
Infant Mortality in the District of Columbia, 1998-2007

by
Fern Johnson-Clarke, PhD

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

Infant Mortality Summit
September 2, 2010

Presentation Points

- What is Infant Mortality?
 - Trends
 - Infant Mortality by Race/Ethnicity
 - Birth Weight of Infants
 - Preterm Babies
 - Infant Mortality by Ward
 - Causes of Infant Death
 - Summary
-

Trends

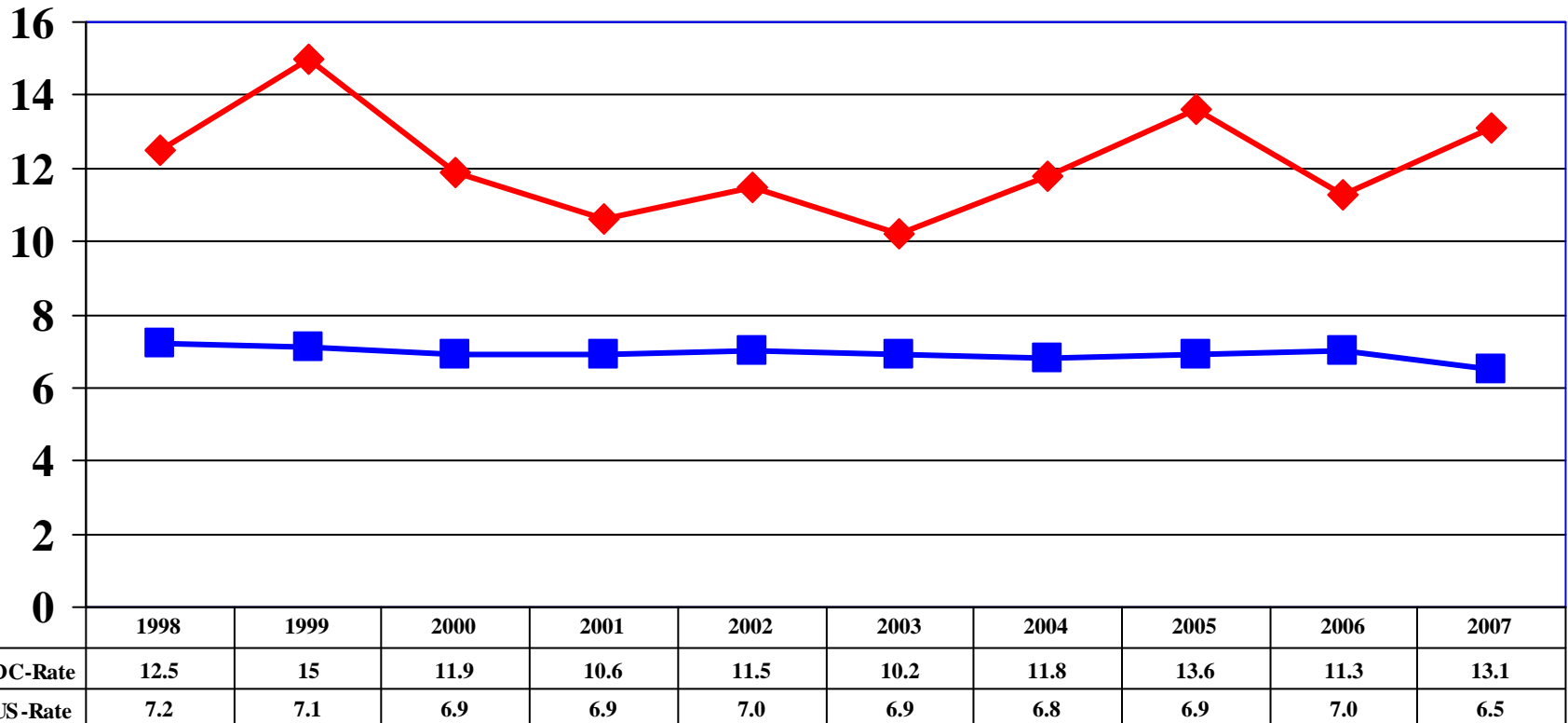
**Table 1: Ten-Year Infant Mortality Trends
District of Columbia Residents, 1998-2007**

Year	Births	Infant Deaths	Infant Mortality Rate*
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
2007	8,870	116	13.1

*Per 1,000 live births

Source: Center for Policy, Planning, and Evaluation

District of Columbia and National Infant Mortality Rates 1998-2007



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

Sources: DC Department of Health, Center for Policy, Planning, and Evaluation

Center for Disease Control and Prevention, National Center for Health Statistics

Infant Mortality by Race/Ethnicity

**Table 2: Live Births, Infant Deaths and Infant Mortality
by Race/Hispanic Origin
District of Columbia Residents, 2006 & 2007**

