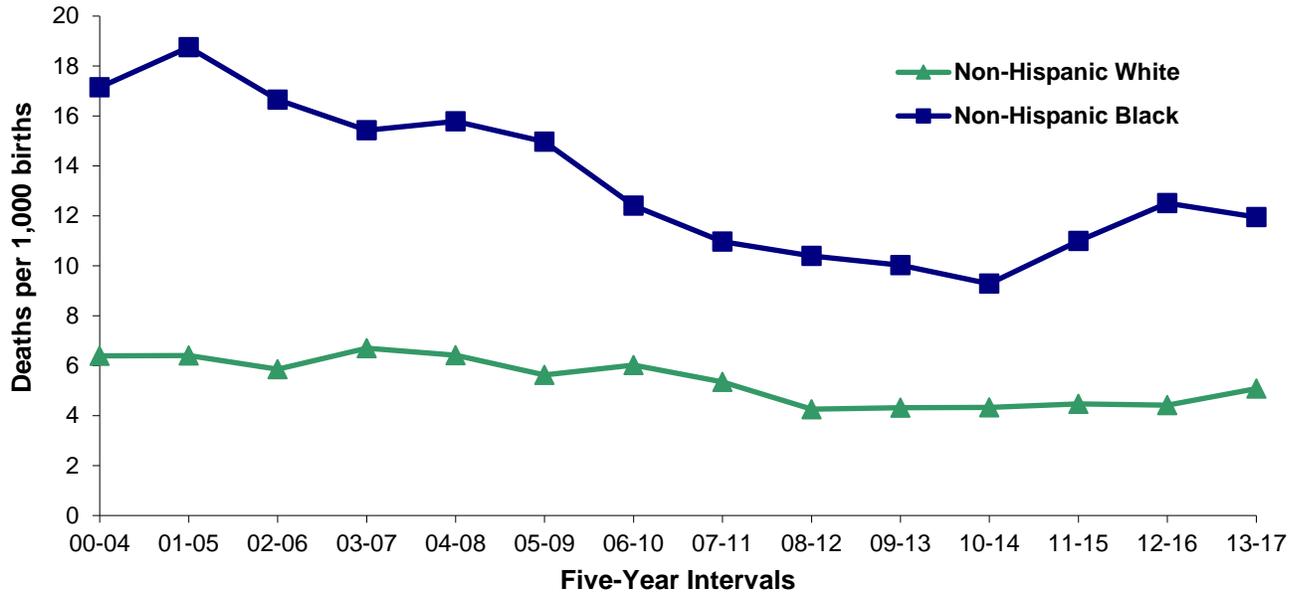


Source: Delaware Health and Social Services, Division of Public Health, Delaware Health Statistics Center

## INFANT MORTALITY- Leading Causes of Death

Sussex County's non-Hispanic black IMR decreased to 11.9 infant deaths per 1,000 live births in 2013-2017, a 37 percent reduction from the 2001-2005 peak of 19 infant deaths per 1,000 live births. Sussex County's non-Hispanic white IMR had a 24 percent decrease from its peak in 2003-2007 (6.7 to 5.1 infant deaths per 1,000 live births).

**Figure 33. Five-year Average Infant Mortality Rates by Race, Sussex County, Delaware, 2000-2017**



Source: Delaware Health and Social Services, Division of Public Health, Delaware Health Statistics Center

## INFANT MORTALITY- Leading Causes of Death

In 2013-2017 there were 401 infant deaths. The five leading causes of infant death in Delaware were:

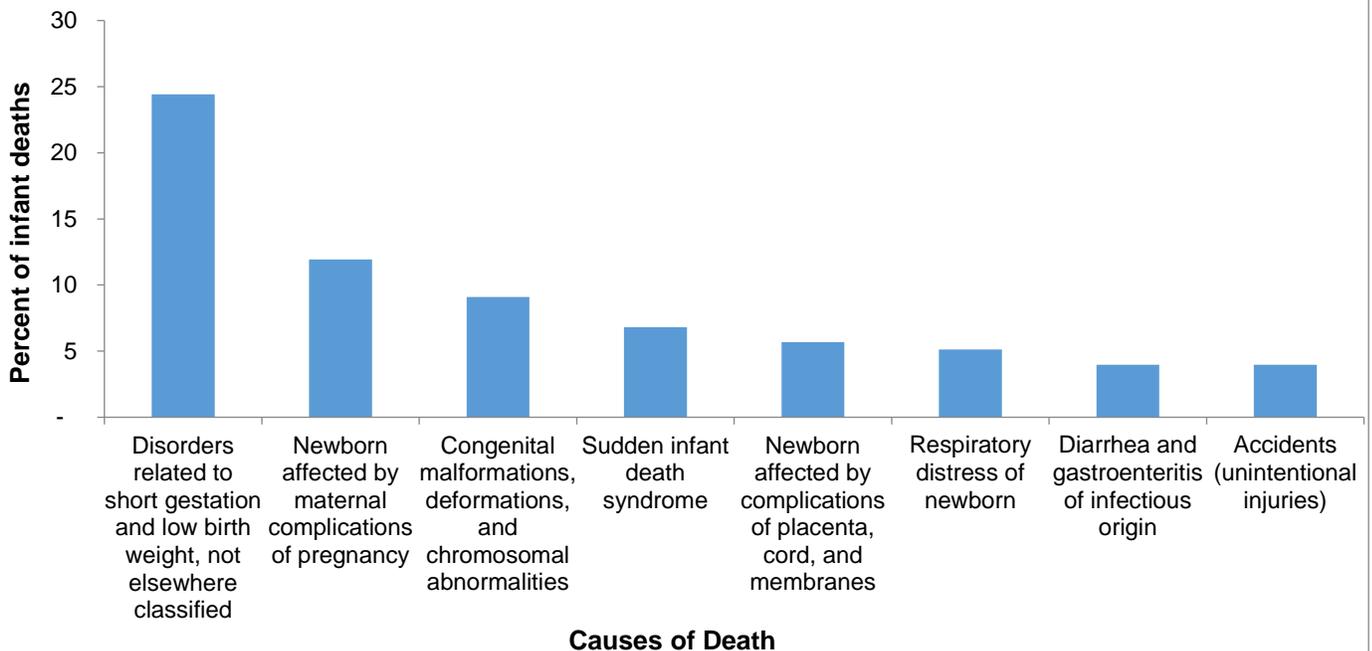
- Disorders related to short gestation and low birthweight, which accounted for 20.7 percent of infant deaths.
- Newborns affected by maternal complications of pregnancy, which accounted for 13.2 percent of infant deaths. Of the 53 deaths attributed to this cause, 46 were due to the newborn being affected by incompetent cervix and premature rupture of membranes
- Congenital anomalies (birth defects), which accounted for 12.7 percent of infant deaths.
- Sudden infant death syndrome (SIDS), which accounted for 6.0 percent of all infant deaths.
- Respiratory distress of newborn, which accounted for 4.5 percent of infant deaths.

In sum, the five most common causes of infant death accounted for 57 percent, or 229 of the 401 total infant deaths.

The most frequent causes of death by race are shown in Figures 34-36. Birth defects and disorders related to short gestation and low birthweight were both listed in the top three most frequent causes of death for both non-Hispanic black and non-Hispanic white infants.

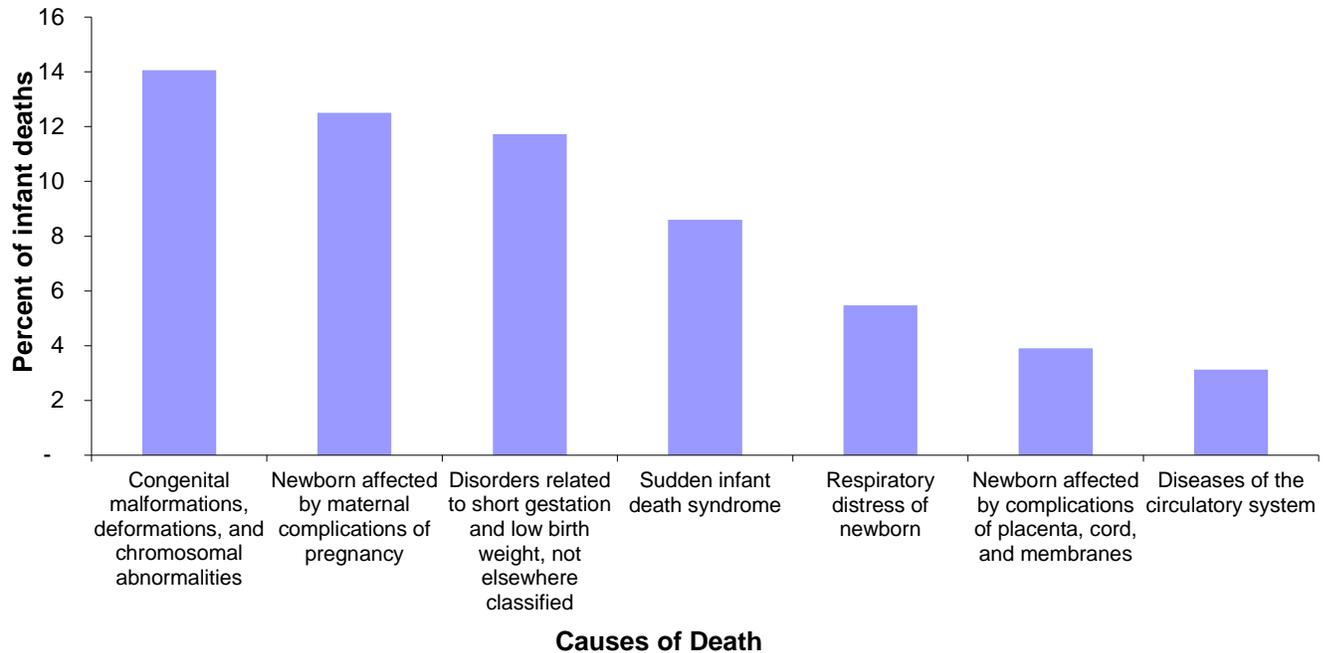
Though the proportions of deaths by race were similar for many of the causes of death, notable exceptions were birth defects and disorders due to prematurity and low birthweight. In 2013-2017, while birth defects were responsible for 14 percent of all non-Hispanic white infant deaths, they accounted for only 9 percent of non-Hispanic black infant deaths. Conversely in 2013-2017, infant deaths due to disorders related to prematurity and low birthweight accounted for larger percentages of non-Hispanic black infant deaths (24 percent) than non-Hispanic white infant deaths (12 percent).

**Figure 34. Percentage of the Most Frequent Causes of Non-Hispanic Black Infant Death, Delaware, 2013-2017**



Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

**Figure 35. Percentage of the Most Frequent Causes of Non- Hispanic White Infant Death, Delaware, 2013-2017**

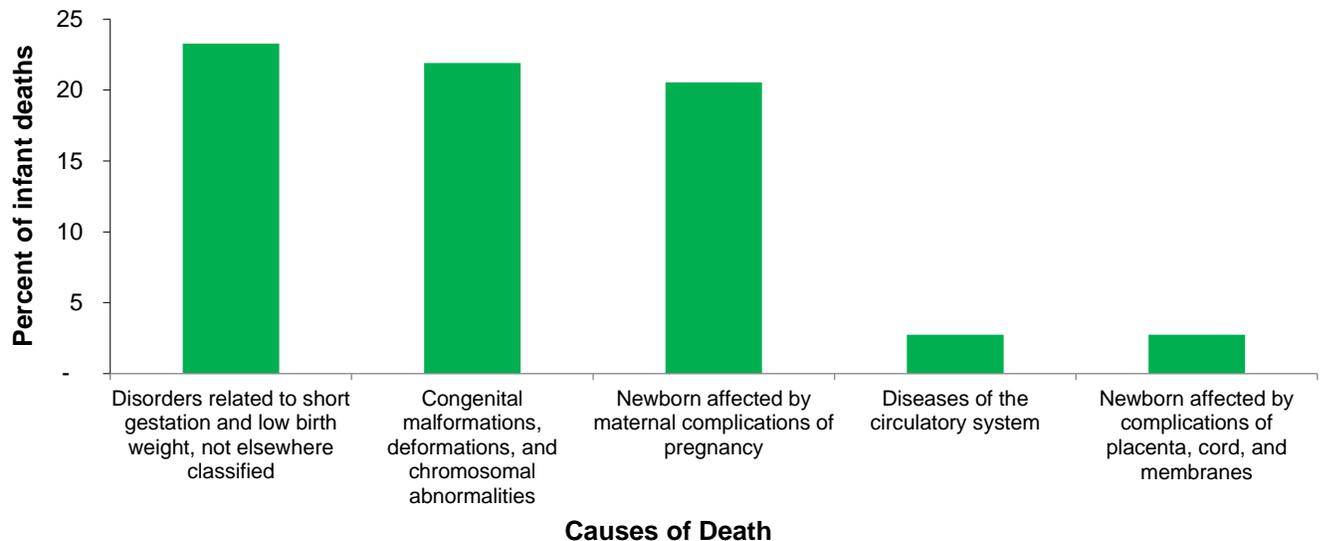


Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

In 1989-1993, Hispanics accounted for 3.6 percent of all live births and 3.4 percent of infant deaths; since that time, the proportion of births to Hispanic mothers has nearly quadrupled. In the most recent five-year period, 2013-2017, 14.2 percent of all live births were to Hispanic mothers, and 18.2 percent of all infant deaths were of Hispanic origin.

