

STATISTICAL NOTE

**2007 NATALITY REPORT
IN THE
DISTRICT OF COLUMBIA**

**Department of Health
Center for Policy, Planning, and Epidemiology
State Center for Health Statistics**

**Government of the District of Columbia
Adrian M. Fenty, Mayor**

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Final**

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	III
BIRTH TRENDS	III
BIRTH COUNTS, FERTILITY, AND SELECTED BIRTH RATES	III
BIRTH OUTCOMES	IV
POTENTIAL RISK BEHAVIORS	IV
1.0 NATALITY	1
1.1 BIRTHS: DEFINITION AND HISTORY	1
1.3 2007 BIRTH COUNTS, CRUDE BIRTH RATES, AND FERTILITY RATES	4
1.4 BIRTH COUNTS BY WARD	6
2.0 DEMOGRAPHIC AND SOCIOECONOMIC CHARACTERISTICS	7
2.1 GENDER OF INFANT	7
2.2 RACE AND ETHNICITY OF MOTHER	7
2.2.1 RACE AND ETHNICITY BY WARD	8
2.3 EDUCATION OF MOTHER	ERROR! BOOKMARK NOT DEFINED.
2.3.1 EDUCATION OF MOTHER BY WARD	9
2.4 MARITAL STATUS	10
2.4.1 MARITAL STATUS BY WARD	ERROR! BOOKMARK NOT DEFINED.
2.5 AGE OF MOTHER	11
2.5.1 AGE OF MOTHER BY WARD	12
2.5.2 AGE-SPECIFIC FERTILITY RATES	13
2.6 BIRTH WEIGHT	14
2.6.1 BIRTH WEIGHT BY WARD	14
3.0 MATERNAL AND INFANT HEALTH CHARACTERISTICS	16
3.1 ADEQUACY OF PRENATAL CARE	16
3.1.1 ADEQUACY OF PRENATAL CARE BY WARD	16
3.2 PLURALITY	17
3.2.1 PLURALITY BY WARD	17
3.3 PREMATURITY	18
3.3.1 PREMATURITY BY WARD	19
3.4 METHOD OF DELIVERY	20
3.5 METHOD OF FEEDING	22
3.6 POTENTIAL RISK BEHAVIORS	22
3.6.1 Tobacco	22
3.6.2 Alcohol	23
REFERENCES	24
VITAL STATISTICS TECHNICAL NOTES	25
APPENDIX 1	

LIST OF TABLES

Table 1: Seventeen-Year Birth Trends: District of Columbia, 1991-2007	4
Table 2: Birth to District of Columbia Residents: 2006-2007	5
Table 3: Race and Ethnicity by Ward: District of Columbia, 2007	6
Table 4: Births by Race and Ethnicity: District of Columbia, 2006- 2007.....	8
Table 5: Mother’s Education by Ward: District of Columbia, 2007	9
Table 6: Marital Status by Ward: District of Columbia Residents, 2007	11
Table 7: Age-Specific Fertility Rates: District of Columbia, 2007	13
Table 8: Mother’s Age by Ward: District of Columbia, 2007	13
Table 9: Birth Weight by Ward: District of Columbia, 2007	15
Table 10: Adequacy of Prenatal Care by Ward: District of Columbia, 2007	17
Table 11: Births by Plurality: District of Columbia, 2007	17
Table 12: Births by Prematurity: District of Columbia, 2006-2007.....	18
Table 13: Births and Selected Birth Indicators by Ward: District of Columbia, 2007.....	20
Table 14: Births by Method of Delivery: District of Columbia, 2006-2007.....	21
Table 15: Births by Tobacco & Alcohol Use: District of Columbia, 2006-2007.....	23

LIST OF FIGURES

Figure 1: Birth Trends by Race and Ethnicity: District of Columbia Residents, 1991-2007.....	2
Figure 2: Births by Gender: District of Columbia, 2006- 2007	7
Figure 3: Births by Mother’s Education: District of Columbia, 2006- 2007	9
Figure 4: Births by Marital Status: District of Columbia, 2006- 2007	10
Figure 5: Births by Age of Mother: District of Columbia, 2006-2007.....	12
Figure 6: Births by Birth Weight: District of Columbia, 2006-2007	14
Figure 7: Births by Adequacy of Prenatal Care: District of Columbia, 2006-2007	16
Figure 8: Births by Prematurity: District of Columbia, 2006-2007	19
Figure 9: Births by Method of Delivery: District of Columbia, 2006-2007	21
Figure 10: Births by Method of Feeding: District of Columbia, 2006- 2007	22

Executive Summary

District of Columbia hospitals and birthing centers are mandated to file birth certificates with the state for all live births occurring at their facilities. Birth data presented in this report are derived from demographic and other information collected from the District of Columbia birth certificate. In addition to analyzing the most recent (2007) birth data, this report also provides contextual analysis of birth trends from 1991 to 2007. These trend analyses provide insight into the factors contributing to overall changes in District population trends and also into changes in population proportions by race and ethnicity. Birth statistics for 2007 are also compared to similar statistics for 2006 as a way to monitor short term changes in birth indicators and their magnitude.

Birth Trends

- ❑ The number of births from 1991 to 2002 shows both a declining trend; overall births declined by 35.7 percent between this period. From 2003 to 2007, the number of births shows an increasing trend for the next five years by 18.4 percent.
- ❑ Overall, there has been a 23.9 percent decline in overall DC births from 1991 to 2007. As a proportion of these births, black births fell from 78.4 percent of the total in 1991 to 55.5 percent by 2007, while as a proportion white births increased from 13.0 percent in 1991 to 26.7 percent in 2007 and Hispanic births increased from 8.2 percent of the total in 1991 to 16.8 percent of all births by 2007.

Birth Counts, Fertility, and Selected Birth Rates

- ❑ In 2007, there were 8,870 live births to District of Columbia resident mothers, 348 more than in 2006 (8,522).
- ❑ The 2007 crude birth rate in DC was 15.2 births per 1,000 total population, an increase of 2.0 percent over the 2006 rate of 14.9.
- ❑ The general fertility rate in 2007 was 60.0 per 1,000 DC women aged 15-44. This figure was slightly higher than the rate in 2006 (58.4).
- ❑ Gender distribution of 2007 births were 4,545 males (51.2 percent) and 4,325 females (48.8 percent). These were similar numbers to 2006 when 4,389 males (51.5 percent) and 4,133 females (48.5 percent) were born to District women.
- ❑ Black mothers gave birth to 4,926 (55.5 percent) babies in 2007 compared to 4,847 (56.9 percent) in 2006. Births to white women accounted for 26.7 percent (2,370) down slightly from 27.1 percent (2,311) in 2006. Hispanic women gave birth to 1,487 (16.8 percent) babies in 2007 compared to 1,344 (15.8 percent) in 2006. There were 212 births (2.4 percent) to Asian women in 2007 compared to 175 (2.1 percent) in 2006.
- ❑ Mothers with only a primary or secondary education accounted for 49.8 percent (4,413) of births in 2007 compared to 47.7 percent (4,068) in 2006. The number of college educated

women who gave birth in 2007 accounted for 42.8 percent (3,800) compared to 42.9 percent (3,658) in 2006.

- ❑ Married women accounted for 41.5 percent (3,679) of the 2007 births down slightly from 42.4 percent (3,613) in 2006, while unmarried women (5,190) continues to account for the majority (58.5 percent) of DC births in 2007 compared to 57.6 percent (4,908) in 2006.
- ❑ In 2007, births to mothers younger than 20 years of age comprised 12.1 percent (1,075) of all births, up slightly from 12.0 percent (1,021) in 2006.
- ❑ Based on computations using the Kessner Index for adequacy of prenatal care, 5,412 (70.0 percent) of District mothers in 2007 had adequate prenatal care. This figure was lower than the 71.2 percent (5,224) reported for 2006. .
- ❑ Residents of Ward 8 had the most births (1,545 or 17.4 percent) in 2007, whereas Ward 4 residents had the most births (1,316 or 15.4 percent) in 2006. The least number of births in 2007 (634 or 7.1 percent) were attributed to residents of Ward 2. Ward 2 also had the fewest number of births (846 or 9.9 percent) in 2006.

Birth Outcomes

- ❑ Singleton births accounted for 96.3 percent (8,543) of all births in 2007 compared to 96.2 percent (8,198) in 2006.
- ❑ Normal birth weight babies (2500 grams and over) accounted for 88.8 percent (7,873) of all births in 2007 compared to 89.4 percent (6,559) in 2006. Low birth weight babies (less than 2500 grams) comprised 11.1 percent (989) of total births in 2007 compared to 11.6 percent (986) in 2006 and very low birth weight babies (less than 1500 grams) accounted for 2.9 percent (258) in 2007 compared to 2.6 percent (217) in 2006.
- ❑ Premature births (less than 37 weeks) accounted for 12.1 percent (1,070) of all births in 2007 down from 13.2 percent (1,129) in 2006.
- ❑ Vaginal deliveries decreased to 63.0 percent (5,586) of total deliveries in 2007 from 65.7 percent (5,603) in 2006. Women who had vaginal deliveries after a previous C-section accounted for 0.9 percent (78) of 2007 births compared to 0.5 percent (45) in 2006.

Potential Risk Behaviors

- ❑ In 2007, 3.4 percent (306) women self reported tobacco use slightly down from 3.7 percent (315) in 2006.
- ❑ Forty-five (0.5 percent) of the women who gave birth in 2007 self reported alcohol use during pregnancy compared to 34 women (0.4 percent) in 2006.
- ❑ For women who reported on feeding method, breast feeding was the method of choice with 63.0 percent (1,857) in 2007 compared to 58.4 percent (1,870) in 2006. Breast and bottle

combination feeding accounted for 27.0 percent (795) of those who reported in 2007 compared to 28.5 percent (913) in 2006.

