

# DELAWARE VITAL STATISTICS ANNUAL REPORT, 2008



## INFANT MORTALITY

Photo courtesy of the Delaware Tourism Office

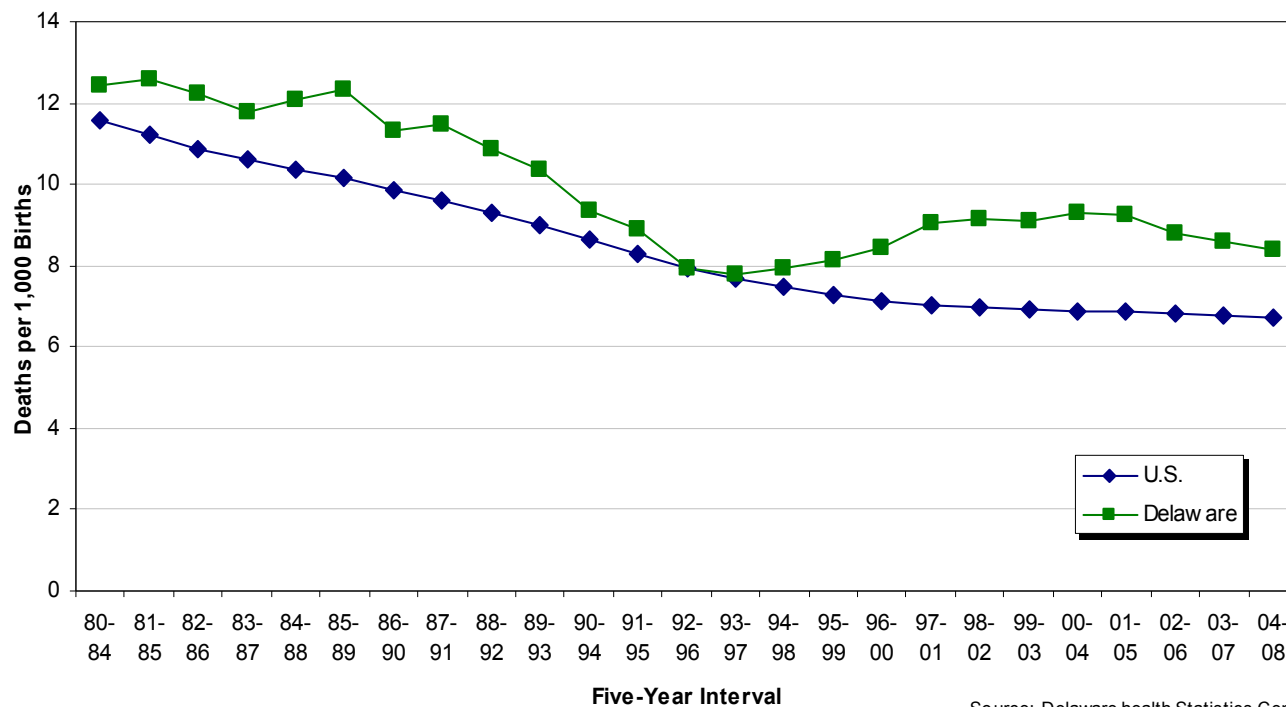
### **Suggested citation:**

Delaware Health Statistics Center. *Delaware Vital Statistics Annual Report, 2008*. Delaware Department of Health and Social Services, Division of Public Health: 2010.

## INFANT MORTALITY

Delaware's infant mortality rate (IMR) decreased for the third consecutive time period. From its 2000-2004 peak of 9.3, it declined 10 percent to 8.4 infant deaths per 1000 live births in 2004-2008. At 6.7, the U.S. rate remained significantly lower than the Delaware rate.

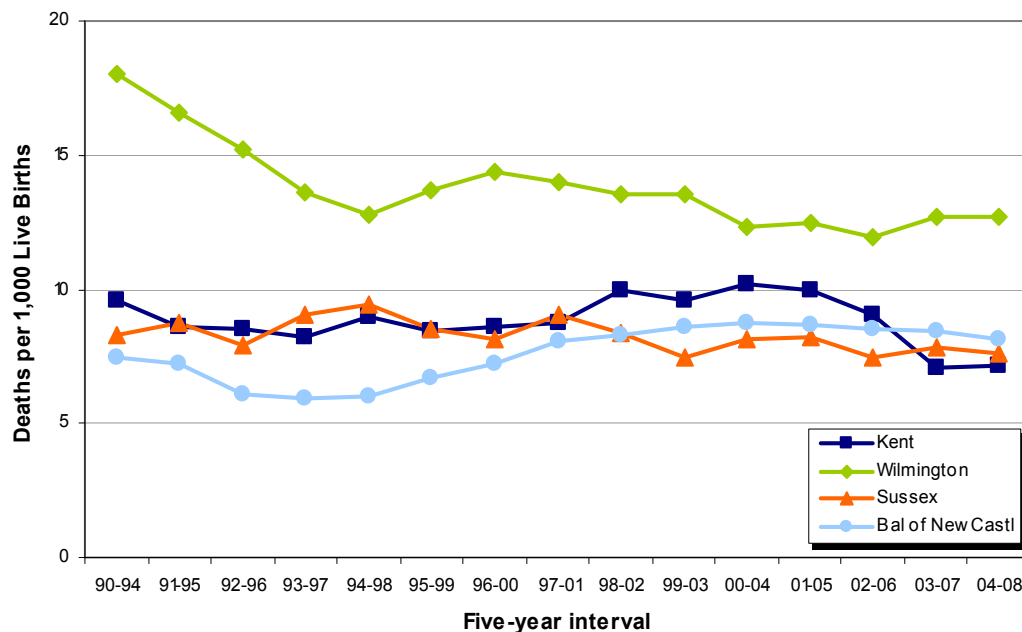
**Five-year Average Infant Mortality Rates  
Delaware and U.S., 1980-2008**



Source: Delaware health Statistics Center

Between 2003-2007 and 2004-2008, IMRs for each of Delaware's counties decreased slightly or remained stable. Overall, IMRs for the city of Wilmington were unchanged, while those for the balance of New Castle County experienced a small decline.

**Five-year Average Infant Mortality Rates  
Delaware Counties and City of Wilmington, Delaware, 1990-2008**

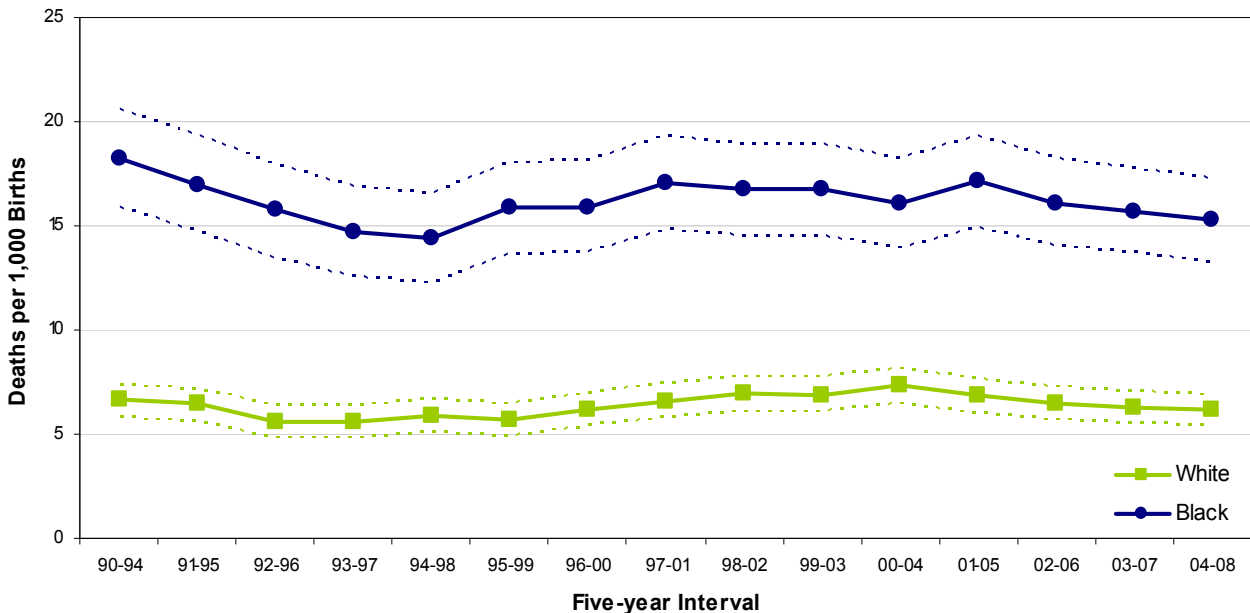


Source: Delaware health Statistics Center

## INFANT MORTALITY

As shown in the graph below, black infants experienced significantly higher mortality rates than white infants, and from 1990-1994 to 2004-2008, black IMRs were anywhere from 2.2 to 2.8 times that of white IMRs.

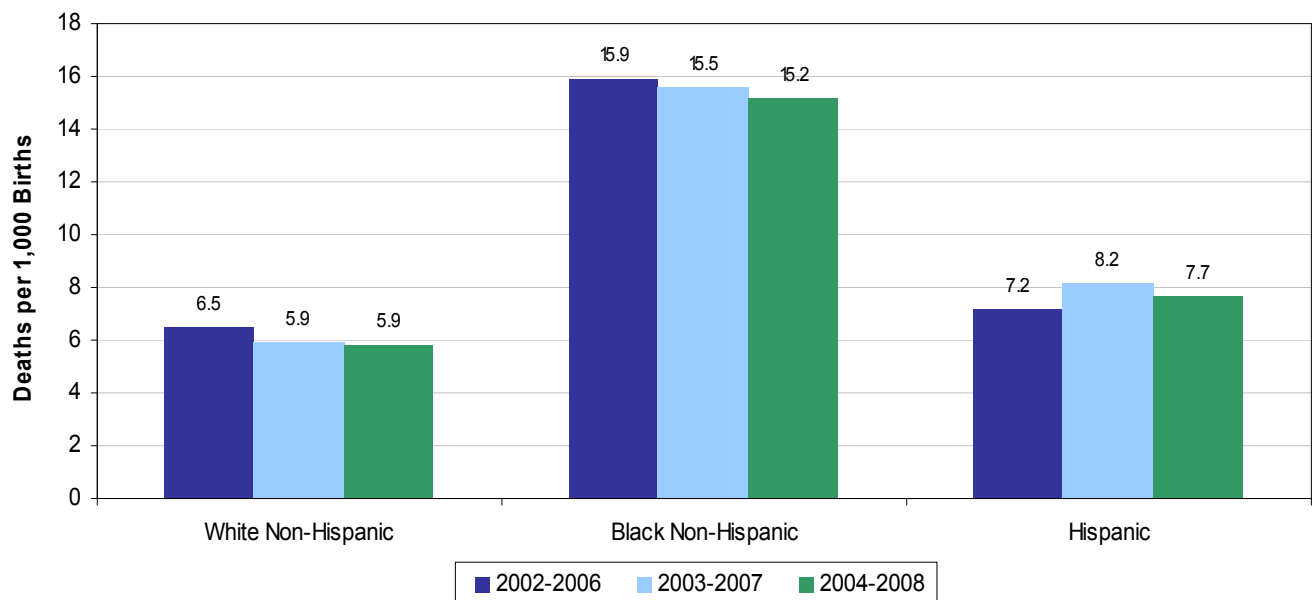
**Five-year Average Black and White Infant Mortality Rates with Confidence Intervals**  
Delaware, 1990-2008



Source: Delaware health Statistics Center

Significant disparities existed between black non-Hispanic IMRs and each of the two other groups, white non-Hispanic and Hispanic. Black non-Hispanics had the highest IMRs in all three time periods, and their rate of 15.1 deaths per 1,000 live births in 2004-2008, was 2.6 times the white non-Hispanic rate of 5.9 and nearly twice the Hispanic rate of 7.7.

**Five-year Average Infant Mortality Rates by Race and Hispanic Origin**  
Delaware, 2002-2008



Source: Delaware health Statistics Center

## INFANT MORTALITY

Not only did IMRs vary between counties, but also between races within each county. Black IMRs were consistently higher than white IMRs in all three counties, for every time period. To gauge the disparity between black and white IMRs, disparity ratios<sup>1</sup> were used.

However, as is shown in the graphs to the right, both the disparity ratio and the rates should be considered when examining the issue of infant mortality.

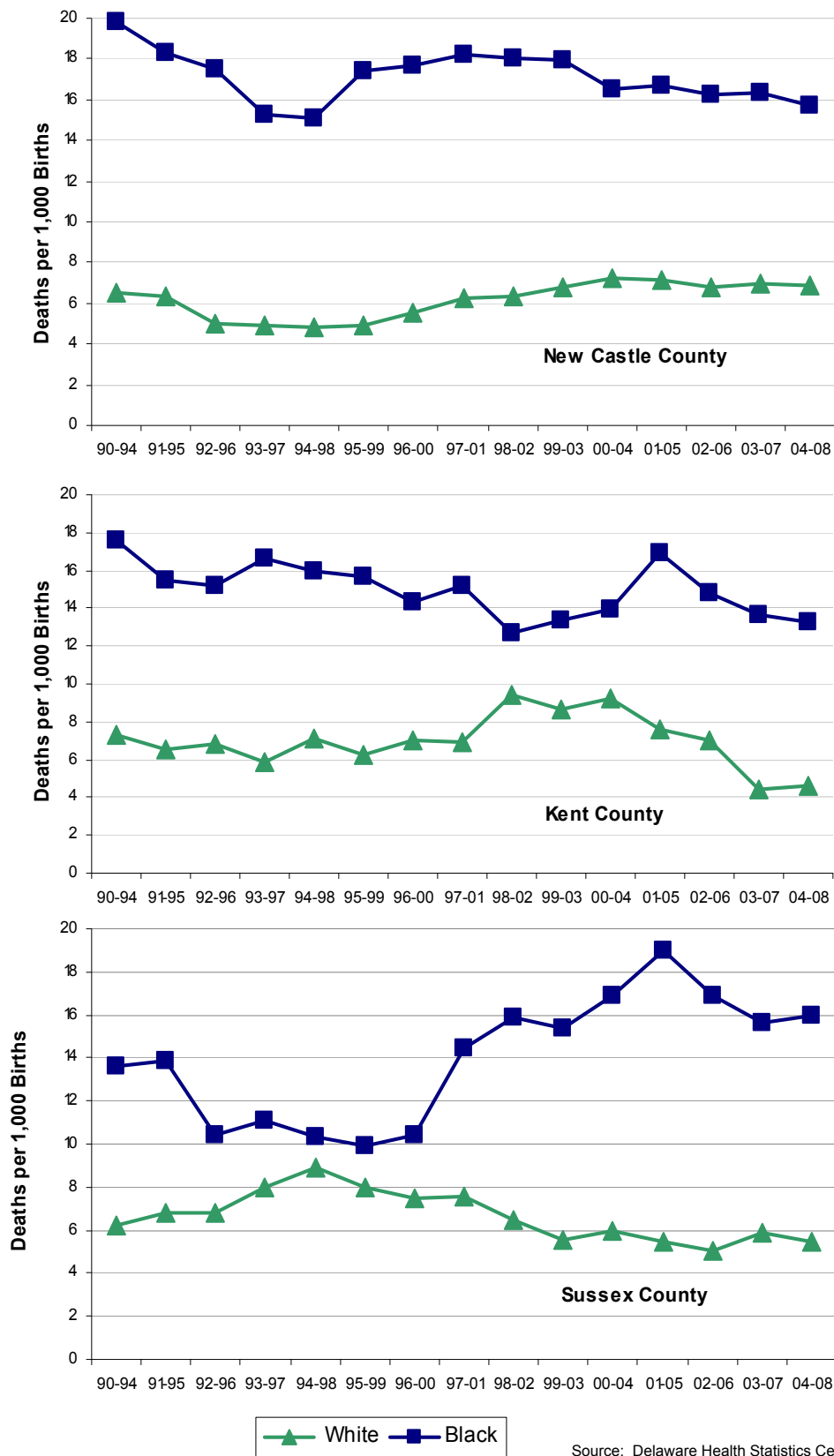
In New Castle County, rates for both races changed very little from 2003-2007 to 2004-2008, and the disparity ratio remained stable at 2.3.