Two causes of death accounted for the greatest number of Hispanic infant deaths: birth defects and disorders related to prematurity and low birthweight.

**Figure 36. Percentage of the Most Frequent Causes of Hispanic Infant Death, Delaware, 2013-2017**



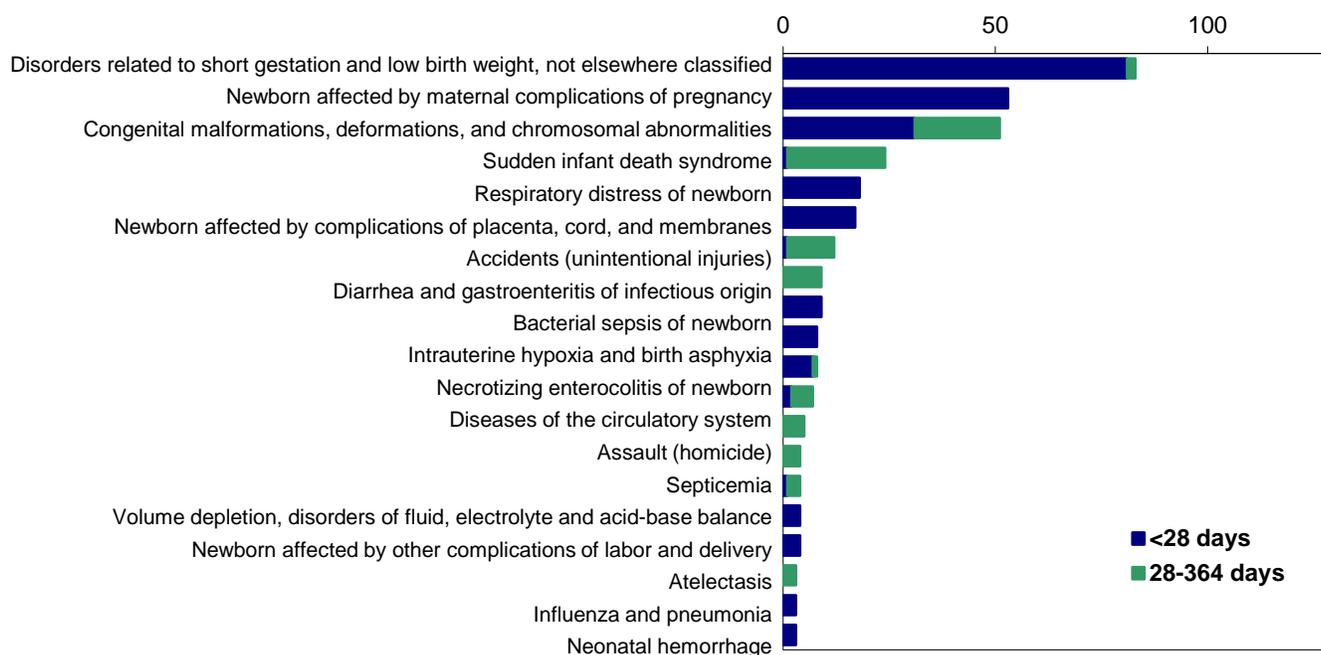
Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

## INFANT MORTALITY- Leading Causes of Death

In 2013-2017, approximately 95 percent of all infant deaths occurred within the first six months of life, 72 percent occurred within the first 28 days of life, and 42 percent occurred within 24 hours of birth.

Figure 37 displays deaths by specific cause and the infant's age classification at death: neonatal (<28 days), or postneonatal (28-364 days).

**Figure. 37 Most Frequent Causes of Infant Death, Delaware, 2013-2017**



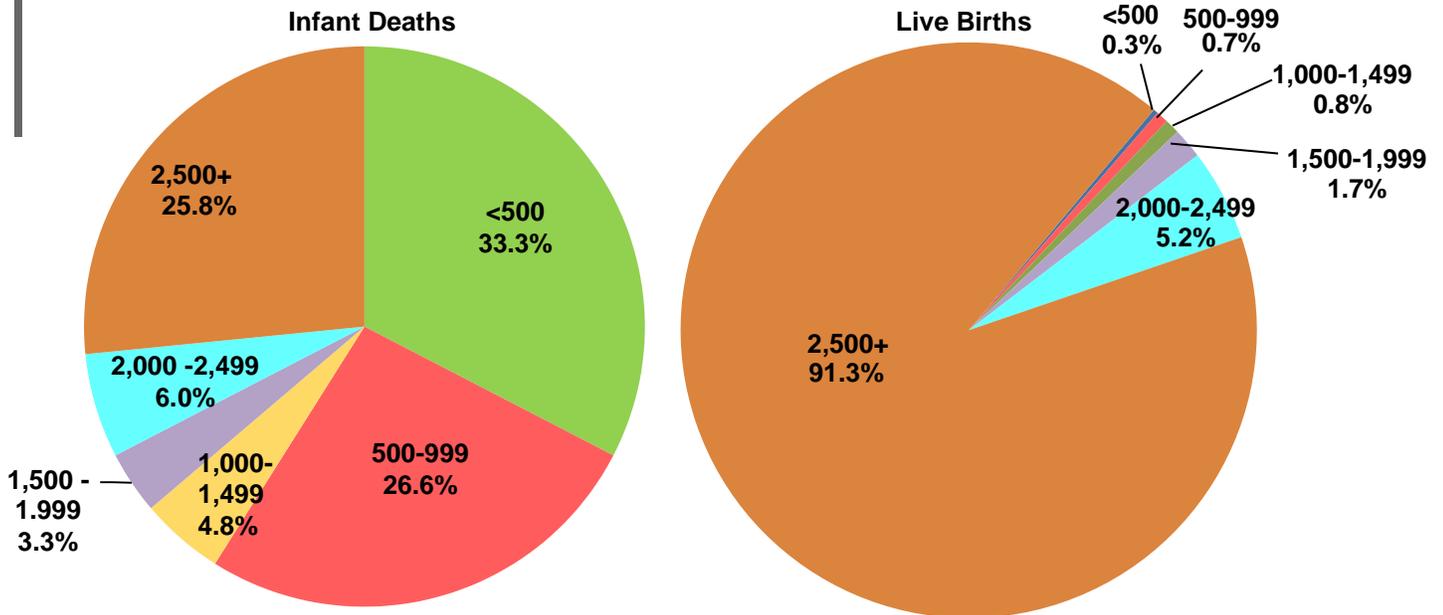
Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

- Prematurity and low birthweight accounted for the greatest number of infant deaths in 2013-2017; 98 percent of these deaths occurred in the neonatal period.
- Sudden infant death syndrome (SIDS) was the only one of the top five causes of death that had the majority of deaths occurring in the postneonatal period, with a mean age at death of 109 days. SIDS deaths decreased 53 percent from 2008-2012 to 2013-2017 (51 to 24 SIDSdeaths). The number of infant deaths in 2013-2017 was 13 percent less than the number of infant deaths in 2008-2012.
- Fifty-four percent (13 out of 24) of the SIDS deaths were associated with co-sleeping and/or sleeping on soft surfaces, such as couches and adult beds.
- In 2013-2017, there were 20 additional infant deaths, coded under a different cause of death that were associated with co-sleeping and/or sleeping on a soft surface. In total, 8 percent of all infant deaths were associated with co-sleeping and/or unsafe sleep practices.

## INFANT MORTALITY - Live Birth Cohort

Although only 1 percent of all live births in 2012-2016 were infants weighing less than 1000 grams, they accounted for over half (60 percent) of all infant deaths. In total, 8.7 percent of all live births in 2012-2016 were infants of low birthweight (under 2,500 grams) and 74 percent of infant deaths were low birthweight.

**Figure 38. Percent Distribution by Birthweight in Grams, Delaware, Live Birth Cohort, 2012-2016**

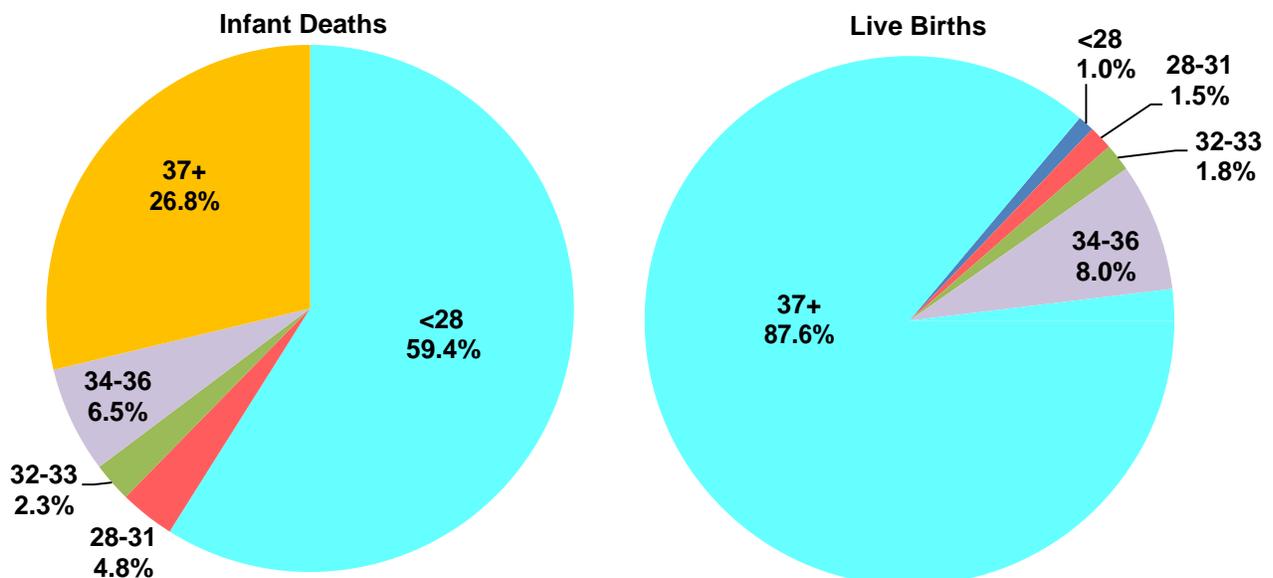


Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

Gestation and infant death demonstrated the same relationship as birthweight and infant death. Infants born at the youngest gestational age made up a very small percentage of live births, yet they accounted for the majority of infant deaths.

One percent of live births in 2012-2016 were less than 28 weeks gestation at birth, but they accounted for 59.4 percent of all infant deaths. In total, 12.3 percent of all live births in 2012-2016 were born preterm (<37 weeks of gestation) and 73 percent of infant deaths were preterm.

**Figure 39. Distribution by Gestation in Weeks, Delaware, Live Birth Cohort, 2012-2016**



Source: Delaware Health and Social Services, Division of Public Health, Delaware Health Statistics Center

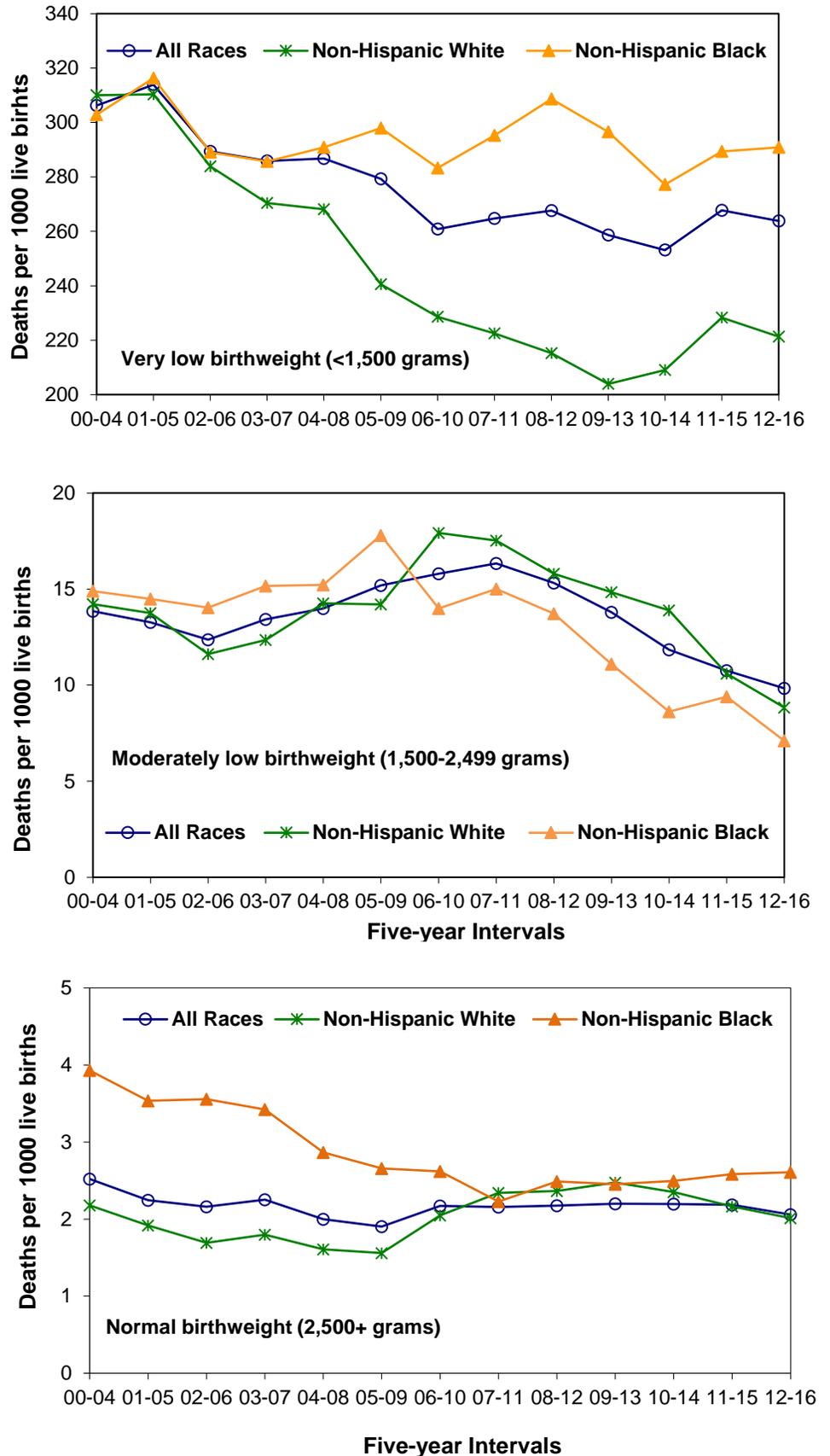
Birthweight and gestation are considered to be the most important predictors of infant health and mortality risk. Infants born too small or too early have a much greater risk of mortality than those who reach a normal birthweight (2,500+ grams) or full-term gestation (37+ weeks).