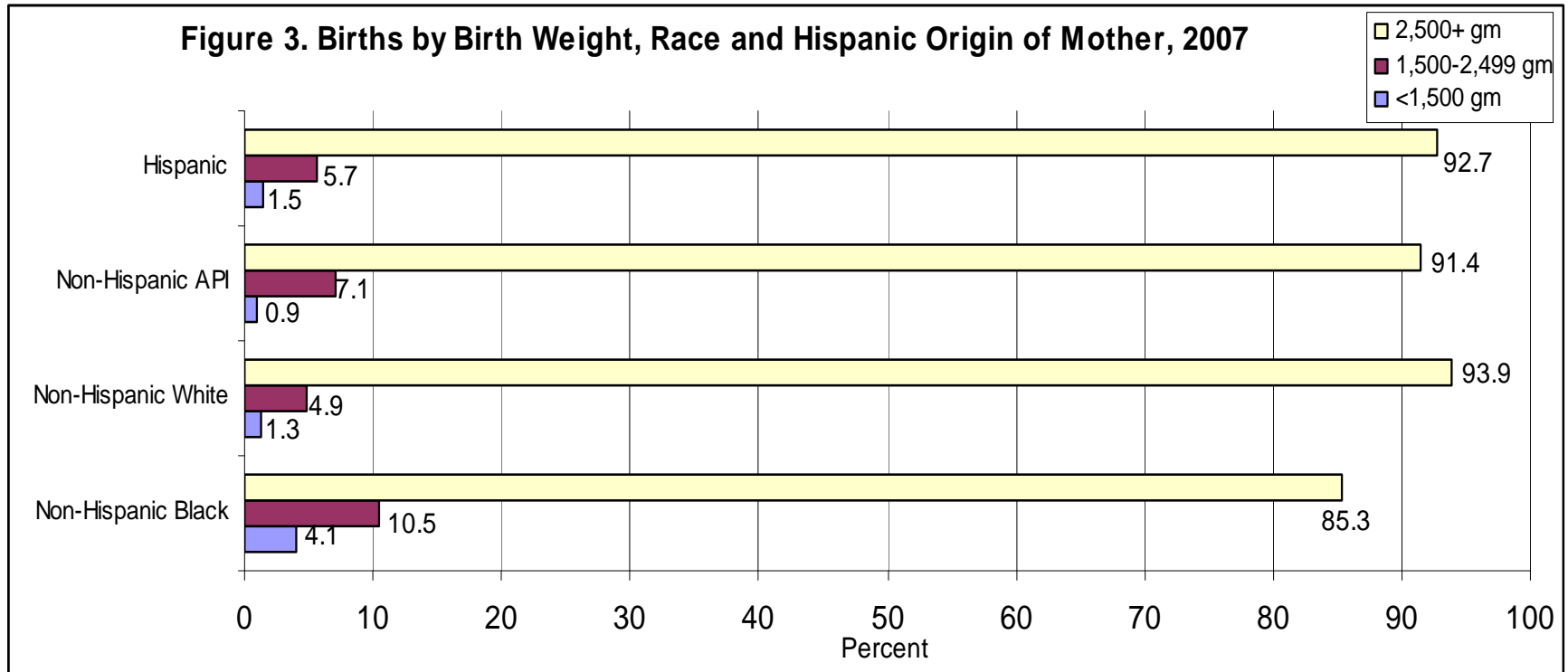
Race/Ethnicity	Live Births		Infant Deaths		Infant Mortality Rate ¹	
	2006	2007	2006	2007	2006	2007
Total	8,522	8,870	96	116	11.3	13.1
Black	4,847	4,927	84	84	17.3	17.0
White	2,311	2,370	6	12	2.6	5.1
Asian/Other	1,346	1,544	6	13	4.5	8.4
Total	8,522	8,870	96	116	11.3	13.1
Non-Hispanic Black	4,814	4,891	84	84	17.4	17.2
Non-Hispanic White	2,103	2,203	6	8	2.9	3.6
Hispanic ²	1,344	1,486	4	14	3.0	9.4

Notes: ¹Infant mortality rate per 1,000 live births

²Hispanics include persons of all Hispanic origin of any race

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

Birth Weight of Infants



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

Birth Weight of Infants (Cont.)

Percent Distribution of Low Birth Weight Infant Deaths by Age of Mother and Time of Death District of Columbia Residents, 2007							
Age of Mother	Infant Deaths	Percent Deaths*	LBW Deaths	%LBW Deaths**	Time of Infant Death		
					Total LBW	Neonatal	Post-neonatal
Total	116	100.0	89	76.7	89	74	15
< 20 years	13	11.2	9	69.2	9	6	3
20-24 years	38	32.8	29	76.3	29	22	7
25-29 years	28	24.1	23	82.1	23	20	3
30-34 years	18	15.5	16	88.9	16	15	1
35-39 years	11	9.5	9	81.8	9	8	1
≥ 40 years	4	3.4	3	75.0	3	3	0
Unknown age	4	3.4	0	0	0	0	0

