

BRIEFING PAPER

ON THE 2005 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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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 1996 to 2005. During this ten-year period, the number of infant deaths declined from 121 in 1996 to 108 in 2005 resulting in an overall decline in the District's infant mortality rate of 5.6 percent between 1996 and 2005. There were 13 fewer infant deaths in 2005 compared to 1996 and there were 437 fewer live births in 2005 compared to 1996. Table 1 and Figure 1 present a ten-year summary of these statistics.

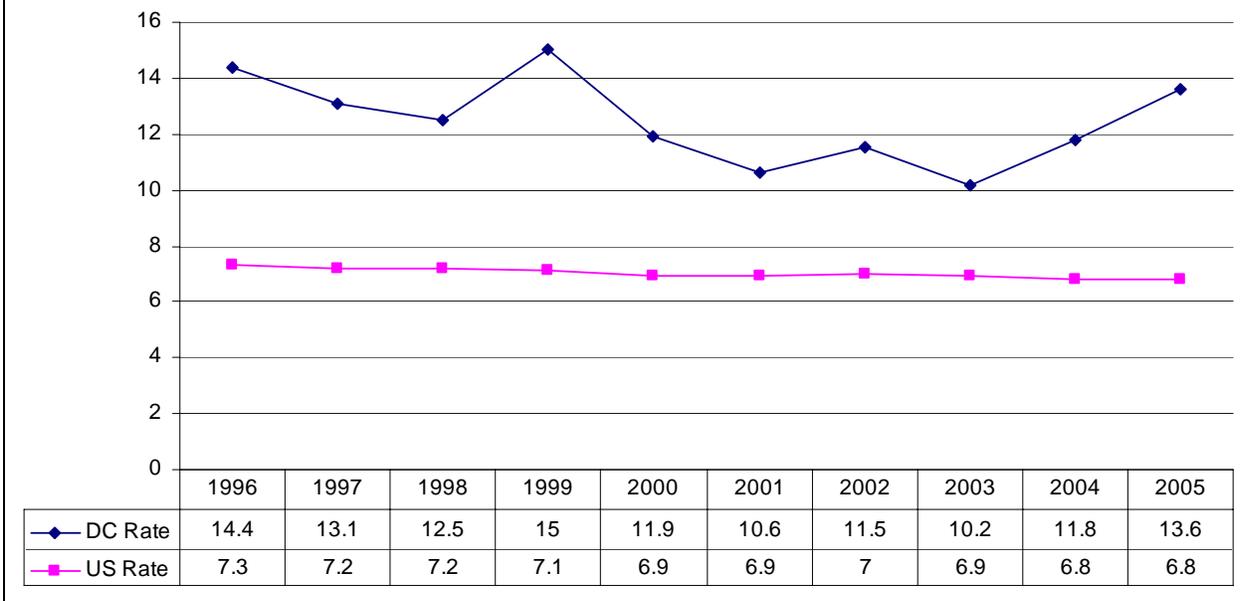
In 2005, there were 7,940 live births and 108 infant deaths to District of Columbia residents (Table 1). This resulted in an infant mortality rate of 13.6 deaths for every 1,000 live births. In 2004, there were 7,937 live births and 94 infant deaths. The infant mortality rate for 2004 was 11.8 deaths per 1,000 live births. There were 14 more infant deaths in 2005 than in 2004 and 3 more births to District women in 2005 as compared to 2004. Ward 3 had the lowest infant mortality rate at 5.3 deaths per 1,000 live births and Ward 8 had the highest infant mortality rate at 21.7 deaths per 1,000 live births (Table 7).

Table 1: Ten-Year Infant Mortality Trends District of Columbia Residents, 1996-2005			
Year	Births	Infant Deaths	Infant Mortality Rate*
1996	8,377	121	14.4
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

* 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 Rates 1996-2005



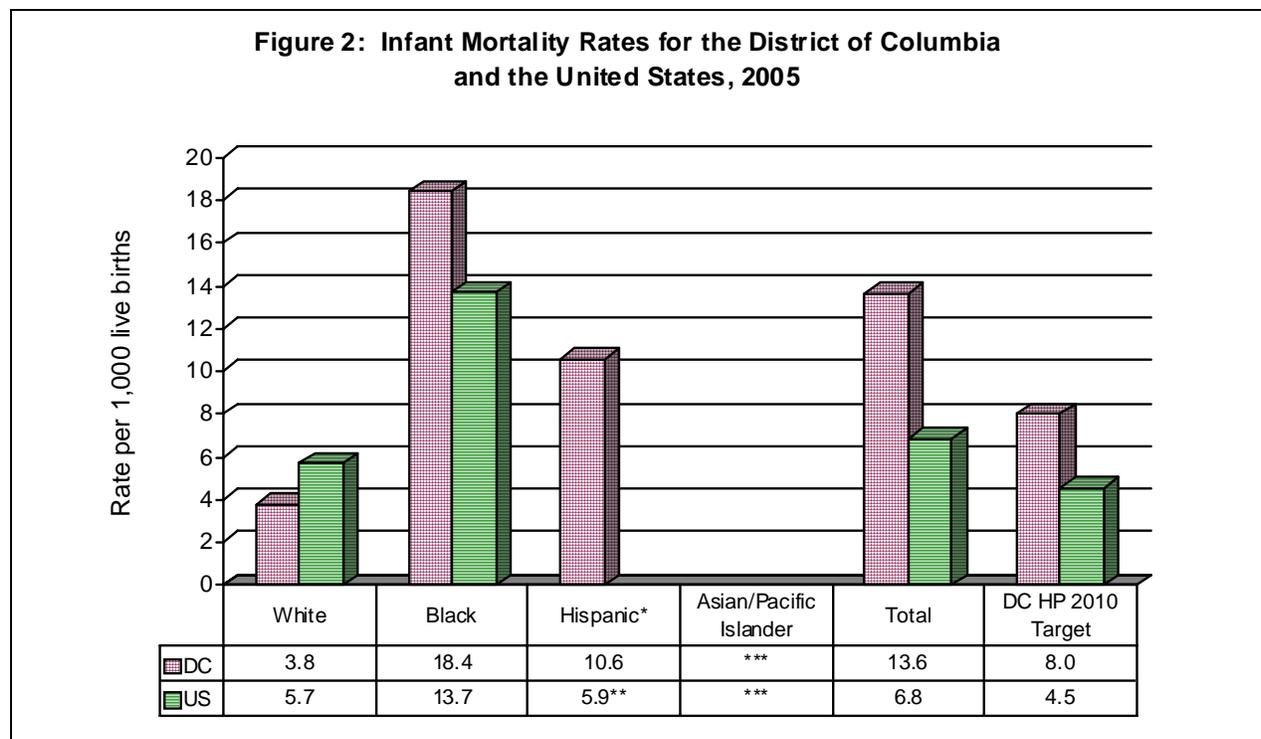
Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.
 Notes: Infant Mortality Rate (IMR) per 1,000 live births.