Although the IMRs decreased for both non-Hispanic white and non-Hispanic black very low birthweight (VLBW) (<1,500 grams) since 2001-2005, the non-Hispanic black IMR of 290.9 was significantly higher than the white IMR of 221.4 infant deaths per 1,000 live births in 2012-2016.

IMRs for moderately low birthweight infants of all races decreased 40 percent from its high point in 2007-2011 to 2012-2016. During that time, non-Hispanic white IMRs decreased 50 percent while the non-Hispanic black IMR decreased by 53 percent, making the non-Hispanic black IMR lower than the non-Hispanic white IMR (7.1 vs 8.8).

The IMR for all races and normal birthweight decreased nine percent from 2007-2011 to 2012-2016 (2.2 to 2.0). IMRs for normal birthweight non-Hispanic white infants decreased 13 percent from 2007-2011 to 2012-2016 (2.3 to 2.0 infant deaths per 1,000 live births), while the IMRs for non-Hispanic black infants increased 18 percent (2.2 to 2.6 infant deaths per 1,000 live births).

**Figure 40. Five-year Average Infant Mortality Rates by Birthweight and Race, Delaware, 2000-2016 Live Birth Cohort**



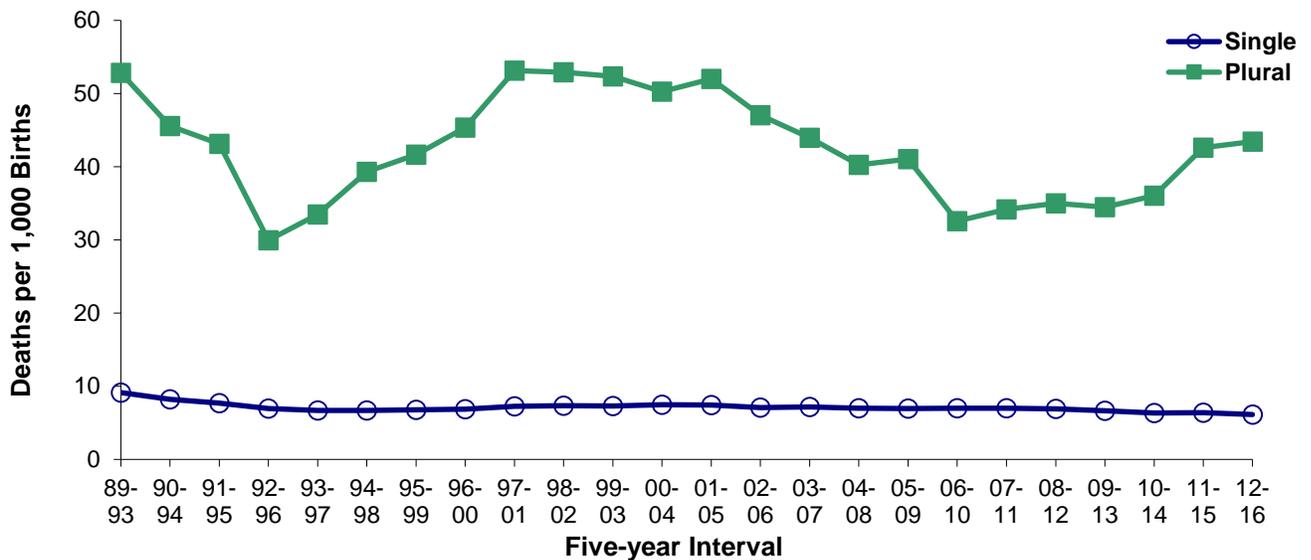
Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

## INFANT MORTALITY - Live Birth Cohort

The divergent movement in non-Hispanic black and white rates in 2012-2016 increased the disparity ratio. During that time period, the non-Hispanic black IMR for normal birthweight infants was 2.6, versus 2.0 infant deaths per 1,000 live births for non-Hispanic white infants of normal birthweight.

From 2001-2005 to 2006-2010, IMRs for plural births decreased 37 percent, from 52 to 33 infant deaths per 1000 live births. Since then, IMRs for plural births increased 33 percent. IMRs for singleton births decreased 13 percent from 2001-2005 to 2012-2016. In 2012-2016, the infant mortality rate for plural births was seven times that of singleton births (43.4 versus 6.1 infant deaths per 1,000 live births, respectively).

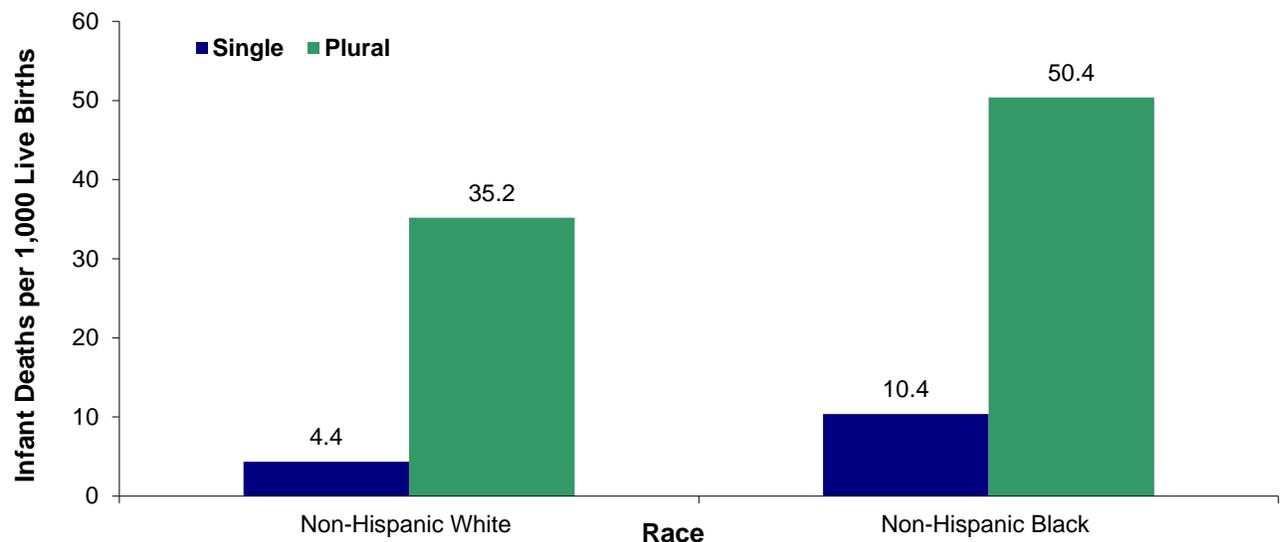
**Figure 41. Five-year Average Infant Mortality Rates by Plurality, Delaware, Live Birth Cohort, 1989-2016**



Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

The disparity between singleton and plural IMRs was evident regardless of race. The non-Hispanic black IMR was more than twice the non-Hispanic white IMR for singleton births and 1.4 times greater for plural births.

**Figure 42. Five-year Average Infant Mortality Rates by Plurality and Race, Delaware, Live Birth Cohort, 2012-2016**



Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

**TABLE E-1. NUMBER OF INFANT DEATHS BY RACE BY COUNTY, AND CITY OF WILMINGTON, U.S., DELAWARE, 2000-2017**

Area/ Race	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>U.S.</b>																		
All Races	27,960	27,523	27,970	27,995	27,860	28,384	28,509	29,153	28,075	26,408	24,572	24,001	23,654	23,446	23,211	23,458	23,157	N/A
Non-Hispanic White	13,461	13,300	13,327	13,228	13,001	13,134	12,884	13,005	12,509	11,785	11,192	10,886	10,759	10,766	10,515	10,444	10,204	N/A
Non-Hispanic Black	8,212	7,938	8,031	7,836	7,869	7,958	8,241	8,351	7,894	7,560	6,758	6,670	6,528	6,488	6,435	6,624	6,545	N/A
Non-Hispanic Other	1,243	1,274	1,289	1,331	1,334	1,380	1,368	1,516	1,452	1,397	1,324	1,338	1,363	1,280	1,273	1,401	1,380	N/A
<b>Delaware</b>																		
All Races	102	114	96	107	97	106	99	91	101	91	88	98	84	68	74	100	87	72
Non-Hispanic White	54	55	52	41	43	36	39	33	37	24	38	39	24	22	27	38	23	18
Non-Hispanic Black	36	50	35	49	44	53	44	38	49	52	35	38	43	33	29	38	39	37
Non-Hispanic Other	0	1	3	1	2	3	4	1	0	7	4	10	6	1	6	6	8	3
<b>Kent</b>																		
All Races	21	19	27	16	17	21	13	9	18	18	15	17	17	6	13	23	14	8
Non-Hispanic White	15	10	22	8	8	6	7	4	7	6	11	10	5	5	8	8	2	0
Non-Hispanic Black	4	8	5	7	8	14	5	4	7	12	3	3	10	1	4	9	8	7
Non-Hispanic Other	0	0	0	0	1	1	1	1	0	0	0	1	0	0	0	1	1	0
<b>New Castle</b>																		
All Races	67	72	55	78	60	68	68	60	70	57	58	74	58	48	49	54	62	48
Non-Hispanic White	32	32	26	27	25	23	22	19	25	13	17	24	16	12	14	19	16	11
Non-Hispanic Black	27	33	22	37	27	30	35	27	36	33	29	34	28	27	20	23	27	26
Non-Hispanic Other	0	0	3	1	0	2	2	0	0	5	3	9	6	1	6	4	7	3
Wilmington																		
All Races	16	17	12	18	12	18	16	17	19	18	18	17	20	14	14	10	18	15
Non-Hispanic White	2	1	1	1	1	1	1	1	2	0	1	2	4	0	3	2	0	1
Non-Hispanic Black	12	14	10	13	8	14	14	14	10	15	13	15	11	11	7	4	14	10
Non-Hispanic Other	0	0	0	0	0	0	0	0	0	2	0	0	1	0	1	1	2	2
Balance of NC County																		
All Races	51	55	43	60	48	50	52	43	51	39	40	57	38	34	35	44	44	33
Non-Hispanic White	30	31	25	26	24	22	21	18	23	13	16	22	12	12	11	17	16	10
Non-Hispanic Black	15	19	12	24	19	16	21	13	26	18	16	19	17	16	13	19	13	16
Non-Hispanic Other	0	0	3	1	0	2	2	0	0	3	3	9	5	1	5	3	5	1
<b>Sussex</b>																		
All Races	14	23	14	13	20	17	18	22	13	16	15	7	9	14	12	23	11	16
Non-Hispanic White	7	13	4	6	10	7	10	10	5	5	10	5	3	5	5	11	5	7
Non-Hispanic Black	5	9	8	5	9	9	4	7	6	7	3	1	5	5	5	6	4	4
Non-Hispanic Other	0	1	0	0	1	0	1	0	0	2	1	0	0	0	0	1	0	0

Notes:

- \*Based on NCHS estimate.
- Infant deaths refer to deaths to children under one year of age.

