2008 INFANT MORTALITY RATE

FOR THE

DISTRICT OF COLUMBIA

Prepared by

State Center for Health Statistics
Center for Policy, Planning, and Evaluation

Department of Health

Government of the District of Columbia
Vincent C. Gray, Mayor

MARCH 31, 2011
Final

GOVERNMENT OF THE DISTRICT OF COLUMBIA
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2008 INFANT MORTALITY RATE

Executive Summary

There has been an overall declining trend in the infant mortality rate over the past ten years from 1999 to 2008. During this ten-year period, the number of infant deaths decreased from 113 in 1999 to 100 in 2008 resulting in an overall decrease in the District's infant mortality rate of 27.3 percent between 1999 and 2008. There were 13 fewer infant deaths in 2008 compared to 1999 and there were 1,621 more live births in 2008 compared to 1999. Table 1 and Figure 1 present a ten-year summary of these statistics.

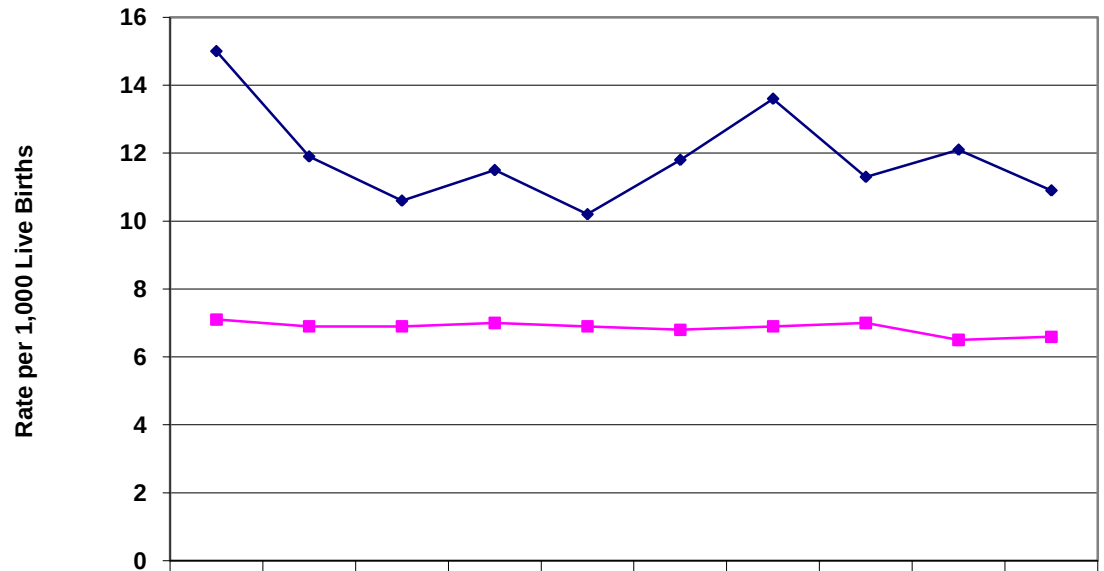
Table 1: Ten-Year Infant Mortality Trends
District of Columbia Residents, 1999-2008

Year	Births	Infant Deaths	Infant Mortality Rate*
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
2007	8,870	116	13.1
2008	9,134	100	10.9

* Per 1,000 live births
Source: State Center for Health Statistics, Center for Policy, Planning and Evaluation, DC Department of Health.

As there continues to be significant variation in the infant mortality rates for the District of Columbia in recent years after a period of decline in the 2000s, the rate has not continued to have a stable downward trend, increasing from 10.2 to 13.1 over the past four years and then declining in 2008. Due to this lack of continued improvements, the District of Columbia Department of Health (DOH) released the Infant Mortality Action Plan in December 2007, which is a comprehensive road map on the efforts to reduce the infant mortality rate in the District. There are three major foci of effort: (1) to increase the capacity of home visitation for pregnant women; (2) to enhance collaboration within DOH and between other agencies; and (3) to increase coordination between the government and community organizations.

Figure 1. District of Columbia and National Infant Mortality Rate, 1999-2008



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
DC Rate	15.0	11.9	10.6	11.5	10.2	11.8	13.6	11.3	12.1	10.9
US Rate	7.1	6.9	6.9	7.0	6.9	6.8	6.9	7.0	6.5	6.59

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

2007 to 2008 Comparison Highlights

- The number of infant deaths decreased from 116 in 2007 to 100 in 2008, a decrease of 13.8 percent.

- The overall infant mortality rate for the District decreased by 16.8 percent from a rate of 13.1 in 2007 per 1,000 live births to 10.9 per 1,000 live births in 2008. The 2007 national infant mortality rate of 6.75 slightly increased from 6.69 in 2006.

- The infant mortality rates decreased in Wards 2, 4, 5, 7 and 8 but increased in Wards 1, 3 and 6.

- Death to infants younger than 28 days decreased from a rate of 9.6 per 1,000 live births in 2007 to 8.1 per 1,000 live births in 2008, a decrease of 15.6 percent. (74 neonatal deaths in 2008 and 85 in 2007.)

- The postneonatal death rate (deaths occurring from 28 days to under one year of age) declined from 3.5 per 1,000 live births in 2007 to 2.8 in 2008, a decrease of 20 percent. (26 postneonatal deaths in 2008 and 31 in 2007.)

- The infant death rate to non-Hispanic black mothers decreased from 17.2 per 1,000 live births in 2007 to 16.6 per 1,000 live births in 2008 (Table 2), a decrease of 3.5 percent. (83 infant deaths in 2008 to District residents).

- The infant death rate to non-Hispanic white mothers was 3.6 per 1,000 live births in 2007 and 3.5 for 2008, a decrease of 2.8 percent (Table 2). (8 infant deaths in 2008 in to District residents).

- The infant death rate to Hispanic mothers decreased by 72.3 percent from 9.4 per 1,000 live births in 2007 (Table 2) to 2.6 per 1,000 live births in 2008. (4 infant deaths in 2008 to District residents).

- The number of infant deaths that resulted from multiple births decreased from 22 in 2007 to 16 in 2008.

- There was one maternal death in 2008 compared to none maternal deaths in 2007.

- Births to teen mothers (15-19 years of age) remained unchanged from 2007 to 2008 at 11.8 percent of the total births in 2007.

Statistical Overview

In 2008, there were 9,134 live births and 100 infant deaths to District of Columbia residents (Table 1). This resulted in an infant mortality rate of 10.9 deaths for every 1,000 live births. In 2007, there were 8,870 live births and 116 infant deaths. The infant mortality rate for 2007 was 13.1 deaths per 1,000 live births. There was a 16.8 percent decrease in the infant mortality rate from 13.1 per 1,000 live births in 2007 to 10.9 in 2008. There were 16 fewer infant deaths in 2008 than in 2007 and 264 more births to District women in 2008 as compared to 2007. **For the first time in recorded history, Ward 2's infant mortality rate of 2.9 deaths per 1,000 live births was lower than Ward 3** and Ward 8 had the highest infant mortality rate at 17.7 deaths per 1,000 live births (Table 10). 2008 births (9,134) increased by 3.0 percent over 2007 births (8,870), the sixth consecutive year births have increased since 2002.

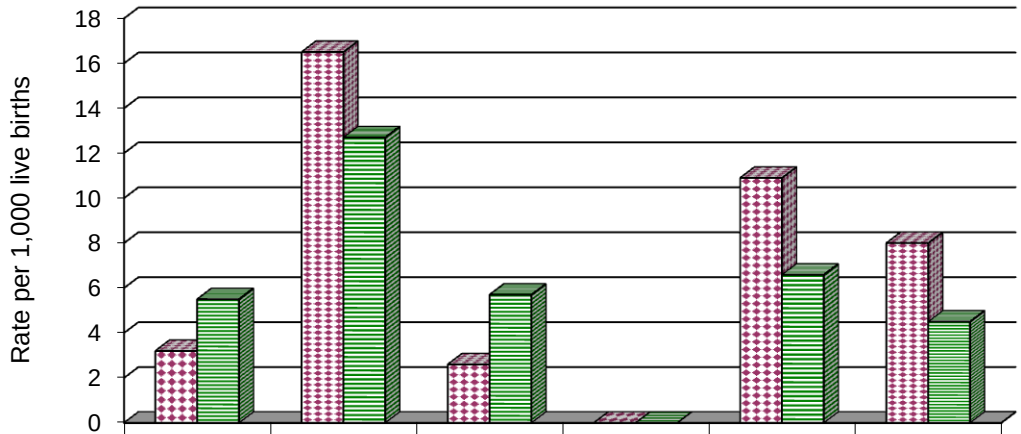
Of the 100 infant deaths that occurred in 2008, 74 (or 74 percent) occurred during the neonatal period (under 28 days of life). The neonatal death rate decreased by 15.6 percent from 9.6 per 1,000 live births in 2007 to 8.1 per 1,000 live births in 2008. The neonatal period is important relative to efforts 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, 2007 & 2008

Race/Ethnicity	Live Births		Infant Deaths		Infant Mortality Rate[1]	
	2007	2008	2007	2008	2007	2008
Total	8,870	9,134	116	100	13.1	10.9
Black	4,926	5,031	84	83	17.0	16.5
White	2,370	2,494	12	8	5.1	3.2
Asian/Other	1,545	1,565	13	5	8.4	3.2
Total	8,870	9,143	116	100	13.1	10.9
Non-Hispanic Black	4,890	4,989	84	83	17.2	16.6
Non-Hispanic White	2,203	2,304	8	8	3.6	3.5
Hispanic[2]	1,487	1,527	14	4	9.4	2.6

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 Evaluation, DC Department of Health.