Notables:

Youngest Mother	11
Oldest Mother	51
Youngest Father	15
Oldest Father	69
Sets of Twins	322
Sets of Triplets	4
Sets of Quadruplets	1
Month Most Births Occurred	July
Month Fewest Births Occurred	April
Largest Live Birth Weight	5646 grams (12 lbs 7 oz)
Smallest Live Birth Weight	85 grams (3 oz)

Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

1.0 NATALITY

1.1 Births: Definition and History

A live birth is defined as “the complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy, which, after such expulsion or extraction, breathes, or shows any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached” (World Health Organization in 1950 and revised in 1988 by the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists). The District of Columbia (DC) uses this definition as the basis for compiling statistics of live births.

Records of birth events and details are kept by Vital Records offices throughout the country in fulfillment of laws that require the registration of all births within national borders as the primary record of citizenship. Birth certificates with authentic seals are provided to birthing parents as proof of the place of occurrence, date and time. Vital statistics are compiled by vital records offices and used to determine trends, rates, causes and other defining characteristics of births, deaths, marriages and divorces by jurisdiction and for the nation as a whole. The original purpose for the passing of the early vital records registration laws in the U.S. was for the protection of individual rights primarily related to the ownership and bequeathing of property. However, with the rise of industrialism and urbanization in the 19th century, information from mortality records was needed to develop support for sanitary reform and public health in general. In the late 1840s the newly formed American Medical Association (AMA) began promoting the use of mortality statistics in the study of various health conditions of the U.S. population.

The annual collection of birth statistics for the U.S. began in 1915 with 10 states and DC. By 1933 the reporting system comprised most of the United States. The organized collection of jurisdictional vital records data by law at the national level began in 1960 when the National Center for Health Statistics (NCHS) was created with a mandate under 42 U.S.C. 242k, Section 306(h) of the Public Health Service Act, to collect vital statistics annually.

1.2 Birth Counts and Birth Rates

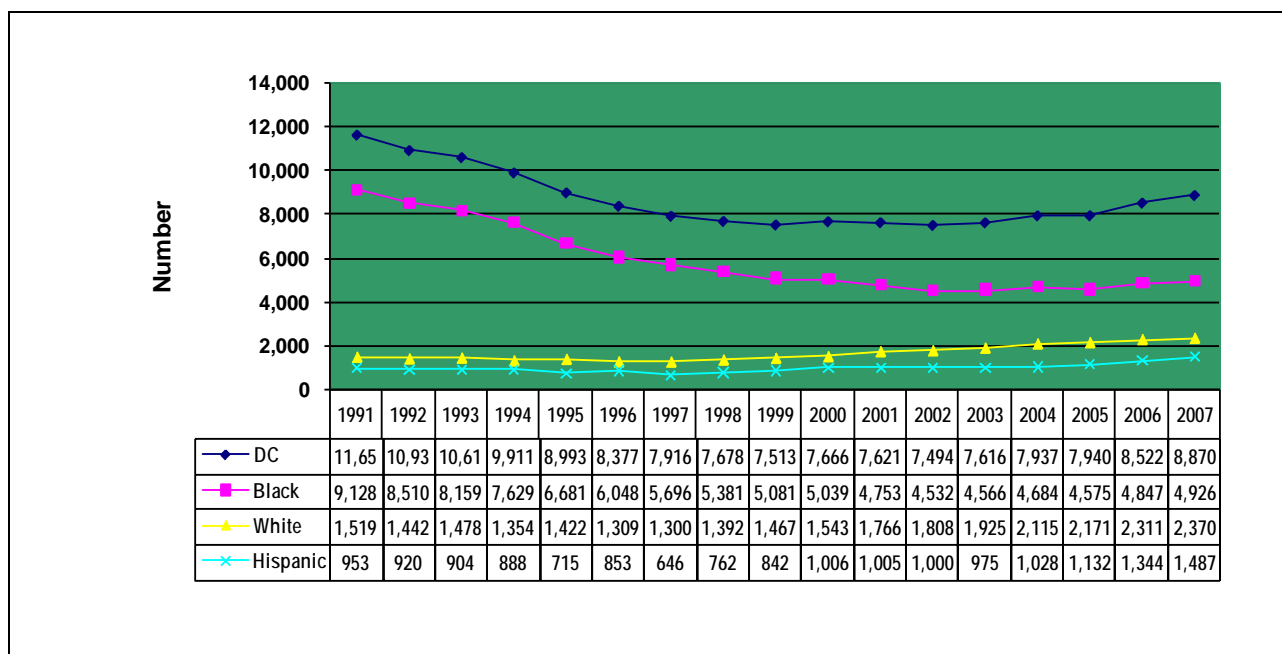
The current report provides selected information on current births in calendar year 2007 and related statistics and comparisons with the previous year 2006. Some trend data and analyses are provided for context. In this report both numbers (counts) and rates are used as required to more clearly present the statistics and their meaning. Generally, the number of events can be used to determine the size of a problem in any area (e.g., how many teens gave birth) or to estimate population changes due to birth and death. But, by using just numbers, we cannot readily compare two areas or two time periods. Such comparisons should take the size of the population into account to avoid erroneous conclusions. To eliminate the effect of different sized populations, we compare rates.

A rate is the number of vital events (such as births) in a specified time period (e.g., calendar year) divided by the number of people in the jurisdictional population (typically, a state, county or city population). This figure is generally multiplied by a constant such as 1,000 or 100,000 to get a number that is easy to read and compare and is reported as “per 1,000” or “per 100,000.” A rate in this report is calculated by computing the number of the event per 1,000 population.

This section looks at certain interesting birth patterns in the data trending over the past 17 years. Figure 1 and Table 1 below present selected birth data from 1991 to 2007 by race and ethnicity, marital status and teenage status (< 20 years).

The number of births in this period clearly shows a declining trend from a period high of 11,650 in 1991 to a period low of 7,494 in 2002. This decline in births by 35.7 percent from 1991 to 2002 is then followed by an increase in births for the next five years from 7,494 in 2002 to 8,870 in 2007, an increase of about 18.4 percent over the period. The declining trend in overall births in the District in the 1991-2002 period coincided with a similar but larger decline in births to black mothers (50.4 percent) with a low point in 2002 when 4,532 black infants were born. Black births have since increased slightly by 8.7 percent from 2002 to 4,927 births in 2007. Births to white mothers also declined since 1991 but for a shorter period. Births to white mothers fell to its lowest level (1,300) in 1997 from 1,519 in 1991, representing a decline by 14.4 percent. Births to white mothers then increased by 82.3 percent from the low of 1,300 in 1997 to a high of 2,370 in 2007. Births to Hispanic mothers reflected the greatest changes in trend during the period 1991-2007, decreasing by 32.2 percent from 953 in 1991 to 646 in 1997. Hispanic births then increased by 130 percent from a low of 646 in 1997 to a high of 1,487 in 2007.

Figure 1: Birth Trends by Race and Ethnicity: District of Columbia Residents, 1991-2007



Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

Married women consistently have better birth outcomes than unmarried women. Most researchers do not see a direct correlation between marital status and birth outcomes, but it appears that marital status acts as a proxy for multiple socioeconomic factors that seem to more directly impact behaviors that affect birth outcomes. Marital status also seems to serve as a proxy for access to prenatal care and proper nutrition. Tracking births by marital status is therefore useful as an indicator of expected birth outcomes.

For DC residents, births to unmarried women declined by 19.7 percent from 66.9 percent (7,793) of all births in 1991 to a low point in the period in 2003 when these births accounted for 53.7 percent (4,093) of the total (Table 1). Births to unmarried women then increased by 8.9 percent from 2003 to 2007 when 5,190 or 58.5 percent of births were to unmarried women.

Teenage births (younger than 20 years) also declined in the period from a high of 2,008 (17.2 percent) in 1991 to a low point of 865 (11.4 percent) in 2003. Teenage births have since shown an upward trend increasing by 6.1 percent from the 2003 figures to 12.1 percent (1,075) in 2007.

In summary, there has been a 23.9 percent decline in overall DC births from 1991 to 2007. As a proportion of these births, black births fell from 78.4 percent of the total in 1991 to 55.5 percent by 2007, while as a proportion white births increased from 13.0 percent in 1991 to 26.7 percent in 2007 and Hispanic births increased from 8.2 percent of the total in 1991 to 16.8 percent of all births by 2007 (Table 1). Appendix 1 shows the changes in the resident population for the District of Columbia from 2000 to 2007. Population trends indicated that the proportion of blacks has declined and this is a possible explanation for the decrease in the number of births to black mothers. On the other hand, increases in the number of births to whites and Hispanics are often times attributed to the growth in size of the DC population from the 2000 census to the current 2007 estimated population.

