

BRIEFING PAPER

ON THE 2006 INFANT MORTALITY RATE

FOR THE

DISTRICT OF COLUMBIA

Prepared by

**The State Center for Health Statistics
Department of Health**

**Government of the District of Columbia
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Statistical Overview

There has been an overall declining trend in the infant mortality rate over the past ten years from 1997 to 2006. During this ten-year period, the number of infant deaths declined from 104 in 1997 to 96 in 2006 resulting in an overall decline in the District's infant mortality rate of 13.7 percent between 1997 and 2006. There were eight fewer infant deaths in 2006 compared to 1997 and there were 606 more live births in 2006 compared to 1997. Table 1 and Figure 1 present a ten-year summary of these statistics.

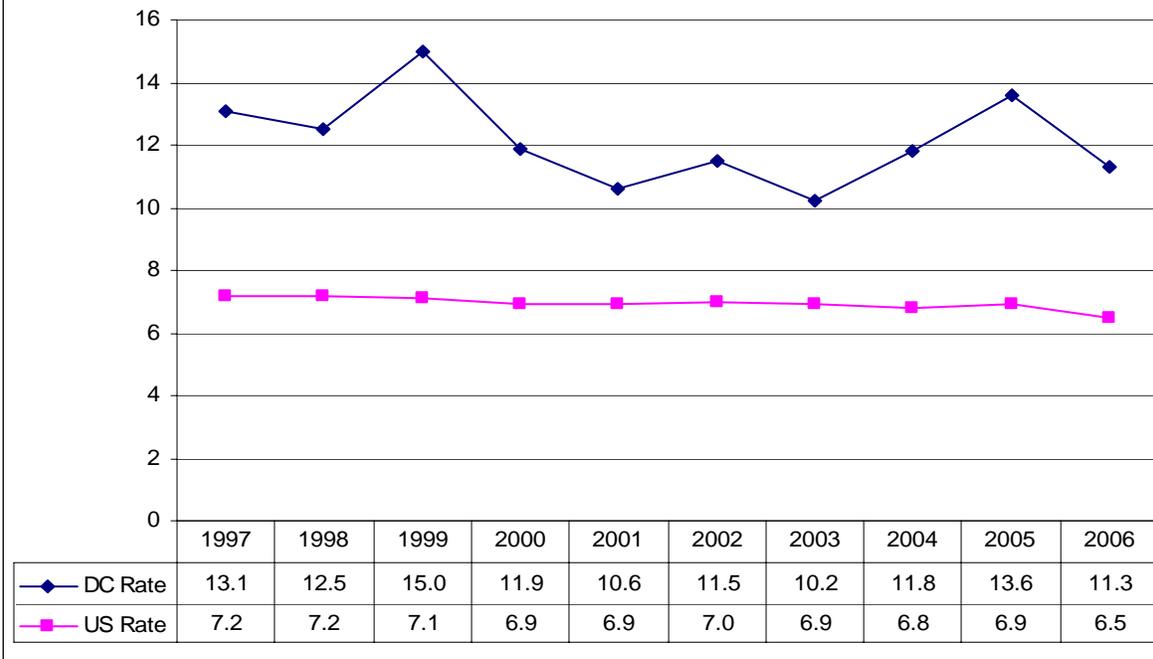
In 2006, there were 8,522 live births and 96 infant deaths to District of Columbia residents (Table 1). This resulted in an infant mortality rate of 11.3 deaths for every 1,000 live births. In 2005, there were 7,940 live births and 108 infant deaths. The infant mortality rate for 2005 was 13.6 deaths per 1,000 live births. There was a 16.9 percent decline in the infant mortality rate from 13.6 per 1,000 live births in 2005 to 11.3 in 2006. There were 12 fewer infant deaths in 2006 than in 2005 and 582 more births to District women in 2006 as compared to 2005. Ward 3 had the lowest infant mortality rate at 2.2 deaths per 1,000 live births and Ward 8 had the highest infant mortality rate at 21.6 deaths per 1,000 live births (Table 9). 2006 births (8,522) increased by 7.3 percent over 2005 births (7,940), the first time births have increased since 1990. This increase is also consistent with the preliminary estimate of total births in the U.S., which increased by 3 percent from 4,138,349 in 2005 to 4,265,996 in 2006.

Year	Births	Infant Deaths	Infant Mortality Rate*
1997	7,916	104	13.1
1998	7,678	96	12.5
1999	7,513	113	15.0
2000	7,666	91	11.9
2001	7,621	81	10.6
2002	7,494	86	11.5
2003	7,616	78	10.2
2004	7,937	94	11.8
2005	7,940	108	13.6
2006	8,522	96	11.3

* Per 1,000 live births

Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

Figure 1. District of Columbia and National Infant Mortality Rate, 1997-2006



Note: Infant Mortality Rate (IMR) per 1,000 live births.

Sources: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.
National Center for Health Statistics (NCHS).

2005 to 2006 Comparisons

- The number of infant deaths decreased from 108 in 2005 to 96 in 2006, a decrease of 11.1 percent.
- The overall infant mortality rate for the District decreased by 16.9 percent from a rate of 13.6 in 2005 per 1,000 live births to 11.3 per 1,000 live births in 2006. This decrease in the District's infant mortality is not consistent with the provisional national infant mortality rate of 6.5 per 1,000 live births in 2006.
- The infant mortality rates decreased in Wards 1, 3, 4, 6, 7 and slightly in 8.
- The infant mortality rates increased in Wards 2 and 5.
- Death to infants younger than 28 days decreased from a rate of 9.3 per 1,000 live births in 2005 to 6.9 per 1,000 live births in 2006, a decrease of 25.8 percent. (59 neonatal deaths in 2006 and 74 in 2005.)
- The postneonatal death rate (deaths occurring from 28 days to under one year of age) was 4.3 per 1,000 live births in 2006 which remained unchanged from 2005. (37 postneonatal deaths in 2006 and 34 in 2005)
- The infant death rate to black mothers decreased from 18.4 per 1,000 live births in 2005 to 17.3 per 1,000 live births in 2006 (Table 2), a decrease of 6 percent. (84 infant deaths in 2006 to District residents).
- The infant death rate to non-Hispanic black mothers decreased from 18.9 per 1,000 live births in 2005 to 17.4 per 1,000 live births in 2006, a decrease of 7.9 percent (Table 2). (84 infant deaths in 2006 to District residents).
- The infant death rate to white mothers also decreased from 3.8 per 1,000 live births in 2005 to 2.6 per 1,000 live births in 2006 (Table 2), which is lower than the preliminary 2006 US rate of 5.6 per 1,000. (Six infant deaths in 2006 to District residents).
- The infant death rate to non-Hispanic white mothers was 3.0 per 1,000 live births in 2005 and for 2.9 for 2006 (Table 2). (Six infant deaths in 2006 in to District residents).
- The infant death rate to Hispanic mothers decreased by 71.7 percent from 10.6 per 1,000 live births in 2005 (Table 2) to 3.0 per 1,000 live births in 2006. (4 infant deaths in 2006 to District residents).
- The number of infant deaths that resulted from multiple births increased from 11 in 2005 to 12 in 2006.
- There was one maternal death in 2006.
- Births to adolescent mothers (younger than 20 years of age) increased from 11.0 percent of the total births in 2005 to 12.0 percent of the total births in 2006, a 9.1 percent increase.
- Births to teen mothers (15-19 years of age) increased from 10.7 percent of the total births in 2005 to 11.7 percent of the total births in 2006.