Figure 2: Infant Mortality Rates for the District of Columbia, 2008 and the United States, Preliminary 2008



	White	Black	Hispanic*	Asian/Pacific Islander	Total	DC HP 2010 Target
DC	3.2	16.5	2.6	0	10.9	8.0
US	5.5	12.7	5.7	0	6.59	4.5

*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.
Sources: State Center for Health Statistics, Center for Policy, Planning and Evaluation, DC Department of Health.
National Center for Health Statistics: http://www.cdc.gov/nchs/data/nvsr/nvsr59/nvsr59_2.pdf

Factors Contributing to Infant Mortality

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. Other factors such as race/ethnicity, age, and marital status may also be associated with infant mortality.

Low Birth Weight

In 2008, the percentage of low birth weight infants (those weighing under 2,500 grams or 5.5 pounds) in the District was 10.5 compared to 11.1 percent in 2007 (Tables 3 and 8). This represents a slight decrease of 5.4 percent. About one in twelve low birth weight infant died before their first birthday.

Very Low Birth Weight

A decrease was seen among very low (under 1,500 grams) and also in moderately low birth weight (1,500–2,499 grams) newborns between 2007 and 2008; **very low birth weight** declined from 2.9 to 2.6 percent, and **moderately low birth weight** decreased from 8.2 to 7.9 percent (data not shown). Birth weight is an important predictor of early death and long-term disability[1,2,3] the lower the birth weight, the greater the risk of poor birth outcome. In 2008, nearly eight out of ten of all very low birth weight infants compared with less than 20 percent (or one in five) of normal weight infants (2,500 and more grams) did not survive their first year of life.

The rate of very low birth weight decreased for non-Hispanic black infants for 2007 to 2008 (from 4.1 to 3.8 percent); very low birth weight decreased for non-Hispanic white (from 1.1 to 0.9 percent); and very low birth weight decreased for Hispanic from 1.6 to 0.9 percent.

Low Birth Weight and Race and Hispanic Origin of Mother

The percentage of low birth weight babies that was born to all black mothers in 2008 decreased to 13.7 from 14.6 in 2007 (Table 3). Likewise, the percentage of low birth weight babies born to Asian and Pacific Islander mothers decreased from 8.0 in 2007 to 7.9 in 2008.Conversely, there was an increase in low birth weight babies born to all white mothers, from 6.2 in 2007 to 6.6 in 2008. Figure 3 shows the distribution of total births by infant birth weight and race and Hispanic origin of mother.

Low birth weight levels decreased for the current year among each of the largest racial/ethnic groups, except for non-Hispanic white; non-Hispanic black (from 14.7 to 13.7 percent for 2007–2008) and Hispanic (from 7.3 to 5.9 percent). Non-Hispanic white increased slightly from 6.0 to 6.6 percent for 2007-2008.

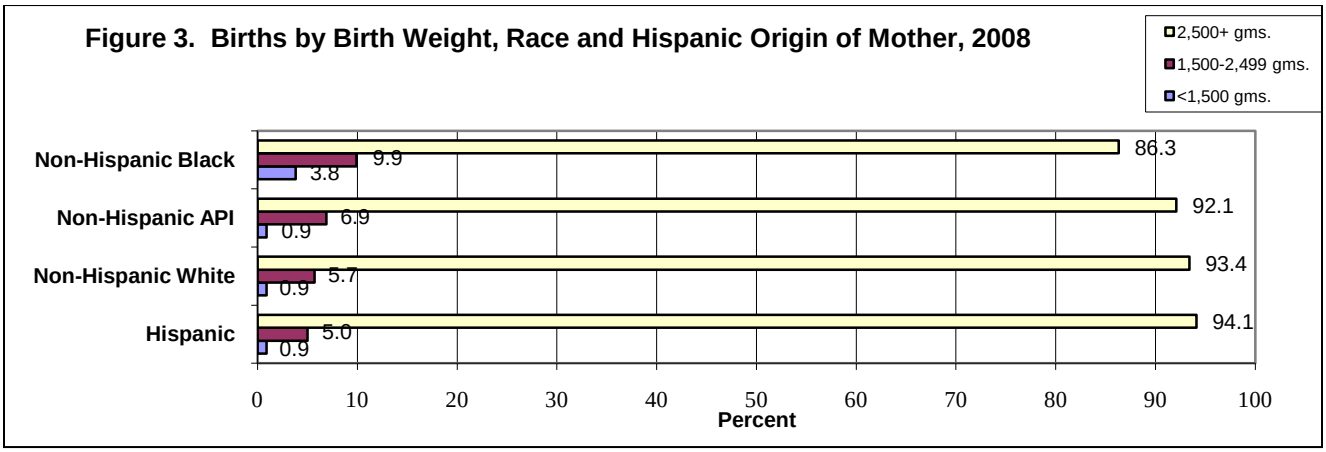
Table 3: Percent Distribution of Low Birth Weight[1] Babies by Race and Hispanic Origin of Mother District of Columbia Residents, 2007 and 2008			
Race/Hispanic Origin	**2007**	**2008**	**Percent Change**
Total Births for All Races	8,870	9,134	3.0
- Number Low Birth Weight	989	956	
- Percentage LBW among all Births	11.1%	10.5%	-5.4
Total Births to Black* Mothers	4,927	5,031	2.1
- Number Low Birth Weight	721	689	
- Percentage LBW among Births to Black Mothers	14.6%	13.7%	-6.2
Total Births to White* Mothers	2,370	2,494	5.2
- Number Low Birth Weight	147	165	
- Percentage LBW among Births to White Mothers	6.2%	6.6%	6.5
Total Births to Asian and Pacific Islander Mothers	212	216	1.9
- Number Low Birth Weight	17	17	
- Percentage LBW among Births to Asian and Pacific Islander Mothers	8.0%	7.9%	-1.2
Total Births to Hispanic/Latina Mothers	1,487	1,527	2.7
- Number of Low Birth Weight	106	90	
- Percentage LBW among Births to Hispanic Mothers	7.3%	5.9%	-19.2

*****Includes mothers of Hispanic origin.

Notes: [1] Low Birth Weight means under 2,500 grams or 5lbs. 8oz.

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

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



Note: API means Asian and Pacific Islanders.
Source: State Center for Health Statistics, Center for Policy, Planning and Evaluation, DC Department of Health.

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 12.0 in 2007 to 11.6 in 2008 (Table 4). The percentage of low birth weight babies born to all mothers 20 years of age and older decreased from 11.0 percent in 2007 to 10.3 percent in 2008.

Table 4: Percent Distribution of Low Birth Weight[1] Babies by Age of Mother District of Columbia Residents, 2007 and 2008

	2007	2008	Percent Change
Total Births for All Ages	8,870	9,134	
- Number of Low Birth Weight	989	956	
- Percentage of Low Birth Weight	11.1%	10.5%	-5.4
Total Births to Mothers Under 20 Years of Age	1,075	1,114	
- Number of Low Birth Weight	129	129	
- Percentage of Low Birth Weight among mothers < 20 years old	12.0%	11.6%	-3.3
Total Births to Mothers 20 Years of Age and Older	7,762	8,001	
- Number of Low Birth Weight	856	824	
- Percentage of Low Birth Weight among mothers ≥20 years old	11.0%	10.3%	-6.4
Total Births to Mothers Whose Age is Unknown[2]	33	19	
- Number of Low Birth Weight	4	3	
- Percentage of Low Birth Weight	12.1%	15.8%	-

Notes: [1] Low Birth Weight means under 2,500 grams or 5lbs. 8oz.
[2] Mother's age is computed from date of birth to date of delivery. If date of birth is not reported, then mother's age is reported as unknown.
Source: State Center for Health Statistics, Center for Policy, Planning and Evaluation, DC Department of Health.