Sources: National Center for Health Statistics  
 Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

**TABLE E-2. NUMBER OF NEONATAL DEATHS BY RACE, COUNTY, AND CITY OF WILMINGTON, U.S., DELAWARE 2000-2017**

Area/ Race	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>U.S.</b>																		
All Races	18,733	18,275	18,791	18,935	18,602	18,782	19,041	19,094	18,238	17,261	16,193	16,065	15,887	15,893	15,737	15,672	15,303	N/A
Non-Hispanic White	8,924	8,817	8,853	8,797	8,499	8,452	8,410	8,329	7,936	7,515	7,251	7,103	7,070	7,119	6,923	6,724	6,486	N/A
Non-Hispanic Black	5,552	5,293	5,399	5,335	5,283	5,332	5,525	5,484	5,159	4,957	4,395	4,437	4,354	4,355	4,361	4,348	4,323	N/A
Non-Hispanic Other	812	754	856	861	851	895	885	982	916	909	867	893	912	869	869	937	925	N/A
<b>Delaware</b>																		
All Races	71	82	78	76	63	79	72	65	68	66	58	73	66	47	55	79	57	48
Non-Hispanic White	38	41	44	29	28	25	28	25	23	15	24	24	16	12	18	32	10	14
Non-Hispanic Black	25	35	28	36	28	39	33	28	35	39	25	35	34	25	20	31	27	22
Non-Hispanic Other	0	1	2	1	2	3	3	0	0	7	4	7	6	1	5	3	7	3
<b>Kent</b>																		
All Races	15	15	22	8	11	14	7	6	12	14	11	13	12	3	10	17	9	5
Non-Hispanic White	10	10	18	3	5	3	4	3	4	4	8	6	3	3	7	7	1	0
Non-Hispanic Black	3	4	4	4	5	10	3	3	5	10	2	3	8	0	2	6	5	5
Non-Hispanic Other	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	1	0
<b>New Castle</b>																		
All Races	50	54	46	57	39	54	52	43	48	42	36	57	47	34	37	49	43	36
Non-Hispanic White	24	24	22	22	16	17	15	14	16	9	8	16	12	6	7	17	7	11
Non-Hispanic Black	21	26	19	27	18	23	28	20	27	23	22	32	21	22	16	23	20	16
Non-Hispanic Other	0	0	2	1	0	2	2	0	0	5	3	6	6	1	5	3	6	3
Wilmington																		
All Races	13	14	9	11	9	15	12	10	10	14	10	14	18	11	12	10	15	9
Non-Hispanic White	2	1	1	0	1	1	0	1	0	0	0	1	4	0	3	2	0	1
Non-Hispanic Black	9	12	8	10	6	11	11	9	6	11	9	13	9	8	5	4	11	5
Non-Hispanic Other	0	0	0	0	0	0	0	0	0	2	0	0	1	0	1	1	2	2
Balance of NC County																		
All Races	37	40	37	46	30	39	40	33	38	28	26	43	29	23	25	39	28	27
Non-Hispanic White	22	23	21	22	15	16	15	13	16	9	8	15	8	6	4	15	7	10
Non-Hispanic Black	12	14	11	17	12	12	17	11	21	12	13	19	12	14	11	19	9	11
Non-Hispanic Other	0	0	2	1	0	2	2	0	0	3	3	6	5	1	4	2	4	1
<b>Sussex</b>																		
All Races	6	13	10	11	13	11	13	16	8	10	11	3	7	10	8	13	5	7
Non-Hispanic White	4	7	4	4	7	5	9	8	3	2	8	2	1	3	4	8	2	3
Non-Hispanic Black	1	5	5	5	5	6	2	5	3	6	1	0	5	3	2	2	2	1
Non-Hispanic Other	0	1	0	0	1	0	1	0	0	2	1	0	0	0	0	0	0	0

Notes:

1. \*Based on NCHS estimate.
2. Neonatal deaths refer to deaths of children under 28 days of age.

Sources: National Center for Health Statistics,

Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

**TABLE E-3. NUMBER OF POSTNEONATAL DEATHS BY RACE, COUNTY, AND CITY OF WILMINGTON, U.S., DELAWARE 2000-2017**

Area/ Race	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>U.S.</b>																		
All Races	9,227	9,248	9,179	9,060	9,258	9,602	9,468	10,059	9,837	9,147	8,379	7,936	7,767	7553*	7,474	7,786	7,854	N/A
Non-Hispanic White	4,537	4,483	4,474	4,431	4,502	4,682	4,474	4,676	4,573	4,270	3,941	3,783	3,689	3647*	3,592	3,720	3,718	N/A
Non-Hispanic Black	2,660	2,645	2,632	2,501	2,586	2,626	2,716	2,867	2,735	2,603	2,363	2,233	2,174	2133*	2,074	2,276	2,222	N/A
Non-Hispanic Other	431	520	433	470	483	485	483	534	536	488	457	445	451	411*	404	464	455	N/A
<b>Delaware</b>																		
All Races	31	32	18	31	34	27	27	26	33	25	30	25	18	21	19	21	30	24
Non-Hispanic White	16	14	8	12	15	11	11	8	14	9	14	15	8	10	9	6	13	4
Non-Hispanic Black	11	15	7	13	16	14	11	10	14	13	10	3	9	8	9	7	12	15
Non-Hispanic Other	0	0	1	0	0	0	1	1	0	0	0	3	0	0	1	3	1	0
<b>Kent</b>																		
All Races	6	4	5	8	6	7	6	3	6	4	4	4	5	3	3	6	5	3
Non-Hispanic White	5	0	4	5	3	3	3	1	3	2	3	4	2	2	1	1	1	0
Non-Hispanic Black	1	4	1	3	3	4	2	1	2	2	1	0	2	1	2	3	3	2
Non-Hispanic Other	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0
<b>New Castle</b>																		
All Races	17	18	9	21	21	14	16	17	22	15	22	17	11	14	12	5	19	12
Non-Hispanic White	8	8	4	5	9	6	7	5	9	4	9	8	4	6	7	2	9	0
Non-Hispanic Black	6	7	3	10	9	7	7	7	9	10	7	2	7	5	4	0	7	10
Non-Hispanic Other	0	0	1	0	0	0	0	0	0	0	0	3	0	0	1	1	1	0
Wilmington																		
All Races	3	3	3	7	3	3	4	7	9	4	8	3	2	3	2	0	3	6
Non-Hispanic White	0	0	0	1	0	0	1	0	2	0	1	1	0	0	0	0	0	0
Non-Hispanic Black	3	2	2	3	2	3	3	5	4	4	4	2	2	3	2	0	3	5
Non-Hispanic Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Balance of NC County																		
All Races	14	15	6	14	18	11	12	10	13	11	14	14	9	11	10	5	16	6
Non-Hispanic White	8	8	4	4	9	6	6	5	7	4	8	7	4	6	7	2	9	0
Non-Hispanic Black	3	5	1	7	7	4	4	2	5	6	3	0	5	2	2	0	4	5
Non-Hispanic Other	0	0	1	0	0	0	0	0	0	0	0	3	0	0	1	1	1	0
<b>Sussex</b>																		
All Races	8	10	4	2	7	6	5	6	5	6	4	4	2	4	4	10	6	9
Non-Hispanic White	3	6	0	2	3	2	1	2	2	3	2	3	2	2	1	3	3	4
Non-Hispanic Black	4	4	3	0	4	3	2	2	3	1	2	1	0	2	3	4	2	3
Non-Hispanic Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

Notes:

1. \*Based on NCHS estimate.
2. Postneonatal deaths refer to deaths of children 28 to 364 days of age.

Sources: National Center for Health Statistics  
 Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

**TABLE E- 4. FIVE-YEAR AVERAGE INFANT MORTALITY RATES BY RACE, COUNTY, AND CITY OF WILMINGTON, U.S., DELAWARE 2000-2017**

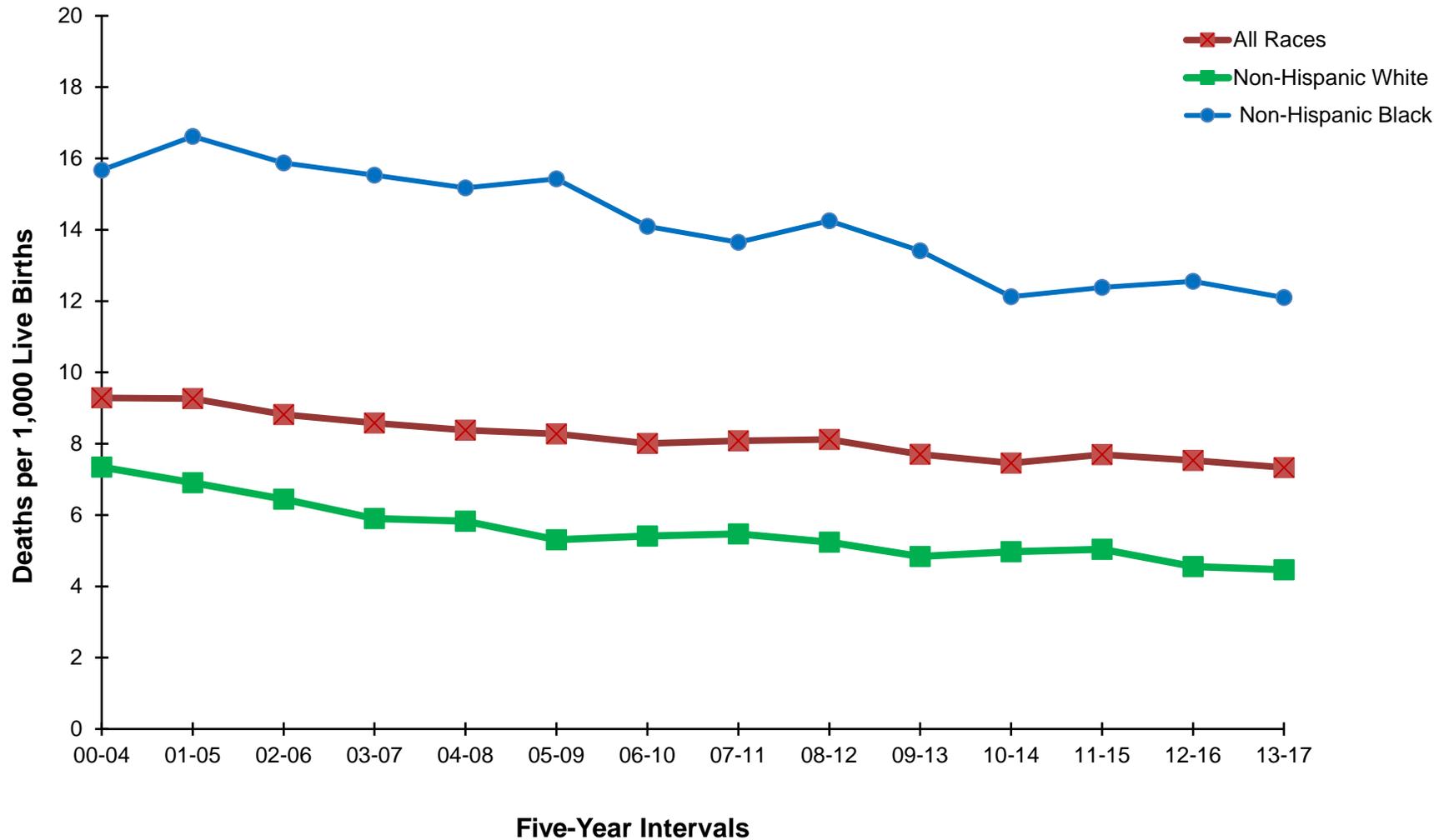
Area/ Race	2000 -2004	2001 -2005	2002 -2006	2003 -2007	2004 -2008	2005 -2009	2006 -2010	2007 -2011	2008 -2012	2009 -2013	2010 -2014	2011 -2015	2012 -2016	2013 -2017
<b>U.S.</b>														
All Races	6.9	6.9	6.8	6.8	6.7	6.7	6.5	6.4	6.2	6.1	6.0	5.9	5.9	N/A
Non-Hispanic White	5.3	5.7	5.7	5.7	5.6	5.6	5.4	5.3	5.2	5.1	5.0	5.0	5.0	N/A
Non-Hispanic Black	13.5	13.6	13.6	13.5	13.3	13.1	12.7	12.3	11.8	11.5	11.2	11.2	11.1	N/A
<b>Delaware</b>														
All Races	9.3+	9.3+	8.8+	8.6+	8.4+	8.3+	8.0+	8.1+	8.1+	7.7+	7.5+	7.7+	7.5+	7.3
Non-Hispanic White	7.3+	6.9+	6.4	5.9	5.8	5.3	5.4	5.5	5.2	4.8	5.0	5.0	4.6	4.5
Non-Hispanic Black	15.7	16.6+	15.9+	15.5	15.2	15.4+	14.1	13.6	14.3+	13.4	12.1	12.4	12.6	12.1
<b>Kent</b>														
All Races	10.2	10.0	9.1	7.1	7.1	7.1	6.5	6.9	7.6	6.6	6.2	6.9	6.5	5.8
Non-Hispanic White	9.7	8.2	7.6	4.8	4.6	4.3	5.0	5.5	5.6	5.5	5.8	5.4	4.2	3.6
Non-Hispanic Black	13.0	16.5	14.8	13.6	13.3	14.2	10.2	9.5	11.6	9.6	7.0	8.9	10.3	9.1
<b>New Castle</b>														
All Races	9.4	9.4	9.2	9.2	9.0	9.0	8.8	9.1	9.3	8.8	8.7	8.6	8.4	8.1
Non-Hispanic White	6.9	6.6	6.2	6.0	6.1	5.6	5.3	5.5	5.4	4.8	4.9	5.1	4.8	4.6
Non-Hispanic Black	16.1	16.2	16.0	16.1	15.6	15.9	15.6	15.5	15.9	15.3	14.3	13.8	13.3	13.2
<b>Wilmington</b>														
All Races	12.4	12.8	12.3	13.0	13.0	13.8	14.1	14.8	16.1	15.9	15.8	14.6	15.1	14.3
Non-Hispanic White	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Non-Hispanic Black	15.4	16.2	15.9	16.9	15.7	17.1	17.4	18.5	18.7	20.2	19.2	16.3	16.4	16.3
<b>Balance of NC County</b>														
All Races	8.8	8.7	8.5	8.5	8.2	8.0	7.7	7.9	7.9	7.5	7.3	7.5	7.1	7.0
Non-Hispanic White	7.0	6.8	6.4	6.2	6.1	5.7	5.5	5.6	5.4	4.8	4.7	4.9	4.6	4.6
Non-Hispanic Black	16.5	16.1	16.0	15.6	15.5	15.1	14.5	13.8	14.4	12.9	12.2	12.6	11.9	11.8
<b>Sussex</b>														
All Races	8.1	8.2	7.5	7.9	7.6	7.2	7.0	6.2	5.2	5.4	5.1	5.8	6.1	6.7
Non-Hispanic White	6.4	6.4	5.9	6.7	6.4	5.6	6.0	5.4	4.3	4.3	4.3	4.5	4.4	5.1
Non-Hispanic Black	17.1	18.8	16.7	15.4	15.8	15.0	12.4	11.0	10.4	10.0	---	11.0	12.5	11.9