Black and white IMRs remained relatively stable in Kent County; likewise, the disparity ratio changed very little, moving from 3.1 to 2.9.

Sussex County's disparity ratio widened to 2.9 due to a slight decrease in the white IMR and a small increase in the black IMR.

Of the three counties, Sussex had the highest single IMR (15.9 infant deaths per 1,000 live births to black mothers), while Kent had the lowest (4.6 infant deaths per 1,000 live births to white mothers).

Five-year Average Infant Mortality Rates by Race  
Delaware Counties, 1990-2008



Source: Delaware Health Statistics Center

1. Disparity ratios were calculated by dividing the black IMR by the white IMR; the resulting number demonstrated the magnitude of difference between black and white.

## INFANT MORTALITY- Leading Cause of Death

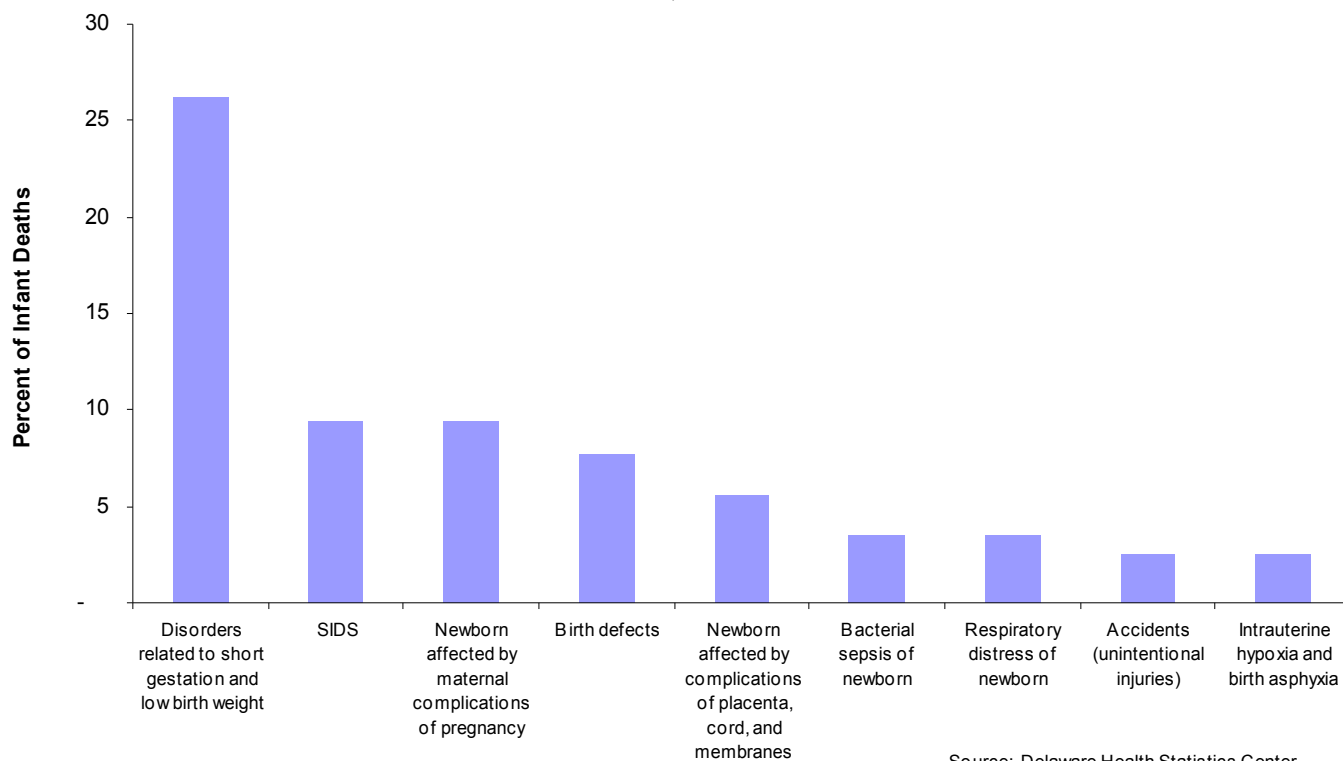
In 2004-2008 the three leading causes of infant death were:

- Disorders related to short gestation and fetal malnutrition (prematurity and low birthweight), which accounted for 24.1 percent of infant deaths,
- Congenital anomalies (birth defects), which accounted for 13.2 percent of infant deaths, and
- Sudden infant death syndrome (SIDS), which accounted for 8.9 percent of infant deaths.

Shown in the graphs below and on the following page are the most frequent causes of death by race. Disorders related to short gestation and low birthweight was the most frequent cause of death for both black and white infants.

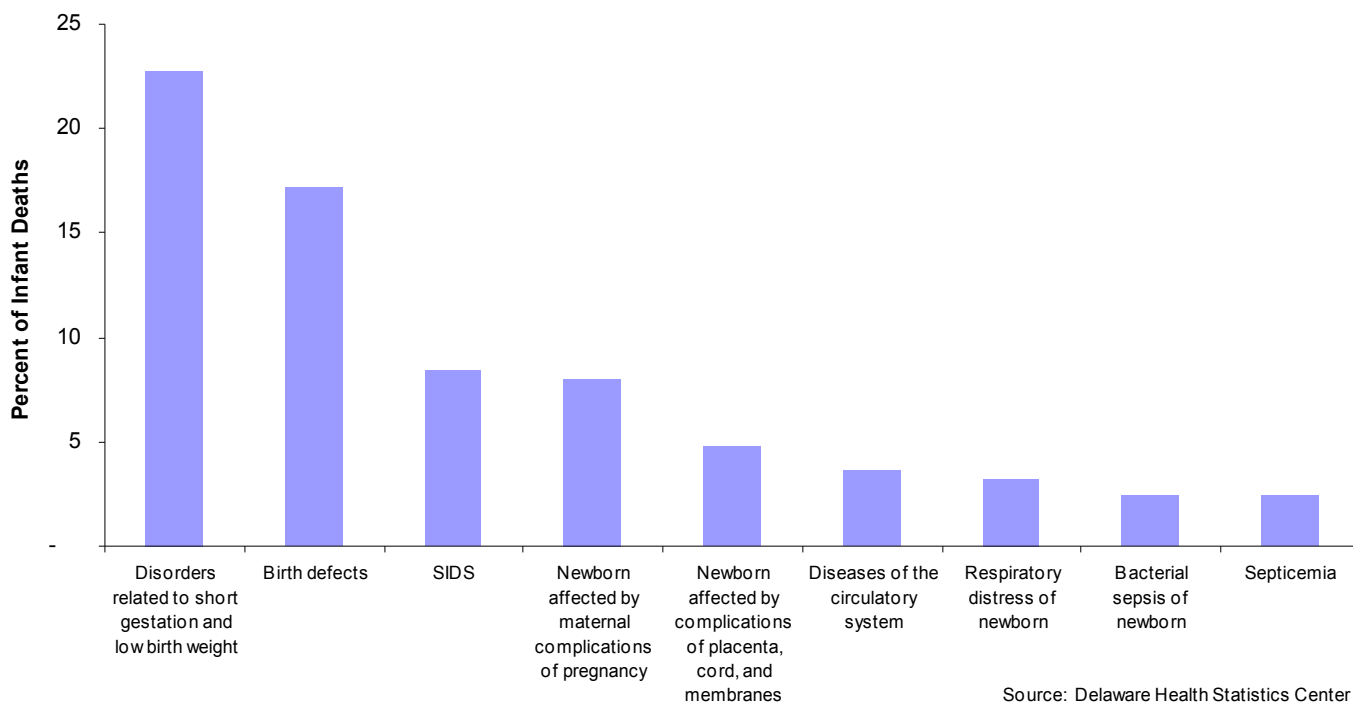
Though the proportions of deaths by race were similar for many of the causes of death, a notable exception was birth defects. While birth defects were responsible for 17.2 percent of all white infant deaths, they accounted for only 7.7 percent of black infant deaths.

**Most Frequent Causes of Black Infant Death  
Delaware, 2004-2008**



## INFANT MORTALITY- Leading Cause of Death

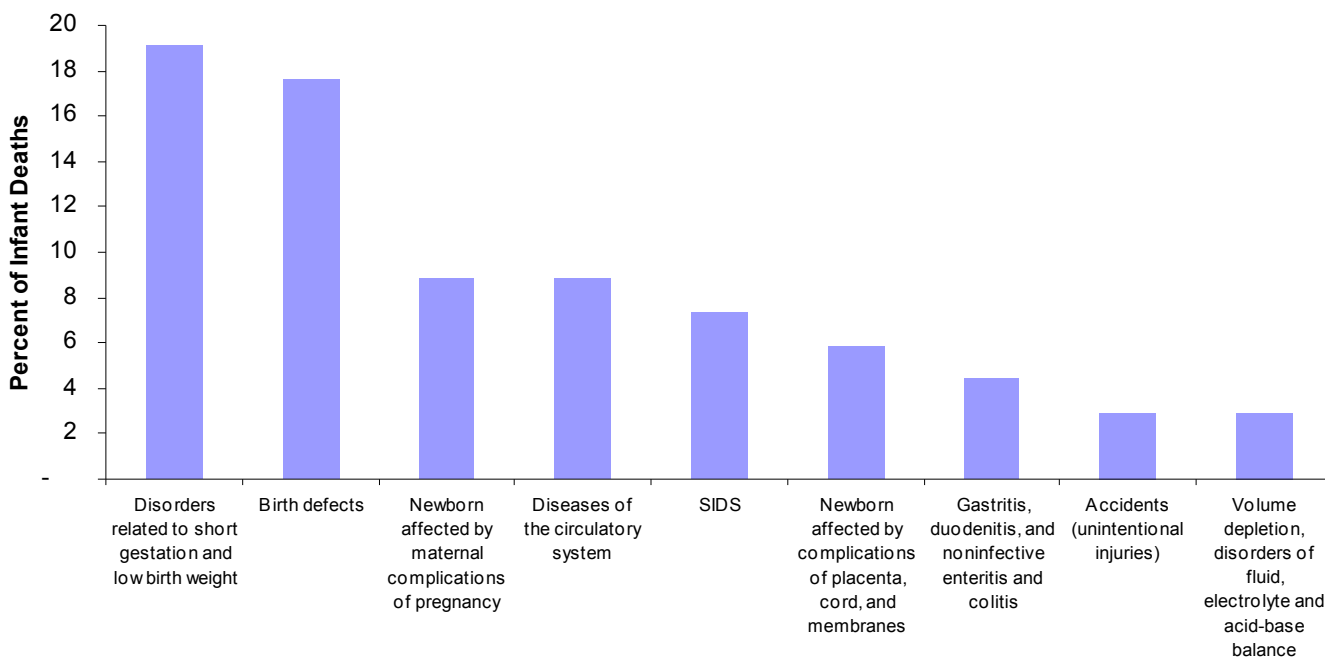
**Most Frequent Causes of White Infant Death  
Delaware, 2004-2008**



In the 1989-1993 time period, 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 been increasing. In the most recent five year period, 2004-2008, 15.1 percent of all live births were to Hispanic mothers, and 13.8 percent of all infant deaths were of Hispanic origin.

The leading cause of death for infants of Hispanic origin was disorders related to short gestation and low birthweight, followed by birth defects.

**Most Frequent Causes of Hispanic Infant Death  
Delaware, 2004-2008**

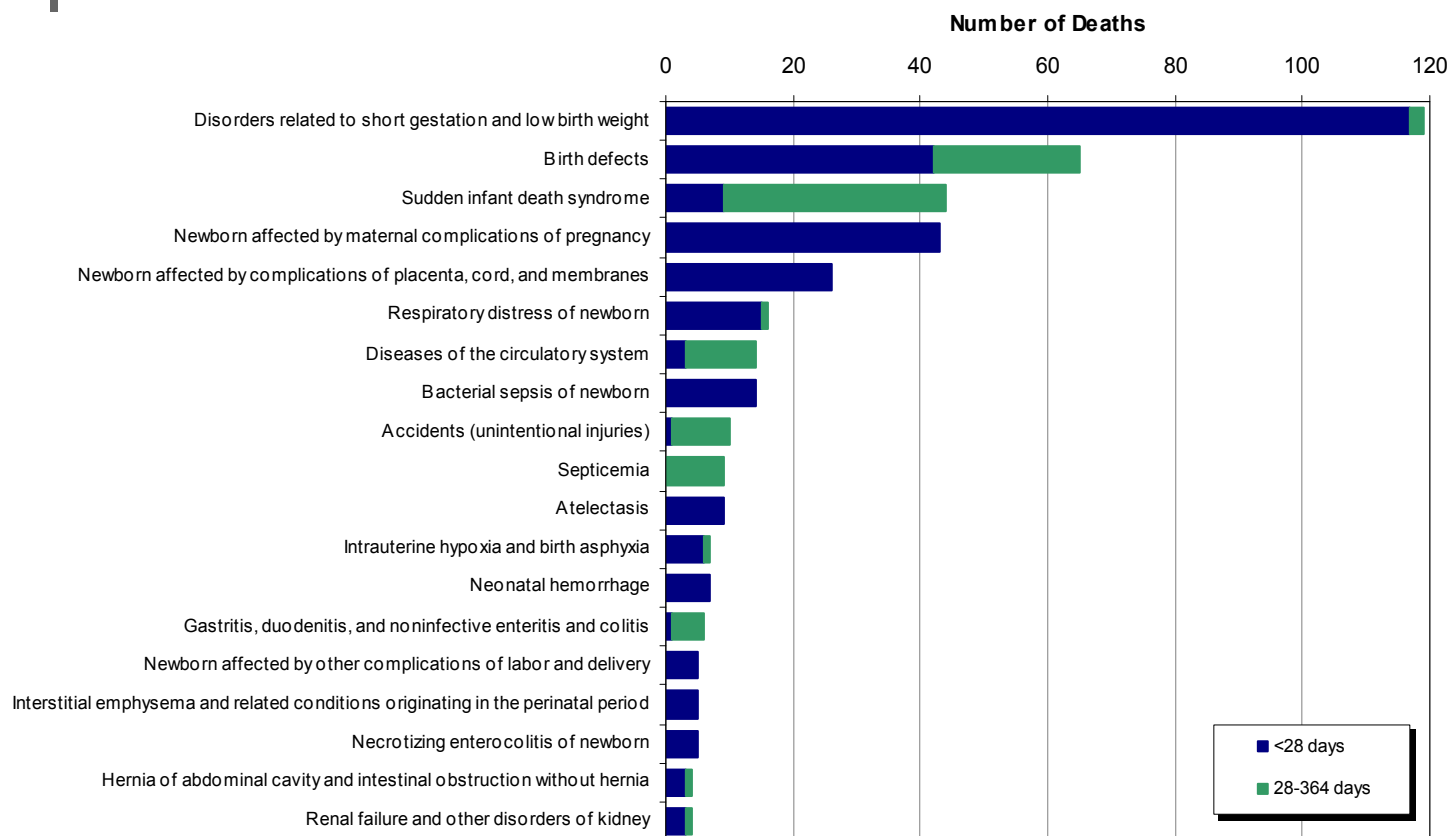


## INFANT MORTALITY - Leading Cause of Death

Ninety-four percent of all infant deaths occurred within the first six months of life, 70 percent of all infant deaths occurred within the first 28 days of life, and 41 percent occurred within 24 hours of birth.