Low Birth Weight and Infant Deaths by Age of mother

Of the 956 low birth weight births, 81 infants (8.5 percent) died in 2008. A total of 29 infants (29 percent of all 100 infant deaths) died to mothers 20-24 years of age. Twenty-four of these 29 infants (82.8 percent) were low birth weight. Fifty-one percent of all infant deaths (N=100) occurred to mothers aged 20-29 years. Twenty-nine percent of all infant deaths occurred to mothers aged 30-39 years and 16 percent of all infant deaths were to mothers aged below 20 years (Table 5).

Low Birth Weight and Infant Deaths by Race of Mother

Of the 100 infant deaths, 81 (81 percent) were low birth weight infants (67 died during the neonatal period and 14 in the postneonatal period). Six of the eight infant deaths to white mothers were born weighing under 2,500 grams. Sixty-eight of the 83 (81.9 percent) infant deaths to black mothers were low birth weight babies. The one infant deaths to Asian mothers was low birth weight babies. Of the 81 low birth weight infants, 75 (92.6 percent) were very low birth weight; nine were moderately low birth weight (7.4 percent).

Table 5: Percent Distribution of Low Birth Weight Infant Deaths by Age of Mother and Time of Death District of Columbia Residents, 2008

Age of Mother	Infant Deaths	Percent Deaths*	LBW Deaths	%LBW Deaths**	Time of Infant Death		
					Total LBW	Neonatal	Post-neonatal
Total	100	100.0	81	81.0	81	67	14
< 20 years	16	16.0	12	75.0	12	10	2
20-24 years	29	29.0	24	82.8	24	17	7
25-29 years	22	22.0	19	86.4	19	15	4
30-34 years	11	11.0	9	81.8	9	8	1
35-39 years	18	18.0	15	83.3	15	15	0
≥ 40 years	3	3.0	2	66.7	2	2	0
Unknown age	1	1.0	0	0	0	0	0

*Percentage based on all infant deaths (N=100).
**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 Evaluation, 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 a slight increase in adequate prenatal care between 2007 (70 percent) and 2008 (70.8 percent) (Table 8). Intermediate care decreased slightly by 3.5 percent from 23 percent in 2007 to 22.2 percent in 2008. Inadequate care remained unchanged from 7.0 percent in 2007.

In 2008, adequate prenatal care increased slightly for non-Hispanic black mothers (66.2 percent) compared to 2007 (64.1 percent). Seventy-four percent non-Hispanic black mothers began prenatal care in the first trimester compared to 71 percent in 2007.

Eighty-five percent of non-Hispanic white mothers received adequate prenatal care in 2008 compared to 87 percent in 2007. The percent of non-Hispanic white mothers who began prenatal care in the first trimester decreased to 90.3 percent in 2008 from 92.4 percent in 2007.

Sixty percent of Hispanic/Latina mothers received adequate prenatal care in 2008 compared to 58.9 percent in 2007. In 2008, 70.4 percent of Hispanic/Latina mothers began prenatal care in the first trimester compared to 65.8 percent in 2007.

There was a slight increase in the percent of births to mothers who began prenatal care in the first trimester in 2008 (78.4 percent) compared to 2007 (76.9 percent) (Table 8). Ward 3 had the highest percentage of women who began prenatal care in the first trimester (89.7 percent)—down from 92.1 percent in 2007—and also the highest percentage of women who received adequate prenatal care (85.3 percent). Ward 8 had 72.1 percent of pregnant women who began prenatal care in the first trimester (the lowest among the wards) and 62.4 percent received adequate prenatal care, (also the lowest among the wards) which partially explains the highest infant mortality in the city for this ward (Table 8).

Prematurity

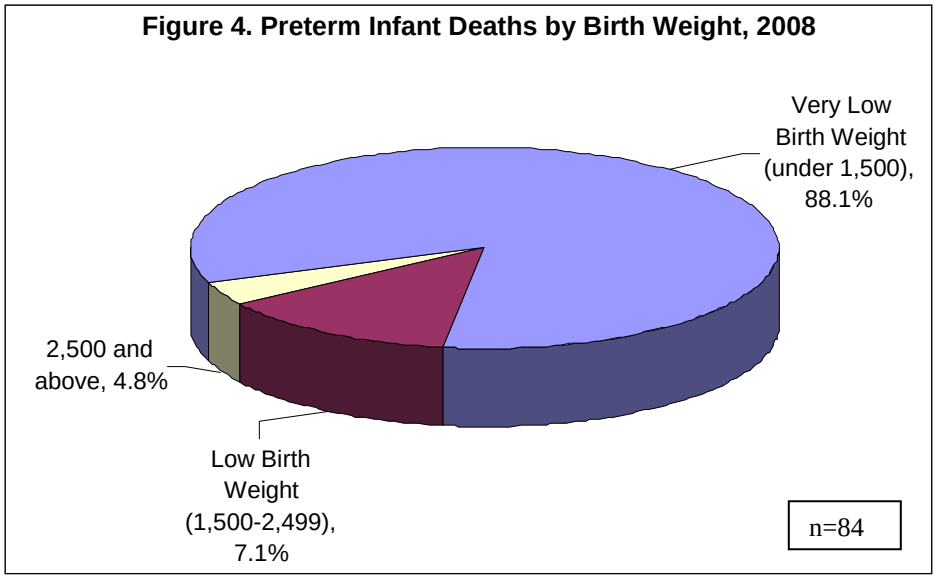
Prematurity leads to low birth weight and infant mortality. Table 6 shows the percentages of all premature births (less than 37 weeks gestation) for 2007-2008. Premature births remained unchanged from 12.1 percent in 2007. Preterm births have decreased across all racial and ethnic groups in 2008 except for blacks, which only increased by less than 1 percent. Approximately 15 percent of non-Hispanic black mothers delivered preterm babies compared to 9.4 percent non-Hispanic white mothers and 8.3 percent Hispanic/Latina mothers.

Almost 66 percent of all preterm births occurred between 34-36 weeks gestation. Eighty-four percent of infants who died in 2008 were preterm. Of these 84 infants, 88.1 percent in 2008 weighed under 1,500 grams (Figure 4). Ninety-four percent of preterm 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, 2007 and 2008			
Race/Hispanic Origin	**2007**	**2008**	**Percent Change**
Total Births for all Races	8,870	9,134	
-Number of Premature Babies	1,070	1,107	
-Percent Premature Babies	12.1%	12.1%	0.0
Total Births to Black* Mothers	4,927	5,031	
-Number of Premature Babies to Black Mothers	723	745	
-Percent Premature Babies to Black Mothers	14.7%	14.8%	0.7
Total Births to White* Mothers	2,370	2,494	
-Number of Premature Babies to White Mothers	179	236	
-Percent Premature Babies to White Mothers	9.8%	9.5%	-3.1
Total Births to Asian and Pacific Islander (API) Mothers	212	216	
-Number of Premature Babies to API Mothers	19	19	
-Percent Premature Babies to API Mothers	9.0%	8.8%	-2.2
Total Births to Hispanic Mothers	1,486	1,527	
-Number of Premature Babies to Hispanic Mothers	159	126	
-Percent Premature Babies to Hispanic Mothers	10.7%	8.2%	-23.4

* 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 Evaluation, DC Department of Health.

Marital Status

The proportion of births to unmarried women decreased in 2008 to 57.8 percent compared with 58.5 in 2007 a 1.2 percent change. Of the 5,278 (57.8 percent) births to unmarried women in 2008 (Tables 7 and 8), 20.1% of these births were to teenagers (15-19 years). Nearly 32 percent of births to women aged 20-24 years and 25.1 percent of births to women aged 25-29 years were to unmarried women.

In 2008, 81.0 percent of infant deaths were to unmarried women, compared to 75.0 percent in 2007 for an increase of 8.0 percent. Between 2005 and 2008, the majority of infant deaths were to unmarried women (Table 7).

Table 7: Number and Percentage of Births and Infant Deaths by Marital Status District of Columbia Residents, 2005-2008

		Births to Unmarried Women		Births to Married Women			Infant Deaths			
Year	Total Number of Births	Number of births	Percent	Number of Births	Percent	Total Infant Deaths	Infant Deaths to Unmarried Women	Percent	Infant Deaths to Married Women	Percent
2008	9,134	5,278	57.8	3,846	42.2	100	81	81.0	17	17.0
2007	8,870	5,190	58.5	3,679	41.5	116	87	75.0	25	21.6
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 Evaluation, DC Department of Health.