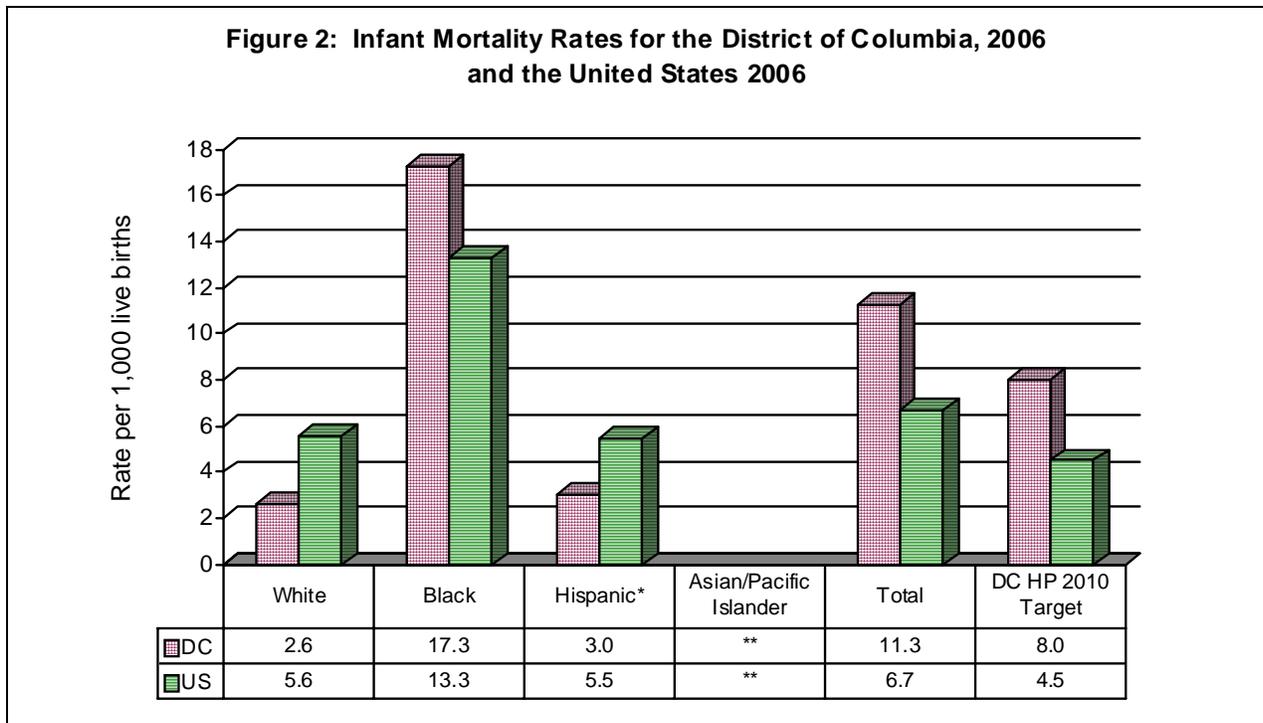
Of the 96 infant deaths that occurred in 2006, 59 (or 61.5 percent) occurred during the neonatal period (under 28 days of life). The neonatal death rate decreased by 25.8 percent from 9.3 per 1,000 live births in 2005 to 6.9 per 1,000 live births in 2006. The neonatal period is important relative to efforts to reduce infant mortality. Many of the causes of infant deaths during this period could have been mitigated or prevented with preconception and prenatal care. Figure 2 shows the infant mortality rate (IMR) by race and Hispanic origin of mother for the District of Columbia compared to the U.S.

Table 2: Live Births, Infant Deaths and Infant Mortality by Race/Hispanic Origin District of Columbia Residents, 2006			
Race/Ethnicity	Live Births	Infant Deaths	Infant Mortality Rate ¹
Total	8,522	96	11.3
Black	4,847	84	17.3
White	2,311	6	2.6
Asian/Other	1,346	6	4.5
Total	8,522	96	11.3
Non-Hispanic Black	4,814	84	17.4
Non-Hispanic White	2,103	6	2.9
Hispanic ²	1,344	4	3.0

Notes: ¹ per 1,000 live births

² Hispanics include persons of all Hispanic origin of any race.

Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.



*Hispanics include persons of all Hispanic origin of any race.

**Rates not computed due to small number of infant deaths and, therefore, are likely to be unstable.

Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health. National Center for Health Statistics.

Factors Contributing to Infant Mortality

Low Birth Weight and Race of Mother

Vital statistics over the years have indicated that factors such as low birth weight, lack of adequate prenatal care, and prematurity are associated with infant mortality. In 2006, the percentage of low birth weight infants (those weighing under 2,500 grams or 5.5 pounds) in the District was 11.6 compared to 11.2 percent in 2005 (Table 3). This represents a slight increase of 3.6 percent. The percentage of low birth weight babies that was born to all black mothers increased from 14.2 in 2005 to 14.5 in 2006. Similarly, there was an increase in low birth weight babies born to all white mothers, from 6.9 in 2005 to 7.3 in 2006. Likewise, the percentage of low birth weight babies born to Asian and Pacific Islander mothers increased from 7.5 in 2005 to 8.6 in 2006. Figure 3 shows the distribution of total births by infant birth weight and race and Hispanic origin of mother.

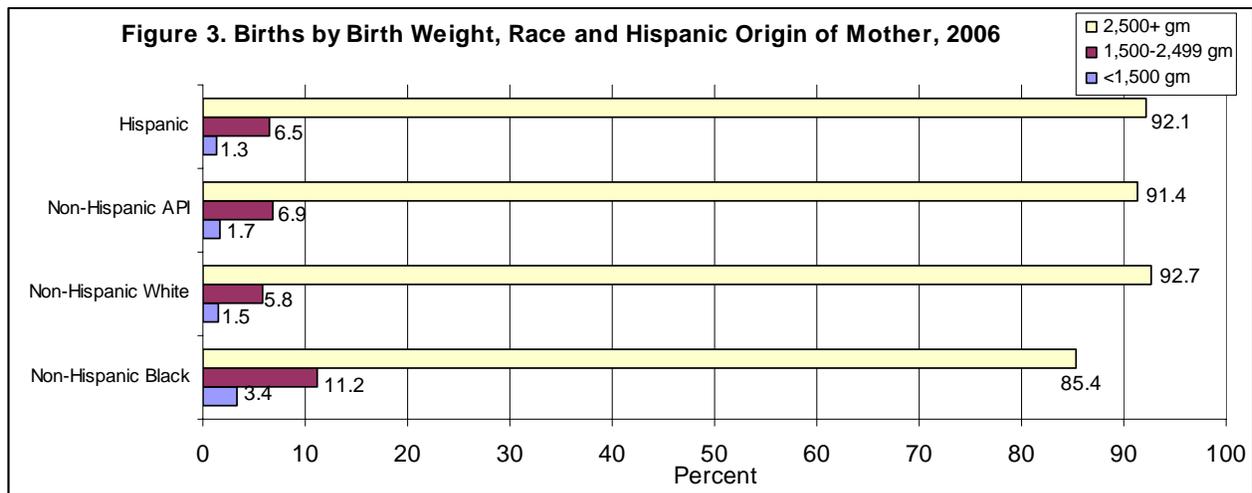
Table 3: Percent Distribution of Low Birth Weight Babies by Race of Mother District of Columbia Residents, 2005 and 2006			
Race	2005	2006	Percent Change
Total Births for All Races	7,940	8,522	7.3
- Number Low Birth Weight	888	986	
- Percentage LBW among all Births	11.2%	11.6%	3.6
Total Births to Black* Mothers	4,575	4,847	
- Number Low Birth Weight	649	706	
- Percentage LBW among Births to Black Mothers	14.2%	14.5%	2.1
Total Births to White* Mothers	2,171	2,311	
- Number Low Birth Weight	150	168	
- Percentage LBW among Births to White Mothers	6.9%	7.3%	5.8
Total Births to Asian and Pacific Islander Mothers	159	175	
- Number Low Birth Weight	12	15	
- Percentage LBW among Births to Asian and Pacific Islander Mothers	7.5%	8.6%	14.7