2004 to 2005 Comparisons

- The number of infant deaths increased from 94 in 2004 to 108 in 2005, an increase of 14.9 percent.
- The overall infant mortality rate for the District increased by 15.3 percent from a rate of 11.8 in 2004 per 1,000 live births to 13.6 per 1,000 live births for 2005. This increase in the District's infant mortality is inconsistent with the national infant mortality rate of 6.8 per 1,000 live births in 2004, which remained unchanged in 2005 (preliminary US IMR of 6.89).
- The infant mortality rates decreased in Wards 1, 2, 6, and 7.
- The infant mortality rates increased in Wards 3, 4, 5 and 8.
- Death to infants younger than 28 days increased from a rate of 8.3 per 1,000 live births in 2004 to 9.3 per 1,000 live births in 2005, an increase of 12.0 percent. (74 neonatal deaths in 2005 and 66 in 2004.)
- The postneonatal death rate (deaths occurring from 28 days to under one year of age) was 4.3 per 1,000 live births in 2005 compared to 3.5 per 1,000 live births in 2004, an increase of 22.9 percent. (34 postneonatal deaths in 2005 and 28 in 2004)
- The infant death rate to black mothers increased from 16.7 per 1,000 live births in 2004 to 18.4 per 1,000 live births in 2005, an increased of 10.2 percent, which is higher than the preliminary 2005 US rate of 13.7 per 1,000. The increase in this rate breaks the four-year downward trend since 2000. (86 infant deaths in 2005 in the District).
- The infant death rate to non-Hispanic black mothers increased from 16.5 per 1,000 live births in 2004 to 18.9 per 1,000 live births in 2005, an increase of 14.5 percent. The preliminary 2005 US rate was 14.2 per 1,000 live births. (86 infant deaths in 2005 in the District).
- The infant death rate to white mothers also increased from 2.8 per 1,000 live births in 2004 to 3.8 per 1,000 live births in 2005, which is lower than the preliminary 2005 US rate of 5.8 per 1,000. (Eight infant deaths in 2005 in the District).
- The infant death rate to non-Hispanic white mothers was 3.0 per 1,000 live births in 2004 and 2005. The preliminary 2005 US rate was 5.7 per 1,000 live births. (Six infant deaths in 2005 in the District).
- The infant death rate to Hispanic mothers increased from 9.7 per 1,000 live births in 2004 to 10.6 per 1,000 live births in 2005, higher than preliminary 2005 US rate of 5.9 per 1,000 live births (12 infant deaths in 2005 in the District).
- The number of infant deaths that resulted from multiple births decreased from 15 in 2004 to 11 in 2005.
- There were no maternal deaths in 2005.
- Births to adolescent mothers (younger than 20 years of age) decreased from 11.2 percent of the total births in 2004 to 11.0 percent of the total births in 2005, a record low for the District of Columbia.

- Births to teen mothers (15-19 years of age) decreased from 10.9 percent of the total births in 2004 to 10.7 percent of the total births in 2005, a record low for the District of Columbia.

Of the 108 infant deaths that occurred in 2005, 74 (or 68.5 percent) occurred during the neonatal period (under 28 days of life). The neonatal death rate increased by 12.0 percent from 8.3 per 1,000 live births in 2004 to 9.3 per 1,000 live births in 2005. 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.



Note: US 2005 rates are preliminary.

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

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

** US rate based on 2005 data.

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

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 2005, the percentage of low birth weight infants (those weighing under 2,500 grams or 5.5 pounds) in the District was 11.2 compared to 11.1 percent in 2004 (Table 2). This represents a slight increase of 0.9 percent. The percentage of low birth weight babies that was born to all black mothers increased from 14.0 in 2004 to 14.2 in 2005. Similarly, there was an increase in low birth weight babies born to all white mothers, from 6.0 in 2004 to 6.9 in 2005. Comparatively, the percentage of low birth weight babies born to Asian and Pacific Islander mothers decreased from 10.9 in 2004 to 7.5 in 2005.