Geographical Distribution

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 2008, which tied with Richmond, and 2006; second lowest in 2004; and third lowest in 2005 and 2007 (Table 8).

Table 8: Infant Mortality Rate Comparisons for Baltimore, the District of Columbia, Richmond and Detroit Cities, 2004-2008
[Rates are Infant deaths per 1,000 live births]

City	2004	2005	2006	2007	2008
Baltimore City, Maryland[1]	12.7	11.3	12.4	11.3	12.1
Detroit City, Michigan[2]	15.5	15.9	13.4	14.9	14.9
District of Columbia[3]	11.8	13.6	11.3	13.1	10.9
Richmond, Virginia[4]	11.0	13.2	13.5	12.4	10.9

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 Evaluation, DC Department of Health.
[4] Virginia Department of Health, VA State Center for Health Statistics.

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. Table 9 shows selected maternal and child health indicators and infant deaths by geographic areas or wards in the District of Columbia. In 2008, there was an increase in the number of infants born in seven wards (1, 2, 4, 5, 6, 7 and 8) of the city (Table 10). The infant mortality breakdown by ward for 2008 shows a decline in the infant mortality rate for five wards (2, 4, 5, 7, and 8). The infant mortality rate increased in the other three wards (1, 3 and 6). Among the five wards with decreased infant mortality rates for 2008, Ward 8 had the highest rate (17.7), but Ward 3 had the largest percentage increase (292.3) from a rate of 1.3 in 2007 to 5.1 in 2008. Due to the small number of infant deaths in Ward 3, caution should be exercised when interpreting the percentage increase in the infant mortality rate, which is highly variable and does not meet standards of reliability or precision. In 2008, the number of infant deaths decreased by 10 in Ward 4. Ward 2 had the largest meaningful decrease from a rate of 12.6 in 2007 to 2.9 in 2008; this rate was even lower than Ward 3, which typically has the lowest infant mortality rate in the city. However, caution should be used when interpreting the rate and percentage change because of very small numbers (Tables 10, 11, and 12). Infant mortality rates by ward from 2004 and 2008 are presented in Table 13.

Table 9. Indicators of Maternal and Child Health, and Infant Mortality by Ward
District of Columbia Residents, 2008

Indicators	DC	Ward 1	Ward 2	Ward 3	Ward 4	Ward 5	Ward 6	Ward 7	Ward 8
2008 Estimated Population[1]	591,176	77,392	75,937	77,888	78,345	72,116	65,537	72,912	71,049
Live Births	9,134	1,306	684	786	1,467	1,085	998	1,222	1,583
Rate/1,000 pop[1]	15.2	15.8	8.1	10.1	18.8	15.3	14.7	17.3	23.2
Live Births									
Black	5,031	384	132	37	635	820	405	1,132	1,485
White	2,494	368	413	680	272	123	532	28	73
Hispanic[2]	1,527	546	117	50	563	125	48	58	20
Births to Unmarried Women	5,278	718	192	51	821	742	390	1,041	1,322
(Percent)	57.8	55.0	28.2	6.5	56.0	68.4	39.1	85.2	83.5
% Births to Unmarried Women									
Black	79.0	67.7	68.2	18.9	59.1	76.8	83.5	86.1	87.5
White	8.6	14.1	9.4	3.7	9.9	12.2	5.1	57.1	16.4
Hispanic[2]	72.6	75.6	57.3	50.0	76.0	73.6	54.2	81.0	55.0
Births to Mothers age <20 yrs.	1,114	128	39	6	143	178	79	226	315
(Percent)	12.2	9.8	5.7	10.8	9.7	16.4	7.9	18.5	19.9
Births to Mothers 15-19 yrs.	1,082	124	38	6	141	172	78	215	308
(Percent)	11.8	9.5	5.6	0.8	9.6	15.9	7.8	17.6	19.5
Birth Rate/1,000 Women 15-19 yrs.[3]	54.5	47.3	9.9	2.6	70.8	64.8	58.2	93.8	109.8
Low Birth Weight Live Births[4]	956	100	57	57	128	118	102	168	225
(Percent)	10.5	7.7	8.4	7.3	8.7	10.9	10.2	13.7	14.2
% Low Birth Weight Births[4]									
Black (Percent)	689 (13.7)	42 (10.9)	23 (17.4)	3 (8.1)	71 (11.2)	100 (12.2)	65 (16.1)	165 (14.6)	220 (14.8)
White (Percent)	165 (6.6)	28 (7.6)	23 (5.6)	48 (7.1)	20 (7.4)	2 (1.6)	36 (6.8)	2 (7.1)	5 (6.9)
Hispanic[2] (Percent)	90 (5.9)	28 (5.1	7 (6.0)	3 (6.0)	37 (6.6)	10 (8.0)	2 (4.2)	1 (1.7)	2 (10.0)
Low Birth Weight[4] to Mothers <20 yrs.	129	11	4	0	8	24	9	40	33
(Percent)	11.6	8.6	10.3	0.0	5.6	13.5	11.4	17.7	10.5
% Births With Adequate Prenatal Care[5]	70.8	69.7	76.7	85.3	67.8	70.3	76.3	68.2	62.4
% Births With Prenatal Care Beginning First Trimester[6]	78.4	78.1	83.5	89.7	75.9	77.5	83.2	75.4	72.1
Infant Deaths (under 1 yr.)	100	8	2	4	15	14	8	21	28
Rate (per 1,000 live births)[7]	10.9	6.1	2.9	5.1	10.2	12.9	8.0	17.2	17.7

Notes: [1] Rates based on 2008 estimated population. DC Office of Planning/State Data Center using block group data provided by Caliper Corporation to derive ward data.

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

[3] City rate based on 2008 estimated population. Annual Estimates of Population by Sex and Age for the District of Columbia, July 1, 2008. US Census Bureau. Rates by ward for women aged 15-19 years were calculated using 2000 Census population (Revised in 2002). US Census Bureau.

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

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

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

[7] 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 Evaluation, DC Department of Health.

Table 10: Births, Infant Deaths and Infant Mortality Rates by Ward District of Columbia Residents, 2007 and 2008							
	Births		Infant Deaths		Infant Mortality Rate[1]		
Ward	2008	2007	2008	2007	2008	2007	Percent Change[2]
1	1,306	1,243	8	7	6.1	5.6	8.9
2	682	634	2	8	2.9	12.6	-77.0
3	786	796	4	1	5.1	1.3	292.3
4	1,467	1460	15	25	10.2	17.1	-40.4
5	1,085	1041	14	17	12.9	16.3	-20.9
6	998	939	8	6	8.0	6.4	25.0
7	1,222	1,210	21	23	17.2	19.0	-35.8
8	1,583	1,545	28	29	17.7	18.8	-5.9
Unknown	5	2	0	0	0	-	-
Total	9,134	8,870	100	116	10.9	13.1	-16.8

[1]Infant deaths per 1,000 live births.

[2]Changes in value over time (e.g., rates) [(New - Old) / Old = Decimal x 100 = Percent change].

Notes: (1) Due to the small number of infant deaths, the above infant mortality rates are highly variable and should be interpreted cautiously.

(2) Ward distribution based on 2002 ward boundaries. Previous to 2007, 1992 ward boundaries were used. However, there was no change in the distribution of infant deaths among the ward when using the 1992 boundaries.

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

Table 11: Statistical Overview by Ward District of Columbia Residents, 2008						
Ward	**Births**	**Infant Deaths**	**IMR***	**LBW**	**Teen Births**	**LBW to Teens**
1	1,306	8	6.1	100	128	11
2	682	2	2.9	57	39	4
3	786	4	5.1	57	6	0
4	1,467	15	10.2	128	143	8
5	1,085	14	12.9	118	178	24
6	998	8	8.0	102	79	9
7	1,222	21	17.2	168	226	40
8	1,583	28	17.7	225	315	33
Unknown	5	0	-	1	0	0
Total	9,134	100	10.9	956	1,114	129

*Infant deaths per 1,000 live births.

Notes: (1) Due to the small number of infant deaths, the above infant mortality rates are highly variable and should be interpreted cautiously.

(2) Ward distribution based on 2002 ward boundaries. Previous to 2007, 1992 ward boundaries were used. However, there was no change in the distribution of infant deaths among the ward when using the 1992 boundaries.

(3) Teen birth in this table is defined as mother's younger than 20 years of age.