*Includes mothers of Hispanic origin.

Notes: 1. Number does not add up due to exclusion of other races and unknown.

2. Low Birth Weight means under 2,500 grams or 5lbs. 8oz.

Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.



Note: API means Asian and Pacific Islanders.

Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

Infant Deaths and Race of Mother by Low Birth Weight

Of the 96 infant deaths, 80 (83.3 percent) were low birth weight infants (57 died during the neonatal period and 23 in the post-neonatal period). Four of the six infant deaths to white mothers were born weighing under 2,500 grams. Seventy-one of the 84 (84.5 percent) infant deaths to black mothers were low birth weight babies. Two of the two infant deaths to Asian mothers were low birth weight babies.

Low Birth Weight and Age of Mother

In the District of Columbia the percentage of low birth weight infants born to all mothers under 20 years of age increased from 11.7 in 2005 to 12.3 in 2006 (Table 4). The percentage of low birth weight babies born to all mothers 20 years of age and older increased from 11.1 percent in 2005 to 11.4 percent in 2006.

Table 4: Percent Distribution of Low Birth Weight Babies by Age of Mother District of Columbia Residents, 2005 and 2006			
	2005	2006	Percent Change
Total Births for All Ages	7,940	8,522	
- Number of Low Birth Weight	888	986	
- Percentage of Low Birth Weight	11.2	11.6	3.6
Total Births to Mothers Under 20 Years of Age	875	1,021	
- Number of Low Birth Weight	102	126	
- Percentage of Low Birth Weight among mothers < 20 years old	11.7	12.3	5.1

Table 4: Percent Distribution of Low Birth Weight Babies by Age of Mother District of Columbia Residents, 2005 and 2006			
	2005	2006	Percent Change
Total Births to Mothers 20 Years of Age and Older	7,056	7,487	
- Number of Low Birth Weight	783	855	
- Percentage of Low Birth Weight among mothers ≥ 20 years old	11.1	11.4	2.7
Total Births to Mothers Whose Age is Unknown	9	14	
- Number of Low Birth Weight	3	5	
- Percentage of Low Birth Weight	33.3	35.7	7.2

Note: Low Birth Weight means under 2,500 grams or 5lbs. 8oz.

Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

Low Birth Weight and Infant Deaths

Of the 986 low birth weight births, 80 infants (8.1 percent) died in 2006. A total of 28 infants (29.2 percent of all 96 infant deaths) died to mothers 20-24 years of age. Twenty-two of these 28 infants (78.6 percent) were low birth weight. Fifty-three percent of all infant deaths (N=96) occurred to mothers aged 20-29 years. Approximately 26 percent of all infant deaths occurred to mothers aged 30-39 years and 11.5 percent of all infant deaths were to mothers aged below 20 years (Table 5).

Table 5: Percent Distribution of Low Birth Weight Infant Deaths by Age of Mother and Time of Death District of Columbia Residents, 2006							
Age of Mother	Infant Deaths	Percent Deaths*	LBW Deaths	%LBW Deaths**	Time of Infant Death		
					Total LBW	Neonatal	Post-neonatal
Total	96	100.0	80	83.3	80	57	23
< 20 years	11	11.5	9	81.8	9	7	2
20-24 years	28	29.2	22	78.6	22	14	8
25-29 years	23	24.0	21	91.3	21	16	5
30-34 years	19	19.8	15	78.9	15	9	6
35-39 years	6	6.3	4	66.7	4	2	2
≥ 40 years	9	9.4	9	100.0	9	9	0

*Percentage based on all infant deaths (N=96).

**Percentage based on total deaths in each age group.

Note: LBW means low birth weight (under 2,500 grams or 5lbs. 8 oz.).

Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health

Prenatal Care

Adequate prenatal care, defined by the Kessner Index (Kessner et al., 1973), is care initiated in the first trimester with a minimum of nine prenatal visits. Care is considered to be inadequate if initiated in the third trimester and consisting of fewer than four prenatal visits; no prenatal care is included in this category. Any other combination of prenatal care and number of visits is considered to be intermediate care. There was no change in adequate prenatal care between 2005 (71.5 percent) and 2006 (71.2 percent) (Table 15). There was no change in intermediate care between 2005 (22.2 percent) to 2006 (22 percent). Inadequate care increased slightly by 7.9 percent from 6.3 percent in 2005 to 6.8 percent in 2006.

There was a slight decrease in the percent of births to mothers who began prenatal care in the first trimester in 2005 (79.5 percent) compared to 2006 (78.8 percent) (Table 15). Ward 3 had the highest percentage of women who began prenatal care in the first trimester (92.9 percent) and also the highest percentage of women who received adequate prenatal care (86.9 percent). Ward 8 had 74.7 percent of pregnant women who began prenatal care in the first trimester (the second lowest among the wards) and 62.9 percent received adequate prenatal care, (the lowest among the wards) which partially explains the highest infant mortality in the city for this ward (Tables 15).