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

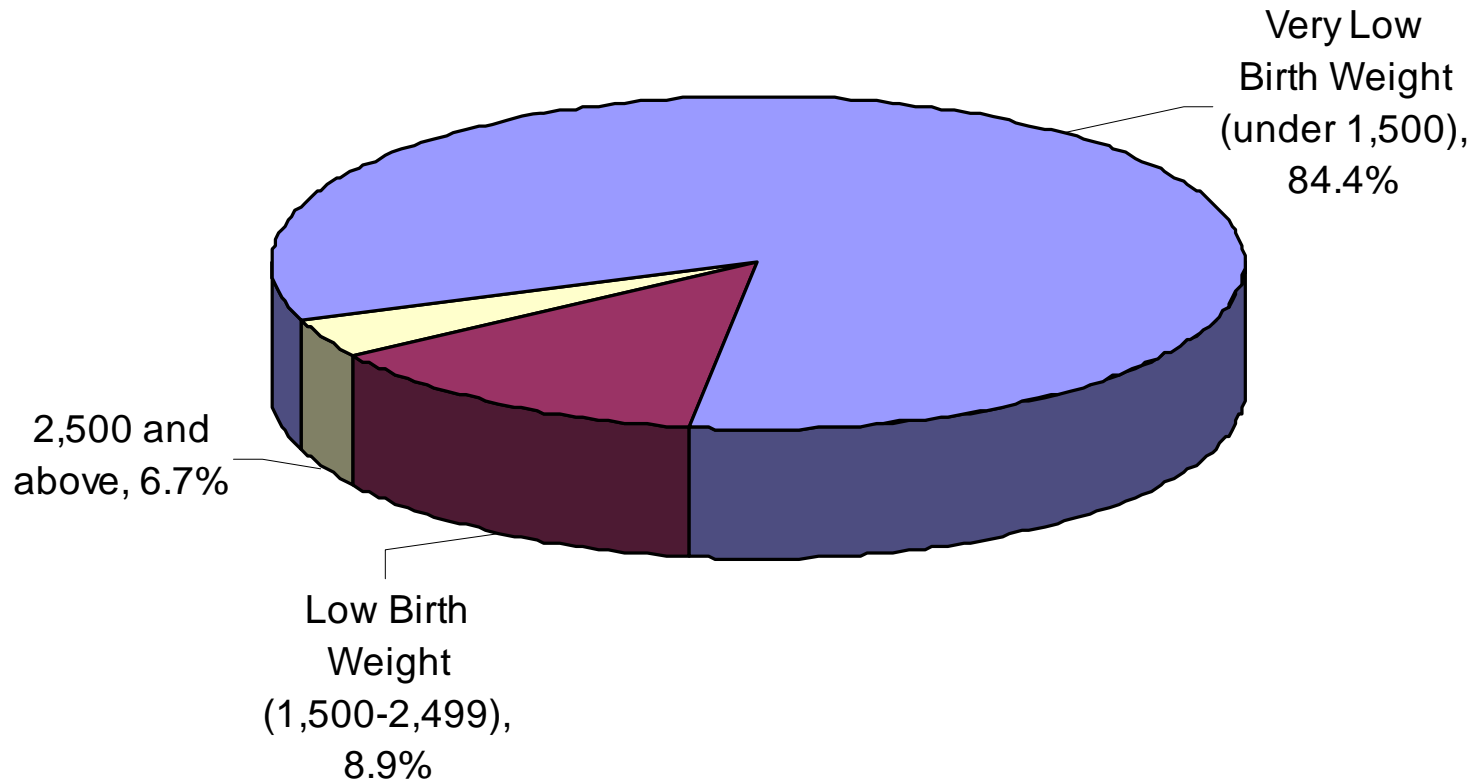
Source: DC Department of Health, Center for Policy, Planning, and Evaluation.

**Percent Distribution of Premature Babies by Race
and Hispanic Origin of Mother
District of Columbia Residents, 2006 and 2007**

Race	2006	2007	Percent Change
Total Births for all Races	8,522	8,870	
-Number of Premature Babies	1,129	1,070	
-Percent Premature Babies	13.2%	12.1%	-8.3
Total Births to Black* Mothers	4,847	4,927	
-Number of Premature Babies to Black Mothers	755	723	
-Percent Premature Babies to Black Mothers	15.6%	14.7%	-5.8
Total Births to White* Mothers	2,311	2,370	
-Number of Premature Babies to White Mothers	226	179	
-Percent Premature Babies to White Mothers	9.8%	7.6%	-22.4
Total Births to Asian and Pacific Islander (API) Mothers	175	212	
-Number of Premature Babies to API Mothers	16	19	
-Percent Premature Babies to API Mothers	9.1%	9.0%	-1.1
Total Births to Hispanic Mothers	1,344	1,486	
-Number of Premature Babies to Hispanic Mothers	152	159	
-Percent Premature Babies to Hispanic Mothers	11.3%	10.7%	-5.3

Preterm Babies (Cont.)