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

**Most Frequent Causes of Infant Death  
Delaware, 2004-2008**



Source: Delaware Health Statistics Center

- Disorders related to short gestation and fetal malnutrition accounted for the greatest number of infant deaths in 2004-2008; all but two 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 83 days.

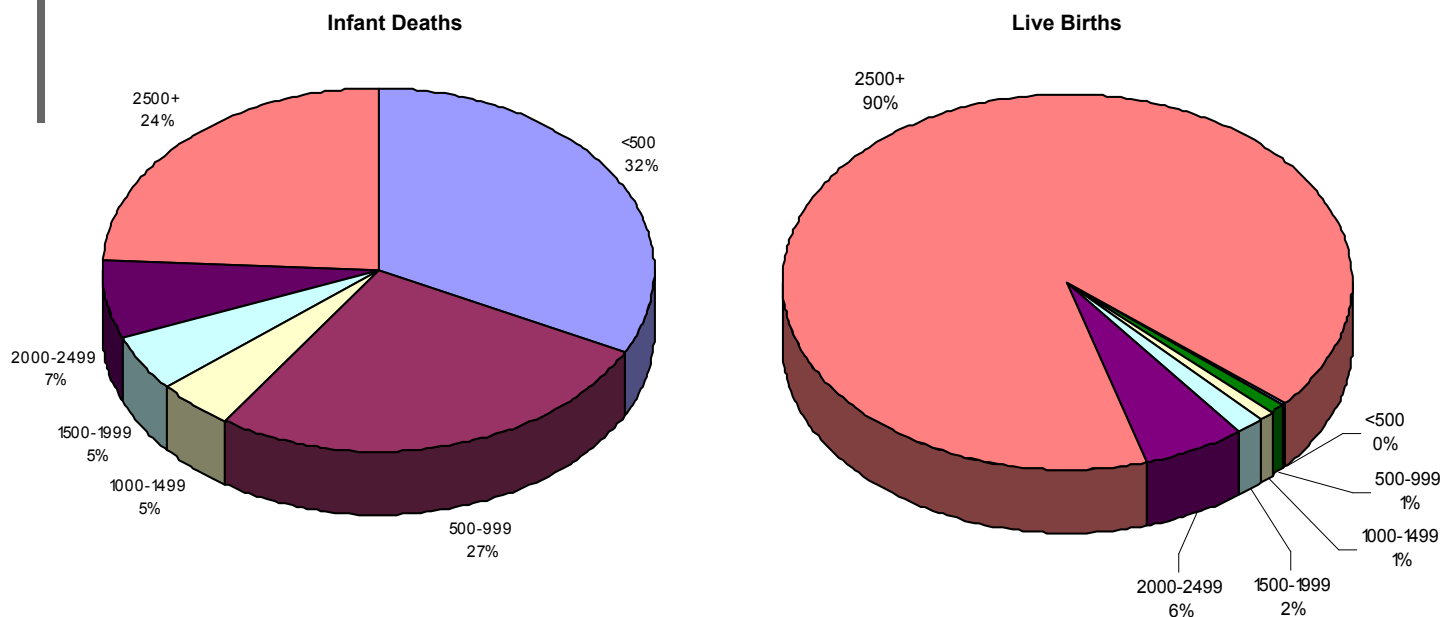
⇒ 43 percent of the SIDS deaths were associated with co-sleeping with adults and/or sleeping on soft surfaces, such as couches and adult beds.

⇒ During that same time period, there were 13 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, 6.5 percent of all infant deaths in 2004-2008 were associated with co-sleeping and/or sleeping on a soft surface.

## INFANT MORTALITY - Live Birth Cohort

Just over 1 percent of all live births were infants weighing less than 1000 grams, but they accounted for over half (58.9 percent) of all infant deaths in 2003-2007. In total, 9.3 percent of all live births in 2003-2007 were infants of low birthweight (under 2500 grams) and 75.2 percent of infant deaths were low birthweight.

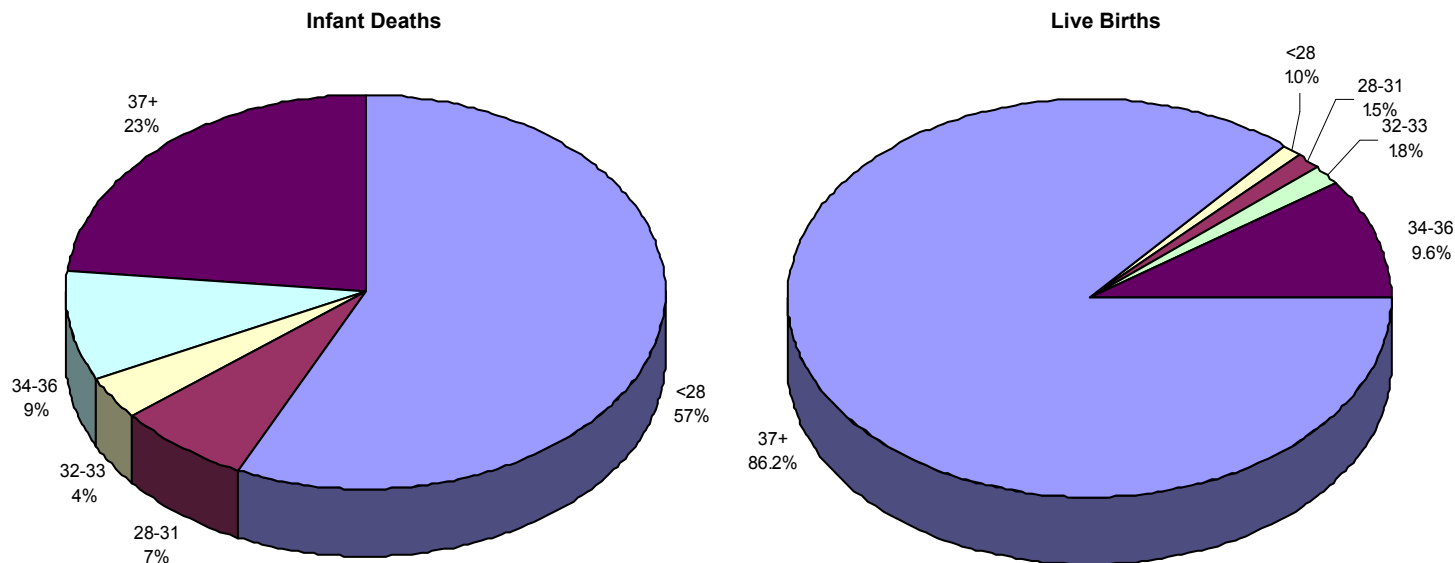
### Distribution by Birthweight, Delaware Live Birth Cohort, 2003-2007



Source: Delaware Health Statistics Center

One percent of live births in 2003-2007 were less than 28 weeks gestation at birth, but they accounted for 57 percent of all infant deaths. In total, 13.8 percent of all live births in 2003-2007 were born preterm (<37 weeks of gestation) and 76.2 percent of infant deaths were born preterm.

### Distribution by Gestation, Delaware Live Birth Cohort, 2003-2007



Source: Delaware Health Statistics Center



## INFANT MORTALITY - Live Birth Cohort

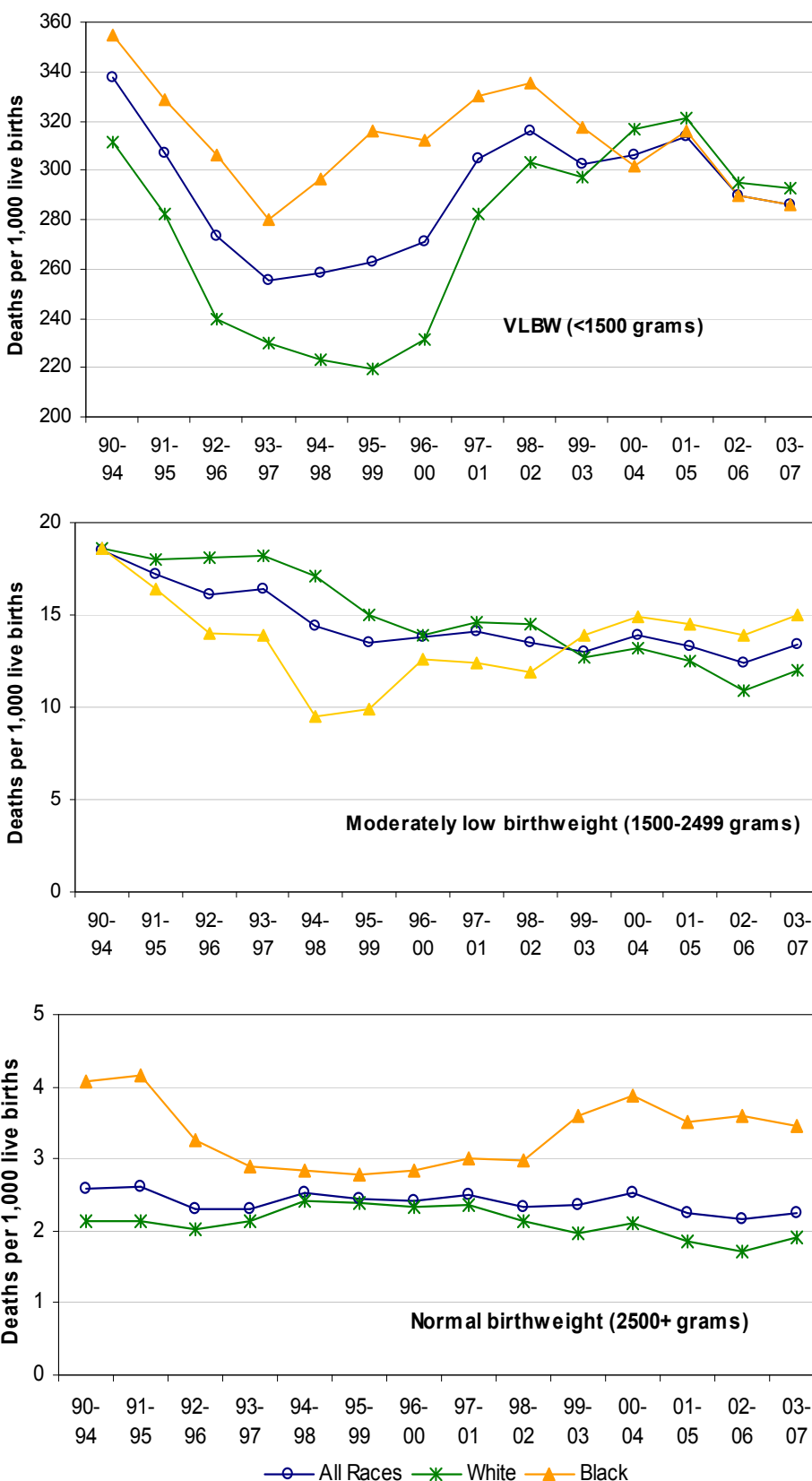
Birthweight and gestation are considered to be the most important predictors of infant health and mortality risk. Infants born too small or too early have a much greater risk of mortality than those who reach a normal birthweight (2500+ grams) or full-term gestation (37+ weeks).

IMRs for very low birthweight (VLBW) infants demonstrated no significant change from 2002-2006 to 2003-2007. Overall, IMRs declined 9.5 percent between 1998-2002 and 2003-2007, with most of the decrease occurring in the black infant mortality rates. By 2003-2007, IMRs for white and black VLBW infants were 293 and 286 infant deaths per 1,000 live births.

Though IMRs of moderately low birthweight infants of both races exhibited slight upward movement from 2002-2006 to 2003-2007; between 1998-2002 and 2003-2007, IMRs for black moderately low birthweight infants increased 26 percent, while those of white moderately low birthweight infants decreased 17 percent.

Most recently, IMRs for normal birthweight infants remained stable, though the overall change from 1998-2002 to 2003-2007 differed by race, with white IMRs decreasing by 11 percent and black IMRs increasing by 16 percent. In 2003-2007, the black IMR for normal birthweight infants was nearly double that of whites (3.5 vs. 1.9).

**Five-year Average Infant Mortality Rate by Birthweight and Race  
Delaware, 1990-2007 Live Birth Cohort**

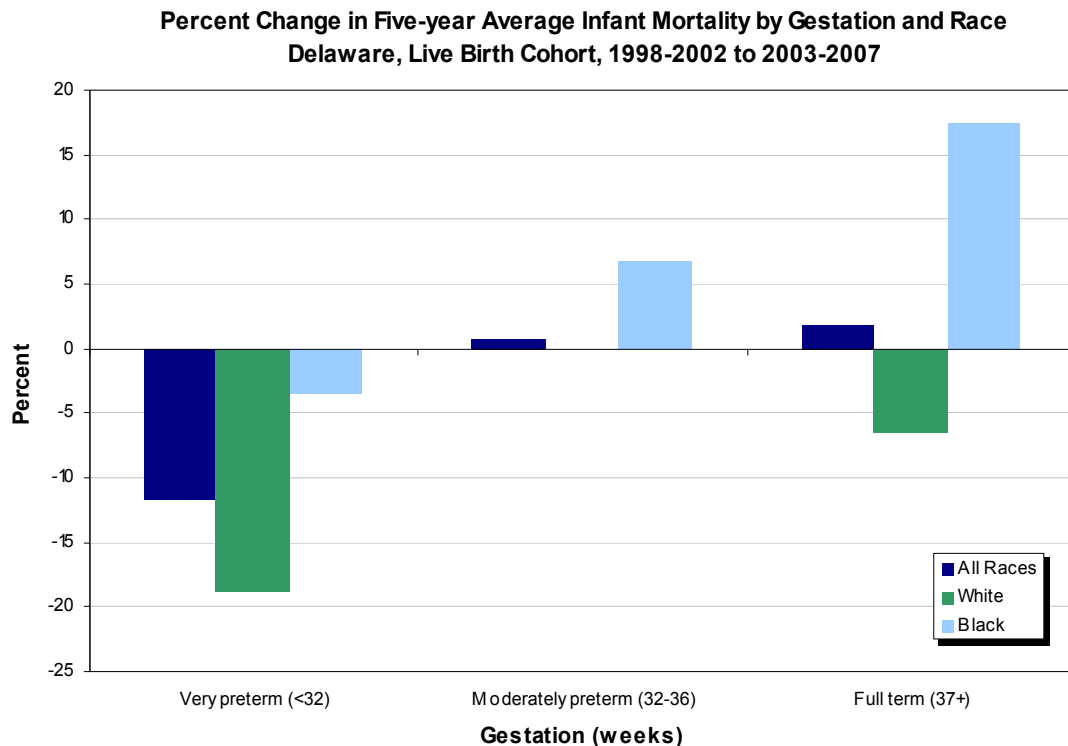


Source: Delaware Health Statistics Center

## INFANT MORTALITY - Live Birth Cohort

The change in IMRs by gestation and race for moderately premature (32-36 weeks) and full-term (37+ weeks) infants followed a pattern similar to that of moderately low and normal birthweight infants.

IMRs for very preterm infants of both races declined, though white rates dropped 19 percent while black rates decreased only 3.5 percent.



From 1992-1996 to 1997-2001, IMRs for plural births increased 77 percent, to 53.1 deaths per 1000 live births; during the same time, IMRs for singleton births increased by 4 percent. Since then, plural IMRs have decreased a total of 17.3 percent, with most of that occurring in the most recent time period. IMRs for singleton births remained stable. In 2003-2007, the infant mortality rate for plural births was 6 times that of singleton births (44 vs. 7.2).