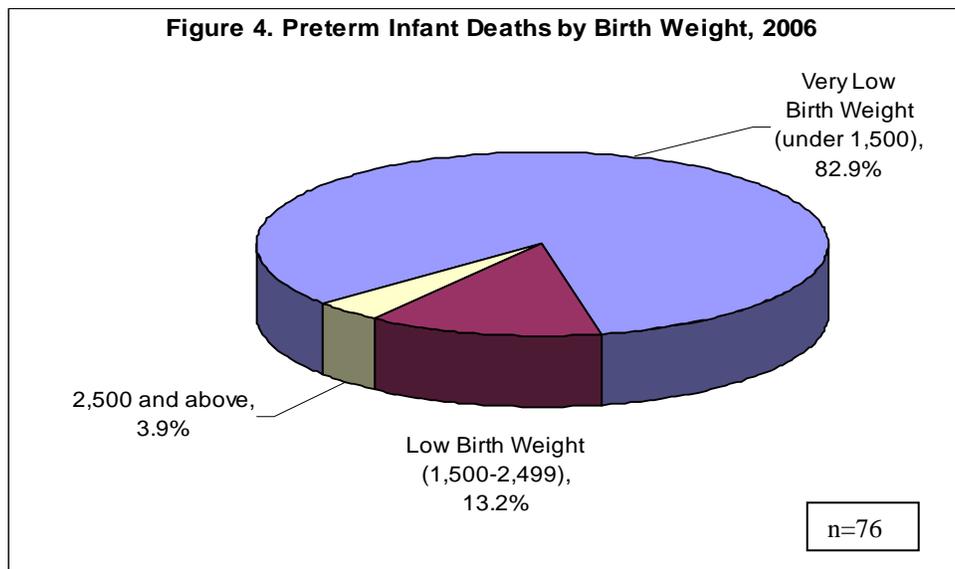
Prematurity

Prematurity leads to low birth weight and infant mortality. Table 6 shows the percentages of all premature births (less than 37 weeks gestation) for 2005-2006. Premature infants increased by 5.6 percent from 12.5 percent in 2005 to 13.2 percent in 2006. Preterm births have increased across all racial and ethnic groups in 2006. Approximately 83 percent of preterm infants who died weighed under 1,500 grams (Figure 4). Eighty-four percent of pre-term infants died to mothers ages 15-34.

Table 6. Percent Distribution of Premature Babies by Race and Hispanic Origin of Mother District of Columbia Residents, 2005 and 2006			
Race	2005	2006	Percent Change
Total Births for all Races	7,940	8,522	
-Number of Premature Babies	989	1,129	
-Percent Premature Babies	12.5%	13.2%	5.6
Total Births to Black* Mothers	4,575	4,847	
-Number of Premature Babies to Black Mothers	679	755	
-Percent Premature Babies to Black Mothers	14.8%	15.6%	5.4
Total Births to White* Mothers	2,171	2,311	
-Number of Premature Babies to White Mothers	188	226	
-Percent Premature Babies to White Mothers	8.7%	9.8%	12.6
Total Births to Asian and Pacific Islander (API) Mothers	159	175	
-Number of Premature Babies to API Mothers	13	16	
-Percent Premature Babies to API Mothers	8.2%	9.1%	11.0
Total Births to Hispanic Mothers	1,132	1,344	
-Number of Premature Babies to Hispanic Mothers	114	152	
-Percent Premature Babies to Hispanic Mothers	10.1%	11.3%	11.9

* Includes mothers of Hispanic origin.

Note: Premature births means births under 37 weeks of gestation.



Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

Marital Status

The proportion of births to unmarried women increased in 2006 to 57.6 percent, compared with 56.0 in 2005 a 3.2 percent change. In 2006, 97% of the births to teenagers (15-19 years) were nonmarital. Nearly 87 percent of births to women aged 20-24 years and 62.8 percent of births to women aged 25-29 years were to unmarried women.

In 2006, 80.2 percent of infant deaths were to unmarried women, compared to 71 percent in 2005 for an increase of 12.5 percent. In 2005 and 2006, the majority of infant deaths were to unmarried women (Table 7).

Year	Total Number of Births	Births to Unmarried Women		Births to Married Women		Total Infant Deaths	Infant Deaths			
		Number of births	Percent	Number of Births	Percent		Infant Deaths to Unmarried Women	Percent	Infant Deaths to Married Women	Percent
2006	8,522	4,908	57.6	3,613	42.4	96	77	80.2	18	18.8
2005	7,940	4,448	56.0	3,492	44.0	108	77	71.3	30	27.8

Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

Hispanic/Latina Outcomes

The number of births to Hispanic/Latina mothers increased from 1,132 in 2005 to 1,344 in 2006. Of these births, 12 infants died in 2005 and 4 infants died in 2006. Thus, the infant mortality rate decreased from 10.6 per 1,000 live births in 2005 to 3.0 per 1,000 live births in 2006. Births to Hispanic mothers younger than age 20 increased by 25.4 percent from 11.8 percent in 2005 to 14.8 percent in 2006. Births to Hispanic teen (15-19 years) mothers increased by 25 percent from 11.6 percent in 2005 to 14.5 percent in 2006. Overall, the percentage of low birth weight infant increased by 9.7 percent from 7.2 percent in 2005 to 7.9 percent in 2006.

For births to mothers aged younger than 20 years, the percentage of low birth weight babies decreased by 13.5 from 10.4 in 2005 to 9.0 in 2006 and for mothers aged 20 years and older, the percentage of low birth weight babies increased by 14.9 from 6.7 in 2005 to 7.7 in 2006 (Table 8).

Of the 96 infant deaths, three infant deaths to Hispanic/Latina mothers were low birth weight babies. All three infants died to mothers in age group 25-29.

Approximately, 61.2 percent of Hispanic/Latina mothers received adequate prenatal care in 2006 compared to 52 percent in 2005. In 2006, 67.1 percent of Hispanic/Latina mothers began prenatal care in the first trimester compared to 56.2 percent in 2005.

Table 8: Percent Distribution of Low Birth Weight Babies to Hispanic Mothers by Age of Mother District of Columbia Residents, 2005 and 2006			
	2005	2006	Percent Change
Total Births to Hispanic Mothers for all Ages	1,132	1,344	
- Number of Low Birth Weight	81	106	
- Percentage of Low Birth Weight	7.2	7.9	9.7
Total Births to Mothers Under 20 Years of Age	134	199	
- Number of Low Birth Weight	14	18	
- Percentage of Low Birth Weight among mothers < 20 years old	10.4	9.0	-13.5
Total Births to Mothers 20 Years of Age and Older	998	1,143	
- Number of Low Birth Weight	67	88	
- Percentage of Low Birth Weight among mothers ≥20 years old	6.7	7.7	14.9

Notes: 1. Persons of Hispanic origin may be of any race; therefore, Hispanics include persons of all Hispanic origin of any race.

2. Due to the small number of births, the above percentages should be interpreted cautiously.

3. Low Birth Weight means under 2,500 grams or 5lbs. 8oz.

Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

Geographical Distribution

The presence of geographical subdivisions such as wards and census tracts in the District provides a basis for breaking down District-wide data into small area statistics for comparison and analyses. In the absence of individual-level socioeconomic data, these ward statistics form a useful basis for evaluating health status indicators against demographic and environmental ward characteristics. In 2006, there was an increase in the number of infants born in seven wards (1, 2, 4, 5, 6, 7, and 8) of the city. The infant mortality breakdown by ward for 2006 shows a decline in the infant mortality rate for six wards (1, 3, 4, 6, 7, and 8). The infant mortality rate increased in the other two wards (2 and 5). Among the six wards with decreased infant mortality rates for 2006, Ward 8 had the highest rate (21.6), but Ward 2 had the largest percentage increase (106.3) from a rate of 6.3 in 2005 to 13.0 in 2006. In 2006, the number of infant deaths increased by 6 in Ward 2. Ward 3 had the largest decrease from a rate of 5.3 in 2005 to 2.2 in 2006. Caution should be used when interpreting the rate and percentage change because of very small numbers (Table 9).