*Notes:*

1. 2013-2017 U.S. data are based on NCHS estimates.
2. Infant mortality rates represent the number of deaths of children under one year of age per 1000 live births.
3. '+' indicates that the Delaware rate is significantly higher than the U.S. rate.  
'-' indicates that the Delaware rate is significantly lower than the U.S. rate.
4. "----" Indicates rate does not meet standard of reliability or precision; based on fewer than 20 deaths in the numerator.
5. No statistical comparisons were made between the county rates and the U.S. rate due to small numbers. See Appendix C for details.

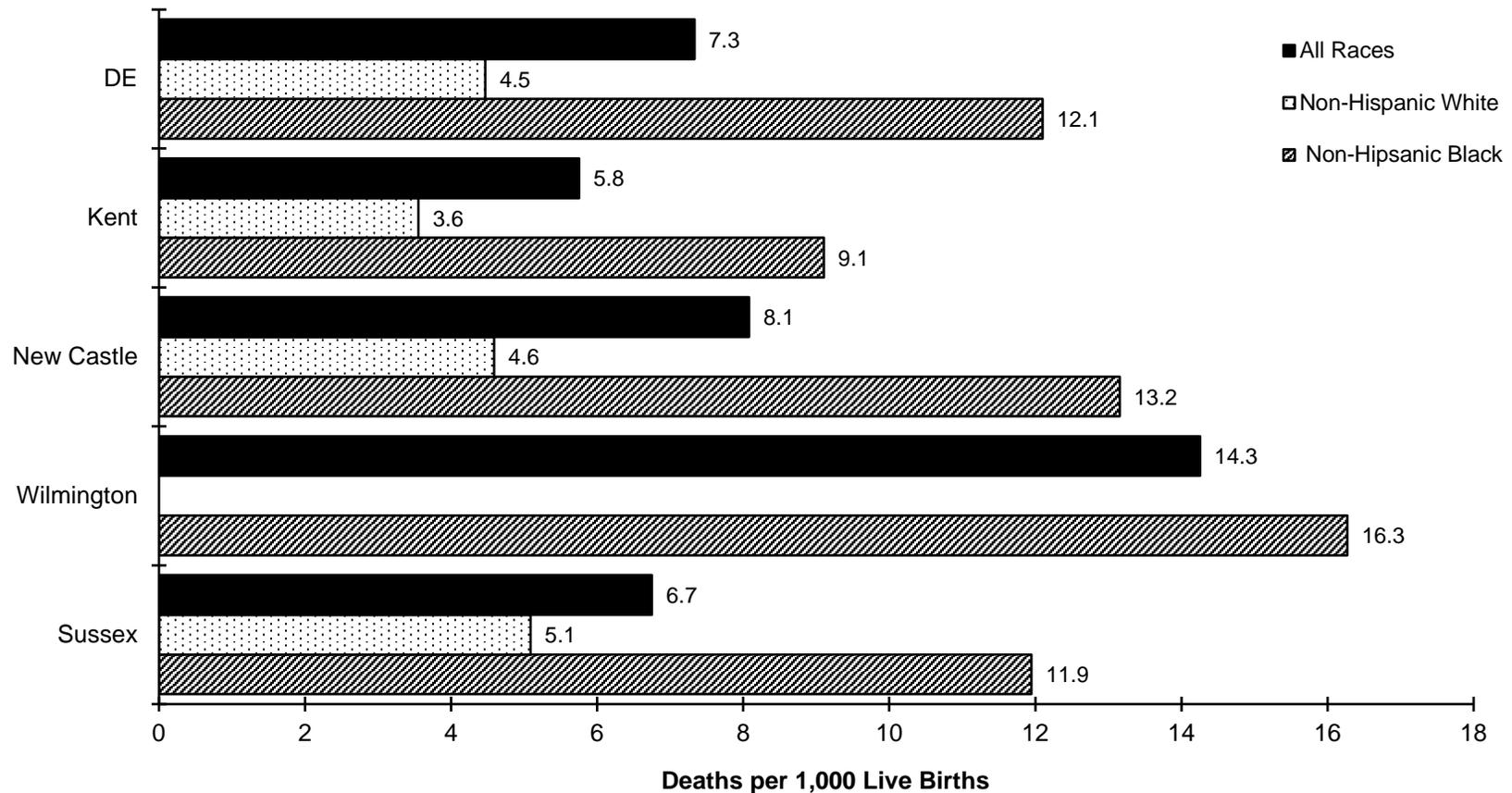
*Sources: National Center for Health Statistics,  
Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center*

**Figure E-1. Five-Year Average Infant Mortality Rates by Race, Delaware, 2000-2017**



Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

**Figure E-2. Five-Year Average Infant Mortality Rates by Race, Delaware, Counties and the City of Wilmington, 2013-2017**



Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

**TABLE E-5. FIVE-YEAR AVERAGE NEONATAL MORTALITY RATES BY RACE, COUNTY, AND CITY OF WILMINGTON, U.S., DELAWARE 2000-2017**

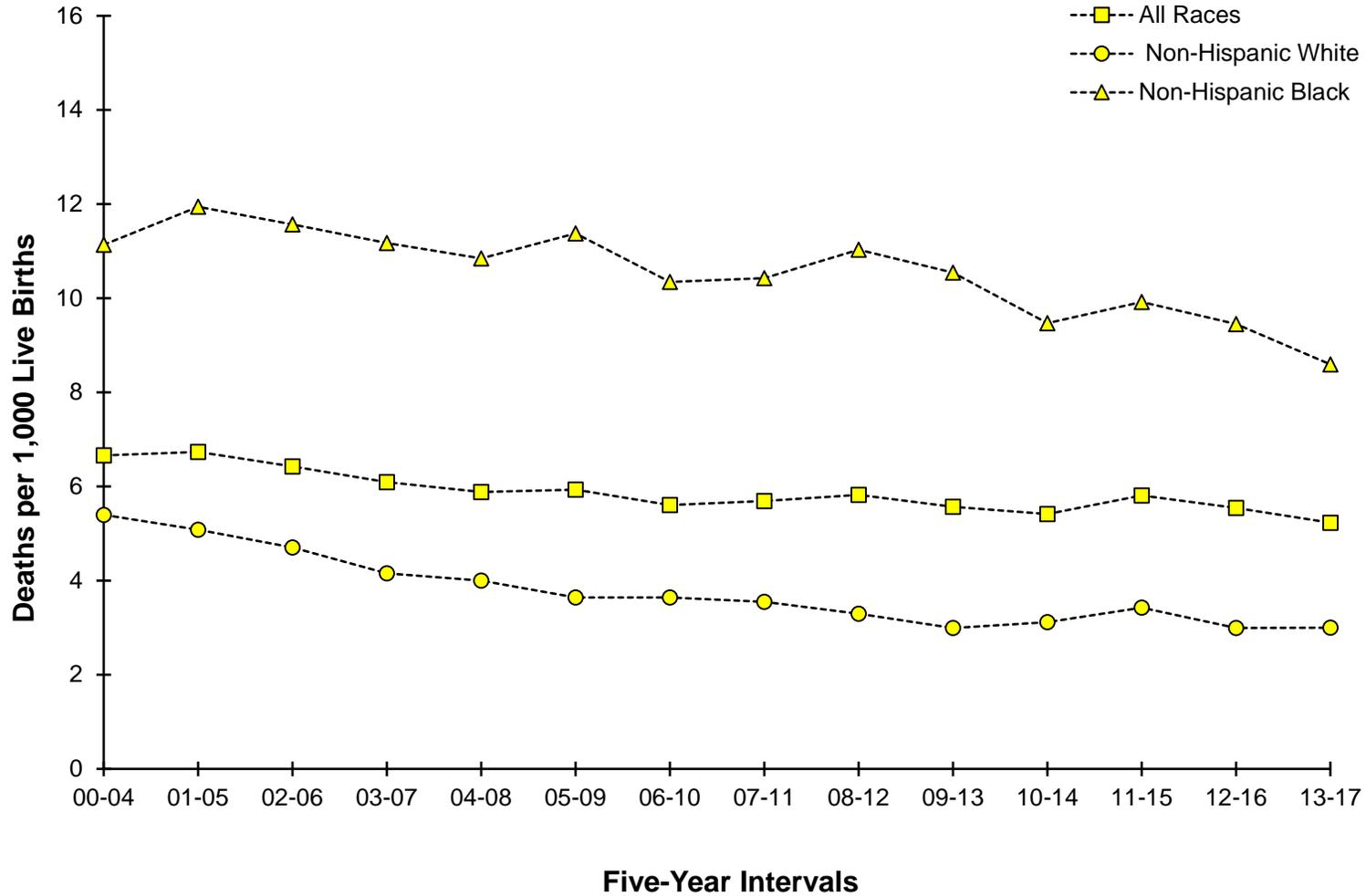
Area/ Race	2000 -2004	2001 -2005	2002 -2006	2003 -2007	2004 -2008	2005 -2009	2006 -2010	2007 -2011	2008 -2012	2009 -2013	2010 -2014	2011 -2015	2012 -2016	2013 -2017
<b>U.S.</b>														
All Races	4.6	4.6	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4.1	4.0	4.0	4.0	N/A
Non-Hispanic White	3.5	3.8	3.7	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.3	3.2	N/A
Non-Hispanic Black	9.1	9.2	9.2	9.0	8.8	8.6	8.3	8.1	7.8	7.6	7.5	7.5	7.4	N/A
<b>Delaware</b>														
All Races	6.7+	6.7+	6.4+	6.1+	5.9+	5.9+	5.6+	5.7+	5.8+	5.6+	5.4+	5.8+	5.5+	5.2
Non-Hispanic White	5.4+	5.1+	4.7+	4.2	4.0	3.6	3.6	3.5	3.3	3.0	3.1	3.4	3.0	3
Non-Hispanic Black	11.1+	11.9+	11.6+	11.2+	10.8+	11.4+	10.3+	10.4+	11.0+	10.5+	9.5+	9.9+	9.5+	8.6
<b>Kent</b>														
All Races	7.2	7.0	6.0	4.3	4.6	4.7	4.4	5.0	5.6	4.8	4.4	5.0	4.6	4.0
Non-Hispanic White	7.1	6.0	4.9	---	---	---	3.3	3.6	3.6	3.5	4.0	3.9	3.2	---
Non-Hispanic Black	8.1	10.6	9.9	9.0	9.1	10.5	7.6	7.5	9.3	7.6	---	---	6.8	---
<b>New Castle</b>														
All Races	7.0	7.1	6.9	6.8	6.5	6.7	6.2	6.4	6.7	6.5	6.4	6.8	6.5	6.2
Non-Hispanic White	5.2	5.0	4.7	4.4	4.1	3.9	3.5	3.5	3.5	3.0	2.9	3.5	3.0	3.1
Non-Hispanic Black	12.2	12.2	12.2	12.0	11.7	11.9	11.7	12.1	12.4	12.1	11.7	11.9	10.9	10.4
Wilmington														
All Races	9.2	9.6	9.1	9.2	8.9	9.6	9.0	9.7	11.6	12.2	12.4	12.6	13.2	11.4
Non-Hispanic White	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Non-Hispanic Black	12.2	12.9	12.4	12.6	11.2	12.3	12.1	13.2	14.0	15.6	14.8	13.3	12.9	11.7
Balance of NC County														
All Races	6.5	6.5	6.5	6.3	6.0	6.0	5.6	5.8	5.8	5.3	5.3	5.7	5.3	5.2
Non-Hispanic White	5.3	5.2	4.8	4.5	4.3	4.1	3.7	3.7	3.5	2.9	2.6	3.2	2.7	2.9
Non-Hispanic Black	12.2	11.8	12.0	11.6	11.9	11.7	11.4	11.4	11.6	10.5	10.4	11.3	9.9	9.8
<b>Sussex</b>														
All Races	5.1	5.5	5.3	5.6	5.2	4.9	4.9	4.1	3.4	3.6	3.5	3.7	3.8	3.8
Non-Hispanic White	4.2	4.3	4.6	5.1	4.9	4.1	4.5	3.5	---	---	---	---	---	3.1
Non-Hispanic Black	10.0	12.2	10.9	10.4	9.5	10.0	---	---	---	---	---	---	---	---

*Notes:*

1. 2013-2017 U.S. data are based on NCHS estimates.
2. Neonatal mortality rates represent the number of deaths of children under 28 days of age per 1000 live births.
3. '+' indicates that the Delaware rate is significantly higher than the U.S. rate.
4. "---" indicates rate does not meet standard of reliability or precision; based on fewer than 20 deaths in the numerator.
5. No statistical comparisons were made between the county rates and the U.S. rate due to small numbers. See Appendix C for details.