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

Table 12: Statistical Overview by Ward District of Columbia Residents, 2007						
Ward	**Births**	**Infant Deaths**	**IMR***	**LBW**	**Teen Births**	**LBW to Teens**
1	1,243	7	5.6	115	149	14
2	634	8	12.6	45	33	2
3	796	1	1.3	57	8	1
4	1,460	25	17.1	144	137	17
5	1,041	17	16.3	133	149	19
6	939	6	6.4	110	71	11
7	1,210	23	19.0	167	222	34
8	1,545	29	18.8	218	306	31
Unknown	2	0	-	0	0	0
Total	8,870	116	13.1	989	1,075	129

* 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 Evaluation, DC Department of Health.

Table 13: Five-Year Infant Mortality Trend by Ward, District of Columbia Residents, 2004-2008 [Rates are Infant deaths per 1,000 live births]					
Ward	**2004**	**2005**	**2006**	**2007**	**2008**
1	13.1	11.6	5.5	5.6	6.1
2	6.6	6.3	13.0	12.6	2.9
3	1.0	5.3	2.2	1.3	5.1
4	8.3	14.2	6.1	17.1	10.2
5	16.4	17.9	20.0	16.3	12.9
6	18.0	13.7	9.1	6.4	8.0
7	22.3	15.9	12.8	19.0	17.2
8	10.6	21.7	21.6	18.8	17.7
Total	11.8	13.6	11.3	13.1	10.9

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

Causes of Death

The leading cause of infant mortality, **Newborn affected by maternal complications of pregnancy** accounted for 20 percent of all infant deaths (Table 14). **Disorders related to short gestation and low birth weight, not elsewhere classified (low birth weight)** was the second ranked leading cause of infant death, which accounted for 16 percent of all infant deaths in 2008. **Congenital malformations, deformations and chromosomal abnormalities classified** was the third leading cause of death, which accounted for 15 percent of all infant mortality. **Newborn affected by complications of placenta, cord, and membranes** and **Newborn affected by other complications of labor and delivery** tied for the fourth leading cause of death, which accounted for 8 percent of all infant deaths. **Sudden infant death syndrome** (SIDS) was the sixth leading cause of death, which accounted for 7 percent each of all infant mortality. **These seven leading causes of infant death in 2008 accounted for 78 percent of all infant deaths in the District of Columbia.** The first six leading causes of death were the same in 2008 as in 2007, but they changed ranks compared with 2007. **Necrotizing enterocolitis of newborn** became the seventh leading cause in 2008 replacing **Septicemia** in 2007.

Table 14: Leading Causes of Infant Death
District of Columbia Residents, 2008

Rank[1]	Cause of Death (Based on Tenth Revision, International Classification of Diseases, 1992)	Number	Percent*	Rate**
…	All causes	100	100.0	1,094.8
1	**Newborn affected by maternal complications of pregnancy (P01)**	20	20.0	219.0
	…Incompetent cervix (P01.0)	3	3.0	32.8
	…Premature rupture of membranes (P01.1)	16	16.0	175.2
	…Other maternal complications of pregnancy (P01.2-P01.4,P01.6-P01.9)	1	1.0	10.9
2	**Disorders related to short gestation and low birth weight, not elsewhere classified (P07)**	16	16.0	175.2
	…Extremely low birth or extreme immaturity (P07.0, P07.2)	5	5.0	54.7
	…Other low birth weight or preterm (P07.1, P07.3)	11	11.0	120.4
3	**Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)**	15	15.0	164.2
	… Down's syndrome (Q90)	4	4.0	43.8
	… Congenital malformations of respiratory system (Q30-Q34)	2	2.0	21.9
	… Other congenital malformations (Q10-Q18,Q86-Q89)	6	6.0	65.7
4	**Newborn affected by complications of placenta, cord, and membranes (P02)**	8	8.0	87.6
	… Newborn affected by chorioamnionitis (P02.7)	4	4.0	43.8
	… Newborn complications involving placenta (P02.0-P02.3)	3	3.0	32.8
	… Newborn affected by complications involving cord (P02.4-P02.6)	1	1.0	10.9
4	**Newborn affected by other complications of labor**			

Table 14: Leading Causes of Infant Death District of Columbia Residents, 2008				
Rank[1]	Cause of Death (Based on Tenth Revision, International Classification of Diseases, 1992)	Number	Percent*	Rate**
	and delivery (P03)	8	8.0	87.6
6	**Sudden infant death syndrome (SIDS) (R95)**	7	7.0	76.6
7	**Necrotizing enterocolitis of newborn (P77)**	4	4.0	43.8
…	All other causes	22	22.0	240.9

*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 Evaluation, DC Department of Health.

In 2008, 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 (low birth weight)** was the second leading cause for the U.S. (Table 15) and also the second for the District of Columbia.

	Table 15. Infant Deaths and Infant Mortality Rates for the 10 Leading Causes of Infant Death: United States, Preliminary, 2008.		
Rank[1]	Cause of death (based on the *International Classification of Diseases, Tenth Revision*, 1992)	Number	Rate[2]
…	All causes	28,029	659.3
1	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	5,647	132.8
2	Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	4,733	111.3
3	Sudden infant death syndrome (R95)	2,292	53.9
4	Newborn affected by maternal complications of pregnancy (P01)	1,764	41.5
5	Accidents (unintentional injuries) (V01–X59)	1,299	30.6
6	Newborn affected by complications of placenta, cord and membranes (P02)	1,073	25.2
7	Bacterial sepsis of newborn (P36)	696	16.4
8	Respiratory distress of newborn (P22)	625	14.7
9	Diseases of the circulatory system (I00-I99)	590	13.9
10	Neonatal hemorrhage (P50–P52,P54)	551	13.0
…	All other causes (residual)	8,759	206.0

…Category not applicable.
[1] Rank based on number of infant deaths.
[2] Rates are per 100,000 live births.
Notes: 1. Data are based on a continuous file of records received from the states. Figures are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals.
2. 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. 59, No. 2, December 9, 2010. Deaths; Preliminary data for 2008. Available from: http://www.cdc.gov/nchs/data/nvsr/nvsr59/nvsr59_2.pdf

Neonatal Mortality

The leading cause of neonatal death in 2008 was **Newborn affected by maternal complications of pregnancy (27.0 percent),** which accounted for almost 25 percent of all neonatal deaths. **Disorders related to short gestation and low birth weight, not elsewhere classified** (low birth weight), was the second leading cause (21.6 percent), and **Congenital malformations,**

deformations and chromosomal abnormalities (17.6 percent) was the third leading cause of neonatal death (Table 16).

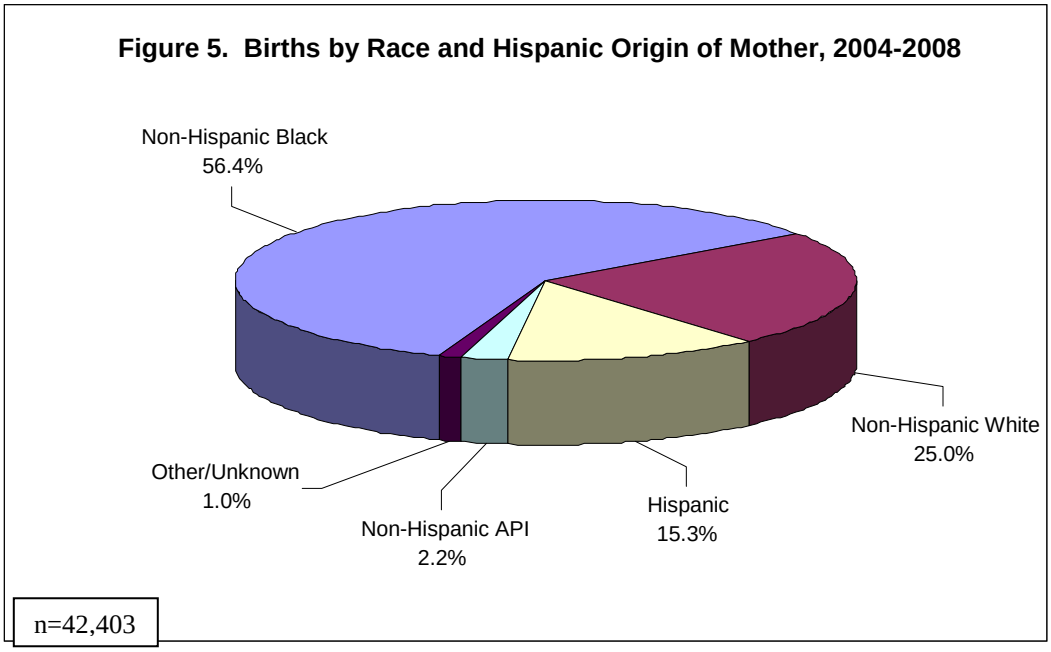
Table 16: Leading Causes of Neonatal Infant Death (n=74) District of Columbia Residents, 2008				
Rank[1]	Cause of Death (Based on Tenth Revision, International Classification of Diseases, 1992)	Number	Percent*	Rate**
…	All causes	74	100.0	810.2
1	**Newborn affected by maternal complications of pregnancy (P01)**	20	27.0	219.0
	…Premature rupture of membranes (P01.1)	16	21.6	175.2
2	**Disorders related to short gestation and low birth weight, not elsewhere classified (P07)**	15	20.3	164.2
3	**Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)**	13	17.6	142.3
4	**Newborn affected by complications of placenta, cord, and membranes (P02)**	8	10.8	87.6
4	**Newborn affected by other complications of labor and delivery (P03)**	8	10.8	87.6
…	All other causes or total	10	13.5	109.5

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

Five-Year Birth and Infant Death Trend

Figure 5 shows the total number of births, 42,403 for the five-year period of 2004 to 2008. Almost 60 percent were to non-Hispanic black mothers, 25 percent were to non-Hispanic white mothers and 15.3 percent were to Hispanic mothers.