Figure 4. Preterm Infant Deaths by Birth Weight, 2007



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

Infant Mortality by Ward

Births, Infant Deaths and Infant Mortality Rates by Ward District of Columbia Residents, 2006 and 2007							
Ward	Births		Infant Deaths		Infant Mortality Rate*		
	2007	2006	2007	2006	2007	2006	Percent Change
1	1243	1262	7	7	5.6	5.5	1.8
2	634	846	8	11	12.6	13.0	-3.1
3	796	913	1	2	1.3	2.2	-40.9
4	1460	1316	25	8	17.1	6.1	180.3
5	1041	898	17	18	16.3	20.0	-18.5
6	939	991	6	9	6.4	9.1	-29.7
7	1210	1015	23	13	19.0	12.8	48.4
8	1545	1249	29	27	18.8	21.6	-13.0
Unknown	2	32	0	1	-	-	-
Total	8,870	8522	116	96	13.1	11.3	15.9

*Per 1,000 live births

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

**Statistical Overview by Ward
District of Columbia Residents, 2007**

Ward	Births	Infant Deaths	IMR*	LBW	Teen Births	LBW to Teens
1	1243	7	5.6	115	149	14
2	634	8	12.6	45	33	2
3	796	1	1.3	57	8	1
4	1460	25	17.1	144	137	17
5	1041	17	16.3	133	149	19
6	941	6	6.4	110	71	11
7	1210	23	19.0	167	222	34
8	1545	29	18.8	218	306	31
Unknown	2	0	-	0	0	0
Total	8,870	116	13.1	989	1,075	129

*Per 1,000 live births

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

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

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

**Leading Causes of Infant Death
District of Columbia Residents, 2007**

Rank ¹	Cause of Death (Based on Tenth Revision, International Classification of Diseases, 1992)	Number	Percent*	Rate**
...	All causes	116	100.0	1,307.8
1	Newborn affected by complications of placenta, cord, and membranes (P02)	22	19.0	248.0
	... Newborn affected by chorioamnionitis (P02.7)	12	10.3	135.3
	... Newborn complications involving placenta (P02.0-P02.3)	8	6.9	90.2
	... Newborn affected by complications involving cord (P02.4-P02.6)	2	1.7	22.5
2	Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)	19	16.4	214.2
	... Congenital malformations and deformations of musculoskeletal system, limbs and integument (Q65-Q85)	4	3.4	45.1
	... Congenital malformations of heart (Q20-Q24)	3	2.6	33.8
	... Congenital malformations of respiratory system (Q30-Q34)	3	2.6	33.8
	... Other congenital malformations	9		101.5
3	Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	15	12.9	169.1
	... Extremely low birth or extreme immaturity (P07.0, P07.2)	10	8.6	112.7
	... Other low birth weight or preterm (P07.1, P07.3)	5	4.3	56.4
4	Newborn affected by maternal complications of pregnancy (P01)	14	12.1	157.8
	... Incompetent cervix (P01.0)	10	8.6	112.7
	... Premature rupture of membranes (P01.1)	3	2.6	33.8
	... Other maternal complications of pregnancy (P01.2-P01.4,P01.6-P01.9)	1	0.9	11.3
5	Sudden infant death syndrome (SIDS) (R95)	9	7.8	101.5

Causes of Infant Death (Cont.)