Table 1: Seventeen-Year Birth Trends: District of Columbia, 1991-2007

Year	Births	Black	%	White	%	Hispanic*	%	Unmarried	%	<20yrs	%
1991	11,650	9,128	78.4	1,519	13.0	953	8.2	7,793	66.9	2,008	17.2
1992	10,939	8,510	77.8	1,442	13.2	920	8.4	7,370	67.4	1,772	16.2
1993	10,614	8,159	76.9	1,478	13.9	904	8.5	7,743	73.0	1,782	16.8
1994	9,911	7,629	77.0	1,354	13.7	888	9.0	6,827	68.9	1,550	15.6
1995	8,993	6,681	74.3	1,422	15.8	715	8.0	5,937	66.0	1,392	15.5
1996	8,377	6,048	72.2	1,309	15.6	853	10.2	5,545	66.2	1,406	16.8
1997	7,916	5,696	72.0	1,300	16.4	646	8.2	5,042	63.7	1,233	15.6
1998	7,678	5,381	70.1	1,392	18.1	762	9.9	4,829	62.9	1,172	15.3
1999	7,513	5,081	67.6	1,467	19.5	842	11.2	4,641	61.8	1,113	15.0
2000	7,666	5,039	65.7	1,543	20.1	1,006	13.1	4,623	60.3	1,086	14.2
2001	7,621	4,753	62.4	1,766	23.2	1,005	13.2	4,373	57.4	1,017	13.3
2002	7,494	4,532	60.5	1,808	24.1	1,000	13.3	4,233	56.5	956	12.8
2003	7,616	4,566	60.0	1,925	25.3	975	12.8	4,093	53.7	865	11.4
2004	7,937	4,684	59.0	2,115	26.6	1,028	13.0	4,442	56.0	887	11.1
2005	7,940	4,575	57.6	2,171	27.3	1,132	14.3	4,448	56.0	875	11.0
2006	8,522	4,847	56.9	2,311	27.1	1,344	15.8	4,908	57.6	1,021	12.0
2007	8,870	4,927	55.5	2,370	26.7	1,487	16.8	5,190	58.5	1,075	12.1

Note: Persons of Hispanic/Latino origin may be of any race. Therefore, each race category contains persons of both Hispanic and non-Hispanic origin.

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

1.3 2007 Birth Counts, Crude Birth Rates, and Fertility Rates

In 2007, there were 8,870 live births to District of Columbia residents, up by 348 over the 2006 number of 8,522. The 2007 births represent a crude birth rate¹ of 15.2 per 1,000 population (Table 2). The 2007 general fertility² rate was 60.0 per 1,000 DC women aged 15-44 representing a 2.7 percent increase over 2006 when the general fertility rate was 58.4.

In 2007 the fertility rate for DC teens³ aged 15-19 years was 49.8 births per 1,000 females in this age group. This rate was 3.1 percent larger than the 2006 rate of 48.3.

¹ **Birth Rate (Crude)** = (Number of live births / Population) X 1,000

² **Fertility Rate** = (Number of live births to women aged 15-44/ Number of women aged 15-44) X 1,000

³ **Teenage Fertility Rate** = (Number of live births to women aged 15-19/ Number of women aged 15-19) X 1,000

Table 2: Births to District of Columbia Residents, 2006-2007

Birth Characteristic	2006		2007		Percent Change	Is Change Significant?
	#	%	#	%		
Live Births	8,522	100	8,870	100	4.1	
Crude Birth Rate	14.9		15.2		2.0	No
Fertility Rate	58.4		60.0		2.7	No
Gender Distribution						
Males	4,389	51.5	4,545	51.2	-0.6	No
Females	4,133	48.5	4,325	48.8	0.6	No
Race						
Black	4,847	56.9	4,926	55.5	-2.5	No
White	2,311	27.1	2,370	26.7	-1.5	No
Hispanic	1,344	15.8	1,487	16.8	6.3	No
Asian & Pacific Islanders	175	2.1	212	2.4	14.3	No
Mother's Education						
Primary or secondary	4,068	47.7	4,413	49.8	4.4	Yes
College	3,658	42.9	3,800	42.8	-0.2	No
Marital Status						
Married	3,613	42.4	3,679	41.5	2.1	Yes
Unmarried	4,908	57.6	5,190	58.5	1.6	Yes
Age of Mother						
< 20 yrs.	1,021	12.0	1,075	12.1	0.8	No
20-34 yrs.	5,803	68.1	5,918	66.7	-2.1	No
> 35 yrs.	1,684	19.8	1,844	20.8	5.1	No
Adequacy of Prenatal Care						
First Trimester	5,787	78.8	5,617	76.9	-2.4	No
Adequate	5,224	71.2	5,412	70.0	-1.7	No
Intermediate	1,617	22.0	1,775	23.0	4.5	No
Inadequate	499	6.8	544	7.0	2.9	No
Plurality						
Single Births	8,198	96.2	8,543	96.3	0.1	No
Plural Births	313	3.7	322	3.6	-2.7	No
Birth Weight						
NBW (≥2,500 grams)	6,559	89.4	7,873	88.8	0.7	No
LBW (<2,500 grams)	986	11.6	989	11.1	-4.3	No
VLBW (<1,500 grams)	217	2.6	258	2.9	11.5	No
Period of Gestation						
< 32 Weeks	235	2.8	278	3.1	10.7	No
32-36 Weeks	894	10.5	792	8.9	-15.2	No
37-41 Weeks	7,283	85.5	7,696	86.8	1.5	No
Method of Delivery						
Vaginal	5,603	65.7	5,587	63.0	-4.3	No
Vaginal/Previous C-section	45	0.5	78	0.9	80.0	No
Primary C-sections	1,951	22.9	2,125	24.0	4.8	No
Repeat C-sections	663	7.8	763	8.6	10.3	No
Vacuum	318	3.7	368	4.1	10.8	No
Forceps	32	0.4	36	0.4	0.0	No
Substance Use						
Tobacco use	315	3.7	306	3.5	-5.4	No
≤5 cigarettes per day	113	35.9	93	30.4	-15.3	No
>5 cigarettes per day	56	17.8	51	16.7	-6.2	No
Alcohol use	34	0.4	45	0.5	25.0	No
Method of Feeding						
Breast Feeding (alone)	1,870	58.4	1,857	63.0	7.9	Yes
Bottle Feeding (alone)	417	13.0	295	10.0	23.1	Yes
Combination (bottle + breast)	913	28.5	795	27.0	-5.3	No

Notes: 1. Persons of Hispanic/Latino origin may be of any race. Therefore, each race category contains persons of both Hispanic and non-Hispanic origin.

2. See definition of statistical significance in the technical notes section.

Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

1.4 Birth Counts by Ward

As shown in Table 3 below, residents of Ward 8 had the largest number (1,545 or 17.4 percent) of births in 2007. Four other Wards had more than 1,000 births including residents of Ward 4 (1,459 or 16.5 percent), Ward 1 (1,243 or 14 percent), Ward 7 (1,210 or 13.6 percent) and Ward 5 with 1,041 (11.7 percent). Ward 2 residents had the fewest number of births (634 or 7.2 percent) followed by Ward 3 with 796 (9.0 percent) and Ward 6 with 939 (10.6 percent).

Table 3: Race and Ethnicity by Ward: District of Columbia, 2007

WARD	Births	%	Black	%	White	%	Hispanic ¹	%	Asian & PI	%
DC	8,870	100.0	4,926	55.5	2,370	26.7	1,487	16.8	212	2.4
WARD 1	1,243	14.0	354	28.5	361	29.0	517	41.6	40	3.2
WARD 2	634	7.2	129	20.4	364	57.4	115	18.1	45	7.1
WARD 3	796	9.0	35	4.4	692	86.9	36	4.5	46	5.8
WARD 4	1,460	16.5	604	41.4	301	20.6	576	39.5	17	1.2
WARD 5	1,041	11.7	787	75.6	107	10.3	133	12.8	20	1.9
WARD 6	939	10.6	433	46.1	445	47.4	42	4.5	29	3.1
WARD 7	1,210	13.6	1,147	94.8	17	1.4	38	3.1	1	0.1
WARD 8	1,545	17.4	1,436	92.9	82	5.3	30	1.9	13	0.8

Note: 1. Persons of Hispanic/Latino origin may be of any race. Therefore, each race category contains persons of both Hispanic and non-Hispanic origin.

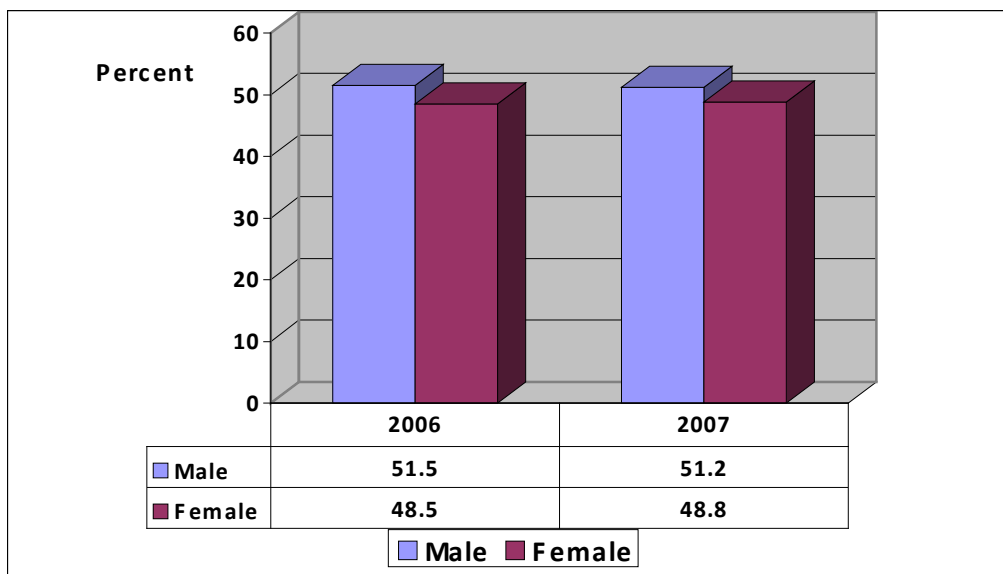
Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

2.0 Demographic and Socioeconomic Characteristics

2.1 Gender of Infant

The gender distribution of DC 2007 resident births, as shown in Table 2 and Figure 2, remained consistent with a fairly long term DC trend (1994-2007) with slightly more males born in 2007 (4,545 or 51.2 percent) than females (4,325 or 48.8 percent). The number of male births in 2007 was slightly greater than the 2006 figure of 4,389 but as a proportion of total births was less than the 2006 proportion of 51.5 percent by 0.6 percent (Table 2). The proportion of female births increased by 0.6 percent from 48.5 percent (4,133) in 2006 to 48.8 percent (4,325) in 2007. Despite this long term trend in more male than female births, the population of the District continues to comprise more females 310,185 (52.7 percent) than males 278,107 (47.3 percent) in 2007.