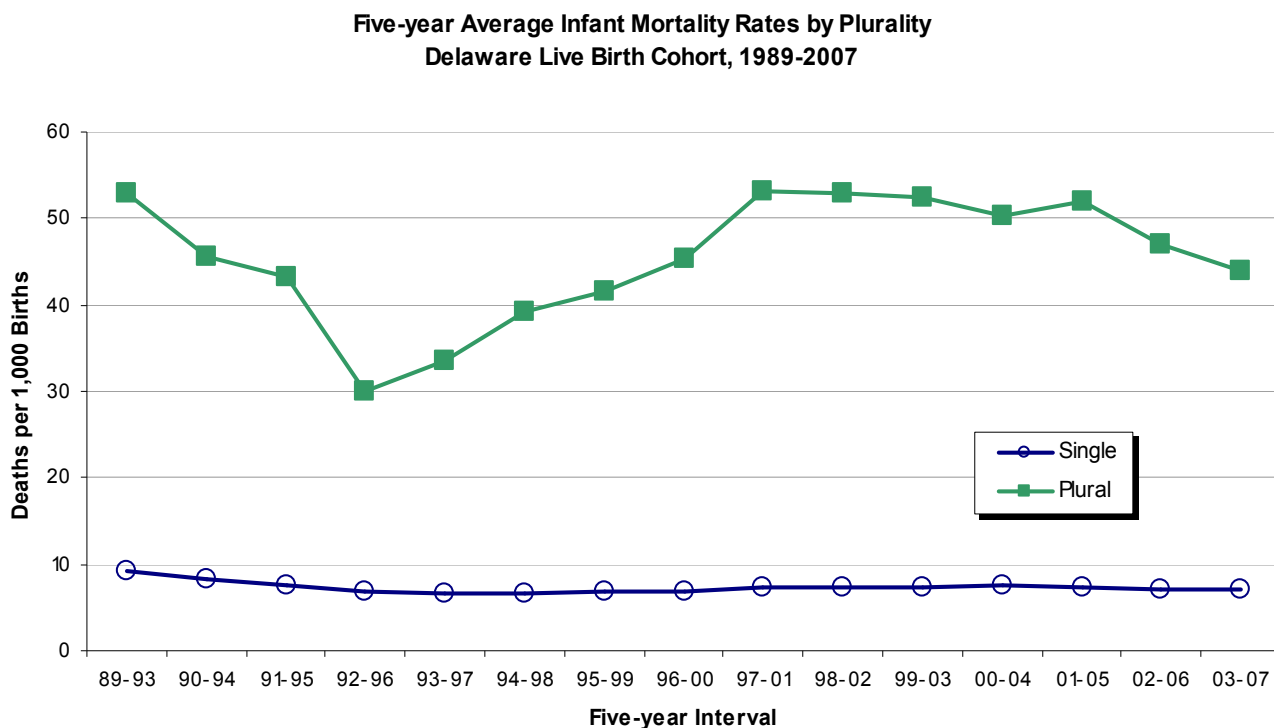


TABLE E-1  
NUMBER OF INFANT DEATHS BY RACE

U.S., DELAWARE, COUNTIES AND CITY OF WILMINGTON, 1991-2008

Area/ Race	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>U.S.</b>																		
All Races	36766	34628	33466	31710	29583	28237	28045	28371	27937	28035	27568	28034	28025	27936	28440	28527	29138	28033*
White	23657	22164	21497	20504	19490	18749	18539	18561	18067	18144	17955	18369	18440	18231	18514	18403	18807	18162
Black	11994	11348	10887	10072	9118	8490	8496	8726	8822	8771	8498	8524	8402	8494	8695	8858	8944	8513
Other	1115	1116	1082	1134	975	998	1010	1084	1048	1120	1115	1141	1183	1211	1231	1266	1387	1358
<b>Delaware</b>																		
All Races	136	93	94	70	79	77	81	103	81	102	114	96	107	97	106	99	91	101
White	79	44	44	40	46	43	42	54	31	65	60	57	53	51	48	50	52	49
Black	55	49	50	27	32	32	36	49	49	37	53	35	53	44	55	44	38	52
Other	2	0	0	3	1	2	3	0	1	0	1	4	1	2	3	5	1	0
<b>Kent</b>																		
All Races	18	19	11	15	18	17	14	18	10	21	19	27	16	17	21	13	9	18
White	9	12	5	10	10	11	4	13	4	16	10	22	8	8	6	7	4	10
Black	8	7	6	5	7	6	10	5	6	5	9	5	8	8	14	5	4	8
Other	1	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	0
<b>New Castle</b>																		
All Races	98	66	68	37	45	48	48	65	61	67	72	55	78	60	68	68	60	70
White	59	29	32	20	24	21	26	27	22	40	37	30	37	33	35	31	33	32
Black	38	37	36	15	21	26	20	38	38	27	35	22	40	27	31	35	27	38
Other	1	0	0	2	0	1	2	0	1	0	0	3	1	0	2	2	0	0
Wilmington																		
All Races	34	27	24	15	11	19	14	18	20	16	17	12	18	12	18	16	17	19
White	11	4	4	3	2	1	4	2	4	4	2	2	4	4	3	2	3	7
Black	23	23	20	11	9	18	10	16	16	12	15	10	14	8	15	14	14	12
Other	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Balance of NC County																		
All Races	64	39	44	22	34	29	34	47	41	51	55	43	60	48	50	52	43	51
White	48	25	28	17	22	20	22	25	18	36	35	28	33	29	32	29	30	25
Black	15	14	16	4	12	8	10	22	22	15	20	12	26	19	16	21	13	26
Other	1	0	0	1	0	1	2	0	1	0	0	3	1	0	2	2	0	0
<b>Sussex</b>																		
All Races	20	8	15	18	16	12	19	20	10	14	23	14	13	20	17	18	22	13
White	11	3	7	10	12	11	12	14	5	9	13	5	8	10	7	12	15	7
Black	9	5	8	7	4	0	6	6	5	5	9	8	5	9	10	4	7	6
Other	0	0	0	1	0	1	1	0	0	0	1	1	0	1	0	2	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 Health Statistics Center

INFANT1

TABLE E-2  
NUMBER OF NEONATAL DEATHS BY RACE

U.S., DELAWARE, COUNTIES AND CITY OF WILMINGTON, 1991-2008

Area/ Race	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>U.S.</b>																		
All Races	22978	21849	21174	20250	19155	18326	18524	18918	18728	18776	18265	18749	18893	18593	18770	18989	19058	18154*
White	14698	13915	13506	13100	12644	12252	12269	12406	12164	12201	12013	12354	12495	12238	12239	12302	12333	11820*
Black	7677	7296	7044	6499	5940	5483	5637	5824	5920	5843	5585	5646	5640	5495	5740	5876	5842	5483*
Other	603	638	624	651	571	591	618	688	644	732	667	749	758	860	791	811	883	851*
<b>Delaware</b>																		
All Races	90	64	69	48	47	53	55	74	58	71	82	79	75	63	79	72	65	68
White	55	33	33	28	26	28	26	33	21	45	44	48	36	33	36	36	37	32
Black	34	31	36	18	20	24	27	41	37	26	37	28	38	28	40	33	28	36
Other	1	0	0	2	1	1	2	0	0	0	1	3	1	2	3	3	0	0
<b>Kent</b>																		
All Races	12	11	6	7	10	13	10	9	8	15	15	22	8	11	14	7	6	12
White	5	9	2	3	6	7	1	6	3	11	10	18	3	5	3	4	3	7
Black	6	2	4	4	3	6	9	3	5	4	5	4	5	5	10	3	3	5
Other	1	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0
<b>New Castle</b>																		
All Races	66	47	56	28	26	33	33	47	44	50	54	47	56	39	54	52	43	48
White	43	21	27	17	12	14	19	15	14	29	27	26	27	21	28	22	23	20
Black	23	26	29	9	14	18	13	32	30	21	27	19	28	18	24	28	20	28
Other	0	0	0	2	0	1	1	0	0	0	0	2	1	0	2	2	0	0
<b>Wilmington</b>																		
All Races	22	19	17	10	6	14	6	12	14	13	14	9	10	9	15	12	10	10
White	10	3	2	3	0	1	3	1	2	4	1	1	1	3	3	1	1	3
Black	12	16	15	6	6	13	3	11	12	9	13	8	9	6	12	11	9	7
Other	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Balance of NC County</b>																		
All Races	44	28	39	18	20	19	27	35	30	37	40	38	46	30	39	40	33	38
White	33	18	25	14	12	13	16	14	12	25	26	25	26	18	25	21	22	17
Black	11	10	14	3	8	5	10	21	18	12	14	11	19	12	12	17	11	21
Other	0	0	0	1	0	1	1	0	0	0	0	2	1	0	2	2	0	0
<b>Sussex</b>																		
All Races	12	6	7	13	11	7	12	18	6	6	13	10	11	13	11	13	16	8
White	7	3	4	8	8	7	6	12	4	5	7	4	6	7	5	10	11	5
Black	5	3	3	5	3	0	5	6	2	1	5	5	5	5	6	2	5	3
Other	0	0	0	0	0	0	1	0	0	0	1	1	0	1	0	1	0	0

**Notes:**

1. N/A indicates that U.S. numbers were not available at the time of publication.
2. Neonatal deaths refer to deaths of children under 28 days of age.

**Sources:**

National Center for Health Statistics  
Delaware Health Statistics Center

INFANT2

TABLE E-3  
NUMBER OF POSTNEONATAL DEATHS BY RACE

U.S., DELAWARE, COUNTIES AND CITY OF WILMINGTON, 1991-2008

Area/ Race	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>U.S.</b>																		
All Races	13788	12779	12292	11460	10428	9911	9521	9453	9209	9259	9303	9285	9132	9343	9670	9538	10080	9879*
White	8959	8249	7991	7404	6846	6497	6270	6155	5903	5943	5942	6015	5945	5993	6275	6101	6474	6342*
Black	4317	4052	3843	3573	3178	3007	2859	2902	2902	2928	2913	2878	2762	2999	2955	2982	3102	3030*
Other	512	478	458	483	404	407	392	396	404	388	448	392	425	351	440	455	504	507*
<b>Delaware</b>																		
All Races	46	29	25	22	32	24	26	29	23	31	32	17	32	34	27	27	26	33
White	24	11	11	12	20	15	16	21	10	20	16	9	17	18	12	14	15	17
Black	21	18	14	9	12	8	9	8	12	11	16	7	15	16	15	11	10	16
Other	1	0	0	1	0	1	1	0	1	0	0	1	0	0	0	2	1	0
<b>Kent</b>																		
All Races	6	8	5	8	8	4	4	9	2	6	4	5	8	6	7	6	3	6
White	4	3	3	7	4	4	3	7	1	5	0	4	5	3	3	3	1	3
Black	2	5	2	1	4	0	1	2	1	1	4	1	3	3	4	2	1	3
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<b>New Castle</b>																		
All Races	32	19	12	9	19	15	15	18	17	17	18	8	22	21	14	16	17	22
White	16	8	5	3	12	7	7	12	8	11	10	4	10	12	7	9	10	12
Black	15	11	7	6	7	8	7	6	8	6	8	3	12	9	7	7	7	10
Other	1	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0
Wilmington																		
All Races	12	8	7	5	5	5	8	6	6	3	3	3	8	3	3	4	7	9
White	1	1	2	0	2	0	1	1	2	0	1	1	3	1	0	1	2	4
Black	11	7	5	5	3	5	7	5	4	3	2	2	5	2	3	3	5	5
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	20	11	5	4	14	10	7	12	11	14	15	5	14	18	11	12	10	13
White	15	7	3	3	10	7	6	11	6	11	9	3	7	11	7	8	8	8
Black	4	4	2	1	4	3	0	1	4	3	6	1	7	7	4	4	2	5
Other	1	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0
<b>Sussex</b>																		
All Races	8	2	8	5	5	5	7	2	4	8	10	4	2	7	6	5	6	5
White	4	0	3	2	4	4	6	2	1	4	6	1	2	3	2	2	4	2
Black	4	2	5	2	1	0	1	0	3	4	4	3	0	4	4	2	2	3
Other	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0

**Notes:**

1. N/A indicates that U.S. numbers were not available at the time of publication.
2. Postneonatal deaths refer to deaths of children 28 to 364 days of age.

**Sources:**

National Center for Health Statistics  
Delaware Health Statistics Center

INFANT3

TABLE E- 4  
FIVE-YEAR AVERAGE INFANT MORTALITY RATES BY RACE  
U.S., DELAWARE, COUNTIES AND CITY OF WILMINGTON, 1988-2008

Area/ Race	1988 -1992	1989 -1993	1990 -1994	1991 -1995	1992 -1996	1993 -1997	1994 -1998	1995 -1999	1996 -2000	1997 -2001	1998 -2002	1999 -2003	2000 -2004	2001 -2005	2002 -2006	2003 -2007	2004 -2008
<b>U.S.</b>																	
All Races	9.3	9.0	8.6	8.3	8.0	7.7	7.5	7.3	7.1	7.0	7.0	6.9	6.9	6.9	6.8	6.8	6.7
White	7.7	7.3	7.0	6.8	6.5	6.4	6.2	6.0	5.9	5.8	5.8	5.7	5.7	5.7	5.7	5.7	5.6
Black	17.7	17.5	17.0	16.4	15.8	15.3	14.8	14.6	14.4	14.2	14.3	14.2	14.0	14.0	13.8	13.6	13.3
<b>Delaware</b>																	
All Races	10.9+	10.3+	9.3	8.9	7.9	7.8	7.9	8.1+	8.4+	9.0+	9.2+	9.1+	9.3+	9.3+	8.8+	8.6+	8.4+
White	8.2	7.5	6.6	6.4	5.6-	5.6	5.9	5.7	6.2	6.6	6.9+	6.9+	7.3+	6.9+	6.5	6.3	6.1
Black	19.8	19.9	18.2	17.0	15.8	14.7	14.4	15.8	15.9	17.1+	16.7+	16.7+	16.1	17.1+	16.1+	15.7+	15.3
<b>Kent</b>																	
All Races	11.3	9.7	9.5	8.6	8.6	8.2	9.0	8.4	8.6	8.7	9.9	9.5	10.2	10.0	9.1	7.1	7.1
White	8.8	7.3	7.3	6.5	6.8	5.8	7.1	6.3	7.0	6.9	9.5	8.6	9.2	7.6	7.0	4.4	4.6
Black	19.9	17.9	17.6	15.5	15.2	16.6	15.9	15.7	14.3	15.2	12.7	13.4	13.9	17.0	14.9	13.6	13.2
<b>New Castle</b>																	
All Races	10.8	10.7	9.5	9.0	7.8	7.3	7.3	7.9	8.5	9.1	9.2	9.5	9.4	9.4	9.2	9.2	9.0
White	7.9	7.5	6.5	6.3	5.0	4.9	4.8	4.9	5.6	6.2	6.4	6.8	7.3	7.1	6.8	7.0	6.9
Black	20.8	21.7	19.8	18.3	17.5	15.3	15.1	17.4	17.7	18.2	18.0	18.0	16.5	16.7	16.3	16.3	15.7
Wilmington																	
All Races	19.6	19.4	18.0	16.6	15.2	13.6	12.8	13.7	14.4	14.0	13.5	13.5	12.4	12.8	12.3	13.0	13.0
White	12.3	11.2	9.7	10.1	---	---	---	---	---	---	---	---	---	---	---	---	---
Black	23.7	24.3	22.7	20.4	20.5	17.8	16.8	18.0	18.7	18.0	17.9	17.6	15.9	17.0	16.3	17.3	16.3
Balance of NC County																	
All Races	8.6	8.5	7.5	7.2	6.1	5.9	6.0	6.7	7.2	8.1	8.3	8.6	8.8	8.7	8.5	8.5	8.2
White	7.4	7.1	6.2	5.9	4.8	4.8	4.7	4.8	5.4	6.1	6.4	6.8	7.3	7.2	6.9	7.0	6.7
Black	17.1	18.6	16.3	16.0	14.4	12.9	13.6	16.8	16.8	18.5	18.1	18.2	17.0	16.6	16.3	15.8	15.3
<b>Sussex</b>																	
All Races	10.7	9.7	8.3	8.7	7.9	9.0	9.5	8.5	8.1	9.0	8.3	7.4	8.1	8.2	7.5	7.9	7.6
White	8.8	7.8	6.2	6.8	6.8	8.0	8.9	8.0	7.5	7.6	6.5	5.5	5.9	5.5	5.0	5.9	5.5
Black	16.1	15.3	13.7	13.8	10.4	11.1	10.4	9.9	10.4	14.4	15.9	15.4	16.9	19.0	16.9	15.6	15.9