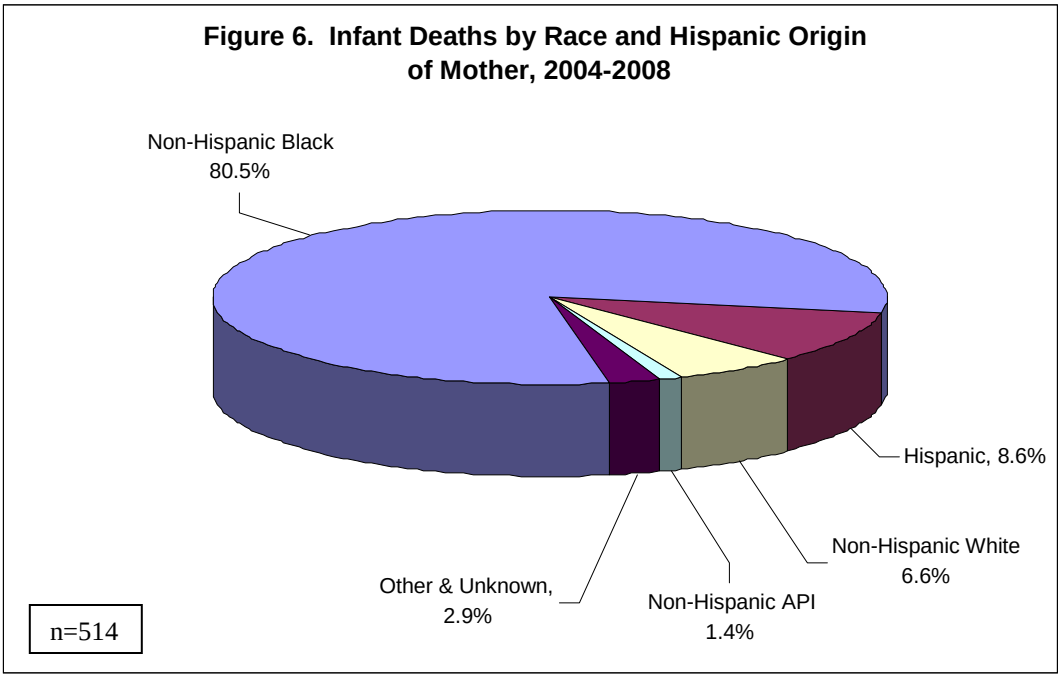
Figure 5. Births by Race and Hispanic Origin of Mother, 2004-2008



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

Of the total number of births (42,403), 514 infants died from 2004 to 2008. Figure 6 shows the average percentage of infant deaths by race/ethnicity from 2004 to 2008. On average between 2004 to 2008, infants to non-Hispanic black mothers, disproportionately died (80.5 percent) compared to their total number of births (56.4 percent).

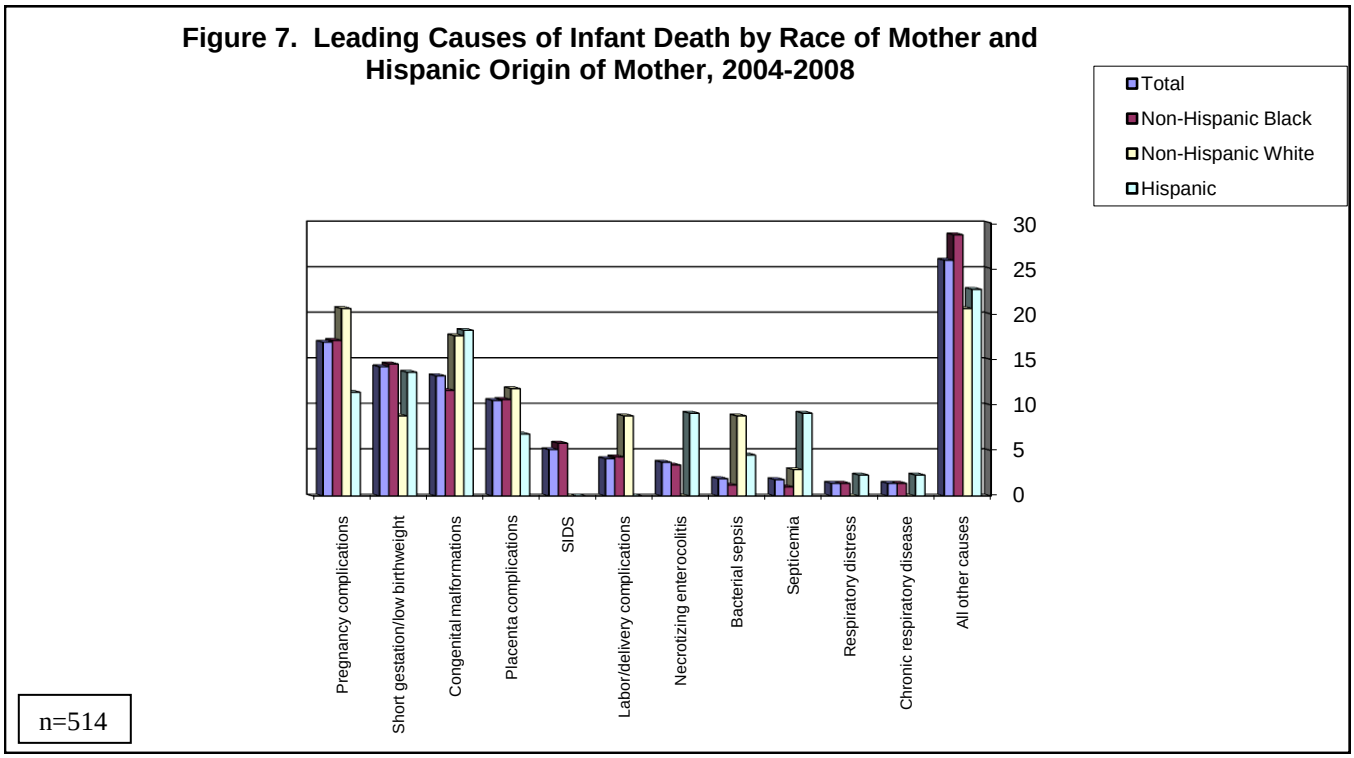
Figure 6. Infant Deaths by Race and Hispanic Origin of Mother, 2004-2008