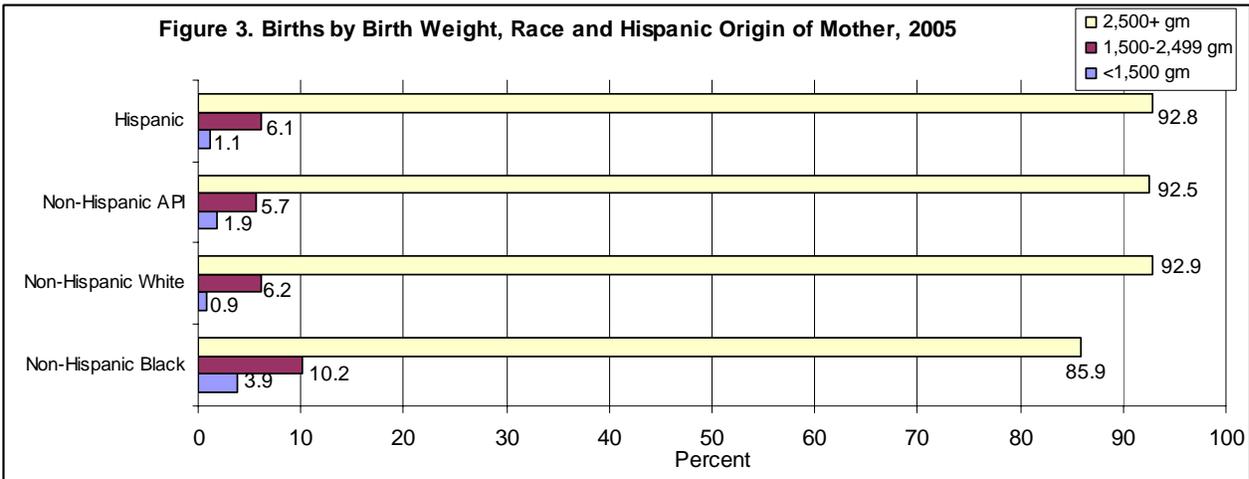
Table 2: Percent Distribution of Low Birth Weight Babies by Race of Mother District of Columbia Residents, 2004 and 2005			
Race	2004	2005	Percent Change
Total Births for All Races	7,937	7,940	
- Number Low Birth Weight	881	888	
- Percentage LBW among all Births	11.1%	11.2	0.9
Total Births to Black* Mothers	4,684	4,575	
- Number Low Birth Weight	656	649	
- Percentage LBW among Births to Black Mothers	14.0%	14.2	1.4
Total Births to White* Mothers	2,115	2,171	
- Number Low Birth Weight	127	150	
- Percentage LBW among Births to White Mothers	6.0%	6.9	15.0
Total Births to Asian and Pacific Islander Mothers	193	159	
- Number Low Birth Weight	21	12	
- Percentage LBW among Births to Asian and Pacific Islander Mothers	10.9%	7.5	-31.2

*Includes mothers of Hispanic origin.

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

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.



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 108 infant deaths, 81 (75.0 percent) were low birth weight infants (64 died during the neonatal period and 17 in the post-neonatal period). Four of the eight infant deaths to white mothers were born weighing under 2,500 grams. Sixty-eight of the 86 (79.0 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 decreased from 12.7 in 2004 to 11.7 in 2005 (Table 3). The percentage of low birth weight babies born to all mothers 20 years of age and older increased from 10.9 percent in 2004 to 11.1 percent in 2005.

Table 3: Percent Distribution of Low Birth Weight Babies by Age of Mother District of Columbia Residents, 2004 and 2005			
	2004	2005	Percent Change
Total Births for All Ages	7,937	7,940	
- Number of Low Birth Weight	881	888	
- Percentage of Low Birth Weight	11.1%	11.2	0.9
Total Births to Mothers Under 20 Years of Age	887	875	
- Number of Low Birth Weight	113	102	
- Percentage of Low Birth Weight among mothers < 20 years old	12.7%	11.7	-7.9
Total Births to Mothers 20 Years of Age and Older	7,049	7,056	
- Number of Low Birth Weight	768	783	
- Percentage of Low Birth Weight among mothers ≥20 years old	10.9%	11.1	1.8
Total Births to Mothers Whose Age is Unknown	1	9	
- Number of Low Birth Weight	-	3	
- Percentage of Low Birth Weight	-	33.3	33.3

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.

Low Birth Weight and Infant Deaths

Of the 888 low birth weight births, 81 infants (9.1 percent) died in 2005. A total of 27 infants (25.0 percent of all 108 infant deaths) died to mothers 20-24 years of age. Nineteen of these 27 infants (70.4 percent) were low birth weight. Forty-nine percent of all infant deaths (N=108) occurred to mothers aged 20-29 years. Approximately 31 percent of all infant deaths occurred to mothers aged 30 to 39 years and 14.8 percent of all infant deaths were to mothers aged below 20 years (Table 4).

**Table 4: Percent Distribution of
Low Birth Weight Infant Deaths by Age of Mother and Time of Death
District of Columbia Residents, 2005**

Age of Mother	Infant Deaths	Percent Deaths*	LBW Deaths	%LBW Deaths**	Time of Infant Death		
					Total LBW	Neonatal	Post-neonatal
Total	108	100.0	81	75.0	81	64	17
< 20 years	16	14.8	7	43.8	7	7	0
20-24 years	27	25.0	19	70.4	19	17	2
25-29 years	26	24.1	22	84.6	22	16	6
30-34 years	18	16.7	15	83.3	15	12	3
35-39 years	15	13.9	12	80.0	12	9	3
≥ 40 years	6	5.6	6	100.0	6	3	3

*Percentage based on all infant deaths (N=108).

**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. Adequate prenatal care increased slightly between 2004 (70.3 percent) and 2005 (71.5 percent) (Table 13). There was no change in intermediate care between 2004 (22.3 percent) to 2005 (22.2 percent). Inadequate care decreased by 14.9 percent from 7.4 percent in 2004 to 6.3 percent in 2005.

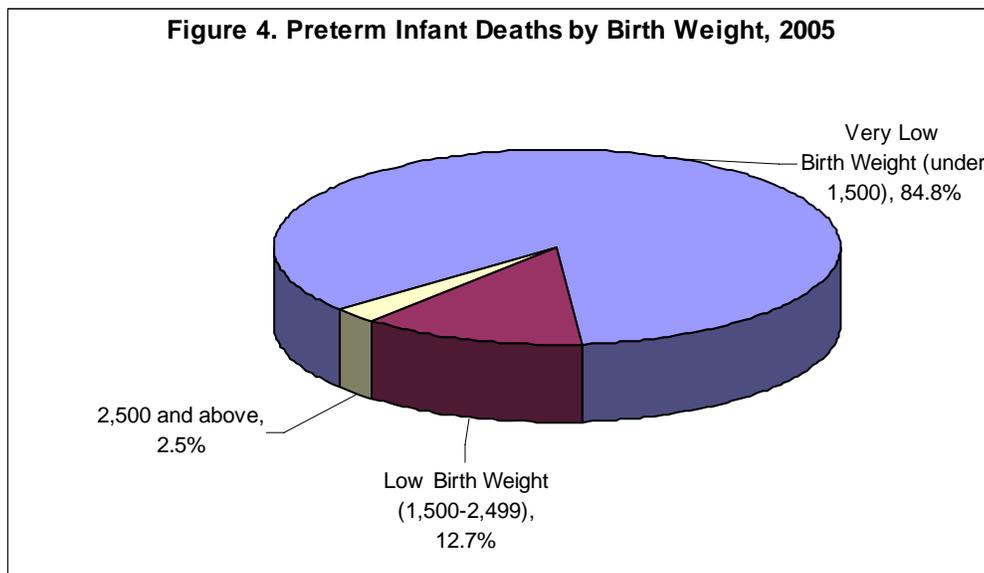
There was no change in the percent of births to mothers who began prenatal care in the first trimester in 2004 (79.4 percent) compared to 2005 (79.5 percent) (Table 13). Ward 3 had the highest percentage of women who began prenatal care in the first trimester (93.2 percent) and also the highest percentage of women who received adequate prenatal care (86.3 percent). Ward 8 had 76.2 percent of pregnant women who began prenatal care in the first trimester (the fourth lowest among the wards) and 64.9 percent received adequate prenatal care, (the second lowest among the wards) which partially explains the highest infant mortality in the city for this ward. Ward 7 had the lowest percentage for first trimester prenatal care began (73.5 percent) and the lowest percentage for adequate prenatal care (63.8 percent) (Tables 12).