**Notes:**

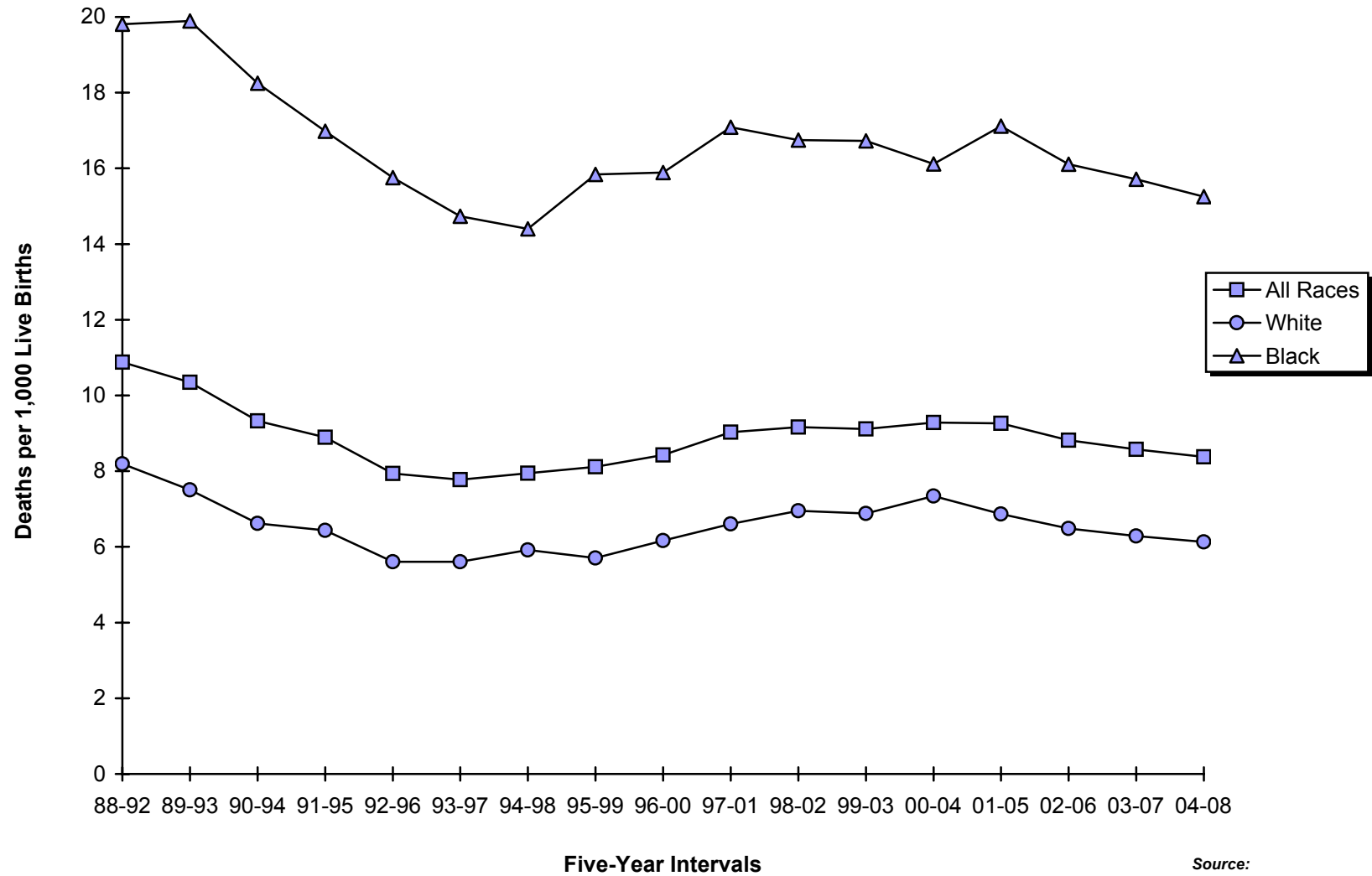
1. 2004-2008 U.S. data are based on NCHS estimates.
2. N/A indicates data not available.
3. Infant mortality rates represent the number of deaths of children under one year of age per 1000 live births.
4. '+' indicates that the Delaware rate is significantly higher than the U.S. rate.  
'-' indicates that the Delaware rate is significantly lower than the U.S. rate.
5. "----" Indicates rate does not meet standard of reliability or precision; based on fewer than 20 deaths in the numerator.
6. 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 Health Statistics Center

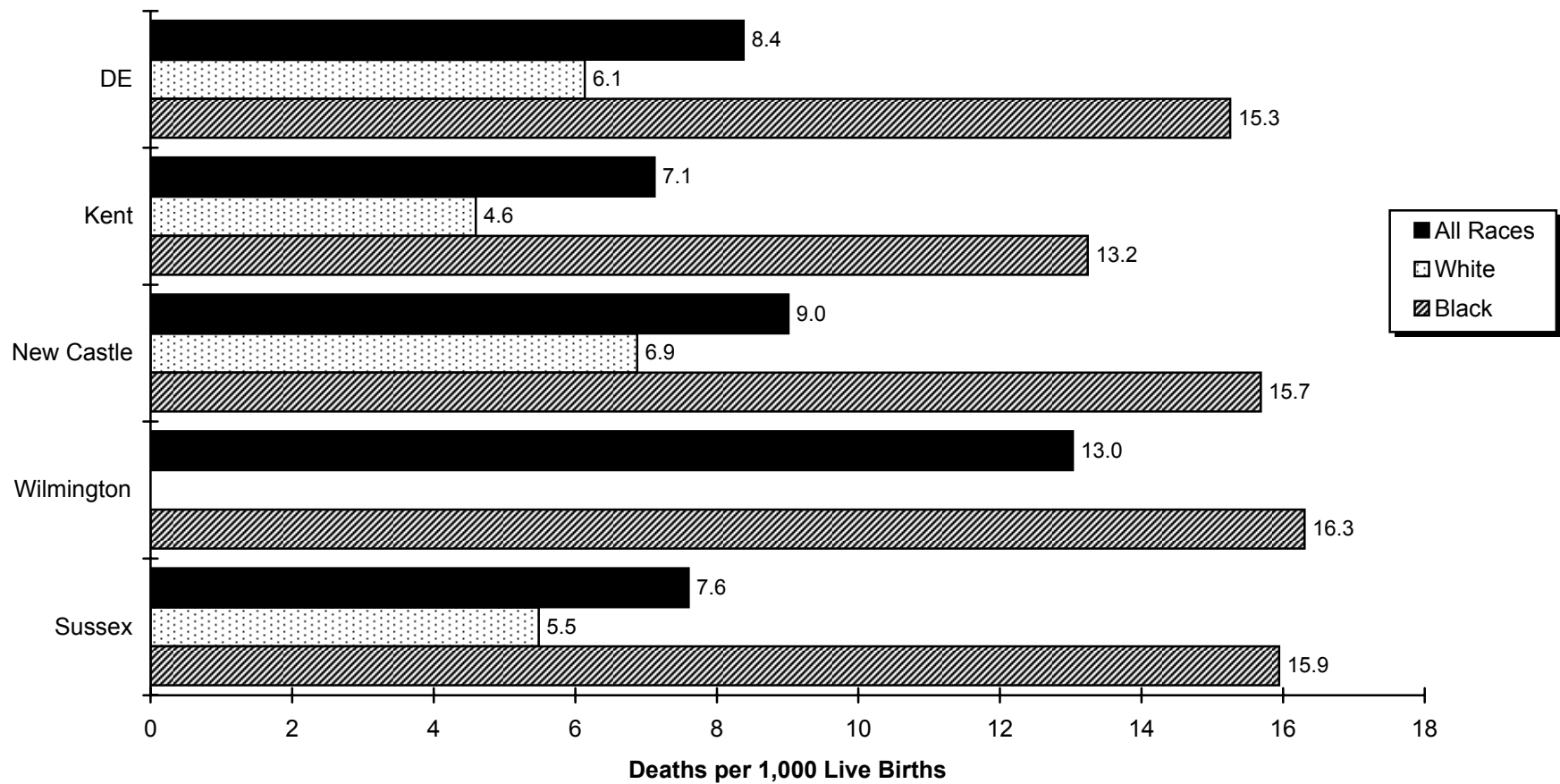
INFANT4

**Figure E-1**  
**Five-Year Average Infant Mortality Rates by Race**  
**Delaware, 1988-2008**



**Source:**  
Delaware Health Statistics Center

**Figure E-2**  
**Five-Year Average Infant Mortality Rates by Race**  
**Delaware, Counties and the City of Wilmington, 2004-2008**



**Source:**  
Delaware Health Statistics Center



TABLE E-5  
FIVE-YEAR AVERAGE NEONATAL MORTALITY RATES BY RACE  
U.S., DELAWARE, COUNTIES AND CITY OF WILMINGTON, 1988-2008

Area/ Race	1988 -1992	1989 -1993	1990 -1994	1991 -1995	1992 -1996	1993 -1997	1994 -1998	1995 -1999	1996 -2000	1997 -2001	1998 -2002	1999 -2003	2000 -2004	2001 -2005	2002 -2006	2003 -2007	2004 -2008
<b>U.S.</b>																	
All Races	5.9	5.7	5.4	5.3	5.1	5.0	4.9	4.8	4.7	4.7	4.7	4.6	4.6	4.6	4.6	4.5	4.4
White	4.8	4.6	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.7
Black	11.4	11.3	10.9	10.6	10.2	9.9	9.7	9.6	9.5	9.5	9.5	9.5	9.3	9.2	9.1	9.0	8.7
<b>Delaware</b>																	
All Races	7.6+	7.2+	6.4+	6.0+	5.4	5.3	5.4	5.5+	5.9+	6.4+	6.7+	6.7+	6.7+	6.7+	6.4+	6.1+	5.9+
White	5.9+	5.5+	4.7	4.5	3.8	3.7	3.7	3.5	4.0	4.4	5.0+	5.0+	5.3+	5.0+	4.7+	4.4	4.3
Black	13.5+	13.2	12.1	11.1	10.7	10.4	10.6	11.9+	12.1+	12.8+	12.7+	12.2+	11.4+	12.2+	11.6+	11.2+	10.8+
<b>Kent</b>																	
All Races	6.6	5.6	5.6	4.9	5.0	5.0	5.4	5.5	5.9	6.1	7.2	7.0	7.2	7.0	6.0	4.3	4.6
White	5.2	4.4	4.4	3.6	3.8	---	3.4	3.4	4.1	4.6	7.0	6.5	6.8	5.5	4.5	---	2.9
Black	11.2	9.6	10.0	---	---	12.7	12.1	12.0	12.1	11.3	8.9	9.3	9.2	11.2	10.0	9.1	8.8
<b>New Castle</b>																	
All Races	7.9	7.9	6.9	6.4	5.6	5.2	5.0	5.4	6.1	6.6	6.9	7.1	7.0	7.1	6.9	6.8	6.5
White	5.9	5.7	4.8	4.6	3.6	3.6	3.1	3.0	3.7	4.3	4.5	5.0	5.3	5.3	5.1	5.0	4.8
Black	15.0	15.8	13.9	12.6	12.4	10.8	10.8	13.0	13.5	14.2	14.5	13.9	12.4	12.5	12.3	12.0	11.7
Wilmington																	
All Races	15.0	14.3	12.7	11.1	10.5	8.7	8.0	8.7	9.8	9.7	10.1	9.8	9.1	9.5	8.9	9.0	8.9
White	11.5	9.6	8.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Black	17.0	17.0	15.2	13.0	14.2	11.2	10.2	11.8	12.5	12.5	13.8	13.4	12.1	13.1	12.3	12.5	11.6
Balance of NC County																	
All Races	6.1	6.3	5.5	5.3	4.5	4.5	4.3	4.7	5.3	6.0	6.3	6.6	6.5	6.6	6.5	6.3	6.0
White	5.3	5.2	4.5	4.3	3.5	3.5	3.1	3.0	3.6	4.2	4.6	5.1	5.4	5.5	5.2	5.1	4.8
Black	12.4	14.3	12.3	12.1	10.6	10.3	11.4	14.1	14.4	15.6	15.1	14.2	12.5	12.1	12.3	11.8	11.8
<b>Sussex</b>																	
All Races	7.7	6.3	5.6	5.5	5.0	5.6	6.8	6.0	5.3	5.8	5.5	4.6	5.1	5.5	5.3	5.6	5.2
White	6.8	6.1	4.6	4.8	4.8	5.1	6.2	5.5	5.0	4.9	4.5	3.6	3.8	3.7	3.8	4.4	4.1
Black	10.2	---	8.3	---	---	---	---	---	---	---	---	---	9.9	12.1	10.8	10.3	9.3

**Notes:**

1. N/A indicates data not available.
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.

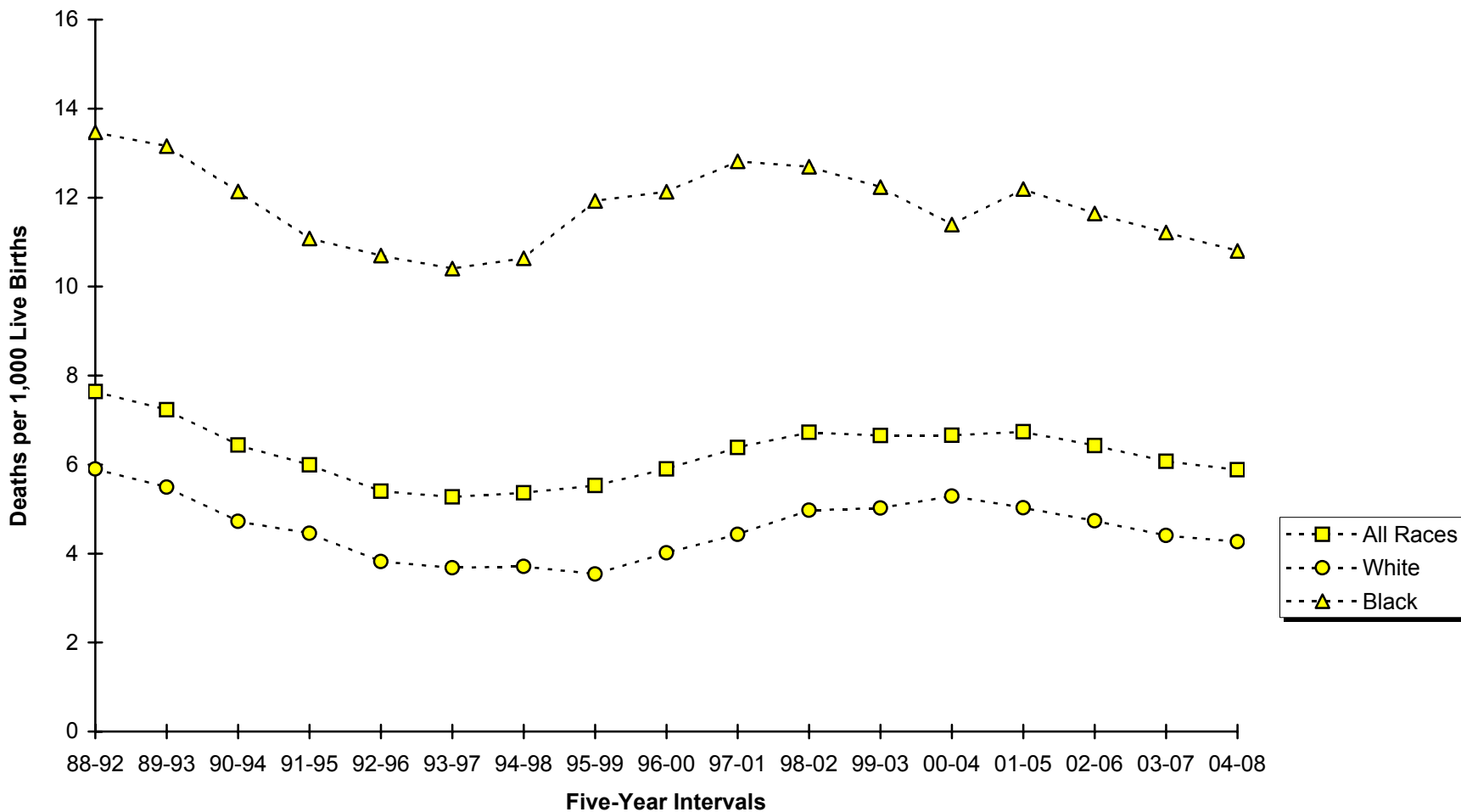
**Sources:**

National Center for Health Statistics  
Delaware Health Statistics Center

INFANTS

**Figure E-3**  
**Five-Year Average Neonatal Mortality Rates by Race**

**Delaware, 1988-2008**



**Source:**  
Delaware Health Statistics Center

TABLE E-6  
FIVE-YEAR AVERAGE POSTNEONATAL MORTALITY RATES BY RACE  
U.S., DELAWARE, COUNTIES AND CITY OF WILMINGTON, 1988-2008