Figure 2: Births by Gender: District of Columbia, 2006- 2007



Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

2.2 Race and Ethnicity of Mother

Births to black women increased in numbers from 4,847 in 2006 to 4,926 in 2007 but declined as a portion of total births from 56.9 percent in 2006 to 55.5 percent in 2007 (Tables 2 and 4). Similarly births to white women increased in numbers by 2.6 percent from 2,311 in 2006 to 2,370 in 2007, but declined as a proportion of all births from 27.1 percent in 2006 to 26.7 percent in 2007. For Hispanic women there was an increase in the number of births by 10.6 percent from 1,344 in 2006 to 1,487 in 2007, as well as by proportion from 15.8 percent of all births in 2006 to 16.8 percent in 2007. The number of births to Asian and Pacific Islander women increased by 18.1 percent from 182 in 2006 to 215 in 2007 and also as a proportion of all births from 2.1 percent in 2006 to 2.4 percent in 2007.

Table 4: Births by Race and Ethnicity: District of Columbia, 2006- 2007

	Race			
	DC		DC	
	2007		2006	
	#	%	#	%
Black	4,926	55.5	4,847	56.9
White	2,370	26.7	2,311	27.1
Asian or Pacific Islander	212	2.4	175	2.1
Other	1,358	15.3	1,182	13.9
Total	8,870	100	8,522	100
	Ethnicity			
Hispanic	1,487	16.8	1,344	15.8

Note: Persons of Hispanic/Latino origin may be of any race. Therefore, each race category contains persons of both Hispanic and non-Hispanic origin.

Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

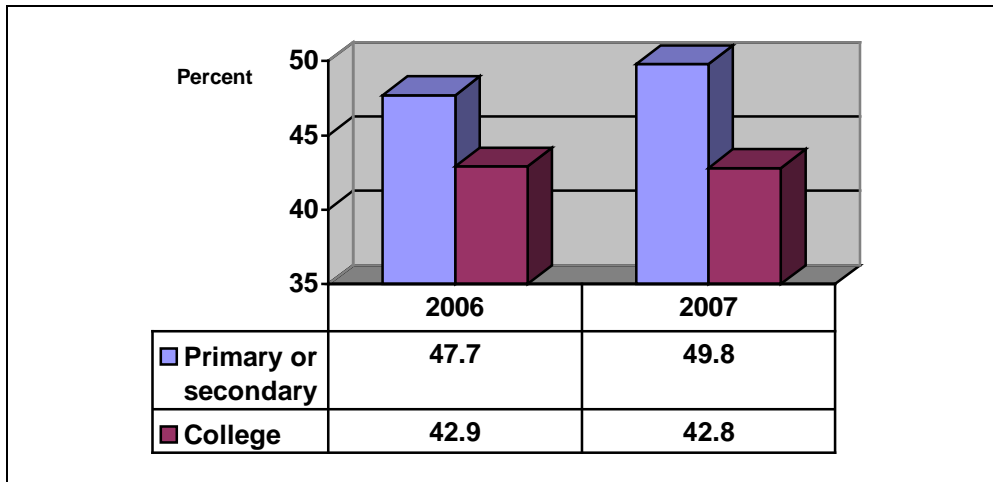
2.2.1 Race and Ethnicity by Ward

The largest proportion of births to black mothers (94.8 percent or 1,147) was recorded by Ward 7 residents (Table 3) compared to the overall District proportion of 55.5 percent (4,926), this was followed by residents of Ward 8 (93.1 percent or 1,436) and Ward 5 (75.6 percent or 787). Residents of Ward 3 had the largest proportion of births to white mothers (86.9 percent or 692) compared to the overall District proportion of 26.7 percent (2,370), this was followed by residents of Ward 2 (57.4 percent or 364) and Ward 6 (47.4 percent or 445). The largest proportion of births to Hispanic mothers (41.6 percent or 517) were recorded by Ward 1 residents compared to the District wide proportion of 16.8 percent (1,487), and the lowest (1.9 percent or 30) by Ward 8 residents. The largest proportion of ward births for Asian and Pacific Islanders mothers (7.1 percent or 45) occurred in Ward 2. This compared to the District proportion of 2.4 percent (212). The smallest (0.1 percent or 1) occurred in Ward 7.

2.3 Education of Mother

Births to women with primary or secondary education increased in number by 8.5 percent from 4,068 in 2006 to 4,413 in 2007 (Table 2). Births to these women also increased as a proportion of all births from 47.7 percent in 2006 to 49.8 percent in 2007 (Figure 3). Similarly for women with some college education there was an increase in the number of births by 3.9 percent from 3,658 in 2006 to 3,800 in 2007. There was, however, a very slight decline in births to women with some college education, as a percentage of all births, from 2006 (42.9 percent) to 2007 (42.8 percent).

Figure 3: Births by Mother’s Education: District of Columbia, 2006-2007



Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

2.3.1 Education of Mother by Ward

In 2007, 49.8 percent of DC mothers had a primary or secondary education (Table 4) while 42.8 percent had some college education. When examined by ward, the distribution ranged from a high of 70.3 percent (1,086) of Ward 8 mothers with only a primary or secondary education to a low of 5.4 percent (43) recorded for Ward 3 mothers. Ward 3 mothers also had the highest proportion (93.5 percent or 744) of some college education and Ward 8 women, the lowest (22.3 percent or 344).

Table 5: Mother’s Education by Ward: District of Columbia, 2007

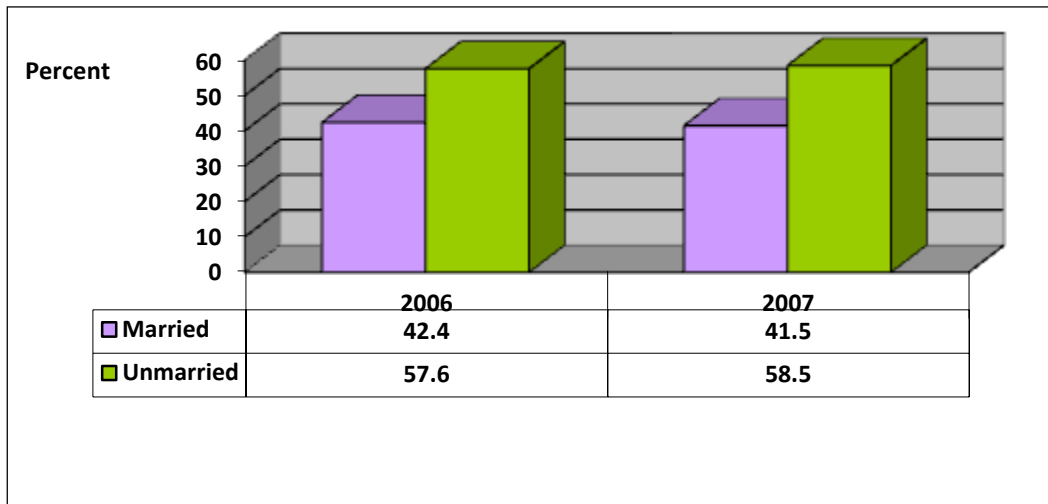
WARD	Mother’s Education			
	Primary or Secondary	%	Some College	%
DC	4,413	49.8	3,800	42.8
WARD 1	659	53.0	483	38.9
WARD 2	185	29.2	421	66.4
WARD 3	43	5.4	744	93.5
WARD 4	783	53.7	548	37.5
WARD 5	552	53.0	380	36.5
WARD 6	307	32.7	574	61.1
WARD 7	797	65.9	305	25.2
WARD 8	1,086	70.3	344	22.3

Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

2.4 Marital Status

The number of births to married women increased by 1.8 percent from 2006 (3,613) to 2007 (3,679) but declined slightly as a percentage of total births from 42.4 percent in 2006 to 41.5 percent in 2007 (Table 2 and Figure 4). The number of births to unmarried women increased by 11.8 percent from 4,908 in 2006 to 5,190 in 2007 and also as a proportion of all births from 57.6 percent in 2006 to 58.5 percent in 2007.

Figure 4: Births by Marital Status: District of Columbia, 2006- 2007



Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

2.4.1 Marital Status by Ward

According to statistics displayed in Table 6, for the District as a whole, unmarried women accounted for 58.5 percent of all 2007 births. However, the distribution by Ward ranged from a high in Ward 8 with 1,299 births to unmarried women accounting for 84.1 percent of all births in that ward to a low of 7.5 percent (60) for Ward 3. Other Wards with over the District average percent of births to unmarried women were Ward 7 with 83.2 percent (1,007) and Ward 5 with 69.5 percent (725). Ward 3 with 92.3 percent (735) had the highest proportion of births to married women among all wards in the District.