Prematurity

Table 5. Percent Distribution of Premature Babies by Race and Hispanic Origin of Mother District of Columbia Residents, 2005	
Race	2005
Total Births for all Races	7,940
-Number of Premature Babies	989
-Percent Premature Babies	12.5%
Total Births to Black* Mothers	4,575
-Number of Premature Babies to Black Mothers	679
-Percent Premature Babies to Black Mothers	14.8%
Total Births to White* Mothers	2,171
-Number of Premature Babies to White Mothers	188
-Percent Premature Babies to White Mothers	8.7%
Total Births to Asian and Pacific Islander (API) Mothers	159
-Number of Premature Babies to API Mothers	13
-Percent Premature Babies to API Mothers	8.2%
Total Births to Hispanic Mothers	1,132
-Number of Premature Babies to Hispanic Mothers	114
-Percent Premature Babies to Hispanic Mothers	10.1%

* Includes mothers of Hispanic origin.

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.

Hispanic/Latina Outcomes

The number of births to Hispanic/Latina mothers increased from 1,028 in 2004 to 1,132 in 2005. Of these births, ten infants died in 2004 and 12 infants died in 2005. Thus, the infant mortality rate increased from 9.7 per 1,000 live births in 2004 to 10.6 per 1,000 live births in 2005. Births to Hispanic mothers younger than age 20 increased by 2.6 percent from 11.5 percent in 2004 to 11.8 percent in 2005. Births to Hispanic teen (15-19 years) mothers increased by 2.7 percent from 11.3 percent in 2004 to 11.6 percent in 2005. Overall, the percentage of low birth weight infant increased by 12.3 from 8.1 in 2004 to 9.1 in 2005.

For births to mothers age younger than 20 years, the percentage of low birth weight babies increased by 22.6 from 8.5 in 2004 to 10.4 in 2005 and for mothers age 20 years and older, the percentage of low birth weight babies decreased by 16.3 from 8.0 in 2004 to 6.7 in 2005 (Table 6).

Of the 108 infant deaths, seven infant deaths to Hispanic/Latina mothers were low birth weight babies. Of these seven infant deaths, three infants died to mothers in age groups 25-29 and two infants died to mothers in age group 35-39, one infant died to mothers in age group 20-24 and one infant died to mothers in age group 40 and older.

Approximately, 52 percent of Hispanic/Latina mothers received adequate prenatal care in 2005 compared to 55 percent in 2004. In 2005, 56.2 percent of Hispanic/Latina mothers began prenatal care in the first trimester compared to 61.6 percent in 2004.

Table 6: Percent Distribution of Low Birth Weight Babies to Hispanic/Latina Mothers by Age of Mother District of Columbia Residents, 2004 and 2005			
	2004	2005	Percent Change
Total Births to Hispanic Mothers for All Ages	1,028	1,132	
- Number of Low Birth Weight	83	81	
- Percentage of Low Birth Weight	8.1%	7.2	-11.1
Total Births to Mothers Under 20 Years of Age	118	134	
- Number of Low Birth Weight	10	14	
- Percentage of Low Birth Weight among mothers < 20 years old	8.5%	10.4	22.4
Total Births to Mothers 20 Years of Age and Older	910	998	
- Number of Low Birth Weight	73	67	
- Percentage of Low Birth Weight among mothers ≥20 years old	8.0%	6.7	-16.3

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

Note: (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.

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 2005, there was an increase in the number of infants born in four Wards (3, 4, 5, and 8) of the city. The infant mortality breakdown by Ward for 2005 shows a decline in the infant mortality rate for four Wards (1, 2, 6 and 7). The infant mortality rate increased in the other four Wards (3, 4, 5 and 8). Among the four Wards with increased infant mortality rates for 2005, Ward 8 had the highest rate, but Ward 3 had the largest percentage increase from a rate of 1.0 in 2004 to 5.3 in 2005. In 2005, the number of infant deaths increased by 12 in Ward 8. Ward 7 had the largest decrease from a rate of 22.3 in 2004 to 15.9 in 2005. Caution should be used when interpreting the rate and percentage change because of very small numbers (Table 7).

Ward	Births		Infant Deaths		Infant Mortality Rate*		
	2005	2004	2005	2004	2005	2004	Percent Change
1	1,123	1,141	13	15	11.6	13.1	-11.5
2	799	763	5	5	6.3	6.6	-4.5
3	936	1,013	5	1	5.3	1.0	430.0
4	1,196	1,088	17	9	14.2	8.3	71.1
5	839	854	15	14	17.9	16.4	9.1
6	949	946	13	17	13.7	18.0	-23.9
7	945	898	15	20	15.9	22.3	-28.7
8	1,150	1,231	25	13	21.7	10.6	104.7
Unknown	3	3	0	0	-	-	-
Total	7,940	7,937	108	94	13.6	11.8	15.3

*Infant deaths per 1,000 live births.

Note: (1) 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 8: Statistical Overview by Ward District of Columbia Residents, 2005						
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 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.