Area/ Race	1988 -1992	1989 -1993	1990 -1994	1991 -1995	1992 -1996	1993 -1997	1994 -1998	1995 -1999	1996 -2000	1997 -2001	1998 -2002	1999 -2003	2000 -2004	2001 -2005	2002 -2006	2003 -2007	2004 -2008
<b>U.S.</b>																	
All Races	3.4	3.3	3.2	3.0	2.9	2.7	2.6	2.5	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3
White	2.8	2.7	2.6	2.5	2.4	2.3	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Black	6.3	6.3	6.0	5.8	5.6	5.4	5.1	5.0	4.8	4.8	4.8	4.7	4.8	4.8	4.7	4.6	4.6
<b>Delaware</b>																	
All Races	3.2	3.1	2.9	2.9	2.5	2.5	2.6	2.6	2.5	2.6	2.4	2.5	2.6	2.5	2.4	2.5	2.5
White	2.3-	2.0-	1.9-	2.0-	1.8-	1.9	2.2	2.2	2.2	2.2	2.0	1.9	2.1	1.8	1.8	1.9	1.9
Black	6.3	6.7	6.1	5.9	5.1	4.3	3.8-	3.9	3.8	4.3	4.1	4.5	4.7	4.9	4.5	4.5	4.5
<b>Kent</b>																	
All Races	4.7	4.1	3.9	3.7	3.5	3.2	3.6	3.0	2.7	2.7	2.7	2.6	2.9	3.0	3.1	2.8	2.6
White	3.6	2.9	2.9	3.0	3.0	3.1	3.7	---	2.9	---	---	---	---	---	---	---	---
Black	8.7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>New Castle</b>																	
All Races	2.9	2.8	2.7	2.6	2.2	2.1	2.3	2.5	2.4	2.5	2.2	2.3	2.4	2.3	2.3	2.5	2.5
White	2.0	1.8	1.7	1.7	1.4	1.4	1.7	1.9	1.8	2.0	1.8	1.8	1.9	1.8	1.7	2.0	2.1
Black	5.8	5.9	5.9	5.7	5.1	4.5	4.3	4.4	4.2	4.0	3.5	4.1	4.2	4.2	4.0	4.3	4.0
Wilmington																	
All Races	4.6	5.2	5.3	5.5	4.8	4.9	4.8	5.0	4.6	4.3	3.4	3.7	3.3	3.3	3.4	4.0	4.1
White	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Black	6.7	7.2	7.5	7.3	6.3	6.5	6.6	6.3	6.2	5.5	---	---	---	---	---	---	---
Balance of NC County																	
All Races	2.5	2.2	2.0	1.9	1.6	1.5	1.7	1.9	1.9	2.1	2.0	2.0	2.3	2.1	2.0	2.2	2.1
White	2.1	1.9	1.7	1.6	1.3	1.3	1.6	1.8	1.8	1.9	1.8	1.6	1.9	1.7	1.6	1.9	2.0
Black	---	---	---	---	---	---	---	---	---	---	---	4.0	4.4	4.4	4.0	4.0	3.5
<b>Sussex</b>																	
All Races	3.0	3.4	2.7	3.2	2.9	3.4	2.7	2.5	2.8	3.3	2.9	2.8	3.0	2.7	2.2	2.3	2.4
White	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Black	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

**Notes:**

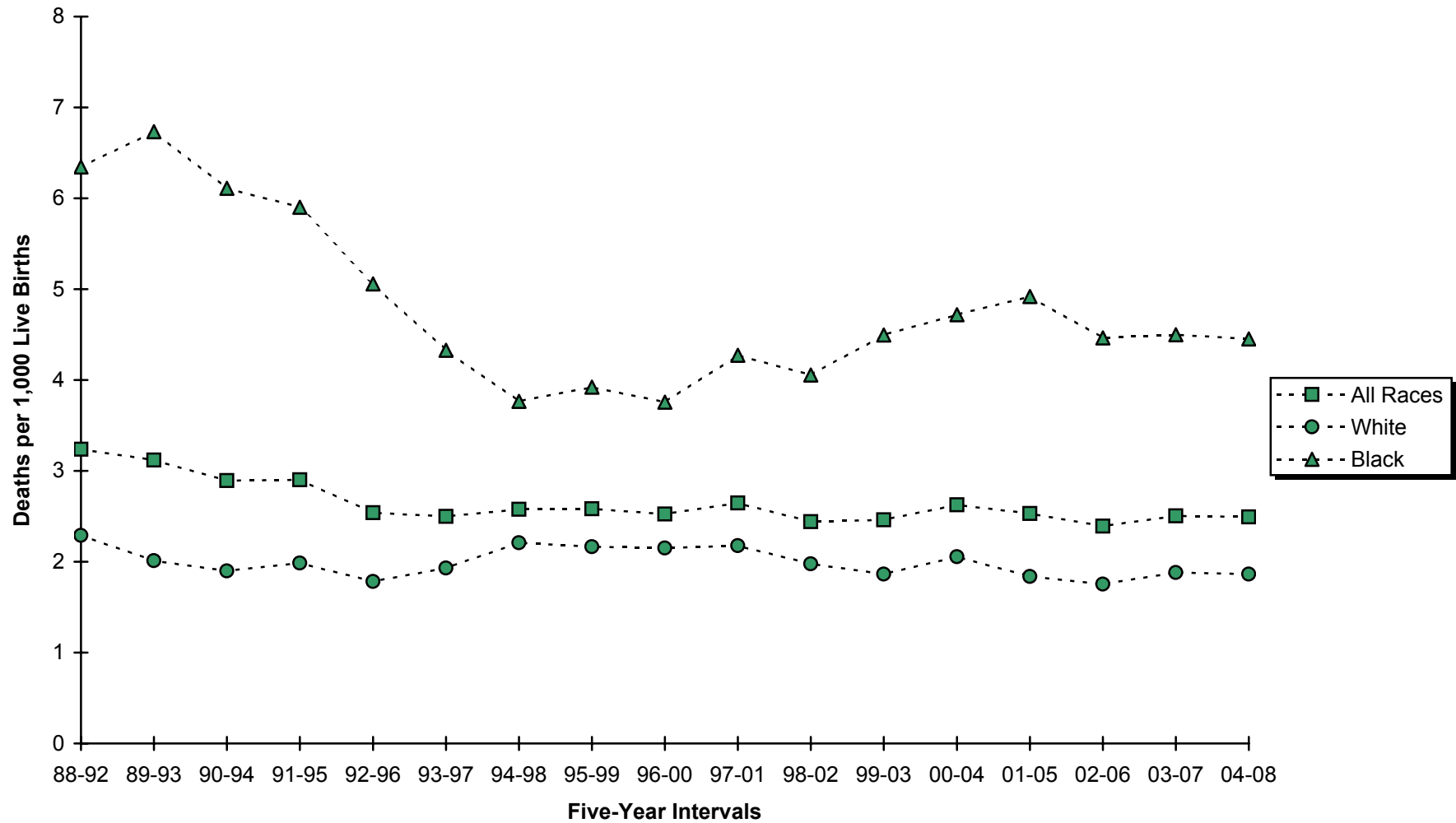
1. N/A indicates data not available.
2. Postneonatal mortality rates represent the number of deaths of children 28 to 364 days of age per 1000 live births.
3. '-' indicates that the Delaware rate is significantly lower than the U.S. rate.
4. "----" Indicates rate does not meet standard of reliability 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 Health Statistics Center

INFANT6

**Figure E-4**  
**Five-Year Average Postneonatal Mortality Rates by Race**  
**Delaware, 1988-2008**



**Source:**  
Delaware Health Statistics Center

TABLE E-7  
FIVE-YEAR AVERAGE PERINATAL MORTALITY RATES BY RACE

DELAWARE AND COUNTIES, 1990-2008

Area/ Race	1990 -1994	1991 -1995	1992 -1996	1993 -1997	1994 -1998	1995 -1999	1996 -2000	1997 -2001	1998 -2002	1999 -2003	2000 -2004	2001 -2005	2002 -2006	2003 -2007	2004 -2008
<b>Delaware</b>															
All Races	8.7	7.9	7.1	6.8	6.9	7.0	7.1	7.6	8.1	8.1	7.9	8.2	8.0	7.5	7.5
White	6.8	6.3	5.7	5.5	5.6	5.4	5.6	5.8	6.2	6.3	6.3	6.2	6.1	5.9	5.8
Black	14.9	12.9	11.3	10.7	10.8	12.0	12.4	13.8	14.4	14.2	13.4	14.3	13.5	12.6	12.5
<b>Kent</b>															
All Races	8.1	7.5	7.7	6.7	7.3	7.6	7.5	7.3	8.9	8.7	8.2	8.7	8.0	5.8	6.0
White	7.5	6.4	6.4	4.8	5.6	5.8	6.0	6.2	8.1	7.8	7.3	6.9	5.9	3.6	3.8
Black	9.5	9.8	11.2	12.7	12.5	13.3	12.9	11.7	11.8	12.1	10.7	13.8	13.7	11.5	11.8
<b>New Castle</b>															
All Races	9.1	8.3	7.2	6.8	6.7	6.9	7.3	7.9	8.3	8.5	8.3	8.5	8.3	8.1	8.1
White	6.7	6.3	5.4	5.4	5.2	4.9	5.3	5.6	5.8	6.2	6.3	6.4	6.3	6.4	6.3
Black	17.2	14.5	13.1	11.1	11.2	13.1	13.7	15.3	16.3	15.9	14.9	15.0	14.1	13.4	13.1
<b>Sussex</b>															
All Races	7.9	7.1	5.9	7.0	7.3	6.6	6.3	6.6	6.4	5.9	6.2	6.6	6.9	7.3	7.0
White	6.5	6.2	6.2	6.8	7.2	6.5	6.1	5.7	5.5	5.1	5.3	5.2	6.0	6.6	6.1
Black	11.9	10.0	5.6	7.5	7.6	6.6	6.6	9.7	9.6	9.1	9.8	12.0	10.3	10.7	10.6

**Notes:**

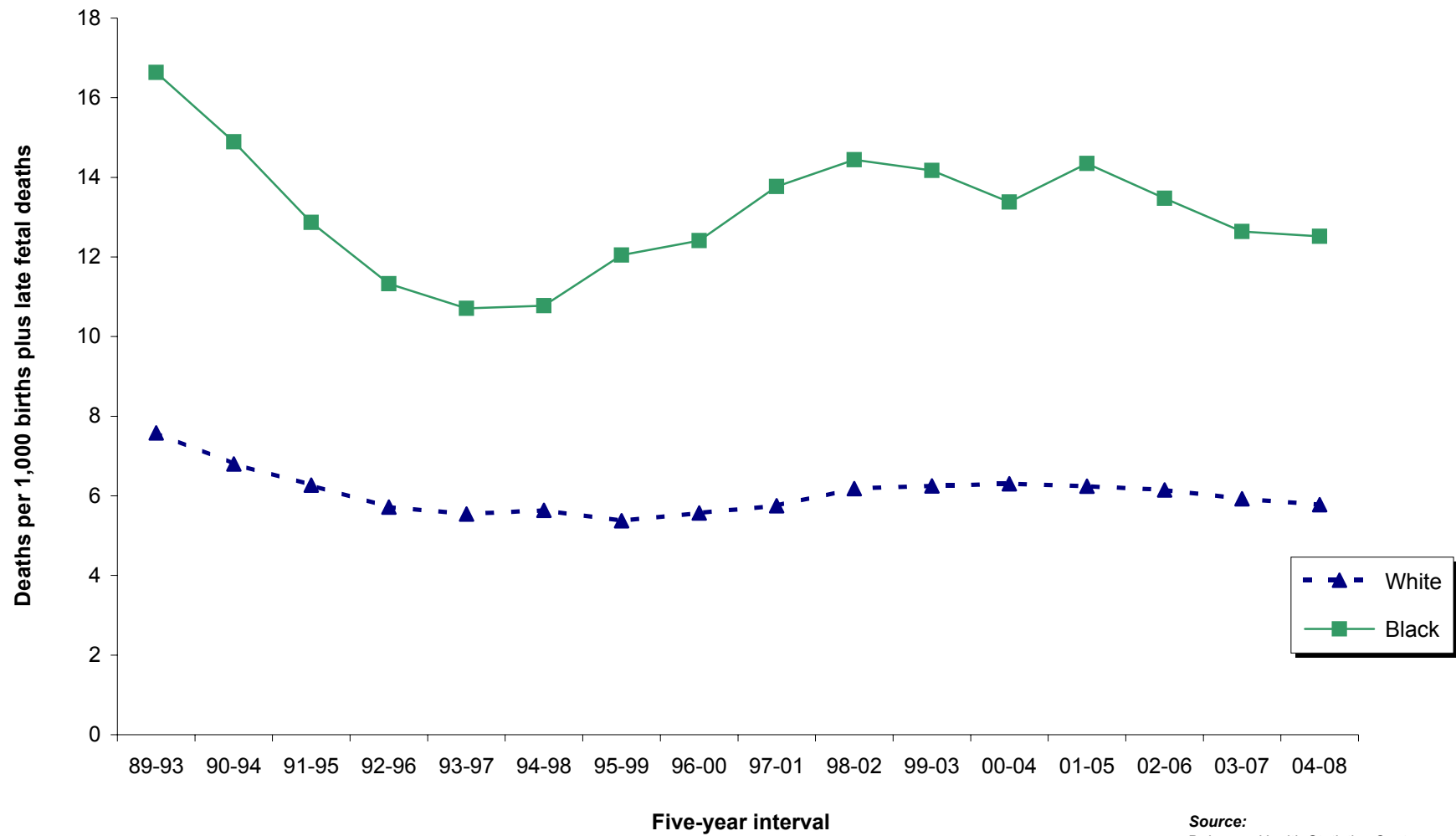
1. Perinatal relates to the period surrounding the birth event.
2. The perinatal mortality rate is the sum of late fetal deaths (28+ weeks gestation) and early infant deaths (<7 days of age) per 1,000 live births and late fetal deaths.