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

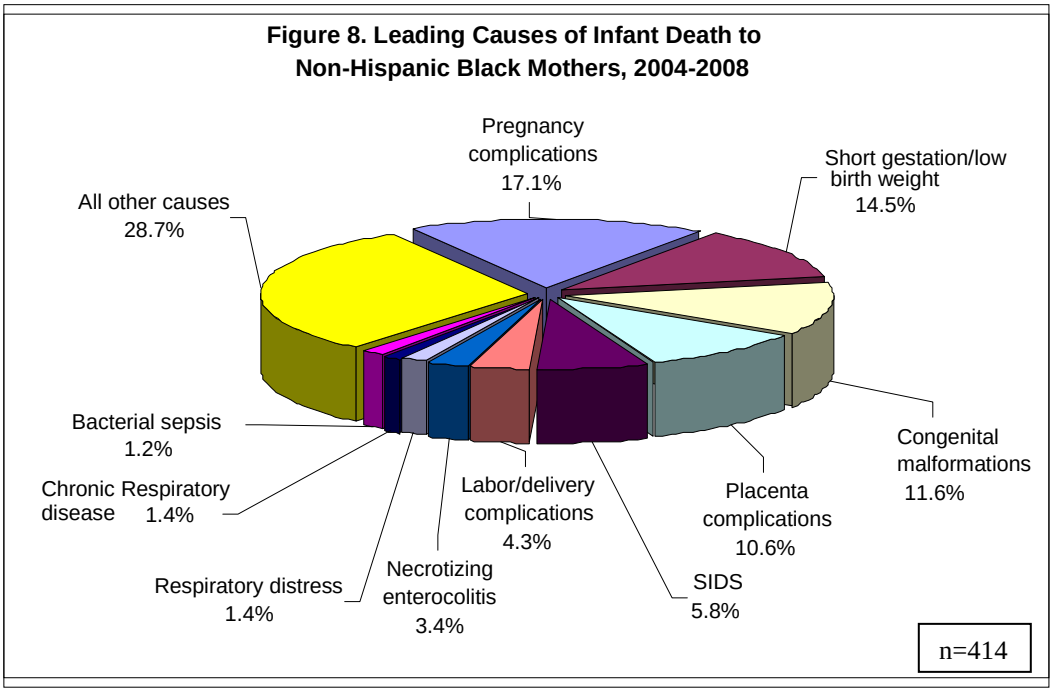
Figure 7 shows the leading causes of infant death over this five-year period (2004-2008). The leading cause of infant mortality was **Newborn affected by maternal complications of pregnancy,** which accounted for 16.9 percent, followed by **Short gestation and low birth weight** (14.2 percent), the third leading cause was **Congenital malformations, deformations and chromosomal abnormalities** (13.2 percent).

Figure 7. Leading Causes of Infant Death by Race of Mother and Hispanic Origin of Mother, 2004-2008



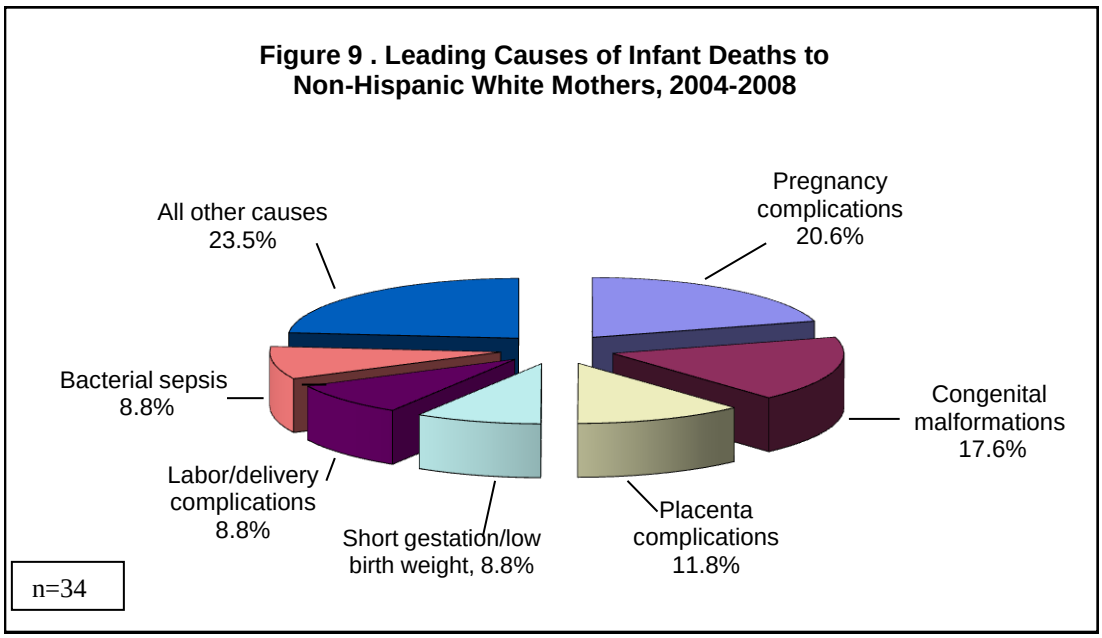
Note: Data by Asian/Pacific Islander were excluded due to small numbers.
Source: State Center for Health Statistics, Center for Policy, Planning and Evaluation, DC Department of Health.

The leading cause of infant death to non-Hispanic black mothers, on average from 2004-2008, was **Newborn affected by maternal complications of pregnancy**, which accounted for 17.1 percent. **Disorders related to short gestation and low birth weight, not elsewhere classified** (14.5 percent) was the second leading cause of infant death to non-Hispanic black mothers, followed by **Congenital malformations, deformations and chromosomal abnormalities** (11.6 percent), which was the third leading cause (Figure 8).



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

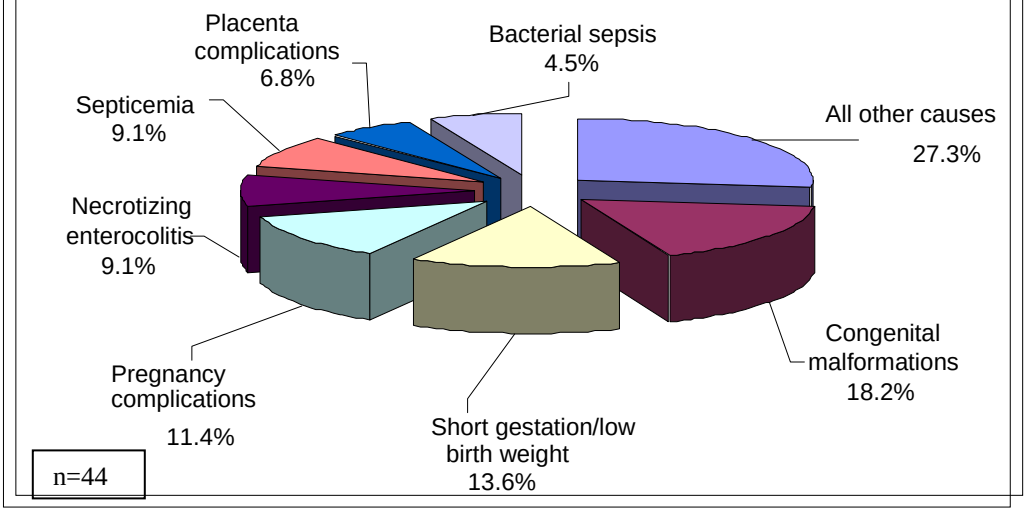
For infant deaths to non-Hispanic white mothers, **Newborn affected by maternal complications of pregnancy** was the leading cause of infant death (20.6 percent) and **Congenital malformations, deformations and chromosomal abnormalities** was the second leading cause (17.6 percent). **Newborn affected by complications of placenta, cord and membranes** was the third leading cause of infant death (11.8 percent) (Figure 9).



Note: Percentage does not add to 100 due to rounding.
Source: State Center for Health Statistics, Center for Policy, Planning and Evaluation, DC Department of Health.

Figure 10 shows that the leading cause of infant death to Hispanic mothers was **Congenital malformations, deformations and chromosomal abnormalities (18.2 percent). Disorders related to short gestation and low birth weight, not elsewhere classified (13.6 percent)** was the second leading cause and **Newborn affected by maternal complications of pregnancy** ranked third place (11.4 percent).

Figure 10. Leading Causes of Infant Death to Hispanic Mothers, 2004-2008



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

Current Reproductive Health Outcomes Oriented Programs

As there continues to be significant variation in the infant mortality rates for the District of Columbia in recent years after a period of decline in the 1990s, the rate has not continued to have a stable downward trend, however, rates decreased from 13.1 in 2007 to 10.9 in 2008. In 2007, the District of Columbia Department of Health (DOH) released the Infant Mortality Action Plan which is a comprehensive road map on the efforts to reduce the infant mortality rate in the District between 2007 and 2010. There are three major foci of effort: (1) to increase the capacity of home visitation for pregnant women; (2) to enhance collaboration within DOH and between other agencies; and (3) to increase coordination between the government and community organizations. With the implementation of all the initiatives in the 2007 Action Plan, the Community Health Administration (CHA) is working on the development of a 2011 Citywide Infant Mortality Action Plan. The *Advisory Committee on Perinatal, Infant and Inter-conceptional Health and Development* will provide recommendations for the Action Plan strategy and initiative development.