Sources: National Center for Health Statistics  
 Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

**Figure E-3. Five-Year Average Neonatal Mortality Rates by Race, Delaware, 2000-2017**



Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

**TABLE E-6. FIVE-YEAR AVERAGE POSTNEONATAL MORTALITY RATES BY RACE, COUNTY, AND CITY OF WILMINGTON, U.S., DELAWARE, 2000-2017**

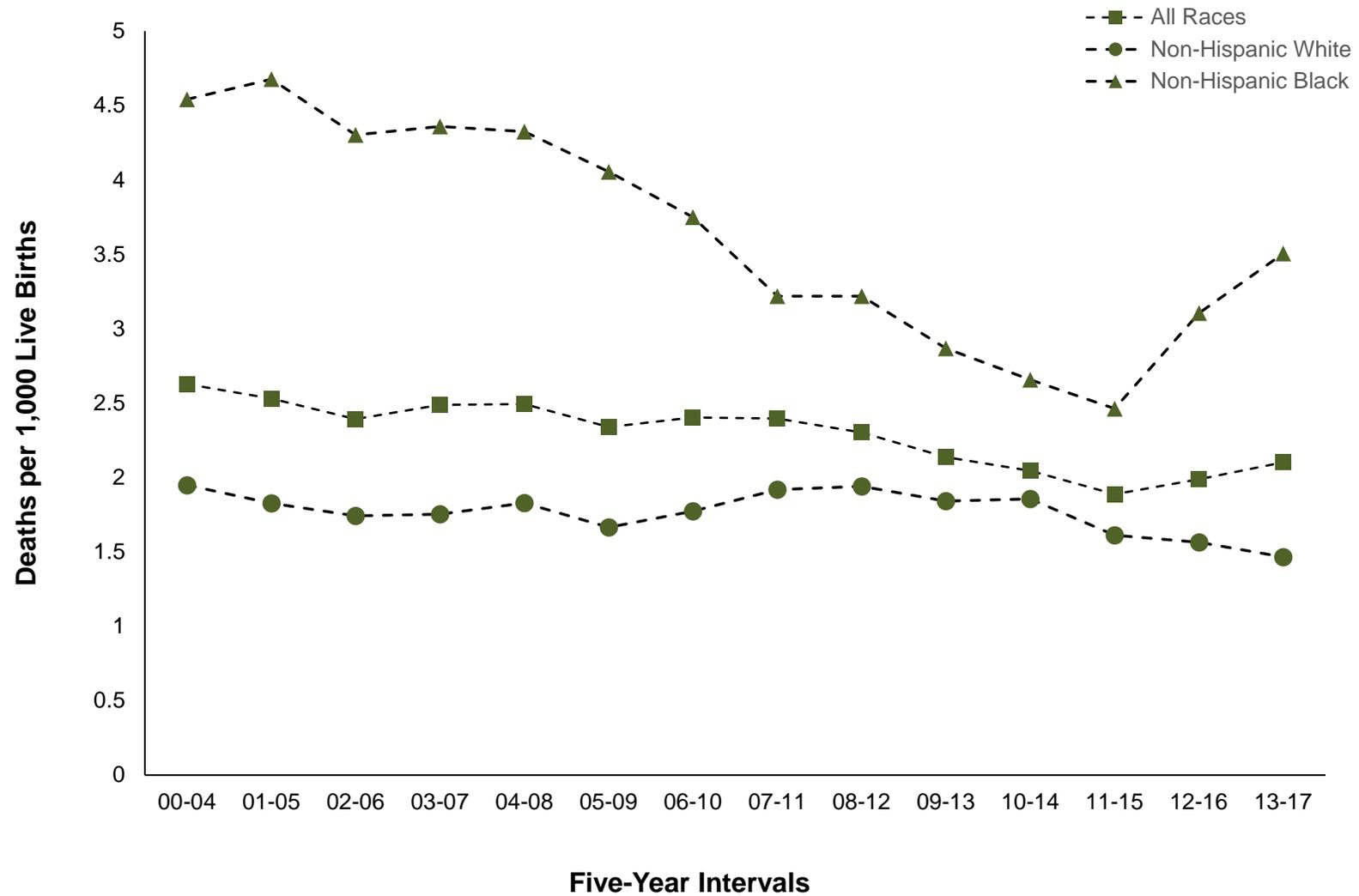
Area/ Race	2000 -2004	2001 -2005	2002 -2006	2003 -2007	2004 -2008	2005 -2009	2006 -2010	2007 -2011	2008 -2012	2009 -2013	2010 -2014	2011 -2015	2012 -2016	2013 -2017
<b>U.S.</b>														
All Races	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.1	2.0	2.0	1.9	1.9	N/A
Non-Hispanic White	1.8	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.7	1.7	1.7	N/A
Non-Hispanic Black	4.4	4.5	4.5	4.5	4.5	4.4	4.3	4.2	4.1	3.9	3.7	3.7	3.7	N/A
<b>Delaware</b>														
All Races	2.6	2.5	2.4	2.5	2.5	2.3	2.4	2.4	2.3	2.1	2.0	1.9	2.0	2.1
Non-Hispanic White	1.9	1.8	1.7	1.8	1.8	1.7	1.8	1.9	1.9	1.8	1.9	1.6	1.6	1.5
Non-Hispanic Black	4.5	4.7	4.3	4.4	4.3	4.1	3.7	3.2-	3.2	2.9-	2.7-	2.5-	3.1	3.5
<b>Kent</b>														
All Races	2.9	3.0	3.1	2.8	2.6	2.3	2.0	1.9	2.1	1.8	---	1.9	2.0	1.8
Non-Hispanic White	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Non-Hispanic Black	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>New Castle</b>														
All Races	2.4	2.3	2.3	2.5	2.5	2.3	2.6	2.7	2.5	2.4	2.3	1.8	1.9	1.9
Non-Hispanic White	1.6	1.6	1.6	1.7	1.9	1.7	1.9	2.0	2.0	1.8	2.0	1.6	1.7	1.5
Non-Hispanic Black	3.9	3.9	3.8	4.1	3.9	3.9	3.9	3.4	3.5	3.1	2.6	---	2.4	2.8
Wilmington														
All Races	---	---	3.2	3.9	4.1	4.2	5.1	5.2	4.6	3.7	---	---	---	---
Non-Hispanic White	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Non-Hispanic Black	---	---	---	---	---	---	5.3	---	---	---	---	---	---	---
Balance of NC County														
All Races	2.3	2.2	2.1	2.2	2.1	1.9	2.1	2.1	2.1	2.1	2.1	1.8	1.9	1.8
Non-Hispanic White	1.7	1.6	1.6	1.7	1.9	1.6	1.8	1.9	1.9	1.8	2.1	1.7	1.9	1.7
Non-Hispanic Black	4.3	4.3	4.0	4.0	3.6	3.4	3.1	---	---	---	---	---	---	---
<b>Sussex</b>														
All Races	3.0	2.7	2.2	2.3	2.4	2.3	2.2	2.1	1.8	1.8	---	2.1	2.3	2.9
Non-Hispanic White	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Non-Hispanic Black	---	---	---	---	---	---	---	---	---	---	---	---	---	---

*Notes:*

1. 2013-2017 U.S. data are based on NCHS estimates.
2. Postneonatal mortality rates represent the number of deaths of children 28 to 364 days of age per 1000 live births.
3. '-' indicates that the Delaware rate is significantly lower than the U.S. rate.
4. "----" Indicates rate does not meet standard of reliability or precision; based on fewer than 20 deaths in the numerator.
5. No statistical comparisons were made between the county rates and the U.S. rate due to small numbers. See Appendix C for details.

*Sources: National Center for Health Statistics  
Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center*

**Figure E-4. Five-Year Average Postneonatal Mortality Rates by Race, Delaware, 2000-2017**



Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

**TABLE E-7. FIVE-YEAR AVERAGE INFANT MORTALITY RATES BY SELECTED RISK MARKERS AND RACE OF MOTHER, DELAWARE, 2012-2016 LIVE BIRTH COHORT**

Risk Factor	Non-Hispanic		
	All	White	Black
<b>Birth Weight of Child</b>			
<2500	62.2	48.1	74.7
<1500	263.8	221.4	290.9
1500-2499	9.8	---	---
2500+	2.1	2.0	2.6
<b>Age of Mother</b>			
<20	7.7	---	---
20-24	8.8	7.6	11.6
25-29	7.5	5.0	12.9
30+	6.4	4.2	12.3
<b>Marital Status of Mother</b>			
Married	4.6	3.6	8.5
Single	10.3	8.4	13.2
<b>Education of Mother</b>			
<12 years	7.0	9.0	8.2
H.S. diploma	10.2	6.8	15.7
1+ years college	5.7	4.1	9.5
<b>Interval Since Last Live Birth</b>			
<18 months	10.6	---	---
18+ months	4.4	3.4	7.8

*Notes:*

1. Infant mortality rates represent the number of deaths to children under one year of age per 1,000 live births.

*Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center*

**TABLE E-8. LEADING CAUSES OF INFANT DEATH BY GESTATIONAL AGE CATEGORY, DELAWARE, 2012-2016 LIVE BIRTH COHORT**

Leading causes of death	Gestational Age Category					% Born Very Preterm	% Born Preterm
	Very preterm	Moderately preterm	Term	Unknown	Total		
Disorders related to short gestation and low birth weight, not elsewhere classified	85	0	1	0	86	98.8	98.8
Newborn affected by maternal complications of pregnancy	52	2	1	0	55	94.5	98.2
Congenital malformations, deformations, and chromosomal abnormalities	9	14	23	0	46	19.6	50.0
Sudden infant death syndrome	0	3	22	0	25	0.0	12.0
Newborn affected by complications of placenta, cord, and membranes	20	1	0	0	21	95.2	100.0
Respiratory distress of newborn	16	0	1	0	17	94.1	94.1
Bacterial sepsis of newborn	7	1	4	0	12	58.3	66.7
Diseases of the circulatory system	1	1	8	0	10	10.0	20.0
Accidents (unintentional injuries)	1	1	7	0	9	11.1	22.2
Diarrhea and gastroenteritis of infectious origin	8	0	0	0	8	100.0	100.0
Intrauterine hypoxia and birth asphyxia	4	1	3	0	8	50.0	62.5
Assault (homicide)	0	1	5	0	6	0.0	16.7
Atelectasis	5	0	0	0	5	100.0	100.0
Necrotizing enterocolitis of newborn	4	0	1	0	5	80.0	80.0
Volume depletion, disorders of fluid, electrolyte and acid-base balance	2	0	1	1	4	50.0	50.0
Neonatal hemorrhage	2	2	0	0	4	50.0	100.0
Septicemia	3	0	0	0	3	100.0	100.0
Newborn affected by other complications of labor and delivery	3	0	0	0	3	100.0	100.0
Hydrops fetalis not due to hemolytic disease	2	1	0	0	3	66.7	100.0
Diseases of the blood and blood-forming organs and certain disorders involving	1	0	1	0	2	50.0	50.0
All other causes	31	7	29	0	67	46.3	56.7
<b>TOTAL</b>	<b>256</b>	<b>35</b>	<b>107</b>	<b>1</b>	<b>399</b>	<b>64.2</b>	<b>72.9</b>

*Notes:*

1. Leading causes of infant death are categorized using NCHS rankable causes of infant death, specific ICD-10 codes are shown in Appendix D.
2. Very preterm is defined as less than 32 weeks of gestation.
3. Moderately preterm is defined as between 32 and 36 weeks of gestation.
4. Term is defined as 37 and greater weeks of gestation.
5. The percent born preterm includes both the very preterm and moderately preterm groups.