Table 9: Statistical Overview by Ward District of Columbia Residents, 2004						
Ward	Births	Infant Deaths	IMR*	LBW	Teen Births	LBW to Teens
1	1,141	15	13.1	120	90	9
2	763	5	6.6	89	65	6
3	1,013	1	1.0	51	6	0
4	1,088	9	8.3	99	119	12
5	854	14	16.4	113	125	19
6	946	17	18.0	105	119	13
7	898	20	22.3	134	166	24
8	1,231	13	10.6	170	197	30
Unknown	3	0	-	0	0	0
Total	7,937	94	11.8	881	887	113

* 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 third lowest in 2005; second lowest in 2002 and 2004; and lowest in 2001 and 2003 (Table 10).

Table 10: Infant Mortality Rate Comparisons for Baltimore, the District of Columbia, Richmond and Detroit, 2001-2005					
[Rates are Infant deaths per 1,000 live births]					
City	2001	2002	2003	2004	2005
Baltimore, Maryland ¹	11.9	10.4	13.2	12.7	11.3
Detroit, Michigan ²	14.0	16.7	16.3	15.5	15.9
District of Columbia ³	10.6	11.5	10.2	11.8	13.6
Richmond, Virginia ⁴	18.5	17.2	14.3	11.0	13.2

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 Source: 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, **congenital malformations, deformations and chromosomal abnormalities**, accounted for 13.9 percent of all infant deaths (Table 11). **Newborn affected by maternal complications of pregnancy** was the second ranked leading cause of infant death, which accounted for 13.0 percent of all infant deaths in 2005. **Disorders related to short gestation and low birth weight, not elsewhere classified, and Newborn affected by complications of placenta, cord, and membranes** tied for the third leading cause of death, which accounted for 10.2 percent of all infant mortality. **Necrotizing enterocolitis of newborn, and Sudden infant death syndrome** tied for the fifth leading cause of death, which accounted for 4.6 percent each of all infant mortality.

**Table 11: Leading Causes of Infant Death
District of Columbia, 2005**

Rank ¹	Cause of Death (Based on Tenth Revision, International Classification of Diseases, 1992)	Number	Percent*	Rate**
...	All causes	108	100.00	1360.2
1	Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)	15	13.9	188.9
	...Edward s syndrome (Q91.3)	3	2.8	37.8
	...Down s syndrome (Q90.9)	2	1.9	25.2
	...Other congenital malformations and deformations (Q89.9)	2	1.9	25.2
	...Other congenital malformations	8	7.4	100.8
2	Newborn affected by maternal complications of pregnancy (P01)	14	13.0	176.3
	...Incompetent cervix (P01.0)	5	4.6	63.0
	...Premature rupture of membrane (P01.1)	9	8.3	113.4
3	Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	11	10.2	138.5
	...Extremely low birth/extreme immaturity (P07.0, P07.2)	8	7.4	100.8
	...Other low birth weight / preterm (P07.1, P07.3)	3	2.8	37.8
3	Newborn affected by complications of placenta, cord, and membranes (P02)	11	10.2	138.5
	...Newborn affected by chorioamnionitis (P02.7)	7	6.5	88.2
	...Newborn complications involving placenta (P02.1)	4	3.7	50.4
5	Necrotizing enterocolitis of newborn (P77)	5	4.6	63.0
5	Sudden infant death syndrome (R95)	5	4.6	63.0
...	All other causes	47	43.5	-

*Percent based on total number of infant deaths.

**Rate per 100,000 live births.

...Category not applicable.

¹Rank based on number of infant deaths.

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

Like the District of Columbia, the leading cause of infant 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) but the third for the District of Columbia.

Table A. Infant Deaths and Infant Mortality rates for the 10 leading causes of infant death: United States, preliminary, 2005.

[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	28,534	689.2
1	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	5,562	134.3
2	Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	4,709	113.7
3	Sudden infant death syndrome (R95)	2,107	50.9
4	Newborn affected by maternal complications of pregnancy (P01)	1,786	43.1
5	Newborn affected by complications of placenta, cord and membranes (P02)	1,111	26.8
6	Accidents (unintentional injuries) (V01–X59)	1,069	25.8
7	Respiratory distress of newborn (P22)	861	20.8
8	Bacterial sepsis of newborn (P36)	834	20.1
9	Neonatal hemorrhage (P50–P52,P54)	664	16.0
10	Necrotizing enterocolitis of newborn (P77)	549	13.3
...	All other causes (residual)	9,282	224.2

...Category not applicable.

¹Rank based on number of infant deaths.

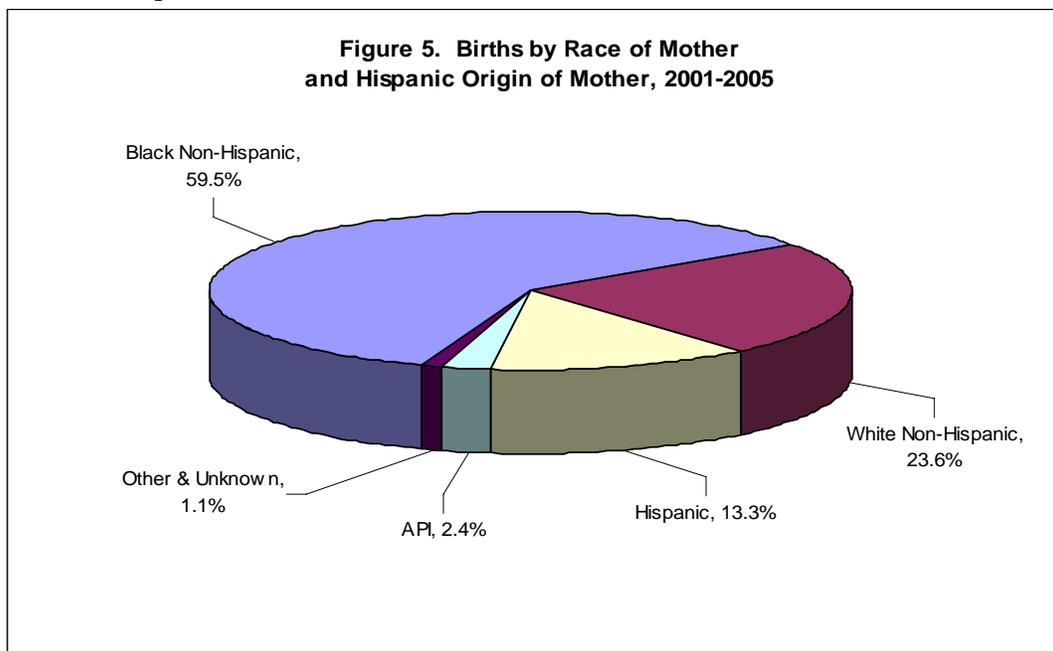
NOTES: For certain causes of death such as unintentional injuries, sudden infant death syndrome, and congenital malformations, deformations and chromosomal abnormalities, preliminary and final data may differ significantly because of the truncated nature of the preliminary file. Data are subject to sampling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