**Table 9: Births, Infant Deaths and Infant Mortality Rates by Ward
District of Columbia Residents, 2005 and 2006**

Ward	Births		Infant Deaths		Infant Mortality Rate*		Percent Change
	2006	2005	2006	2005	2006	2005	
1	1262	1,123	7	13	5.5	11.6	-52.6
2	846	799	11	5	13.0	6.3	106.3
3	913	936	2	5	2.2	5.3	-58.5
4	1316	1,196	8	17	6.1	14.2	-57.0
5	898	839	18	15	20.0	17.9	11.7
6	991	949	9	13	9.1	13.7	-33.6
7	1015	945	13	15	12.8	15.9	-19.5
8	1249	1,150	27	25	21.6	21.7	-0.5
Unknown	32	3	1	0	-	-	-
Total	8522	7,940	96	108	11.3	13.6	-16.9

*Infant deaths per 1,000 live births.

Note: Due to the small number of infant deaths, the above infant mortality rates are highly variable and should be interpreted cautiously.

Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health

**Table 10: Statistical Overview by Ward
District of Columbia Residents, 2006**

Ward	Births	Infant Deaths	IMR*	LBW	Teen Births	LBW to Teens
1	1,262	7	5.5	121	135	18
2	846	11	13.0	91	74	10
3	913	2	2.2	74	2	0
4	1,316	8	6.1	134	141	12
5	898	18	20.0	128	136	17
6	991	9	9.1	124	107	11
7	1,015	13	12.8	129	208	30
8	1,249	27	21.6	184	216	28
Unknown	32	1	-	1	2	0
Total	8,522	96	11.3	986	1,021	126

* Infant deaths per 1,000 live births.

Notes: 1. Teen birth means birth to a mother under the age of 20 years.

2. LBW means low birth weight (under 2,500 grams or 5 lbs. 8 oz.).

3. Due to the small number of infant deaths, the above infant mortality rates are highly variable and should be interpreted cautiously.

Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

Ward	Births	Infant Deaths	IMR*	LBW	Teen Births	LBW to Teens
1	1,123	13	11.6	93	107	8
2	799	5	6.3	90	63	8
3	936	5	5.3	76	2	0
4	1,196	17	14.2	127	118	14
5	839	15	17.9	118	108	17
6	949	13	13.7	104	116	13
7	945	15	15.9	138	170	24
8	1,150	25	21.7	142	191	18
Unknown	3	0	-	0	0	0
Total	7,940	108	13.6	888	875	102

* Infant deaths per 1,000 live births.

Notes: 1. Teen birth means birth to a mother younger than 20 years of age.

2. LBW means low birth weight (under 2,500 grams or 5 lbs. 8 oz.).

3. Due to the small number of infant deaths, the above infant mortality rates are highly variable and should be interpreted cautiously.

Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

The District's infant mortality rate is comparable to cities of similar size and population mix. Among the following four cities, the District's rate was the lowest in 2003 and 2006; third lowest in 2005; second lowest in 2002 and 2004 (Table 12).

City	2002	2003	2004	2005	2006
Baltimore, Maryland ¹	10.4	13.2	12.7	11.3	12.4
Detroit, Michigan ²	16.7	16.3	15.5	15.9	13.4
District of Columbia ³	11.5	10.2	11.8	13.6	11.3
Richmond, Virginia ⁴	17.2	14.3	11.0	13.2	13.5

Sources: ¹ Vital Statistics Administration, Department of Health and Mental Hygiene, Maryland.

² Vital Records & Health Data Development Section, Michigan Department of Community Health.

³ State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

⁴ Virginia Department of Health, VA State Center for Health Statistics.

Causes of Death

The leading cause of infant mortality, **Newborn affected by maternal complications of pregnancy** accounted for 18.8 percent of all infant deaths (Table 13). **Disorders related to short gestation and low birth weight, not elsewhere classified** was the second ranked leading cause of infant death, which accounted for 16.7 percent of all infant deaths in 2006. **Newborn affected by complications of placenta, cord, and membranes** and **Congenital malformations, deformations and chromosomal abnormalities**, tied for the third leading cause of death, which accounted for 8.3 percent of all infant mortality. **Necrotizing enterocolitis of newborn**, **Newborn affected by other complication of labor and delivery**, and **Bacterial sepsis of newborn** tied for the fifth leading cause of death, which accounted for 3.1 percent each of all infant mortality.

**Table 13: Leading Causes of Infant Death
District of Columbia Residents, 2006**

Rank ¹	Cause of Death (Based on Tenth Revision, International Classification of Diseases, 1992)	Number	Percent*	Rate**
...	All causes	96	100.00	1126.5
1	Newborn affected by maternal complications of pregnancy (P01)	18	18.8	211.2
	... Premature rupture of membrane (P01.1)	12	12.5	140.8
	... Incompetent cervix (P01.0)	5	5.2	58.7
	... Other maternal complications of pregnancy (P01.2-P01.4,P01.6-P01.9)	1	1.0	11.7
2	Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	16	16.7	187.7
	... Extremely low birth/extremely immaturity (P07.0, P07.2)	13	13.5	152.5
	... Other low birth weight/preterm (P07.1,P07.3)	3	3.1	35.2
3	Newborn affected by complications of placenta, cord, and membranes (P02)	8	8.3	93.9
	... Newborn affected by chorioamnionitis (P02.7)	3	3.1	35.2
	... Newborn complications involving placenta (P02.1)	3	3.1	35.2
	... Newborn affected by complications involving placenta (P02.0-P02.3)	2	2.1	23.5
3	Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)	8	8.3	93.9
	... Congenital malformations of heart (Q20-Q24)	3	3.1	35.2
	... Other congenital malformations	5	5.2	58.7
5	Necrotizing enterocolitis of newborn (P77)	3	3.1	35.2
5	Newborn affected by other complications of labor and delivery (P03)	3	3.1	35.2
5	Bacterial sepsis of newborn (P36)	3	3.1	35.2
...	All other causes	37	38.5	434.2

*Percent based on total number of infant deaths.

**Rate per 100,000 live births.

... Category not applicable.

¹ Rank based on number of infant deaths.

Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

In 2006, the leading cause of death nationally was **Congenital malformations, deformations and chromosomal abnormalities**. **Disorders related to short gestation and low birth weight, not elsewhere classified** was the second leading cause for the US (Table A) and also the second for the District of Columbia.

Table A. Infant Deaths and Infant Mortality Rates for the 10 Leading Causes of Infant Death: United States, Preliminary, 2006.

[Data are based on a continuous file of records received from the states. Rates are per 100,000 live births. Figures are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals.]