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

**TABLE E-9. FIVE-YEAR AVERAGE INFANT MORTALITY RATES BY RACE AND SELECTED RISK MARKERS, DELAWARE LIVE BIRTH COHORT, 2000-2016**

Parameter/ Race	2000 -2004	2001 -2005	2002 -2006	2003 -2007	2004 -2008	2005 -2009	2006 -2010	2007 -2011	2008 -2012	2009 -2013	2010 -2014	2011 -2015	2012 -2016
<b>BIRTHWEIGHT</b>													
<b>2500+</b>													
All Races	2.5	2.2	2.2	2.3	2.0	1.9	2.2	2.2	2.2	2.2	2.2	2.2	2.1
Non-Hispanic White	2.2	1.9	1.7	1.8	1.6	1.6	2.0	2.3	2.4	2.5	2.4	2.2	2.0
Non-Hispanic Black	3.9	3.5	3.6	3.4	2.9	2.7	2.6	2.2	2.5	2.5	2.5	2.6	2.6
<b>&lt;2500</b>													
All Races	73.1	74.5	69.9	68.8	69.2	70.6	65.5	67.1	68.2	64.6	61.7	64.6	62.2
Non-Hispanic White	68.2	67.3	62.9	58.4	59.8	55.5	54.5	52.3	51.1	46.9	47.1	49.4	48.1
Non-Hispanic Black	83.2	88.1	81.1	82.6	84.2	90.1	82.1	86.5	88.9	83.3	76.3	79.6	74.7
<b>&lt;1500</b>													
All Races	306.2	313.9	289.4	285.8	286.8	279.3	260.8	264.7	267.6	258.6	253.1	267.7	263.8
Non-Hispanic White	310.0	310.3	283.9	270.5	268.1	240.6	228.6	222.5	215.2	203.9	209.0	228.3	221.4
Non-Hispanic Black	302.8	316.3	289.1	285.7	290.9	298.0	283.3	295.2	308.6	296.5	277.2	289.4	290.9
<b>GESTATION</b>													
<b>37+ weeks</b>													
All Races	2.4	2.2	2.2	2.3	2.0	2.0	2.4	2.6	2.6	2.5	2.6	2.5	2.2
Non-Hispanic White	2.0	1.8	1.7	1.9	1.8	1.7	2.3	2.7	2.7	2.7	2.8	2.3	2.0
Non-Hispanic Black	4.0	3.4	3.4	3.4	2.8	2.6	2.7	2.6	2.7	2.7	2.9	3.1	3.0
<b>&lt;37 weeks</b>													
All Races	52.6	53.5	49.1	47.1	47.0	47.3	43.6	44.3	45.5	44.0	41.5	44.8	43.3
Non-Hispanic White	46.6	45.4	40.5	36.8	36.8	35.0	34.2	33.0	32.3	31.2	28.9	32.8	33.0
Non-Hispanic Black	67.9	73.0	68.4	67.3	68.5	71.5	64.4	66.8	69.6	65.6	60.1	63.0	58.5
<b>&lt;32 weeks</b>													
All Races	239.4	249.1	232.4	220.4	220.4	216.9	195.0	195.7	198.7	190.8	178.9	189.6	186.9
Non-Hispanic White	239.7	241.7	215.6	192.6	191.1	178.3	160.1	154.9	146.2	137.7	130.1	144.2	144.6
Non-Hispanic Black	240.6	260.3	249.2	245.6	254.0	258.1	236.5	241.2	249.6	235.5	216.0	226.1	225.0
<b>PLURALITY</b>													
<b>Single</b>													
All Races	7.5	7.4	7.1	7.2	7.0	7.0	7.0	7.0	6.9	6.7	6.3	6.4	6.1
Non-Hispanic White	5.8	5.6	5.2	5.2	5.1	4.7	5.3	5.4	5.2	5.1	4.8	4.6	4.4
Non-Hispanic Black	13.6	13.7	13.0	12.8	12.2	12.6	11.8	11.7	11.8	11.5	10.6	10.9	10.4
<b>Plural</b>													
All Races	50.3	52.0	47.0	44.0	40.3	41.0	32.6	34.2	35.0	34.5	36.1	42.6	43.4
Non-Hispanic White	43.0	42.6	37.3	30.2	26.5	26.2	21.0	20.8	22.0	22.2	27.0	33.3	35.2
Non-Hispanic Black	54.3	65.0	59.7	64.4	68.6	70.4	54.9	54.9	56.6	46.6	40.5	47.5	50.4
<b>SMOKING DURING PREGNANCY</b>													
<b>No</b>													
All Races	8.2	8.2	7.9	7.7	7.4	7.6	7.4	7.4	7.4	7.2	6.7	6.9	6.6
Non-Hispanic White	6.1	5.9	5.8	5.3	5.1	4.9	5.5	5.4	5.5	5.3	4.9	4.7	4.5
Non-Hispanic Black	14.4	14.8	13.7	13.5	13.2	13.8	12.8	13.0	13.3	12.5	11.6	12.0	11.2
<b>Yes</b>													
All Races	14.8	15.1	13.4	13.9	13.3	12.1	10.7	10.8	10.0	9.7	10.7	11.5	12.1
Non-Hispanic White	13.4	13.4	10.4	10.8	10.8	8.7	8.2	8.5	7.3	6.9	8.8	10.0	10.4
Non-Hispanic Black	19.7	22.3	24.2	24.2	21.6	21.9	17.8	16.1	16.2	16.0	14.4	15.0	17.6

See footnotes at the end of the table

**TABLE E-9. FIVE-YEAR AVERAGE INFANT MORTALITY RATES BY RACE AND SELECTED RISK MARKERS, DELAWARE, LIVE BIRTH COHORT, 2000-2016 (continued)**

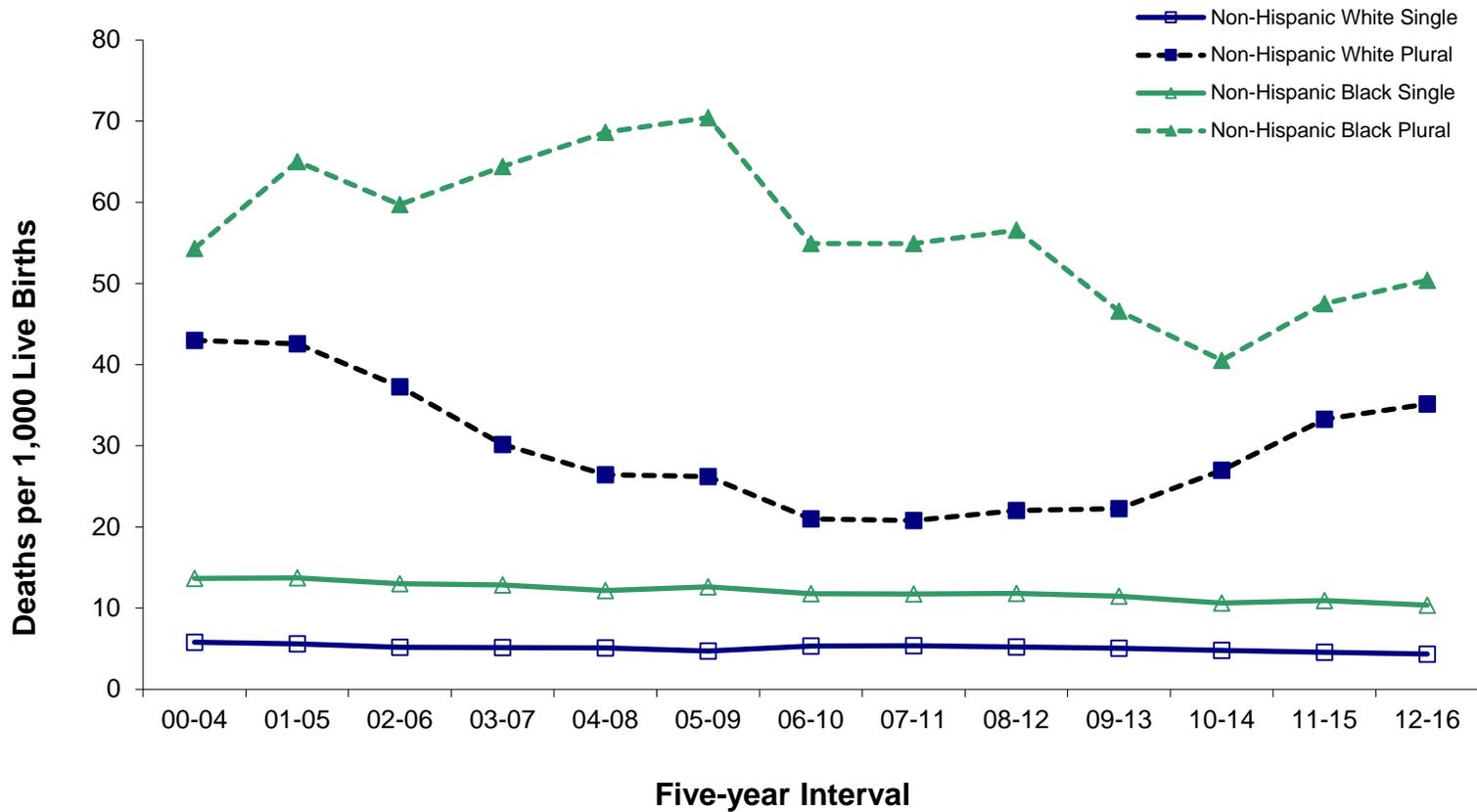
Parameter/ Race	2000 -2004	2001 -2005	2002 -2006	2003 -2007	2004 -2008	2005 -2009	2006 -2010	2007 -2011	2008 -2012	2009 -2013	2010 -2014	2011 -2015	2012 -2016
<b>EDUCATION</b>													
<b>HS Grad or less</b>													
All Races	11.4	11.1	10.7	10.8	10.1	10.0	10.0	10.0	9.5	9.5	8.8	9.3	8.9
Non-Hispanic White	9.8	9.3	8.9	8.8	8.5	8.1	8.6	8.3	7.8	7.7	7.2	7.8	7.5
Non-Hispanic Black	17.1	17.4	16.6	16.4	15.3	15.4	14.8	15.0	15.3	15.1	13.7	14.2	13.3
<b>1+ yrs college</b>													
All Races	6.0	6.3	5.8	5.4	5.6	5.9	5.6	5.8	6.2	5.7	5.7	5.9	5.7
Non-Hispanic White	5.1	5.1	4.3	4.0	4.0	3.8	4.1	4.5	4.7	4.4	4.5	4.3	4.1
Non-Hispanic Black	11.1	12.1	11.2	11.1	11.5	13.1	11.2	10.8	11.0	9.7	9.2	9.6	9.5
<b>PAYMENT FOR DELIVERY</b>													
<b>Medicaid</b>													
All Races	9.8	10.2	9.6	10.4	10.2	9.9	9.5	9.3	8.8	8.5	8.2	8.7	8.7
Non-Hispanic White	8.8	9.2	8.5	8.9	9.2	8.2	8.4	7.3	7.1	6.7	6.8	7.1	7.6
Non-Hispanic Black	13.8	14.8	13.9	14.5	14.1	14.0	12.9	13.5	13.5	13.0	12.2	12.6	11.8
<b>Private Insurance</b>													
All Races	7.8	7.6	7.4	6.7	6.4	6.6	6.4	6.4	6.6	6.4	6.2	6.2	5.9
Non-Hispanic White	6.0	5.6	5.3	4.7	4.5	4.3	4.6	5.1	4.9	4.9	4.6	4.5	4.0
Non-Hispanic Black	17.0	17.1	16.7	15.5	14.9	16.3	14.8	13.4	13.9	12.6	11.3	12.2	12.0

*Notes:*

1. See the Basic Definitions' section for definitions of birthweight, gestation, prenatal care attainment, and plurality.
2. "\*" indicates rate does not meet standards of reliability or precision; based on fewer than 20 deaths in the numerator.
3. Primary source of payment for delivery not available prior to 1991.