Table 6: Marital Status by Ward: District of Columbia, 2007

WARD	Marital Status			
	Unmarried	%	Married	%
DC	5,190	58.5	3,679	41.5
WARD 1	706	56.8	537	43.2
WARD 2	179	28.2	455	71.8
WARD 3	60	7.5	735	92.3
WARD 4	821	56.2	639	43.8
WARD 5	725	69.6	316	30.4
WARD 6	391	41.6	548	58.2
WARD 7	1,007	83.2	203	16.8
WARD 8	1,299	84.1	246	15.9

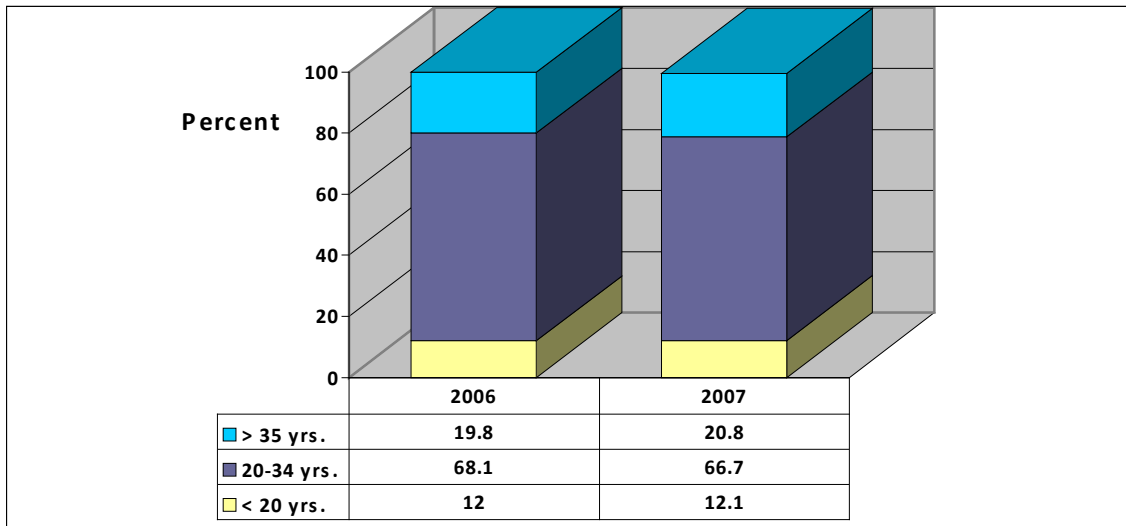
Note: DC Total does not add to 8,870 births due to unreported ward of residence.
 Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

2.5 Age

of Mother

For women aged less than 20 years, the number of births increased by 5.3 percent from 1,021 (2006) to 1,075 (2007). The proportion of births also increased slightly from 12.0 percent in 2006 to 12.1 percent in 2007 (Table 2 and Figure 5). The number of births to women in the 20-34 age range increased by 2.0 percent from 5,803 in 2006 to 5,918 in 2007, however as a proportion of all births, there was a decline from 68.1 percent in 2006 to 66.7 percent in 2007. Women in the 35 and older age group had an increase of 9.5 percent in births from 2006 (1,684) to 2007 (1,844) and also increased their proportion of total births from 19.8 percent in 2006 to 20.8 percent in 2007.

Figure 5: Births by Age of Mother: District of Columbia, 2006-2007



Note: Percentage does not add to 100 due to rounding or due to unreported age of mother.

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

2.5.1 Age of Mother by Ward

In 2007, mothers younger than 20 years old accounted for 12.1 percent of all births (Table 7). When examined by Wards the distribution ranged from highs of 19.8 percent (306) in Ward 8 and 18.3 percent (222) in Ward 7 to lows of 1.0 percent (8) in Ward 3 and 7.7 percent (72) in Ward 6. Women in the 20-34 age range accounted for almost 67 percent of all District births in 2007, with the largest proportions recorded in Ward 8 (71.1 percent or 1,098) and Ward 7 (70.6 percent or 854), and the smallest proportions in Ward 3 (50.4 percent or 409) and Ward 6 (63.9 percent or 600). Women in the 35 years and older age range accounted for 20.8 percent of all District births in 2007. The largest proportion of these women lived in Ward 3 (48.4 percent or 385) and Ward 2 (30.0 percent or 190) while the smallest proportion lived in Ward 8 (8.7 percent or 134) and Ward 7 (10.9 percent or 132).

Table 7: Mother's Age by Ward: District of Columbia, 2007

WARD	Mother's Age (in years)					
	<20	%	20-34	%	35 +	%
DC	1,075	12.1	5918	66.7	1,844	20.8
WARD 1	149	12.0	817	65.7	269	21.6
WARD 2	32	5.1	409	64.5	190	30.0
WARD 3	8	1.0	401	50.4	385	48.4
WARD 4	137	9.4	1,007	69.0	314	21.5
WARD 5	149	14.3	730	70.1	157	15.1
WARD 6	72	7.7	600	63.9	263	28.0
WARD 7	222	18.4	854	70.6	132	10.9
WARD 8	306	19.8	1,098	71.1	134	8.7

Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

2.5.2 Age-Specific Fertility Rates

Table 8 presents age-specific birth rates for DC in 2007. These numbers indicate a higher fertility rate among DC women of a younger age. At the youngest age group (10-14), DC women recorded a fertility rate of 1.7 per 1,000 women aged 10-14 years in 2007 slightly higher than the 1.5 recorded for 2006. DC women aged 15-19 recorded a fertility rate of 49.8 and women aged 20-34 recorded an average fertility rate of 70.3 (Table 8). Older DC women in the age ranges 35-39 and 40-44 had fertility rates of 67.3 and 16.1, respectively in 2007 compared to 58.2 and 17.6, respectively for 2006.

Table 8: Age-Specific Fertility Rates: District of Columbia, 2006-2007

Age ¹ (in years)	DC 2007	DC 2006
10-14	1.7	1.5
15-19	49.8	48.3
15-17	43.6	42.7
18-19	54.4	52.5
20-24	66.3	67.3
25-29	64.3	65.0
30-34	82.3	79.7
35-39	67.3	58.3
40-44	16.0	17.2
45-49 ²	1.1	1.2

Note: 1. Rate per 1,000 women in each age group category.

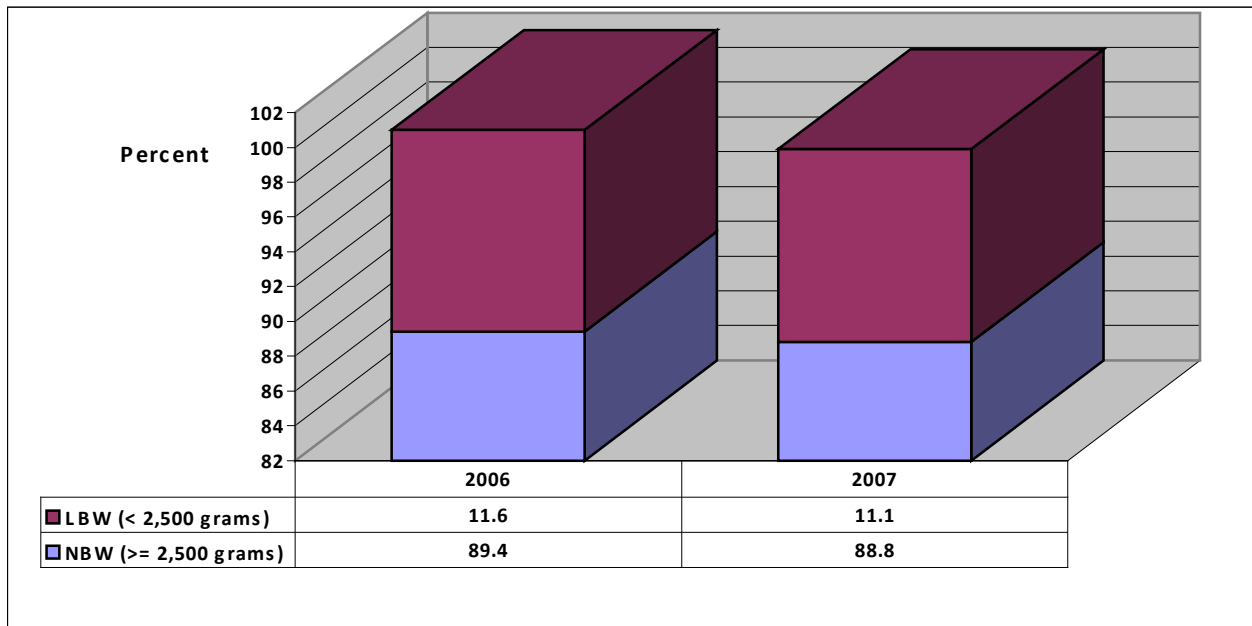
2. Rate computed by related the number of births to women aged 40-44 years.

Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

2.6 Birth Weight

Normal birth weight babies (2500 grams and over) accounted for 88.8 percent (7,873) of all births in 2007 compared to 89.4 percent (6,559) in 2006 (Table 2 and Figure 6). Low birth weight babies (less than 2500 grams) comprised 11.1 percent (989) of total births in 2007 compared to 11.6 percent (986) in 2006 and very Low birth weight babies (less than 1500 grams) accounted for 2.9 percent (258) in 2007 compared to 2.6 percent (217) in 2006.