**Source:**

Delaware Health Statistics Center

PERI\_RACE

**Figure E-5**  
**Five-year Average Perinatal Mortality Rates by Race**  
**Delaware, 1989-2008**



Source:  
Delaware Health Statistics Center

TABLE E-8  
FIVE-YEAR AVERAGE INFANT MORTALITY  
RATES BY SELECTED RISK MARKERS AND RACE OF MOTHER  
DELAWARE, 2003-2007 LIVE BIRTH COHORT

Risk Factor	Race		
	All Races	White	Black
<b>Birth Weight of Child</b>			
<2500	68.8	61.2	82.2
<1500	286.1	293.0	286.0
1500-2499	13.4	12.0	15.0
2500+	2.3	1.9	3.5
<b>Age of Mother</b>			
<20	11.6	10.6	13.6
20-24	9.2	6.4	14.4
25-29	9.0	6.4	17.3
30+	6.9	5.4	14.0
<b>Marital Status of Mother</b>			
Married	5.6	4.7	11.1
Single	12.2	9.4	16.4
<b>Education of Mother</b>			
<12 years	11.0	9.5	15.3
H.S. diploma	10.7	7.4	17.1
1+ years college	5.4	4.1	10.9
<b>Trimester Care Received</b>			
Late/No PNC <sup>2</sup>	18.1	13.8	28.6
First	7.9	6.0	14.1
<b>Interval Since Last Live Birth</b>			
<18 months	13.5	8.9	21.9
18+ months	6.5	4.4	12.4

COHRATES

**Notes:**

1. Infant mortality rates represent the number of deaths to children under one year of age per 1,000 live births.
2. Defined as receiving no care or care in the third trimester.

**Source:**

Delaware Health Statistics Center

TABLE E-9  
LEADING CAUSES OF INFANT DEATH BY GESTATIONAL AGE CATEGORY  
DELAWARE, 2003-2007 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	109	0	1	2	112	97.3	97.3
Congenital malformations, deformations, and chromosomal abnormalities	20	18	25	0	63	31.7	60.3
Newborn affected by maternal complications of pregnancy	41	2	0	0	43	95.3	100.0
Sudden infant death syndrome	2	7	31	0	40	5.0	22.5
Newborn affected by complications of placenta, cord, and membranes	28	0	0	0	28	100.0	100.0
Respiratory distress of newborn	16	0	0	0	16	100.0	100.0
Bacterial sepsis of newborn	13	2	1	0	16	81.3	93.8
Diseases of the circulatory system	3	4	8	0	15	20.0	46.7
Accidents (unintentional injuries)	2	5	5	0	12	16.7	58.3
Atelectasis	8	1	0	0	9	88.9	100.0
Septicemia	4	1	3	0	8	50.0	62.5
Gastritis, duodenitis, and noninfective enteritis and colitis	8	0	0	0	8	100.0	100.0
Neonatal hemorrhage	8	0	0	0	8	100.0	100.0
Intrauterine hypoxia and birth asphyxia	4	1	2	0	7	57.1	71.4
Renal failure and other disorders of kidney	4	1	1	0	6	66.7	83.3
Pulmonary hemorrhage originating in the perinatal period	5	0	0	0	5	100.0	100.0
hernia	0	1	3	0	4	0.0	25.0
Newborn affected by other complications of labor and delivery	4	0	0	0	4	100.0	100.0
perinatal period	4	0	0	0	4	100.0	100.0
Slow fetal growth and fetal malnutrition	3	0	0	0	3	100.0	100.0
All other causes	30	19	35	1	85	35.3	57.6
<b>TOTAL</b>	<b>316</b>	<b>62</b>	<b>115</b>	<b>3</b>	<b>496</b>	<b>63.7</b>	<b>76.2</b>

INFLCOD

**Notes:**

1. Leading causes of infant death are categorized using the 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 Health Statistics Center



TABLE E-10  
FIVE-YEAR AVERAGE INFANT MORTALITY RATES BY RACE AND SELECTED RISK MARKERS

DELAWARE LIVE BIRTH COHORT, 1989-2007

Parameter/ Race	1989 -1993	1990 -1994	1991 -1995	1992 -1996	1993 -1997	1994 -1998	1995 -1999	1996 -2000	1997 -2001	1998 -2002	1999 -2003	2000 -2004	2001 -2005	2002 -2006	2003 -2007
<b>BIRTHWEIGHT</b>															
<b>2500+</b>															
All Races	2.8	2.6	2.6	2.3	2.3	2.5	2.4	2.4	2.5	2.3	2.4	2.5	2.2	2.2	2.3
White	2.3	2.1	2.1	2.0	2.1	2.4	2.4	2.3	2.4	2.1	2.0	2.1	1.9	1.7	1.9
Black	4.7	4.1	4.1	3.3	2.9	2.8	2.8	2.8	3.0	3.0	3.6	3.9	3.5	3.6	3.5
<b>&lt;2500</b>															
All Races	94.4	83.8	76.4	68.7	65.4	64.8	66.5	69.5	75.2	76.4	74.2	73.1	74.5	69.9	68.8
White	82.6	69.9	66.3	58.4	56.9	55.4	53.9	55.9	63.2	68.7	67.4	68.8	68.4	64.0	61.2
Black	110.9	102.9	91.1	85.3	78.9	78.8	86.0	88.2	93.7	90.5	88.3	83.0	88.0	80.9	82.2
<b>&lt;1500</b>															
All Races	364.7	337.3	307.1	272.9	255.2	258.5	262.7	270.9	304.8	316.2	302.4	306.2	313.9	289.7	286.1
White	361.0	311.4	282.1	239.3	229.8	223.2	219.3	231.5	281.9	303.4	297.2	316.8	321.2	295.3	293.0
Black	366.2	355.0	328.4	306.1	280.3	296.8	315.8	312.1	329.8	335.5	317.0	301.5	315.7	289.4	286.0
<b>GESTATION</b>															
<b>37+ weeks</b>															
All Races	3.0	2.6	2.7	2.3	2.4	2.6	2.6	2.5	2.5	2.3	2.3	2.4	2.2	2.2	2.3
White	2.5	2.1	2.3	2.2	2.3	2.6	2.6	2.4	2.3	2.1	1.9	2.0	1.7	1.7	1.9
Black	4.7	3.9	3.8	2.8	2.8	2.8	2.7	2.8	3.1	2.9	3.7	4.0	3.4	3.4	3.4
<b>&lt;37 weeks</b>															
All Races	68.2	62.9	56.2	50.3	47.1	45.6	45.9	48.2	53.0	54.3	52.8	52.6	53.5	49.1	47.1
White	58.9	51.3	45.6	38.1	37.2	35.4	33.6	35.7	41.8	45.5	45.1	46.5	45.2	40.2	37.5
Black	81.5	79.8	73.4	72.3	65.3	64.1	69.6	70.5	73.5	72.5	70.5	67.7	72.7	68.2	66.9
<b>&lt;32 weeks</b>															
All Races	267.6	260.6	238.6	212.4	196.5	199.8	201.3	214.9	238.1	249.6	238.7	239.4	249.1	232.4	220.4
White	283.3	259.5	231.0	186.3	177.7	179.4	174.0	191.5	228.4	249.2	238.2	244.0	248.3	221.2	202.1
Black	254.4	258.2	242.8	239.1	215.4	222.2	235.6	238.7	250.4	255.4	246.3	239.8	259.4	250.0	246.4
<b>PLURALITY</b>															
<b>Single</b>															
All Races	9.1	8.2	7.7	7.0	6.7	6.7	6.8	6.9	7.3	7.3	7.3	7.5	7.4	7.1	7.2
White	6.1	5.4	5.4	5.0	5.0	5.1	5.1	4.9	5.2	5.4	5.2	5.6	5.4	5.0	5.3
Black	18.8	16.8	14.8	13.3	12.1	11.5	12.2	12.9	13.4	13.4	13.8	13.5	13.6	13.0	12.8
<b>Plural</b>															
All Races	52.8	45.6	43.1	30.0	33.5	39.3	41.6	45.4	53.1	52.9	52.3	50.3	52.0	47.0	44.0
White	49.8	41.9	37.9	24.5	28.9	30.4	28.6	35.1	43.4	48.0	50.3	49.2	49.9	43.9	37.2
Black	65.2	---	---	---	---	68.7	84.6	73.0	80.7	68.5	60.8	54.1	64.6	59.1	63.5
<b>SMOKING DURING PREGNANCY</b>															
<b>No</b>															
All Races	9.2	8.1	7.8	7.0	7.1	7.1	7.4	7.6	8.1	8.0	8.2	8.2	8.2	7.9	7.7
White	6.7	5.5	5.4	5.0	5.3	5.2	5.3	5.3	5.7	5.8	5.9	6.2	6.1	5.9	5.7
Black	17.1	15.9	15.0	13.4	12.6	12.7	14.0	14.3	15.3	14.8	15.0	14.3	14.7	13.7	13.4
<b>Yes</b>															
All Races	13.4	13.3	12.1	10.3	9.2	10.6	10.6	11.3	13.4	15.1	14.1	14.8	15.1	13.4	13.9
White	8.7	9.5	9.6	8.2	7.4	9.4	9.3	9.8	12.2	14.2	12.7	13.3	13.0	10.1	10.7
Black	31.1	27.4	21.3	18.6	16.2	15.3	16.3	17.3	18.0	18.9	19.4	19.5	22.0	23.9	23.9

TABLE E-10 (continued)  
FIVE-YEAR AVERAGE INFANT MORTALITY RATES BY RACE AND SELECTED RISK MARKERS

DELAWARE LIVE BIRTH COHORT, 1989-2007

Parameter/ Race	1989 -1993	1990 -1994	1991 -1995	1992 -1996	1993 -1997	1994 -1998	1995 -1999	1996 -2000	1997 -2001	1998 -2002	1999 -2003	2000 -2004	2001 -2005	2002 -2006	2003 -2007
<b>EDUCATION</b>															
<b>HS Grad or less</b>															
All Races	11.8	10.6	10.4	9.5	9.4	9.9	10.4	10.3	11.1	11.5	11.4	11.4	11.1	10.7	10.8
White	8.4	7.4	7.6	6.9	7.2	8.0	8.0	7.8	8.4	9.1	8.8	9.1	8.7	8.2	8.4
Black	19.8	17.8	16.8	15.7	14.3	14.3	15.8	15.6	16.8	16.9	17.2	16.9	17.2	16.6	16.4
<b>1+ yrs college</b>															
All Races	7.2	6.5	5.7	5.0	4.9	4.9	4.9	5.5	6.1	6.0	6.0	6.0	6.3	5.8	5.4
White	5.5	4.6	4.2	4.0	3.9	3.7	3.6	4.1	4.6	4.7	4.7	5.0	5.0	4.5	4.1
Black	18.1	16.9	13.0	9.9	10.2	10.5	11.8	13.5	13.9	12.6	12.2	11.0	12.0	11.1	10.9
<b>PRENATAL CARE ATTAINMENT</b>															
<b>First</b>															
All Races	9.1	8.0	7.4	6.7	6.5	6.9	7.3	7.7	8.2	8.3	8.2	8.3	8.3	7.9	7.9
White	6.7	5.6	5.5	5.1	5.1	5.3	5.5	5.8	6.2	6.4	6.2	6.6	6.4	6.0	6.0
Black	19.9	18.0	15.0	13.5	12.3	12.6	14.2	14.6	15.2	14.8	15.0	14.2	14.5	13.9	14.1
<b>Late or no</b>															
All Races	26.4	23.8	27.2	24.0	25.2	21.9	19.4	15.5	20.1	21.7	25.8	25.0	25.4	21.7	18.1
White	20.8	24.3	29.6	20.5	24.9	22.3	16.7	11.5	17.4	19.6	24.2	22.1	19.7	16.9	13.8
Black	31.1	24.3	26.3	28.5	25.5	21.5	21.2	19.0	23.0	25.8	30.6	31.8	38.0	33.0	28.6
<b>PAYMENT FOR DELIVERY</b>															
<b>Medicaid</b>															
All Races	NA	NA	11.7	10.1	10.0	10.3	10.9	9.9	10.6	10.1	9.5	9.8	10.2	9.6	10.4
White	NA	NA	8.5	7.3	7.9	8.8	9.1	7.7	8.6	8.3	7.1	7.5	7.7	7.0	8.0
Black	NA	NA	15.4	13.8	12.9	12.7	13.6	13.1	13.8	13.0	13.3	13.7	14.7	14.0	14.4
<b>Private Insurance</b>															
All Races	NA	NA	6.1	5.5	5.3	5.5	5.7	6.5	6.8	7.4	7.7	7.8	7.5	7.4	6.7
White	NA	NA	4.8	4.4	4.2	4.2	4.3	4.9	5.2	5.7	5.9	6.1	5.7	5.6	4.9
Black	NA	NA	14.1	12.6	11.6	12.8	13.7	14.8	15.6	16.5	17.1	16.9	17.0	16.6	15.4