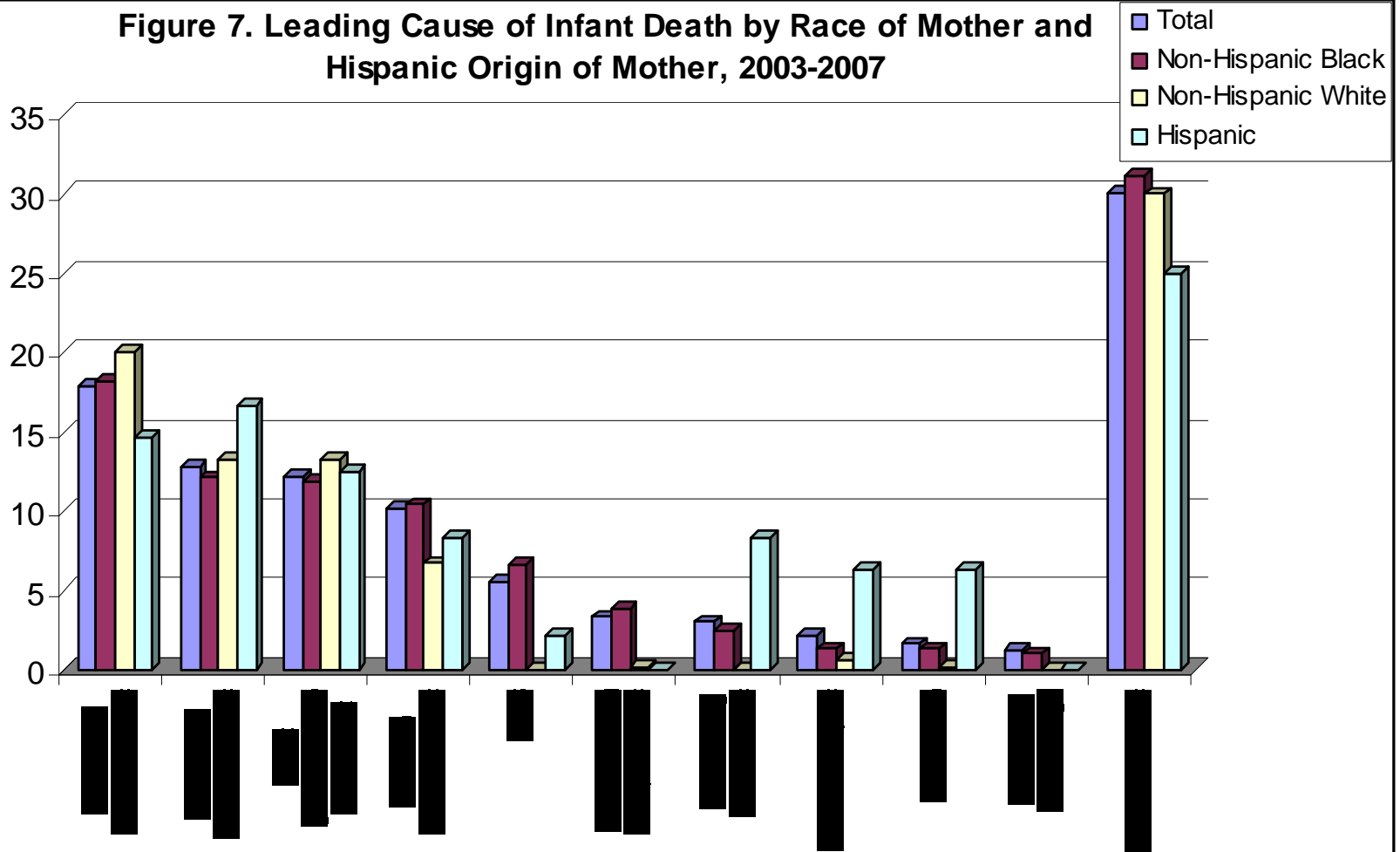
Leading Causes of Neonatal Infant Death (n=85) District of Columbia Residents, 2007				
Rank ¹	Cause of Death (Based on Tenth Revision, International Classification of Diseases, 1992)	Number	Percent*	Rate**
...	All causes	85	100.0	958.3
1	Newborn affected by complications of placenta, cord, and membranes (P02)	21	24.7	236.8
	... Newborn affected by chorioamnionitis (P02.7)	12	14.1	135.3
2	Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)	15	17.6	169.1
3	Newborn affected by maternal complications of pregnancy (P01)	14	16.5	157.8
	... Incompetent cervix (P01.0)	10	11.8	112.7
4	Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	12	14.1	135.3
5	Newborn affected by other complications of labor and delivery (P03)	6	7.1	67.6
...	All other causes or total	17	20.0	191.7

*Per 100,000 live births

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

Causes of Infant Death (Cont.)

Figure 7. Leading Cause of Infant Death by Race of Mother and Hispanic Origin of Mother, 2003-2007



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

Summary

- Over the past 10 years, there continues to be variations in the IMRs. After a period of decline in the 1990s, the rate has not continued to have a stable downward trend.
 - IMRs decreased in Wards 2, 3, 5, 6 & 8 but increased in Wards 1, 4 & 7 in 2007.
 - Infants who died before 28 days of age increased by 39% between 2006 & 2007.
 - 62% of preterm births occurred during 34-36 weeks gestation
 - Ward 8 had the highest percentage LBW babies & teen births
 - Leading cause of infant death to non-Hispanic black mothers was pregnancy complications (18.2% of deaths to blacks)
-

Summary (Cont.)

- Leading cause of infant death to non-Hispanic white mothers was also pregnancy complications (20% of white infant deaths)
 - Leading cause of infant death to Hispanic mothers was congenital malformations (16.7% of all Hispanic infant deaths)
-

Questions?

Contact Information:

Fern Johnson-Clarke, PhD

Senior Deputy Director

Center for Policy, Planning, and Evaluation

DC Department of Health

202-442-9032

fern.johnson-clarke@dc.gov

Figure 5. Births by Race and Hispanic Origin of Mother, 2003-2007

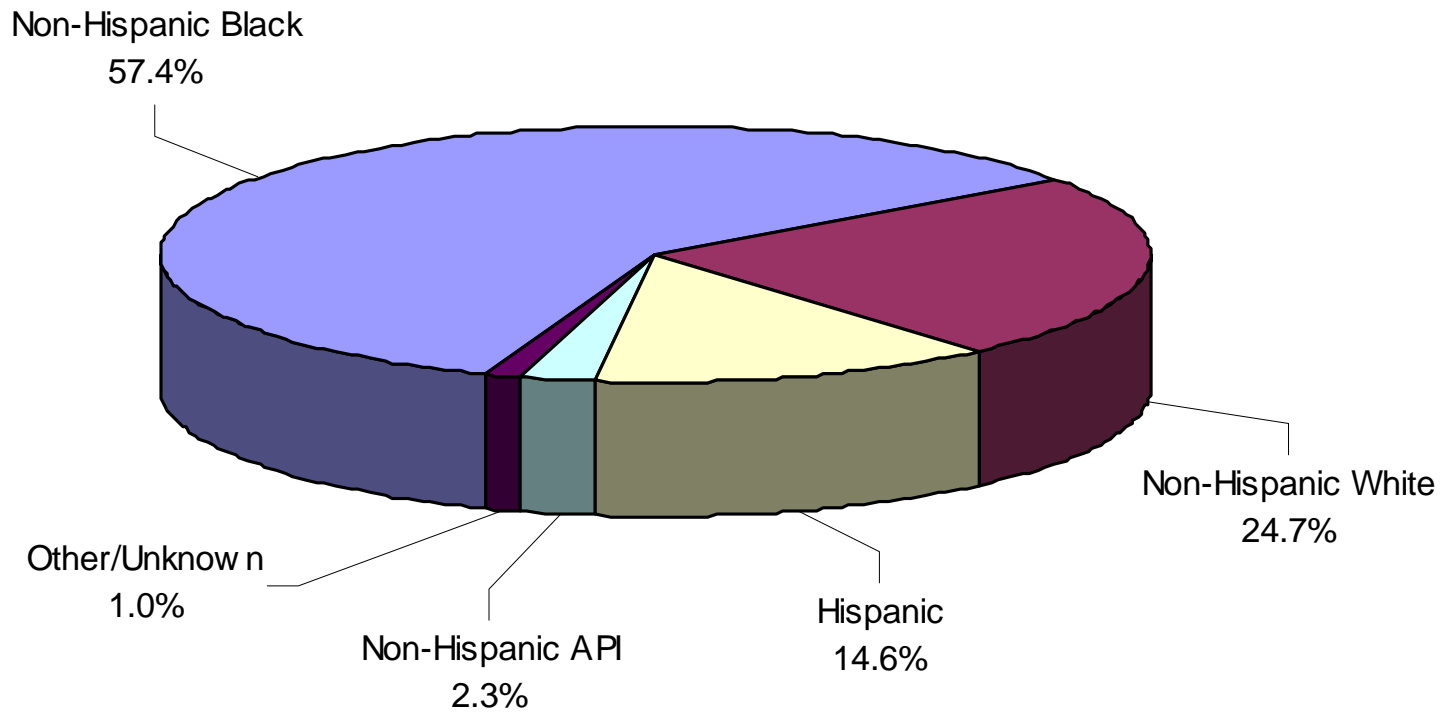


Figure 6. Infant Deaths by Race and Hispanic Origin of Mother, 2003-2007

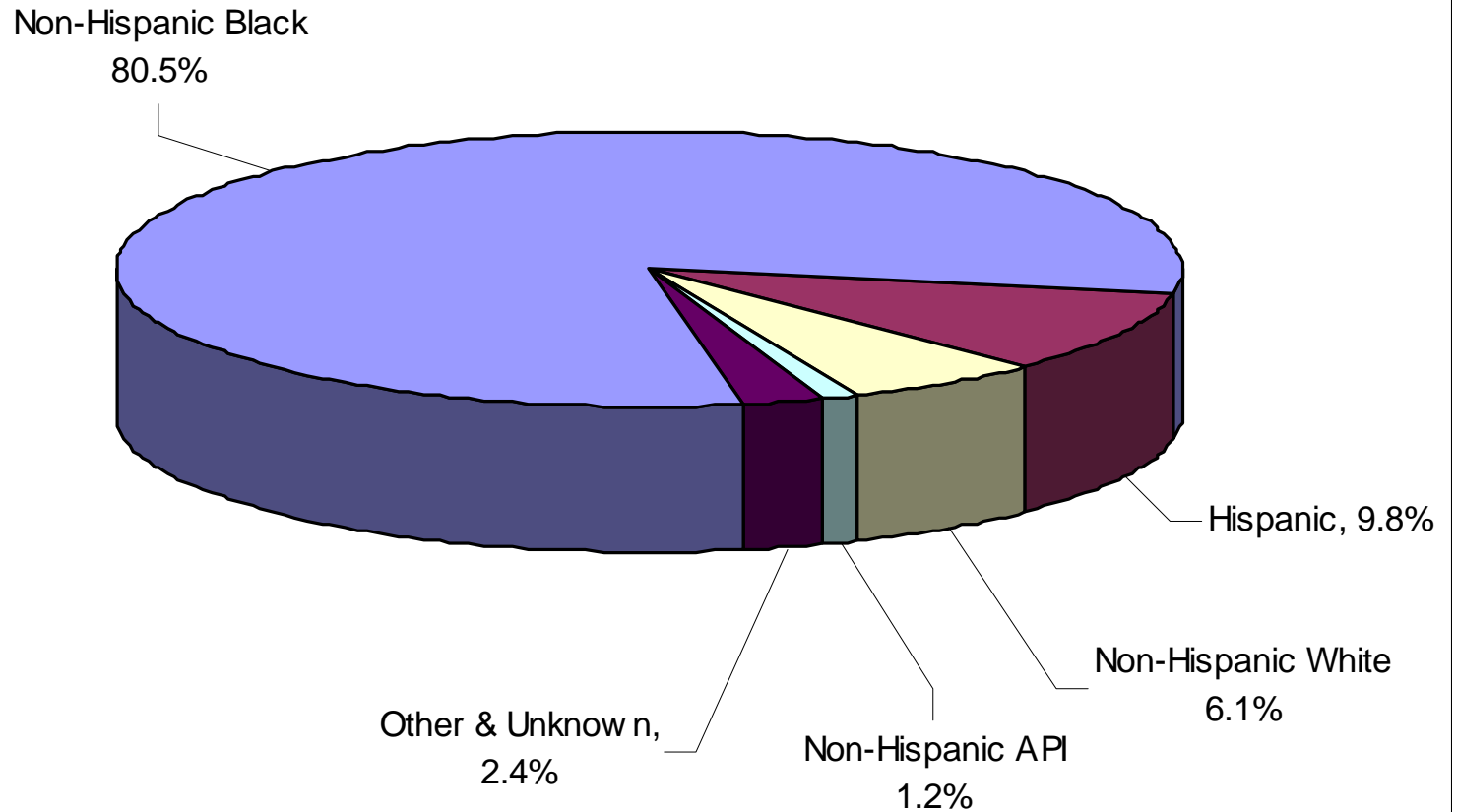


Figure 8. Leading Causes of Infant Death to Non-Hispanic Black Mothers, 2003-2007