Rank ¹	Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 1992</i>)	Number	Rate
...	All causes	28,609	670.6
1	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	5,827	136.6
2	Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	4,841	113.5
3	Sudden infant death syndrome (R95)	2,145	50.3
4	Newborn affected by maternal complications of pregnancy (P01)	1,694	39.7
5	Newborn affected by complications of placenta, cord and membranes (P02)	1,123	26.3
6	Accidents (unintentional injuries) (V01–X59)	1,119	26.2
7	Respiratory distress of newborn (P22)	801	18.8
8	Bacterial sepsis of newborn (P36)	786	18.4
9	Neonatal hemorrhage (P50–P52,P54)	598	14.0
10	Diseases of the circulatory system (I00–I99)	539	12.6
...	All other causes (residual)	9,136	214.2

...Category not applicable.

¹Rank based on number of infant deaths.

Notes: For certain causes of death such as unintentional injuries, sudden infant death syndrome, and congenital malformations, deformations and chromosomal abnormalities, preliminary and final data may differ significantly because of the truncated nature of the preliminary file. Data are subject to sampling and/or random variation.

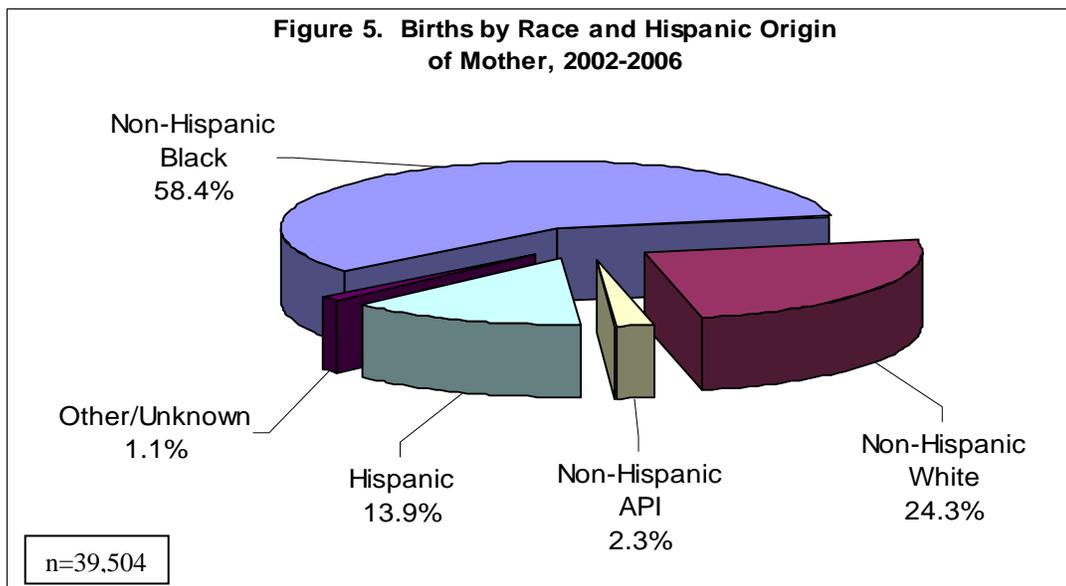
Source: National Vital Statistics Reports, Vol. 56, No. 16, June 11, 2008. Deaths; Preliminary data for 2006. Available from: http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_16.pdf

The leading cause of neonatal death was, **Newborn affected by maternal complications of pregnancy**, which accounted for almost 29 percent. **Disorders related to short gestation and low birth weight, not elsewhere classified** was the second leading cause (20.3 percent), **Newborn affected by complications of placenta, cord, and membranes** (13.6 percent) was the third leading cause of neonatal death (Table 14).

Table 14: Leading Causes of Neonatal Infant Death (n=59) District of Columbia Residents, 2006				
Rank ¹	Cause of Death (Based on Tenth Revision, International Classification of Diseases, 1992)	Number	Percent*	Rate**
...	All causes	59	100.0	692.3
1	Newborn affected by maternal complications of pregnancy (P01)	17	28.8	199.5
2	Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	12	20.3	140.8
3	Newborn affected by complications of placenta, cord, and membranes (P02)	8	13.6	93.9
4	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	3	5.1	35.2
4	Bacterial sepsis of newborn (P36)	3	5.1	35.2
...	All other causes or total	16	27.1	187.7

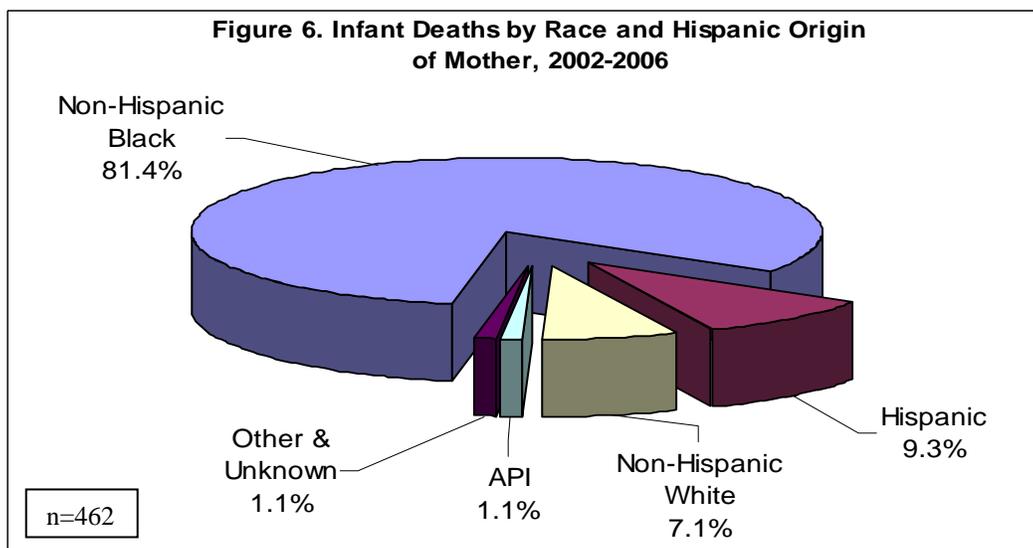
Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

Figure 5 shows the total number of births, 39,504 for the years 2002 to 2006. Almost 60 percent were to non-Hispanic black mothers, 24.3 percent were to non-Hispanic white mothers and 13.9 percent were to Hispanic mothers.