Source: National Vital Statistics Reports, Deaths: Preliminary data for 2005. Health E-Stats. Sept 2007. Available from: <http://www.cdc.gov/nchs/products/pubs/pubd/hestats/prelimdeaths05/prelimdeaths05.htm>

The leading cause of neonatal death was, **Newborn affected by maternal complications of pregnancy**, which accounted for almost 18 percent. **Congenital malformations, deformations and chromosomal abnormalities** and **Disorders related to short gestation and low birth weight, not elsewhere classified** (14.9 percent) tied for the second leading causes of neonatal death (Table 12).

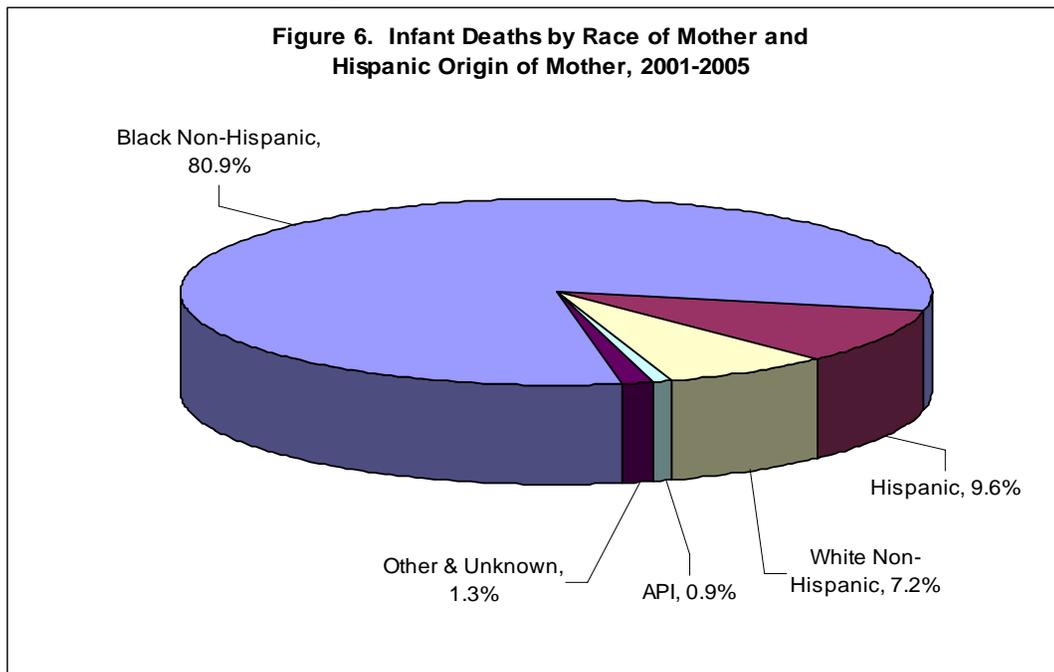
Table 12: Leading Causes of Neonatal Infant Death (n=74) District of Columbia, 2005				
Rank ¹	Cause of Death (Based on Tenth Revision, International Classification of Diseases, 1992)	Number	Percent*	Rate**
...	All causes	74	100	932.0
1	Newborn affected by maternal complications of pregnancy (P01)	13	17.6	163.7
2	Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)	11	14.9	138.5
2	Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	11	14.9	138.5
4	Newborn affected by complications of placenta, cord, and membranes (P02)	10	13.5	125.9
5	Other symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R96, R97-unknown).	7	9.5	88.2
6	Pulmonary hemorrhage originating in the perinatal period.	4	5.4	50.4
...	All other causes	18	24.3	-

Figure 5 shows the total number of births, 38,608, for the years 2001 to 2005. Almost 60 percent were to non-Hispanic black mothers, 23.6 percent were to non-Hispanic white mothers and 13.3 percent were to Hispanic mothers.



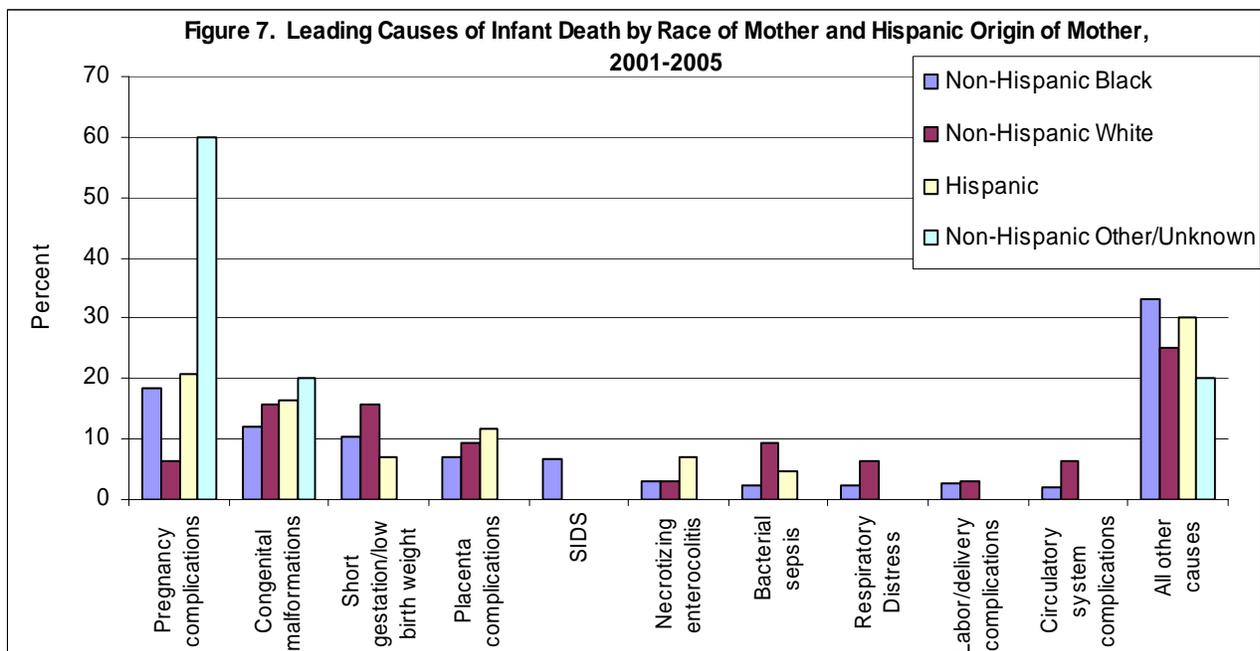
Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