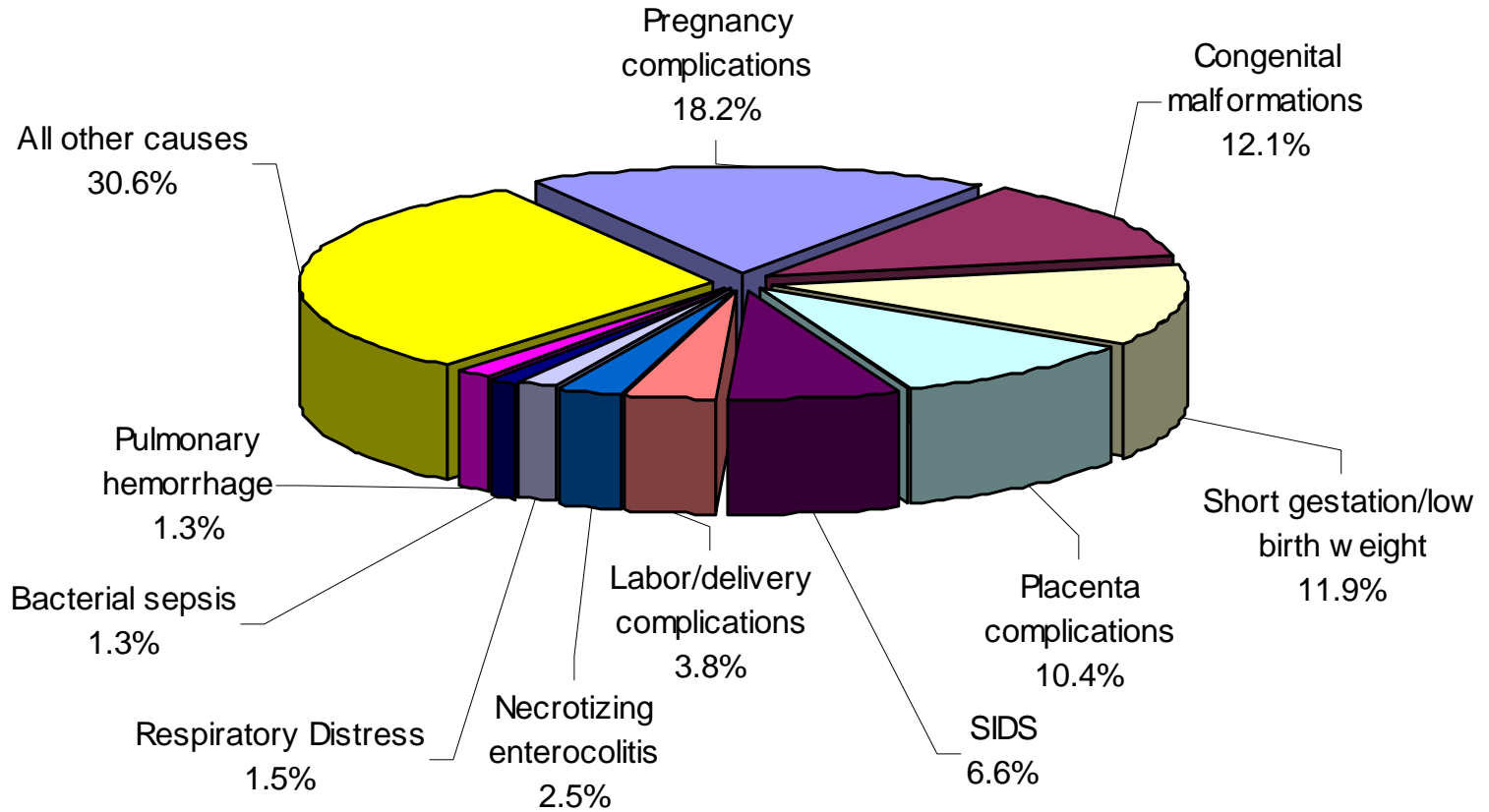


Figure 9. Leading Causes of Infant Deaths to Non-Hispanic White Mothers, 2003-2007