Figure 6: Births by Birth Weight: District of Columbia, 2006-2007



Note:

1. LBW means low birth weight.
2. NBW means normal birth weight.

Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

2.6.1 Birth Weight by Ward

As shown in Table 9, among DC women who gave birth in 2007, 88.8 percent (7,873) had normal birth weight babies (2500 grams or more) and 11.1 percent had low birth weight infants (less than 2500 grams). Ward 3 (92.8 percent or 739) had the largest proportion of normal birth weight (NBW) babies followed closely by Ward 2 (92.7 percent or 588). Ward 8 (14.2 percent or 219) had the largest proportion of low birth weight (LBW) babies followed by Ward 7 (13.8 percent or 167) and Ward 5 (12.8 percent or 133). There were 258 very low birth weight (less than 1500 grams) babies born in the District in 2007 representing 2.9 percent of all births. Of these births Ward 8 (4.0 percent or 61) had the highest ward proportion followed by Ward 5 (3.8 percent or 40) and Ward 7 (3.7 percent or 45). Ward 3 had the smallest proportion (1.4 percent or 11) of very low birth weight (VLBW) babies followed by Wards 1 and 2 (1.9 percent).

Table 9: Birth Weight by Ward: District of Columbia, 2007

WARD	Birth Weight (in grams)					
	>= 2500 NBW	%	< 2500 LBW	%	<1,500 VLBW	%
DC	7,873	88.8	989	11.1	258	2.9
WARD 1	1,124	90.4	115	9.3	23	1.9
WARD 2	588	92.7	45	7.1	12	1.9
WARD 3	739	92.8	57	7.2	11	1.4
WARD 4	1,314	90.0	144	9.9	36	2.5
WARD 5	830	87.2	133	12.8	40	3.8
WARD 6	831	88.4	109	11.6	30	3.2
WARD 7	1,043	86.2	167	13.8	45	3.7
WARD 8	1,325	85.8	219	14.2	61	4.0

Note: 1. LBW means low birth weight.

2. NBW means normal birth weight.

3. VLBW means very low birth weight.

4. DC total does not add to 8,870 births due to unreported ward of residence.

Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

3.0 Maternal and Infant Health Characteristics

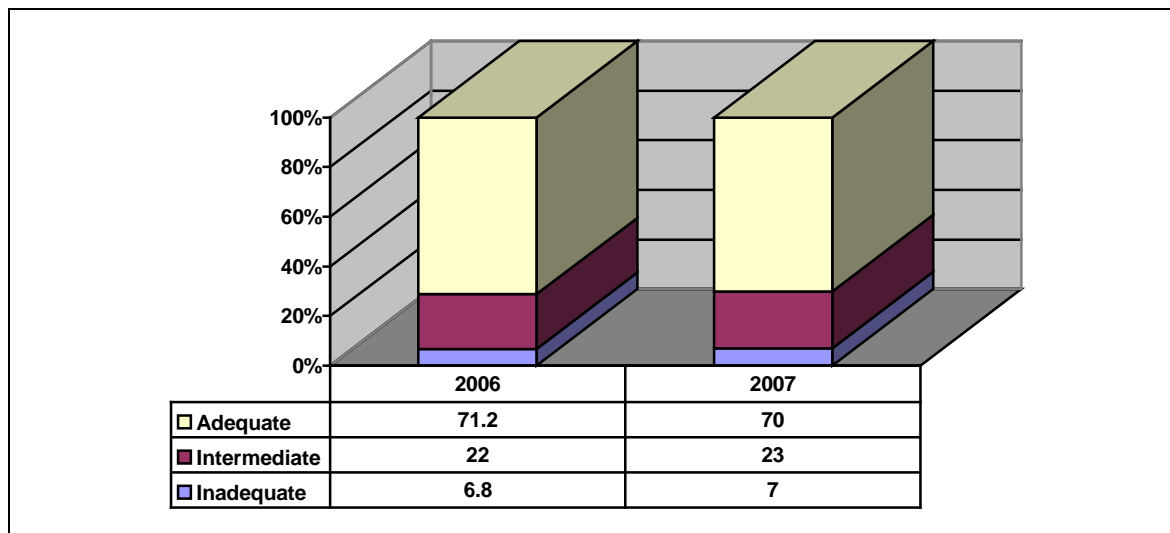
3.1 Adequacy of Prenatal Care

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.

The proportion of births to DC women who initiated care during their first trimester was 76.9 percent in 2007 representing a slight decline from the 78.8 percent recorded in 2006 (Table 2). While, according to the Kessner Index, more women (5,412) received adequate prenatal care during 2007 compared to 2006 (5,224), the 2007 proportion of 70.0 percent was slightly less than that of 2006 (71.2 percent).

More DC women received inadequate prenatal care in 2007 (544 or 7.0 percent) compared to 2006 (499 or 6.8 percent). There was a 9.8 percent increase in the number of women who received intermediate prenatal care from 1,617 in 2006 to 1,775 in 2007 and an increase in the total proportion of these women from 22.0 percent in 2006 to 23.0 percent in 2007 (Figure 7).

Figure 7: Births by Adequacy of Prenatal Care: District of Columbia, 2006-2007



Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

3.1.1 Adequacy of Prenatal Care by Ward

Among wards, 464 (77.7 percent) of the women from Ward 6 had the largest proportion of adequate prenatal care, followed by Ward 6 with 77.1 percent (658) and Ward 1 with 67.8 percent (745). Ward 8 residents had the largest proportion of inadequate prenatal care with 9.9 percent (127), followed by Ward 7 with 8.7 percent (85). Ward 8 women also had the largest proportion (27.9 percent) of intermediate prenatal care, followed by Ward 5 (26.7 percent or 223) and Ward 1 with 25.6 percent (283).

Table 10: Adequacy of Prenatal Care by Ward: District of Columbia, 2007

WARD	Adequacy of Prenatal Care					
	Adequate	%	Inadequate	%	Intermediate	%
DC	5,412	70.0	544	7.0	1,775	23.0
WARD 1	745	67.9	70	6.4	283	25.8
WARD 2	463	77.7	27	4.5	106	17.8
WARD 3	685	87.2	19	2.4	82	10.4
WARD 4	864	66.2	109	8.4	324	25.0
WARD 5	549	65.7	64	7.7	223	26.7
WARD 6	659	77.4	42	4.9	151	17.7
WARD 7	647	66.2	85	8.7	245	25.1
WARD 8	799	62.1	127	9.9	361	28.1

Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

3.2 Plurality

Single births (8,543) accounted for 96.3 percent of all births in 2007 compared to 96.2 percent (8,198) in 2006 (Tables 2 and 11). The number of plural births in 2007(327) accounted for 3.7 percent of all births that year compared to 313 (3.7 percent) in 2006. In 2007 there were 322 (3.6 percent) twin births, 4 triplets and 1 quadruplet birth. In 2006 there were 313 (3.7 percent) twin births, 6 triplet births, and 4 quadruplet births.

Table 11: Births by Plurality: District of Columbia, 2006-2007

Plurality	DC		DC	
	2007		2006	
	Number	percent	Number	percent
Singleton Births	8,543	96.3	8,198	96.2
Twins	322	3.6	313	3.7
Triplets	4	0.1	6	0.1
Quadruplets	1	0.01	4	0.1

Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

3.2.1 Plurality by Ward

Single births comprised 96.3 percent (8,543) of all births in the District in 2007 while twin births accounted for 3.6 percent (322), and triplets and more accounted for only 4 births in 2007 (Table 11). Single births were fairly evenly distributed across wards with Ward 5 recording the highest proportion with 97.5 percent (1,015) followed by Ward 7 with 96.9 percent (1,173) and Ward 8 with 96.8 percent (1,495). Ward 3 had the largest proportion of twin births with 5.7 percent (45), followed by Ward 2 with

5.2 percent (33) and Ward 1 with 3.8 percent (47). Ward 7 with 3.1 percent (37) recorded the lowest proportion of twin births.

3.3 Prematurity

In 2007, 1,070 DC infants were born prematurely (with a gestation of less than 37 weeks) representing 12.1 percent of all births compared to the 2006 number of 1,129 (13.3 percent) as shown in Tables 2 and 12 and Figure 8. Of these numbers, 278 infants (3.1 percent) were born in 2007 at less than 32 weeks gestation. In 2006, 235 infants (2.8 percent) were born at less than 32 weeks of gestation. The number (7,742) and percentage (87.3) of 2007 infants born after 36 weeks of gestation represented an increase from 2006 when 7,329 (86.0 percent) infants were born after 36 weeks gestation.