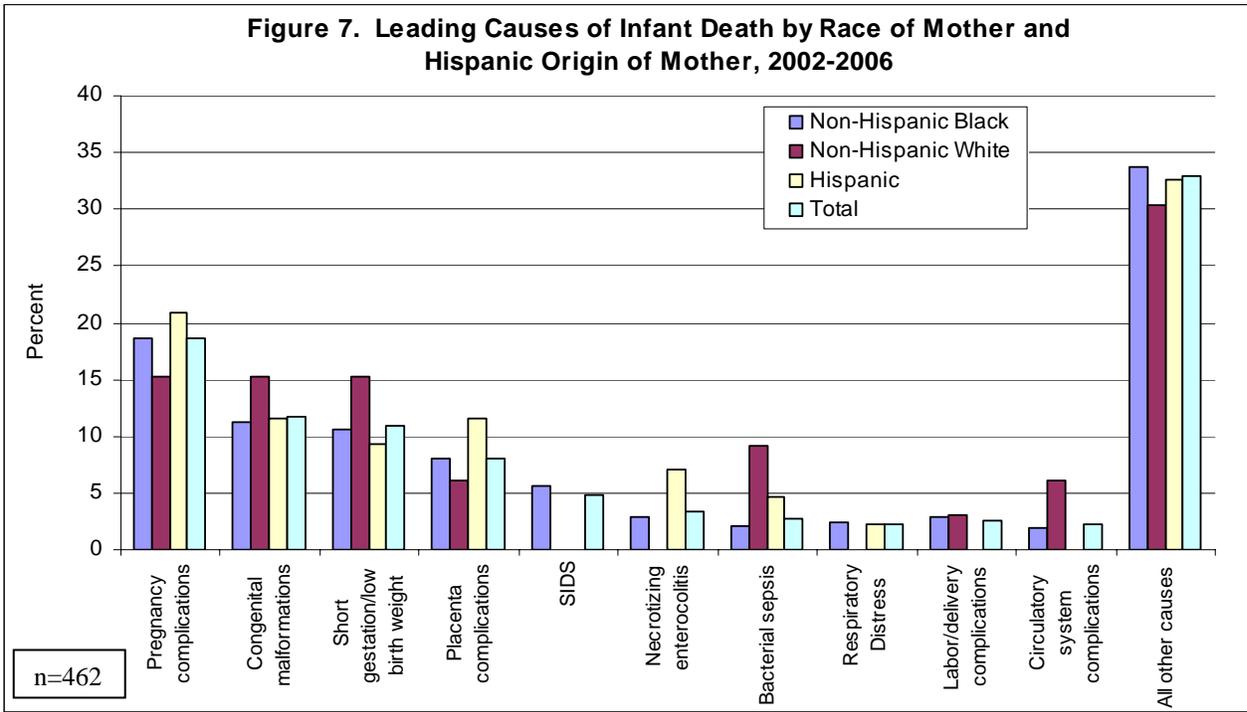
Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

Of the total number of births (39,504), 462 infants died from 2002 to 2006. Figure 6 shows the average percentage of infant deaths by race/ethnicity from 2002 to 2006. On average between 2002 to 2006, infants to non-Hispanic black mothers, disproportionately died (81.4 percent) compared to their total number of births (58.4 percent).



Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

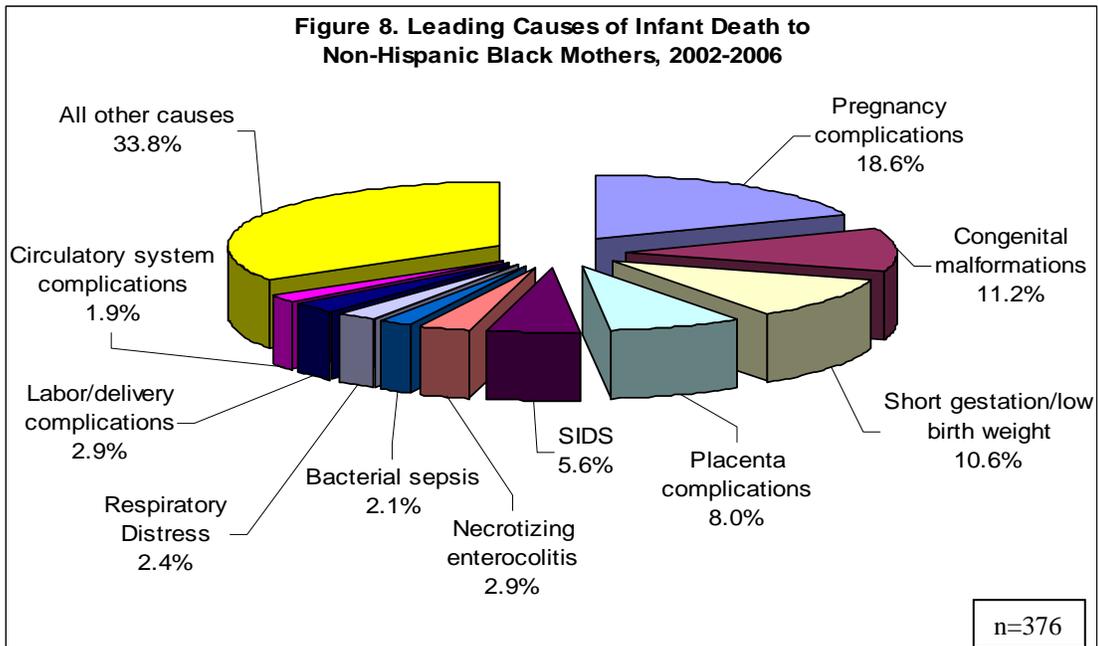
Figure 7 shows the leading causes of infant death over this five-year period (2002-2006). The leading cause of infant mortality was **Newborn affected by maternal complications of pregnancy**, which accounted for 18.6 percent, followed by **Congenital malformations, deformations and chromosomal abnormalities** (11.7 percent), the third leading cause was **Short gestation and low birth weight** (11.0 percent).



Note: Data by Asian/Pacific Islander were excluded due to small numbers.

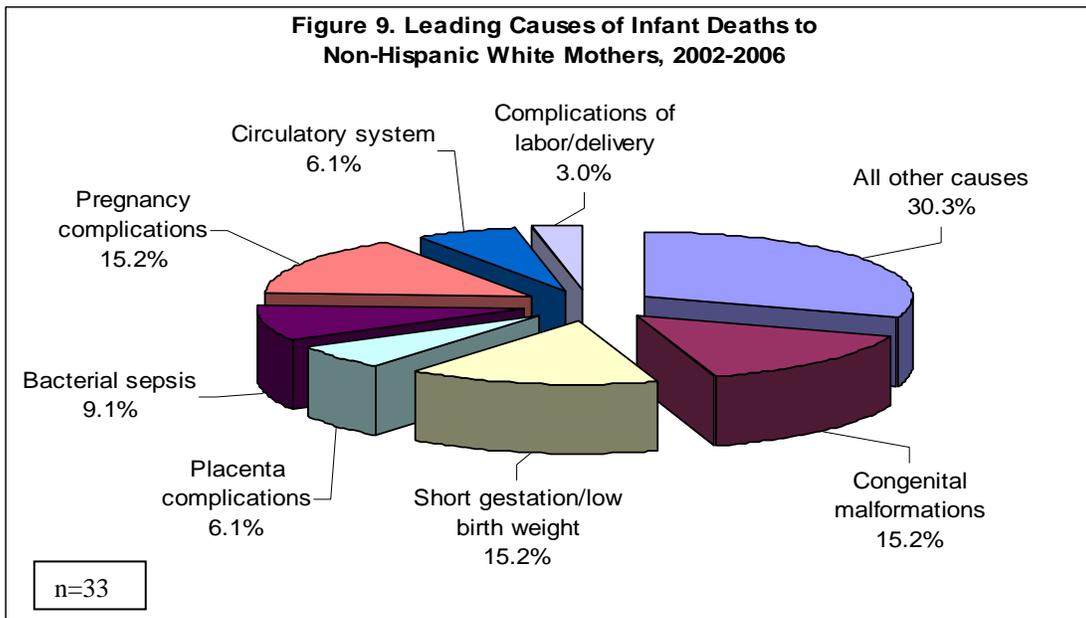
Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

The leading cause of infant death to non-Hispanic black mothers, on average from 2002-2006, was **Newborn affected by maternal complications of pregnancy**, which accounted for 18.6 percent. **Congenital malformations, deformations and chromosomal abnormalities** (11.2 percent) was the second leading cause of infant death to non-Hispanic black mothers, followed by **Disorders related to short gestation and low birth weight, not elsewhere classified** (10.6 percent) which was the third leading cause (Figure 8).