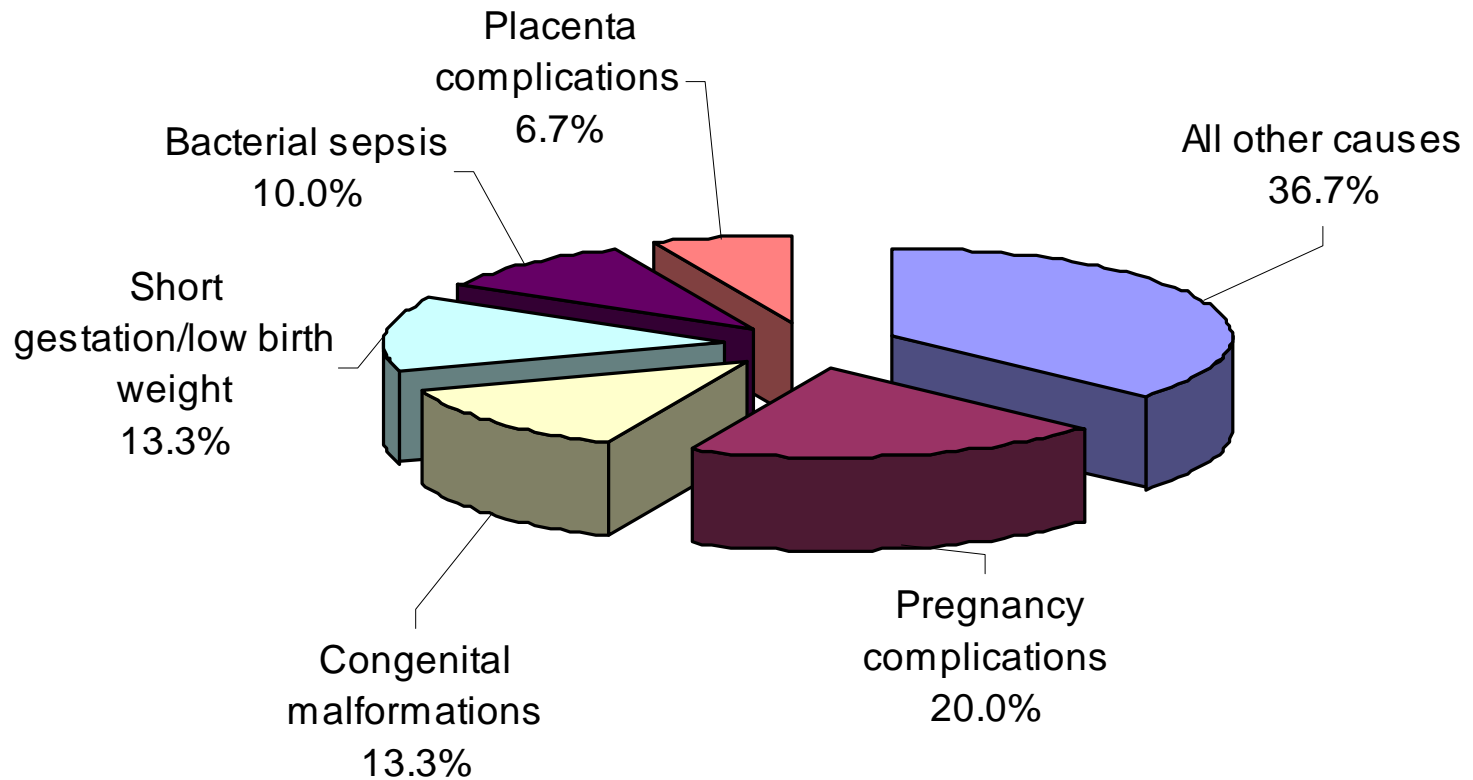


Figure 10. Leading Causes of Infant Death to Hispanic Mothers, 2003-2007