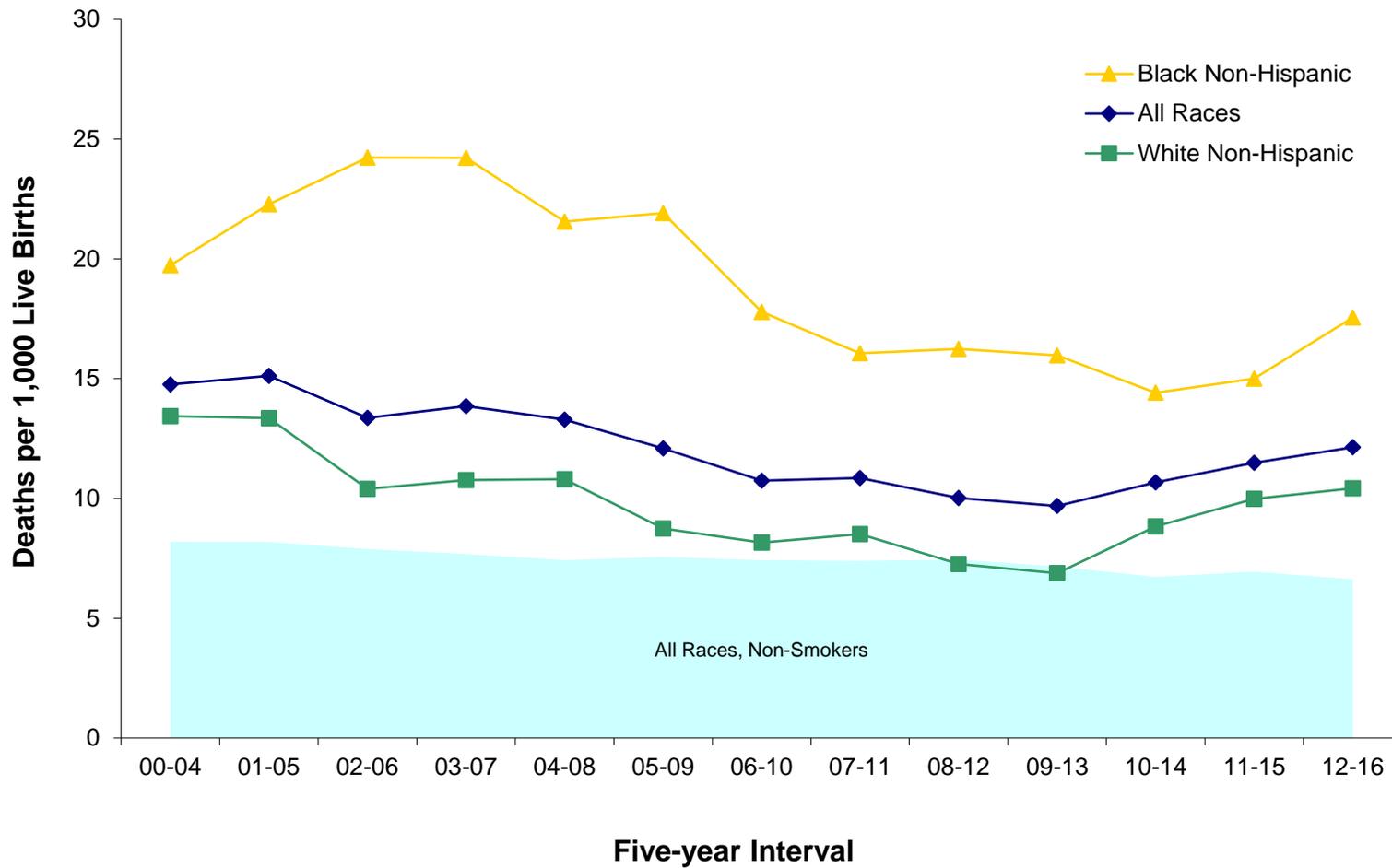
Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

**Figure E-5. Five-year Average Infant Mortality Rates by Race and Plurality, Delaware, 2000-2016 Live Birth Cohort**



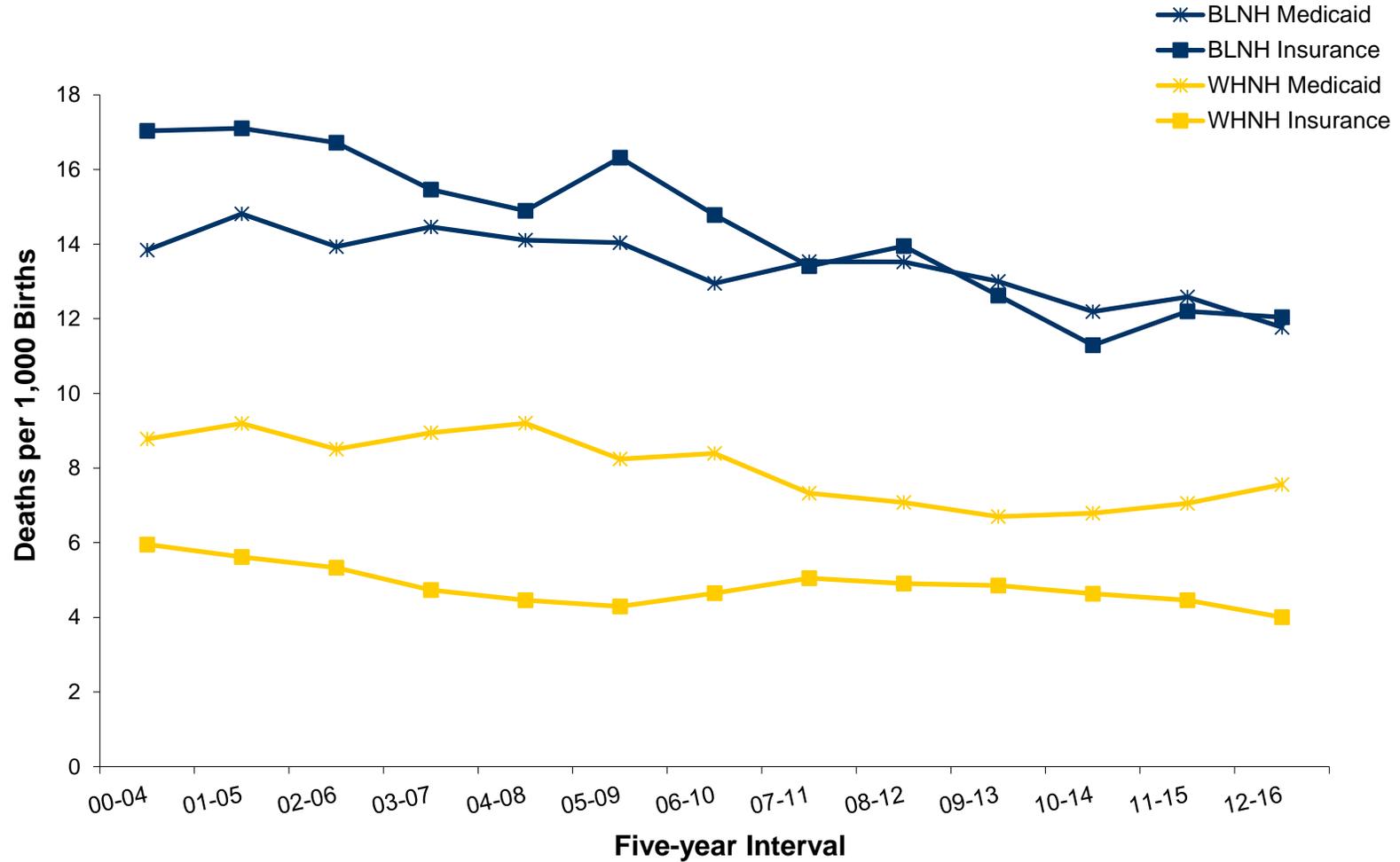
Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

**Figure E-6. Five-year Average Infant Mortality Rates by Race of Mothers who Smoked during Pregnancy versus all Non-smoking Mothers, Delaware, 2000-2016 Live Birth Cohort**



Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

**Figure E-7. Five-year Average Infant Mortality Rates by Race and Source of Payment for Delivery, Delaware, 2000-2016 Live Birth Cohort**



Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

**TABLE E-10. NUMBER OF INFANT DEATHS BY PLURALITY, BIRTH WEIGHT IN GRAMS, RACE OF MOTHER, AND SEX OF CHILD, DELAWARE, 2012-2016, LIVE BIRTH COHORT**

Plurality/ Birth Weight	Race and Sex											
	All Races			Non-Hispanic White			Non-Hispanic Black			Other Non-Hispanic		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
<b>All Births</b>	399	219	180	156	81	75	171	97	74	19	11	8
<2500	295	165	130	100	56	44	138	77	61	15	8	7
<1500	258	147	111	85	47	38	128	74	54	13	6	7
<500	133	73	60	35	19	16	77	42	35	8	3	5
500-999	106	67	39	39	23	16	46	31	15	4	2	2
1000-1499	19	7	12	11	5	6	5	1	4	1	1	0
1500-1999	13	7	6	5	3	2	3	1	2	1	1	0
2000-2499	24	11	13	10	6	4	7	2	5	1	1	0
2500+	103	54	49	55	25	30	33	20	13	4	3	1
2500-2999	39	20	19	22	10	12	9	4	5	2	2	0
3000-3499	35	16	19	15	5	10	15	10	5	2	1	1
3500-3999	17	9	8	9	4	5	6	3	3	0	0	0
4000-4499	11	8	3	8	5	3	3	3	0	0	0	0
4500+	1	1	0	1	1	0	0	0	0	0	0	0
Unknown	1	0	1	1	0	1	0	0	0	0	0	0
<b>Single Births</b>	326	179	147	124	65	59	145	81	64	17	9	8
<2500	228	127	101	73	42	31	113	61	52	13	6	7
<1500	195	112	83	60	35	25	104	59	45	11	4	7
<500	98	52	46	24	14	10	60	31	29	7	2	5
500-999	82	55	27	28	17	11	39	27	12	4	2	2
1000-1499	15	5	10	8	4	4	5	1	4	0	0	0
1500-1999	10	5	5	4	2	2	2	0	2	1	1	0
2000-2499	23	10	13	9	5	4	7	2	5	1	1	0
2500+	97	52	45	50	23	27	32	20	12	4	3	1
2500-2999	38	20	18	22	10	12	8	4	4	2	2	0
3000-3499	32	15	17	12	4	8	15	10	5	2	1	1
3500-3999	15	8	7	7	3	4	6	3	3	0	0	0
4000-4499	11	8	3	8	5	3	3	3	0	0	0	0
4500+	1	1	0	1	1	0	0	0	0	0	0	0
Unknown	1	0	1	1	0	1	0	0	0	0	0	0
<b>Plural Births</b>	73	40	33	32	16	16	26	16	10	2	2	0
<2500	67	38	29	27	14	13	25	16	9	2	2	0
<1500	63	35	28	25	12	13	24	15	9	2	2	0
<500	35	21	14	11	5	6	17	11	6	1	1	0
500-999	24	12	12	11	6	5	7	4	3	0	0	0
1000-1499	4	2	2	3	1	2	0	0	0	1	1	0
1500-1999	3	2	1	1	1	0	1	1	0	0	0	0
2000-2499	1	1	0	1	1	0	0	0	0	0	0	0
2500+	6	2	4	5	2	3	1	0	1	0	0	0
2500-2999	1	0	1	0	0	0	1	0	1	0	0	0
3000-3499	3	1	2	3	1	2	0	0	0	0	0	0
3500-3999	2	1	1	2	1	1	0	0	0	0	0	0
4000-4499	0	0	0	0	0	0	0	0	0	0	0	0
4500+	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Note:  
Infant deaths refer to deaths of children under one year of age.

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

**TABLE E-11. NUMBER OF NEONATAL DEATHS BY PLURALITY, BIRTH WEIGHT IN GRAMS, RACE OF MOTHER, AND SEX OF CHILD, DELAWARE, 2012-2016 LIVE BIRTH COHORT**

Plurality/ Birth Weight	Race and Sex										
	All Races			Non-Hispanic White			Non-Hispanic Black			Non-Hispanic Other	
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male
<b>All Births</b>	399	219	180	103	58	45	135	79	56	17	9
<2500	295	165	130	84	45	39	124	72	52	14	7
<1500	258	147	111	78	42	36	120	72	48	12	5
<500	133	73	60	35	19	16	77	42	35	8	3
500-999	106	67	39	33	19	14	40	29	11	3	1
1000-1499	19	7	12	10	4	6	3	1	2	1	1
1500-1999	13	7	6	0	0	0	1	0	1	1	1
2000-2499	24	11	13	6	3	3	3	0	3	1	1
2500+	33	22	11	19	13	6	11	7	4	3	2
2500-2999	39	20	19	9	6	3	1	1	0	2	2
3000-3499	35	16	19	3	3	0	7	4	3	1	0
3500-3999	17	9	8	2	2	0	2	1	1	0	0
4000-4499	11	8	3	4	1	3	1	1	0	0	0
4500+	1	1	0	1	1	0	0	0	0	0	0
Unknown	1	0	1	0	0	0	0	0	0	0	0
<b>Single Births</b>	326	179	147	78	45	33	113	64	49	15	7
<2500	228	127	101	60	33	27	102	57	45	12	5
<1500	195	112	83	55	31	24	98	57	41	10	3
<500	98	52	46	24	14	10	60	31	29	7	2
500-999	82	55	27	23	13	10	35	25	10	3	1
1000-1499	15	5	10	8	4	4	3	1	2	0	0
1500-1999	10	5	5	0	0	0	1	0	1	1	1
2000-2499	23	10	13	5	2	3	3	0	3	1	1
2500+	97	52	45	18	12	6	11	7	4	3	2
2500-2999	38	20	18	9	6	3	1	1	0	2	2
3000-3499	32	15	17	2	2	0	7	4	3	1	0
3500-3999	15	8	7	2	2	0	2	1	1	0	0
4000-4499	11	8	3	4	1	3	1	1	0	0	0
4500+	1	1	0	1	1	0	0	0	0	0	0
Unknown	1	0	1	0	0	0	0	0	0	0	0
<b>Plural Births</b>	73	40	33	25	13	12	22	15	7	2	2
<2500	67	38	29	24	12	12	22	15	7	2	2
<1500	63	35	28	23	11	12	22	15	7	2	2
<500	35	21	14	11	5	6	17	11	6	1	1
500-999	24	12	12	10	6	4	5	4	1	0	0
1000-1499	4	2	2	2	0	2	0	0	0	1	1
1500-1999	3	2	1	0	0	0	0	0	0	0	0
2000-2499	1	1	0	1	1	0	0	0	0	0	0
2500+	6	2	4	1	1	0	0	0	0	0	0
2500-2999	1	0	1	0	0	0	0	0	0	0	0
3000-3499	3	1	2	1	1	0	0	0	0	0	0
3500-3999	2	1	1	0	0	0	0	0	0	0	0
4000-4499	0	0	0	0	0	0	0	0	0	0	0
4500+	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0

Note:  
Neonatal deaths refer to deaths of children under 28 days of age.

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center