To this end, the Perinatal and Infant Health Bureau of the Community Health Administration in DOH has led the efforts on these initiatives. In 2008, the Perinatal and Infant Health Bureau was expanded to include a robust Healthy Start program which uses a nurse-family support worker model. The Perinatal and Infant Health Bureau's (PIHB) aim is to decrease perinatal disparities such as prematurity, low birth weight, very low birth weight, and infant mortality by increasing awareness of how to improve birth outcomes. The Healthy Start Program at DOH has seen a dramatic increase in the number of women served going from 230 in 2007 to 581 in 2008. CHA works closely with Mary's Center, another federally funded Healthy Start Program in the District. This collaboration includes cross-training of staff and sharing of screening tools and resources. In that collaboration with the community is part of the mission of CHA, DOH continues to partner with organizations such as First Candle to work to increase the number of cribs available to women with newborns to reduce the rates of co-sleeping.

The Healthy Start Program at DOH has seen a dramatic increase in the number of women served going from 230 in 2007 to 656 in 2009. CHA continues to work closely with Mary's Center for Maternal and Child Care, Inc., another federally funded Healthy Start Program in the District and the Healthy Babies Project, a local not-for-profit organization serving low-income women and families. This collaboration includes cross-training of staff and sharing of screening tools and resources. In that collaboration with the community is part of the mission of CHA, DOH continues to partner with organizations such as First Candle and CareFirst Blue Cross Blue Shield to work to increase the number of cribs and pack-n-plays available to women with newborns to reduce the rates of co-sleeping.

In 2009, DOH launched the "*I am A Healthy DC MOM"* public awareness campaign which reinforces messages that prospective mothers stay fit and healthy. Messages emphasize the need to exercise, eat nutritious meals rich in folic acids and nutrients, get help to quit using tobacco, alcohol, or other harmful substances, and reduce the amount of stress in their lives. In September 2010, DOH launched the *"I am a Healthy DC Baby"* public information campaign. Materials related to this campaign emphasize what parents can do to have a healthy baby and where to call to obtain more information and support. The four subthemes are: *I have my daily needs met*; *I am fed healthy foods*; *I get scheduled health check-ups*; and *I am safe where I sleep and play.*

Within the Department of Health, The Healthy Start Program has partnered with the HIV/AIDS, Hepatitis, Sexually Transmitted Diseases, and Tuberculosis Administration (HAHSTA) in a campaign to test all women participating in the program and refer women that are HIV positive into HAHSTA programs. The goal is to identify all pregnant women that are HIV positive so that they can be effectively linked into appropriate medical care. The DC Healthy Start (DCHS) program queries all prospective or enrolled clients about their HIV/AIDS status. Through outreach, literature, case management home visits, and public awareness campaigns, DCHS educates clients about the importance of knowing their HIV status through early preventive care to reduce transmission to their partners as well as to prevent perinatal transmission to infants. DCHS also offers free Ora-quik screenings, condoms, education, and referrals for diagnostic services to decrease the transmission of HIV/AIDS. In Fiscal Year 2010 DCHS community outreach workers accomplished 130 Ora-Quik screenings at outreach sites and referred 11 individuals with presumptive positive test to the HAHSTA for definite testing.

In efforts to increase coordination between local government agencies, DOH has engaged in collaborations with the Department of Mental Health to ensure that all pregnant women have access to appropriate mental health services, and the Department of Corrections to ensure adequate prenatal care for women in the correctional system. CHA has also been working with the Department of Health Care Finance and the Medicaid Managed Care Organizations to develop a comprehensive quality improvement effort to improve perinatal outcomes which launched in 2009.

In 2009, DOH implemented the Electronic Birth Registry System. This system allows for the real-time analysis of trends related to perinatal outcomes and, with the appropriate consent from new mothers, allows determinations to be made relative to eligibility for Healthy Start and other programs to assist mothers and infants at risk.

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Technical Notes

Data Sources and Method

Data shown in this report for 2007 are based on data from the District of Columbia (DC) resident linked birth/infant death data set, which are part of the DC Vital Registration System and DC resident infant deaths and births that occurred in other states through the inter-state exchange agreement. Data for DC were collected and reported using the 1989 revision of the U.S. standard birth certificate and the 2003 revision of the U.S. standard death certificate.

The linked birth/infant death data set is the primary data source for analyzing infant mortality trends and patterns in DC. In the linked birth/infant death data set, information from resident birth certificate is linked to information from resident death certificate for each infant less than 1 year of age. The purpose of the linkage is to use the many additional variables available from the birth certificate to conduct more detailed analyses of infant mortality patterns. The linked birth/infant death data set is particularly useful for computing accurate infant mortality rates by race and ethnicity because the race and ethnicity of the mother from the birth certificate is used in both the numerator and denominator of the infant mortality rate. The race and ethnicity from the birth certificate is generally provided by the mother at the time of delivery, and is considered to be more accurate than race and ethnicity from the death certificate that is provided by an informant, or in the absence of an informant, by observation. Linked birth/infant death data sets are available from the State Center for Health Statistics (SCHS), Center for Policy, Planning, and Evaluation, DC Department of Health.

The report also uses data from the National Center for Health Statistics (NCHS) 2006 preliminary mortality report for the United States, National Vital Statistics Reports, Vol. 59, No. 2, December 9, 2010. Deaths: Preliminary data for 2008. Available from: http://www.cdc.gov/nchs/data/nvsr/nvsr59/nvsr59_2.pdf.

Cause-of-death classification

The mortality statistics presented in this report were compiled in accordance with World Health Organization (WHO) regulations, which specify that member nations classify and code causes of death in accordance with the current revision of the International Classification of Diseases (ICD). The ICD provides the basic guidelines used in virtually all countries to code and classify causes of death. Effective with deaths occurring in 1999, the United Sates began using the Tenth Revision of this classification (ICD-10).

In this report, tabulations of cause-of-death statistics are based solely on the underlying cause of death. The underlying cause is defined by WHO as "the disease or injury which initiated the train of events leading directly to death, or the circumstances of the accident of violence which produced the fatal injury." The underlying cause is selected from the conditions entered by the physician in the cause-of-death section of the death certificate. When more than one cause or condition is entered by the physician, the underlying cause is determined by the sequence of conditions on the certificate, provisions of the ICD, and associated selection rules and modifications. Generally, more medical information is reported on death certificates than is directly reflected in the underlying cause of death. This is captured in NCHS multiple cause-of-death statistics.

Tabulation lists and cause-of-death ranking

For this report, the tabulation List of 130 Selected Causes of Death used for deaths for all infant less than 1 year of age. This list is also used to rank leading causes of death.

Race and Hispanic origin

The 1989 revision of the U.S. Standard Certificate of Birth allows the reporting of race and Hispanic origin separately on the birth certificates. Race of the mother is reported in nine categories on the birth certificates: white, black, American Indian, Chinese, Japanese, Hawaiian, Filipino, "other" Asian or Pacific Islander, and "other" race. Hispanic origin of decedent is reported as the country of origin. The 2003 revision of the U.S. Standard Certificate of Death allows the reporting of more than one race (multiple races). This change was implemented to reflect the increasing diversity of the population of the United Sates and to be consistent with the decennial census. The race and ethnicity items on the revised certificate are compliant with the 1997 "Revision of the Race and Ethnic Standards for Federal Statistics and Administrative Reporting." These were issued by the Office of Management and Budget (OMB) and have replaced the previous standards that were issued in 1997.

Population bases for computing rates

Populations used for computing death rates shown in this report represent the population residing in DC, enumerated as of April 1 for census 2000 year and estimated as of July 1 for 2008. Population estimates used to compute birth rates for DC for 2008. Birth rates shown in this report for 2008 are based on populations that are consistent with the 2000 census levels. Death rates shown in this report for 2008 by ward are based on 2008 estimated population and 2000 Census population. The 2008 estimated population was provided by the DC Office of Planning/State Data Center, which used block group data provided by Caliper Corporation to derive ward data.

Computing rates

Rates in this report are on an annual basis per 1,000 live births and per 100,000 population residing in the District of Columbia.

Availability of mortality data

Infant Mortality data are available in publications, unpublished tables, and electronic products as described on the Department of Health, Center for Policy, Planning, and Evaluation website at the following address: http://doh.dc.gov/doh/cwp/view,a,1374,q,602045.asp detailed analyses that is not provided in this report is possible upon request.

Definition of terms

Infant death	Death of an infant before his or her first birthday.
Infant mortality rate	Number of infant deaths per 1,000 live births.
Low birth weight	Newborn weighing under 2,500 grams or 5lbs. 8oz.
Neonatal death	Death of a child younger than 28 days of age.
Neonatal mortality rate	Number of neonatal deaths per 1,000 live births.
Postneonatal death	Death of a child 28 days of age or older but younger than one year of age.
Postneonatal mortality rate	Number of postneonatal deaths per 1,000 live births.
Preterm birth	Birth before 37 completed weeks of gestation.
Very low birth weight	Newborn weighing under 1,500 grams or 3lbs. 5oz.