**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.

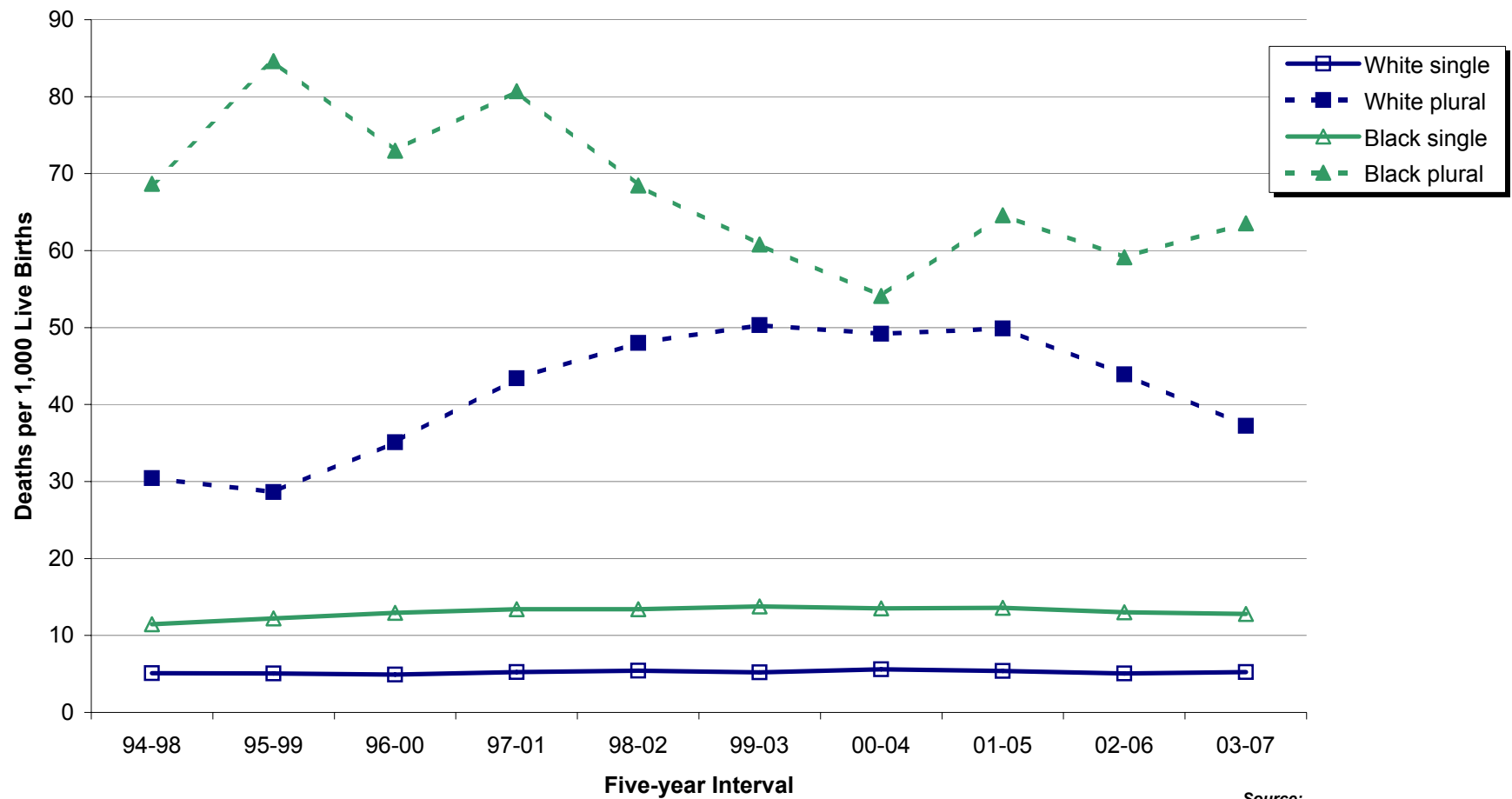
**Source:**

Delaware Health Statistics Center

COTREND

**Figure E-6**  
**Five-year Average Infant Mortality Rates by Race and Plurality**

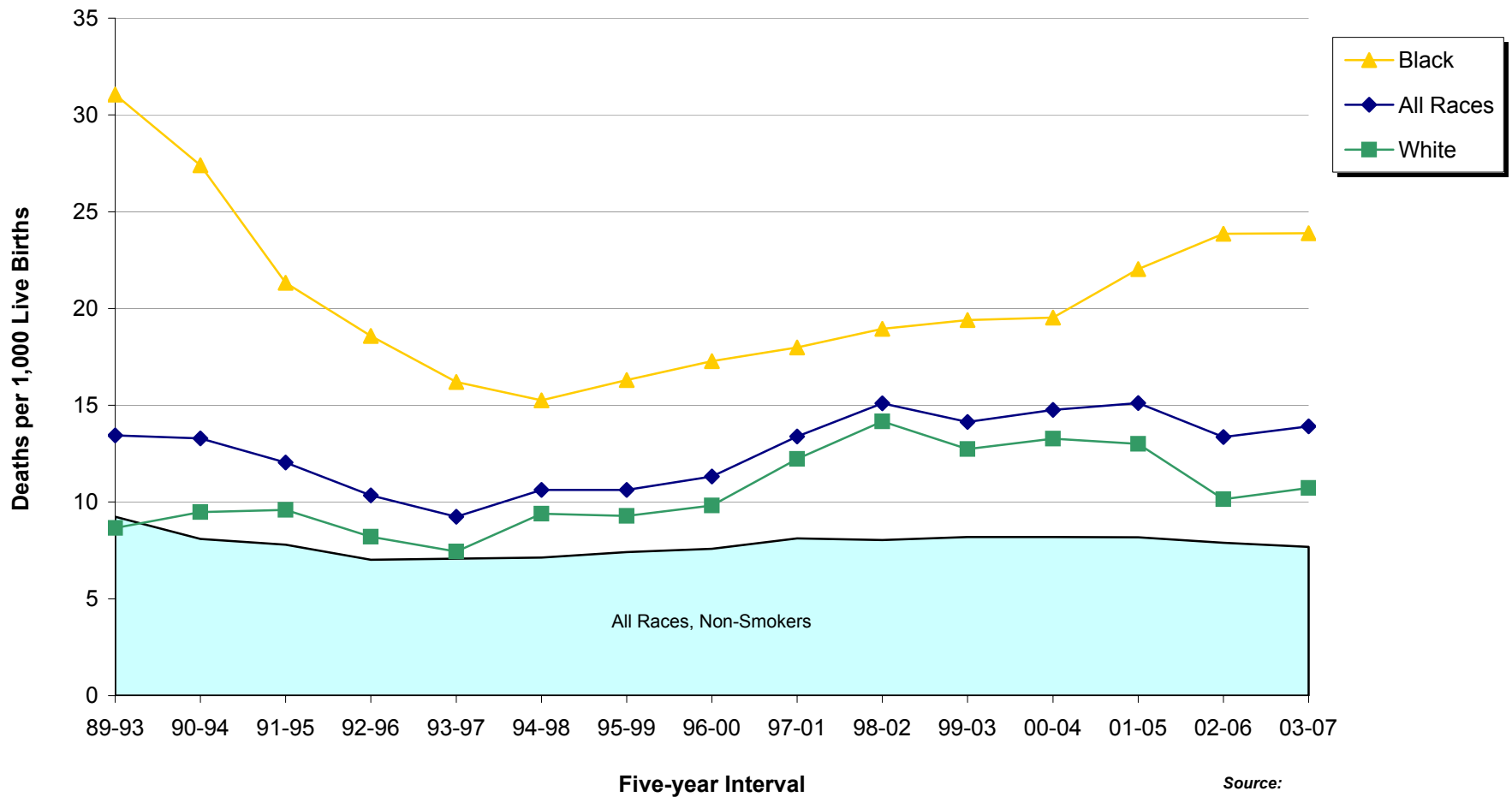
**Delaware, 1994-2007 Live Birth Cohort**



*Source:*  
Delaware Health Statistics Center

**Figure E-7**  
**Five-year Average Infant Mortality Rates by Race of Mothers who Smoked**  
**during Pregnancy versus all Non-smoking Mothers**

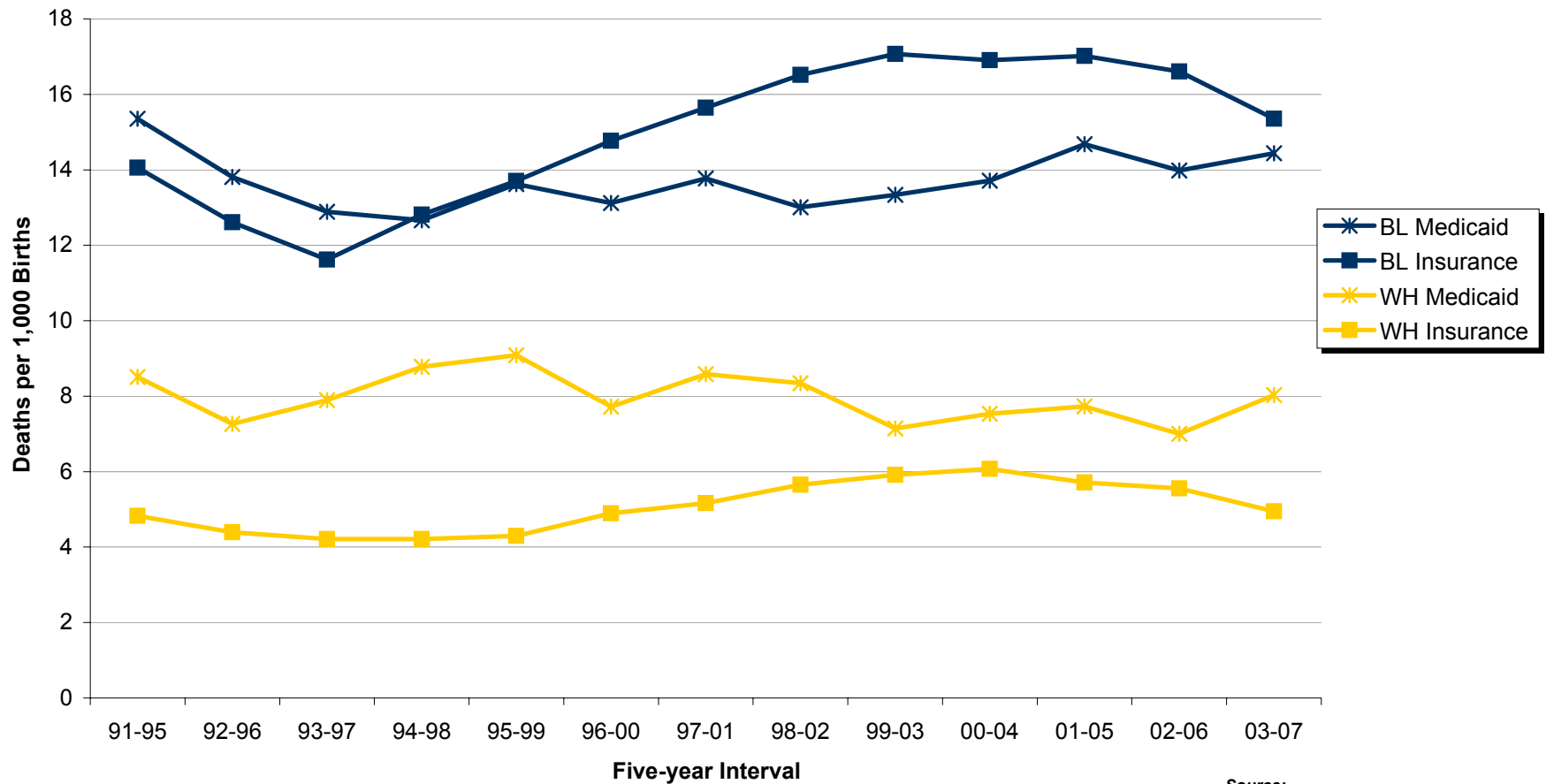
**Delaware, 1989-2007 Live Birth Cohort**



**Source:**  
 Delaware Health Statistics Center

**Figure E-8**  
**Five-year Average Infant Mortality Rates by Race and**  
**Source of Payment for Delivery**

**Delaware, 1991-2007 Live Birth Cohort**



**Source:**  
Delaware Health Statistics Center

TABLE E-11  
NUMBER OF INFANT DEATHS BY PLURALITY, BIRTH WEIGHT IN GRAMS, RACE OF MOTHER AND SEX OF CHILD  
DELAWARE, 2003-2007 LIVE BIRTH COHORT

Plurality/ Birth Weight	Race and Sex											
	All Races			White			Black			Other		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
<b>All Births</b>	496	264	232	258	139	119	221	118	103	17	7	10
<2500	373	198	175	185	101	84	175	92	83	13	5	8
<1500	315	172	143	155	88	67	151	81	70	9	3	6
<500	160	82	78	64	38	26	91	43	48	5	1	4
500-999	132	72	60	73	37	36	56	34	22	3	1	2
1000-1499	23	18	5	18	13	5	4	4	0	1	1	0
1500-1999	24	12	12	13	6	7	10	5	5	1	1	0
2000-2499	34	14	20	17	7	10	14	6	8	3	1	2
2500+	119	63	56	71	37	34	44	24	20	4	2	2
2500-2999	43	25	18	31	19	12	11	6	5	1	0	1
3000-3499	46	21	25	19	6	13	24	13	11	3	2	1
3500-3999	20	9	11	13	5	8	7	4	3	0	0	0
4000-4499	7	6	1	6	5	1	1	1	0	0	0	0
4500+	3	2	1	2	2	0	1	0	1	0	0	0
Unknown	4	3	1	2	1	1	2	2	0	0	0	0
<b>Single Births</b>	403	214	189	205	107	98	183	101	82	15	6	9
<2500	285	151	134	134	71	63	139	76	63	12	4	8
<1500	231	128	103	106	60	46	116	65	51	9	3	6
<500	115	61	54	39	26	13	71	34	37	5	1	4
500-999	98	54	44	53	25	28	42	28	14	3	1	2
1000-1499	18	13	5	14	9	5	3	3	0	1	1	0
1500-1999	22	10	12	12	5	7	10	5	5	0	0	0
2000-2499	32	13	19	16	6	10	13	6	7	3	1	2
2500+	115	61	54	69	35	34	43	24	19	3	2	1
2500-2999	39	23	16	29	17	12	10	6	4	0	0	0
3000-3499	46	21	25	19	6	13	24	13	11	3	2	1
3500-3999	20	9	11	13	5	8	7	4	3	0	0	0
4000-4499	7	6	1	6	5	1	1	1	0	0	0	0
4500+	3	2	1	2	2	0	1	0	1	0	0	0
Unknown	3	2	1	2	1	1	1	1	0	0	0	0
<b>Plural Births</b>	93	50	43	53	32	21	38	17	21	2	1	1
<2500	88	47	41	51	30	21	36	16	20	1	1	0
<1500	84	44	40	49	28	21	35	16	19	0	0	0
<500	45	21	24	25	12	13	20	9	11	0	0	0
500-999	34	18	16	20	12	8	14	6	8	0	0	0
1000-1499	5	5	0	4	4	0	1	1	0	0	0	0
1500-1999	2	2	0	1	1	0	0	0	0	1	1	0
2000-2499	2	1	1	1	1	0	1	0	1	0	0	0
2500+	4	2	2	2	2	0	1	0	1	1	0	1
2500-2999	4	2	2	2	2	0	1	0	1	1	0	1
3000-3499	0	0	0	0	0	0	0	0	0	0	0	0
3500-3999	0	0	0	0	0	0	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	1	1	0	0	0	0	1	1	0	0	0	0

**Note:**

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

**Source:**

Delaware Health Statistics Center

PLBWRCSX

TABLE E-12  
NUMBER OF NEONATAL DEATHS BY PLURALITY, BIRTH WEIGHT IN GRAMS, RACE OF MOTHER AND SEX OF CHILD  
DELAWARE, 2003-2007 LIVE BIRTH COHORT

Plurality/ Birth Weight	Race and Sex											
	All Races			White			Black			Other		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
<b>All Births</b>	352	192	160	179	100	79	162	89	73	11	3	8
<2500	310	168	142	155	87	68	145	79	66	10	2	8
<1500	286	156	130	142	80	62	136	74	62	8	2	6
<500	160	82	78	64	38	26	91	43	48	5	1	4
500-999	108	60	48	63	31	32	42	28	14	3	1	2
1000-1499	18	14	4	15	11	4	3	3	0	0	0	0
1500-1999	10	5	5	6	3	3	4	2	2	0	0	0
2000-2499	14	7	7	7	4	3	5	3	2	2	0	2
2500+	39	22	17	23	13	10	15	8	7	1	1	0
2500-2999	17	11	6	13	9	4	4	2	2	0	0	0
3000-3499	14	8	6	5	2	3	8	5	3	1	1	0
3500-3999	5	2	3	3	1	2	2	1	1	0	0	0
4000-4499	2	1	1	2	1	1	0	0	0	0	0	0
4500+	1	0	1	0	0	0	1	0	1	0	0	0
Unknown	3	2	1	1	0	1	2	2	0	0	0	0
<b>Single Births</b>	269	145	124	130	70	60	128	72	56	11	3	8
<2500	230	124	106	108	59	49	112	63	49	10	2	8
<1500	206	112	94	95	52	43	103	58	45	8	2	6
<500	115	61	54	39	26	13	71	34	37	5	1	4
500-999	78	42	36	45	19	26	30	22	8	3	1	2
1000-1499	13	9	4	11	7	4	2	2	0	0	0	0
1500-1999	10	5	5	6	3	3	4	2	2	0	0	0
2000-2499	14	7	7	7	4	3	5	3	2	2	0	2
2500+	37	20	17	21	11	10	15	8	7	1	1	0
2500-2999	15	9	6	11	7	4	4	2	2	0	0	0
3000-3499	14	8	6	5	2	3	8	5	3	1	1	0
3500-3999	5	2	3	3	1	2	2	1	1	0	0	0
4000-4499	2	1	1	2	1	1	0	0	0	0	0	0
4500+	1	0	1	0	0	0	1	0	1	0	0	0
Unknown	2	1	1	1	0	1	1	1	0	0	0	0
<b>Plural Births</b>	83	47	36	49	30	19	34	17	17	0	0	0
<2500	80	44	36	47	28	19	33	16	17	0	0	0
<1500	80	44	36	47	28	19	33	16	17	0	0	0
<500	45	21	24	25	12	13	20	9	11	0	0	0
500-999	30	18	12	18	12	6	12	6	6	0	0	0
1000-1499	5	5	0	4	4	0	1	1	0	0	0	0
1500-1999	0	0	0	0	0	0	0	0	0	0	0	0
2000-2499	0	0	0	0	0	0	0	0	0	0	0	0
2500+	2	2	0	2	2	0	0	0	0	0	0	0
2500-2999	2	2	0	2	2	0	0	0	0	0	0	0
3000-3499	0	0	0	0	0	0	0	0	0	0	0	0
3500-3999	0	0	0	0	0	0	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	1	1	0	0	0	0	1	1	0	0	0	0

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

**Source:**  
Delaware Health Statistics Center

NEOPLBW