Of the total number of births, 447 infants died from 2001 to 2005. Figure 6 shows the average percentage of infant deaths by race/ethnicity from 2001 to 2005. On average between 2001 to 2005, infants to non-Hispanic black mothers, disproportionately died (80.9 percent) compared to their total number of births (59.5 percent).



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

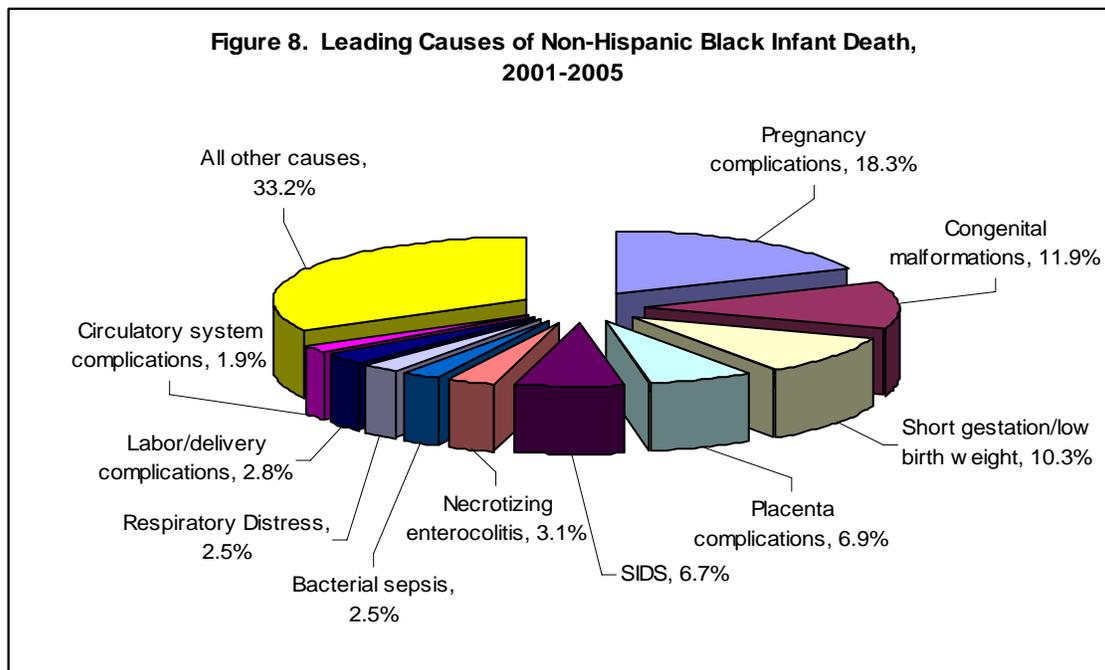
Figure 7 shows the leading causes of infant death over this five-year period (2001-2005). The leading cause of infant mortality was **Newborn affected by maternal complications of pregnancy**, which accounted for 17.9 percent, followed by **Congenital malformations, deformations and chromosomal abnormalities** (12.8 percent) and **short gestation and low birth weight** (10.3 percent).



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

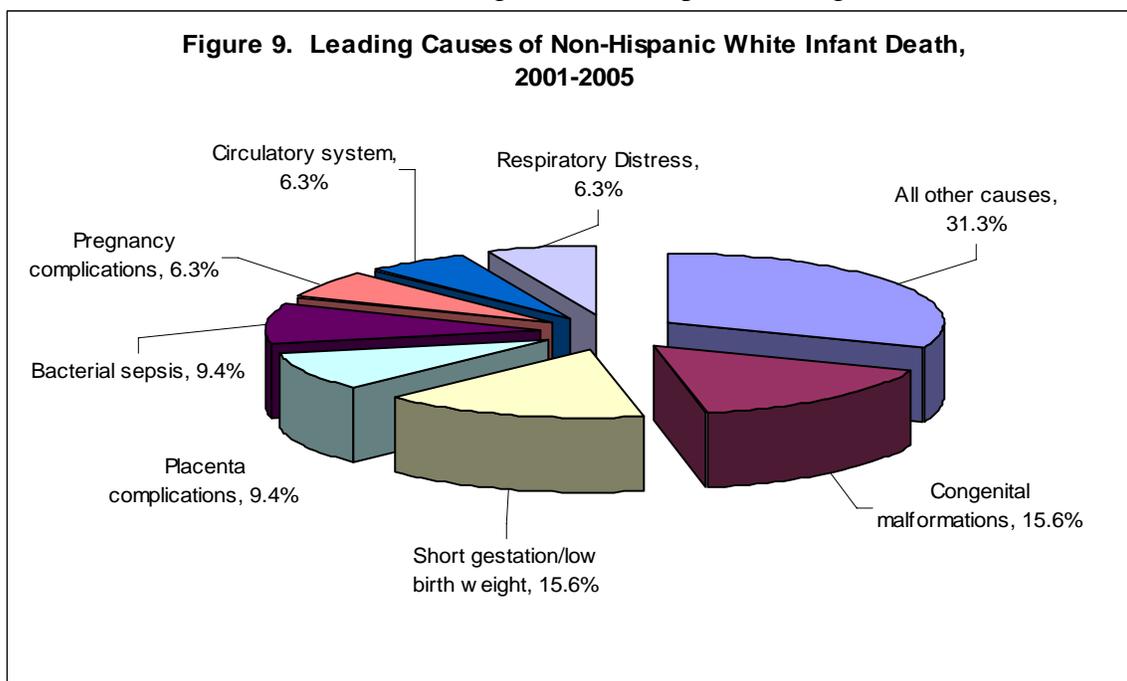
Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

The leading cause of infant death to non-Hispanic black mothers, on average from 2001-2005, was **Newborn affected by maternal complications of pregnancy**, which accounted for 18.3 percent. **Congenital malformations, deformations and chromosomal abnormalities** (11.9 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** was the third leading cause (Figure 8).