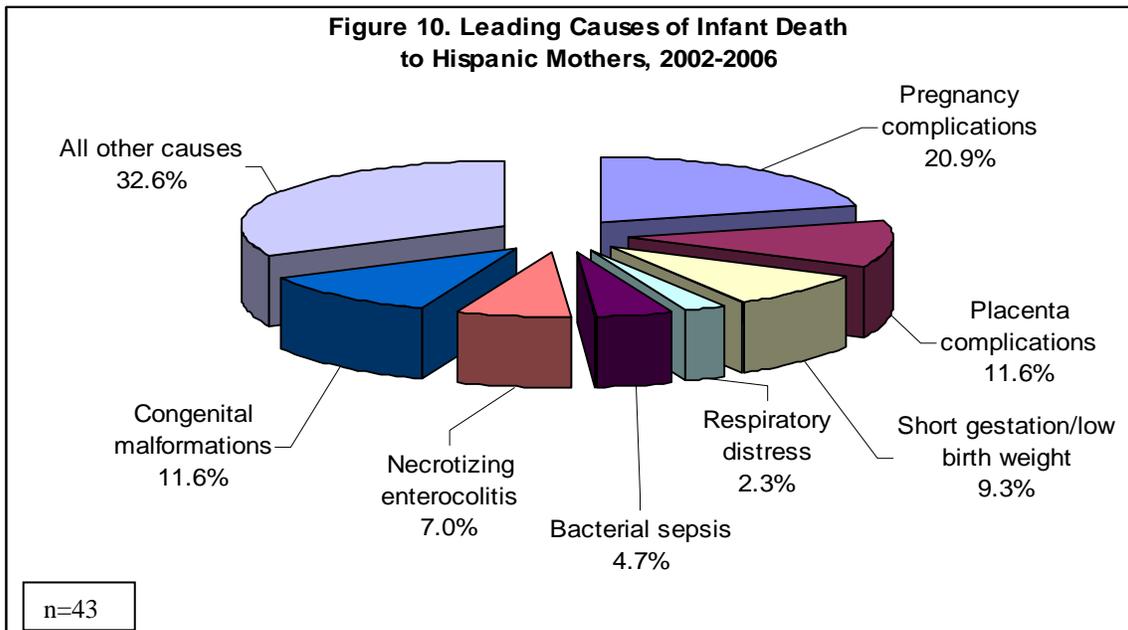
Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

For infant deaths to non-Hispanic white mothers, **Newborn affected by maternal complications of pregnancy, Congenital malformations, deformations and chromosomal abnormalities and Disorders related to short gestation and low birth weight, not elsewhere classified** tied for the leading cause (15.2 percent) (Figure 9).



Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

Figure 10 shows that the leading cause of infant death to Hispanic mothers was **Newborn affected by maternal complications of pregnancy** (20.9 percent). **Congenital malformations, deformations and chromosomal abnormalities and Complications of placenta** tied for the second place (11.6 percent).



Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

**Table 15. Indicators of Maternal and Child Health, and Infant Mortality by Ward
District of Columbia Residents, 2006**

Indicators	DC	Ward 1	Ward 2	Ward 3	Ward 4	Ward 5	Ward 6	Ward 7	Ward 8
Census 2000 Population	572,059	80,014	82,845	79,566	71,393	66,548	65,457	64,704	61,532
Live Births Rate/1,000 pop ¹	8,522 14.9	1,262 15.8	846 10.2	913 11.5	1,316 18.4	898 13.5	991 15.1	1,015 15.7	1,249 20.3
Live Births									
Black	4,847	381	347	29	630	731	600	961	1,151
White	2,311	390	356	803	199	101	350	18	79
Hispanic ²	1,344	529	122	41	502	73	26	27	21
Births to Unmarried Women (Percent)	4,908 57.6	695 55.1	374 44.2	41 4.5	770 58.5	615 68.5	544 54.9	830 81.8	1,031 82.6
% Births to Unmarried Women									
Black	79.4	73.0	78.1	20.7	62.1	76.7	86.5	83.2	88.1
White	9.5	17.7	10.7	2.9	22.6	11.9	4.9	33.3	8.9
Hispanic ²	67.8	72.8	58.2	36.6	70.7	61.6	42.3	75.9	33.3
Births to Mothers age <20 yrs (Percent)	1,021 12.0	135 10.7	74 8.7	2 0.2	141 10.7	136 15.1	107 10.8	208 20.5	216 17.3
Births to Mothers 15-19 yrs (Percent)	997 11.7	134 10.6	73 8.6	2 0.2	138 10.5	134 14.9	104 10.5	199 19.6	211 16.9
Birth Rate/1,000 Women 15-19 yrs ¹	50.2	49.9	19.1	0.9	69.3	50.5	77.6	86.8	75.2
Low Birth Weight Live Births ³ (Percent)	986 11.6	121 9.6	91 10.8	74 8.1	134 10.2	128 14.3	124 12.5	129 12.7	184 14.7
% Low Birth Weight Births ³									
Black	14.6	16.3	16.1	10.3	11.3	15.3	16.5	13.1	15.4
White	7.3	6.4	6.7	7.2	11.6	7.9	6.6	5.6	6.3
Hispanic ²	7.9	6.4	8.2	2.4	9.2	12.3	7.7	3.4	14.3
Low Birth Weight ³ to Mothers <20 yrs (Percent)	126 12.3	18 13.3	10 13.5	0 0.0	12 8.5	17 12.5	11 10.3	30 14.4	28 13.0
% Births With Adequate Prenatal Care ⁴	71.2	68.3	73.9	86.9	66.1	70.6	75.5	68.0	62.9
% Births With Prenatal Care Beginning First Trimester ⁵	78.8	75.3	79.7	92.9	73.3	77.4	82.5	76.6	74.7
Infant Deaths (under 1 yr.) Rate (per 1,000 live births) ⁶	96 11.3	7 5.5	11 13.0	2 2.2	8 6.1	18 20.0	9 9.1	13 12.8	27 21.6

Notes:

¹ Rates based on Census 2000 population.

² Hispanics include persons of all Hispanic origin of any race.

³ Low birth weight (under 2,500 grams or 5 lbs. 8 oz.).

⁴ Adequate prenatal care is based on care initiated in the first trimester with a minimum of nine prenatal visits.

⁵ Births for which unknown "prenatal care began" were subtracted from the total number of births before percentages were computed.

⁶ Due to the small number of infant deaths, infant mortality rates are highly variable and should be interpreted cautiously.

Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.