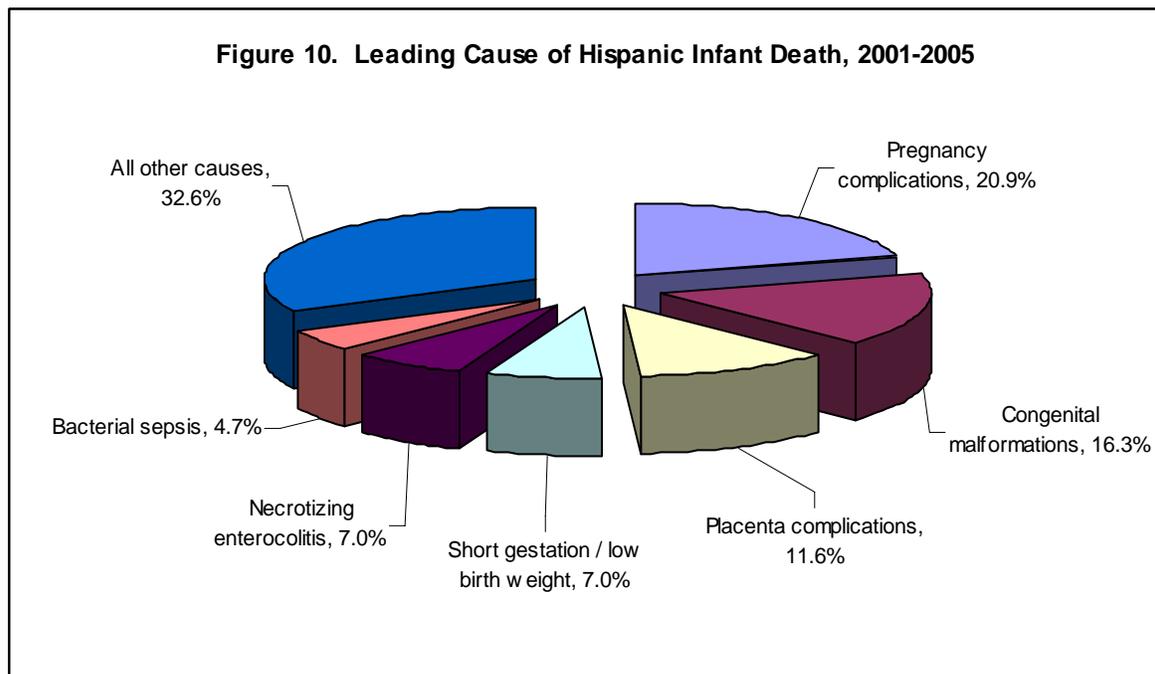
Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

For infant deaths to non-Hispanic white mothers, **Congenital malformations, deformations and chromosomal abnormalities** and **Disorders related to short gestation and low birth weight, not elsewhere classified** tied for the leading causes (15.6 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) followed by **Congenital malformations, deformations and chromosomal abnormalities** (16.3 percent).



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

**Table 13. Indicators of Maternal and Child Health, and Infant Mortality
for the District of Columbia by Ward, 2005**

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	7,940 13.9	1,123 14.0	799 9.6	936 11.8	1,196 16.8	839 12.6	949 14.5	945 14.6	1,150 18.7
Births to Unmarried Women (Percent)	4448 56.0	576 51.3	359 44.9	46 4.9	686 57.4	572 68.2	519 54.7	784 83.0	905 78.7
% Births to Unmarried Women									
Black	77.4	71.6	77.6	20.8	59.5	73.7	84.4	84.4	84.5
White	8.3	13.4	10.2	3.4	17.5	21.3	5.3	29.4	5.7
Hispanic ²	67.7	67.0	60.6	27.6	73.8	67.2	60.9	64.7	56.3
Births to Mothers age <20 yrs (Percent)	875 11.0	107 9.5	63 7.9	2 0.2	118 9.9	108 12.9	116 12.2	170 18.0	191 16.6
Births to Mothers 15-19 yrs (Percent)	852 10.7	105 9.3	63 7.9	1 0.1	117 9.8	105 12.5	113 11.9	163 17.2	185 16.1
Birth Rate/1,000 Women 15-19 yrs ¹	42.9	37.8	21.9	0.4	47.2	45.5	49.8	72.6	86.7
Low Birth Weight Live Births ³ (Percent)	888 11.2	93 8.3	90 11.3	76 8.1	127 10.6	118 14.1	104 11.0	138 14.6	142 12.3
% Low Birth Weight Births ³									
Black	14.2	11.1	16.1	14.6	13.3	15.4	15.1	14.8	13.1
White	6.9	8.4	6.8	7.6	5.3	6.7	4.5	5.9	5.7
Hispanic ²	7.2	6.0	6.4	3.4	8.8	6.9	13.0	5.9	0.0
Low Birth Weight ³ to Mothers <20 yrs (Percent)	102 11.7	8 7.5	8 12.7	0 0.0	14 11.9	17 15.7	13 11.2	24 14.1	18 9.4
% Births With Adequate Prenatal Care ⁴	71.5	68.3	72.4	86.3	69.1	71.3	76.2	63.8	64.9
% Births With Prenatal Care Beginning First Trimester ⁵	79.5	74.4	80.8	93.2	75.7	78.3	84.7	73.5	76.2
Infant Deaths (under 1 yr.) Rate (per 1,000 live births) ⁶	108 13.6	13 11.6	5 6.3	5 5.3	17 14.2	15 17.9	13 13.7	15 15.9	25 21.7

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.