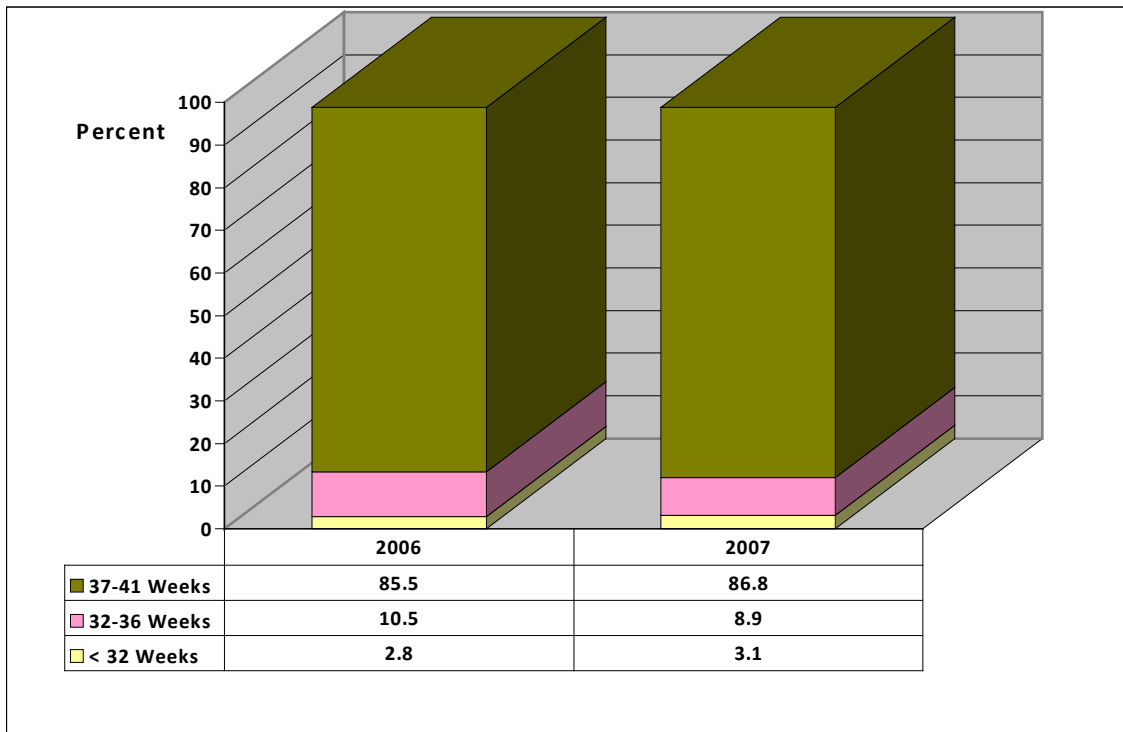
Table 12: Births by Prematurity: District of Columbia, 2006-2007

Prematurity	DC		DC	
	2007		2006	
	Number	percent	Number	percent
<32 Weeks	278	3.1	235	2.8
32-36 Weeks	792	8.9	894	10.5
37-41 Weeks	7,696	86.8	7,283	85.5
42 + Weeks	46	0.5	46	0.5

Note: na means data not available.

Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

Figure 8: Births by Prematurity: District of Columbia, 2006-2007



Note: Percentage does not add to 100 due to unreported gestational age.

Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

3.3.1 Prematurity by Ward

The number of premature births (less than 37 weeks gestation) to DC women in 2007 was 1,070 representing 12.1 percent of all births (Table 13). Ward 5 with 15.0 percent (156) had the largest proportion of these births among the 8 wards, followed by Ward 7 with 14.4 percent (174) and Ward 8 with 13.5 percent (209). Ward 3 with 7.4 percent (59) had the lowest proportion of premature births, followed by Ward 2 with 8.2 percent (52). Full term births accounted for 86.7 percent of all District births in 2007 with Ward 3 having the largest proportion of these with 92.1 (733) percent, followed by Ward 2 with 91.2 percent (578). Ward 5 had the lowest proportion of full term births with 83.5 percent (869). Births that extended beyond 42 weeks gestation comprised 0.5 percent (46) of total births with Ward 5 accounting for 10 (1.0 percent) of these and Ward 6 had 8 (0.9 percent). Ward 3, Ward 8 and Ward 2 both had the fewest of these births with three each.

Table 13: Births and Selected Birth Indicators by Ward: District of Columbia, 2007

WARD	Prematurity					
	< 37	%	37-41	%	42 +	%
DC	1,070	12.1	7,696	86.8	46	0.5
WARD 1	141	11.3	1,087	87.5	5	0.4
WARD 2	52	8.2	578	91.2	3	0.5
WARD 3	59	7.4	733	92.1	3	0.4
WARD 4	164	11.2	1,274	87.3	8	0.6
WARD 5	156	15.0	869	83.5	10	1.0
WARD 6	115	12.3	814	86.7	8	0.9
WARD 7	174	14.4	1,021	84.4	6	0.5
WARD 8	209	13.5	1,318	85.3	3	0.2

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

3.4 Method of Delivery

Vaginal deliveries decreased to 63.0 percent (5,586) of total deliveries in 2007 from 65.7 percent (5,603) in 2006 (Table 14 and Figure 9). Women who had vaginal deliveries after a previous C-section accounted for 0.9 percent (78) of 2007 births compared to 0.5 percent (45) in 2006. Slightly more women (2,125 or 24.0 percent) had primary C-sections in 2007 compared to 1,951 (22.9 percent) in 2006. Repeat C-sections accounted for 8.6 percent (763) of 2007 births compared to 7.8 percent (663) in 2006. Women who gave birth by vacuum assistance or vacuum assistance combined with vaginal or C-section accounted for 4.1 percent (368) of 2007 births and 36 women (0.4 percent) had forceps assistance combined with vaginal or C-section births. In 2006, 3.7 percent (318) gave birth by vacuum assistance combined with vaginal or C-section and 32 (0.4 percent) by forceps assistance combined with vaginal or C-section.

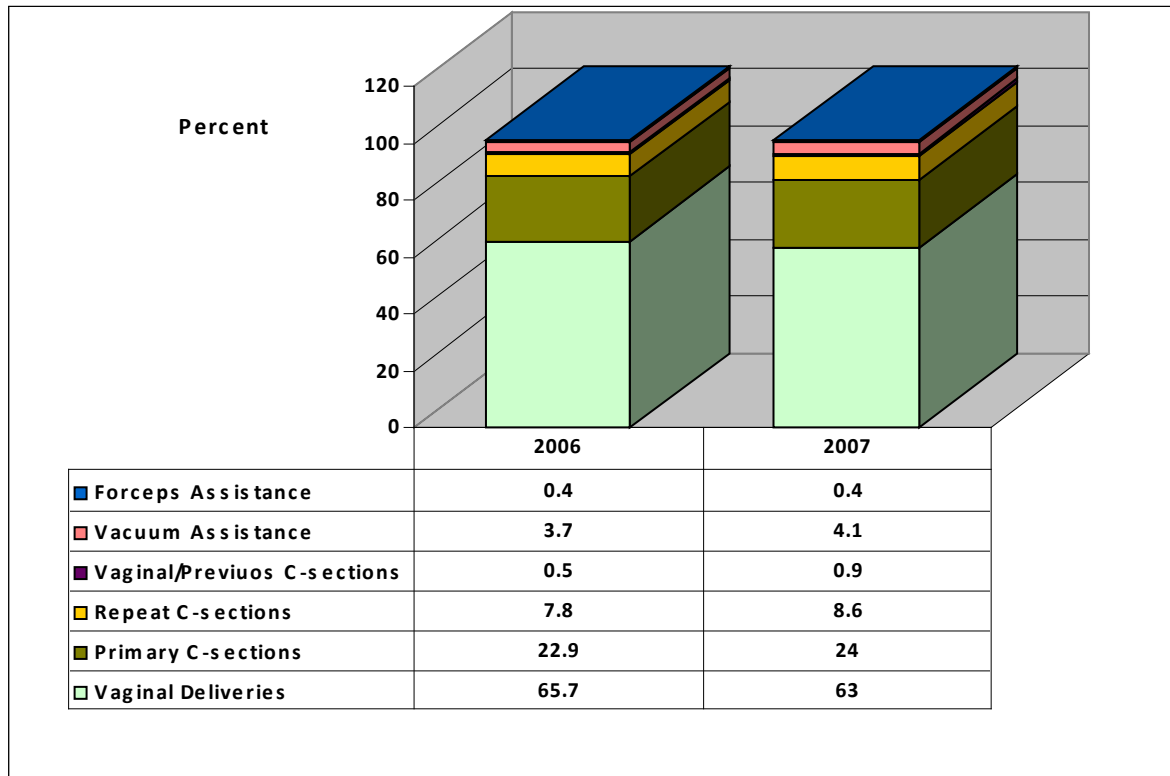
Table 14: Births by Method of Delivery: District of Columbia, 2006-2007

Method of Delivery	DC		DC	
	2007		2006	
	#	%	#	%
Vaginal	5,586	63.0	5,603	65.7
Primary C-sections	2,125	24.0	1,951	22.9
Repeat C-sections	763	8.6	663	7.8
Vaginal/Previous C-sections	78	0.9	45	0.5
Vacuum	368	4.1	318	3.7
Forceps	36	0.4	32	0.4

Note: Percentage does not add to 100 due to multiple selections of method of delivery (e.g., a mother can have a vaginal delivery combined with vacuum assistance).

Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

Figure 9: Births by Method of Delivery: District of Columbia, 2006-2007



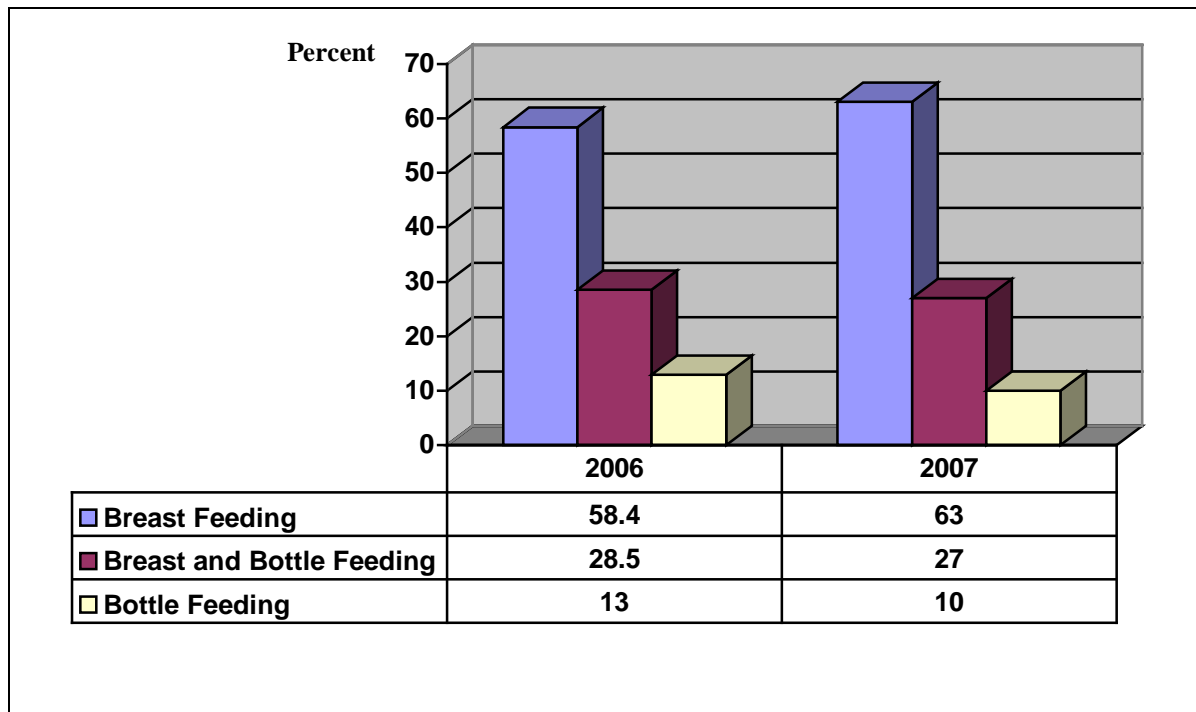
Note: Percentage does not add to 100 due to multiple selections of method of delivery (e.g., a mother can have a vaginal delivery combined with vacuum assistance).

Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

3.5 Method of Feeding

For DC women who reported on feeding method, breast feeding was the method of choice with 63.0 percent (1,857) choosing to breast feed in 2007 compared to 58.4 percent (1,870) in 2006 (Table 2). Breast and bottle combination feeding accounted for 27.0 percent (795) of those who reported in 2007 compared to 28.5 percent (913) in 2006. Of those who reported, very few women, 10.0 percent (295), chose bottle feeding alone in 2007 compared to 13.0 percent (417) in 2006 (Figure 10).

Figure 10: Births by Method of Feeding: District of Columbia, 2006-2007



Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

3.6 Potential Risk Behaviors

3.6.1 Tobacco

As displayed in Table 15, in 2007, 3.5 percent (306) women self reported tobacco use during pregnancy slightly down from 3.7 percent (315) in 2006. Of those who admitted to smoking 93 (30.4 percent) smoked 5 or less cigarettes per day in 2007 while 16.7 percent (51) used more than 5 cigarettes per day. These numbers were down from 113 (35.9 percent) who smoked less than 5 cigarettes per day in 2006 and 17.8 percent (56) who used more in 2006. These numbers indicate that about half the women who admitted to smoking did not specify their cigarette use.

3.6.2 Alcohol

Of the DC women who gave birth in 2007, 45 (0.5 percent) self reported alcohol use during pregnancy. This number was up from the 34 women (0.4 percent) who so reported in 2006. The number of women (8) self reporting number of drinks per week were too small for reliable computation of proportions.

**Table 15: Births by Tobacco and Alcohol Use:
District of Columbia, 2006-2007**

Tobacco & Alcohol	DC		DC	
	2007		2006	
	Number	percent	Number	percent
Tobacco Use	306	3.5	315	3.7
< 5 cigarettes per day	93	30.4	113	35.9
> 5 cigarettes per day	51	16.7	56	17.8
Alcohol Use	45	0.5	34	0.4

Source: State Center for Health Statistics, Center for Policy, Planning, and Epidemiology, DC Department of Health, 2009.

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VITAL STATISTICS TECHNICAL NOTES

Definitions

Adequacy of 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.

Birth Weight - The weight of the fetus or infant at the time of delivery.

Gestational Period - Number of weeks elapsed between the first day of the last menstrual period and date of delivery or date of pregnancy termination. The term gestational period is interchangeable with weeks of gestation, gestational age, and duration of pregnancy. This report uses the physician's estimate of gestational age.

Live Birth - Every product of conception that gives a sign of life after birth, regardless of the length of the pregnancy, is considered a live birth. This concept is included in the definition set forth by the World Health Organization in 1950 and revised in 1988 by a working group formed by the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists. A live birth is the complete expulsion or extraction from its mother of a result of conception, irrespective of the duration of pregnancy, which, after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached.

Low Birth Weight - A weight at birth of under 2,500 grams or 5 lbs., 8 oz.

Occurrence Data - Vital statistics compiled on the basis of where the vital event actually occurred.

Plurality - The number of siblings born as the result of a single pregnancy (e.g., twins, triplets).

Premature Birth - A live birth weighing 2,500 grams (5-1/2 pounds) or less. If birth weight is not stated, length of gestation (under 37 weeks) is used.

Preterm Birth – Birth before 37 completed weeks of gestation.

Residence Data - Vital statistics compiled on the basis of the usual place of residence of the mother regardless of where the birth occurred.

Very Low Birth Weight - A weight at birth of under 1,500 grams or 3 lbs., 5 oz.

Rates and Ratios

The impact of chance variation must be considered in evaluating categories with small frequencies. For example, a small change in the number of births by racial/ethnic groups in a county or ward—as is the case in the District—can disproportionately affect the fertility rate for that county. Rates for cities and counties, therefore, require special consideration. Regional and state rates, with larger frequencies, provide more stable rates.

Rates used in this report are calculated with the 2007 estimated population figures from the U.S. Department of Commerce, Bureau of the Census.

Birth Rate (Crude) = (Number of live births / Population) X 1,000

Fertility Rate = (Number of live births to women aged 15-44/ Number of women aged 15-44) X 1,000

Teenage Fertility Rate = (Number of live births to women aged 15-19/ Number of women aged 15-19) X 1,000

Source of Data

Data shown in this report for 2007 are based on 100 percent of the resident birth certificates in the District of Columbia (DC) and DC resident 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.

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. These were issued by the Office of Management and Budget (OMB).

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 2007. Population estimates used to compute birth rates for DC for 2007. Birth rates shown in this report for 2007 are based on populations that are consistent with the 2000 census levels.

Computing rates

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

Statistical significance

When estimates of variability for the data values are available, the statistical significance of the difference between the baseline and the most recent rate or percent for a subgroup can be tested directly using a Z statistic.

$$Z = (R_{mr} - R_b) / \sqrt{SE_{mr} + SE_b}$$

Where:

R_{mr} = rate or percent based on the most recent data,

R_b = rate or percent at the baseline,

SE_{mr} = standard error of the most recent data value, and

SE_b = standard error of the rate or percent at the baseline.

This formula assumes that the group rates are independent. The comparison of the Z statistic with some Z -critical value determines the significance of the difference between the two rates. If $|Z| \geq 1.96$, the difference is significant at an alpha (α) level of 0.05. The difference between the most recent data value and the baseline is flagged (*) when it is statistically significant at the 0.05 level.

Appendix 1: Annual Estimates of the Resident Population by Sex, Race, and Hispanic Origin for District of Columbia; April 1, 2000 to July 1, 2008

Sex, Race, and Hispanic Origin	Population Estimates								
	July 1, 2008	July 1, 2007	July 1, 2006	July 1, 2005	July 1, 2004	July 1, 2003	July 1, 2002	July 1, 2001	July 1, 2000
BOTH SEXES	591,833	587,868	585,419	582,049	579,521	577,371	579,112	577,678	571,723
One race	582,198	578,648	576,464	573,355	571,107	569,256	571,214	570,012	564,322
White	237,092	230,825	224,995	219,449	213,890	209,195	207,336	204,207	196,966
Black	322,021	325,665	330,080	333,230	337,098	340,409	344,467	346,944	349,083
AIAN	2,367	2,287	2,234	2,196	2,131	2,094	2,092	2,032	1,975
Asian	20,120	19,313	18,608	17,954	17,471	17,079	16,849	16,390	15,869
NHPI	598	558	547	526	517	479	470	439	429
Two or more races <i>Race alone or in combination: 1</i>	9,635	9,220	8,955	8,694	8,414	8,115	7,898	7,666	7,401
White	243,839	237,238	231,168	225,398	219,620	214,667	212,607	209,283	201,806
Black	328,527	331,870	336,108	339,084	342,757	345,857	349,759	352,071	354,043
AIAN	5,834	5,669	5,601	5,536	5,439	5,359	5,352	5,280	5,209
Asian	23,308	22,351	21,544	20,785	20,185	19,666	19,348	18,773	18,139
NHPI	1,100	1,051	1,019	968	947	902	883	836	806
NOT HISPANIC	540,709	538,304	536,311	532,994	530,870	529,430	531,830	530,741	526,486
One race	532,290	530,266	528,481	525,385	523,508	522,314	524,915	524,072	520,077
White	196,049	191,465	186,005	180,196	174,614	170,036	168,662	166,186	160,822
Black	314,537	317,957	322,389	325,796	330,015	333,821	338,012	340,190	342,115
AIAN	1,592	1,555	1,515	1,477	1,428	1,399	1,408	1,356	1,330
Asian	19,699	18,904	18,198	17,558	17,096	16,724	16,503	16,031	15,509
NHPI	413	385	374	358	355	334	330	309	301
Two or more races <i>Race alone or in combination: 1</i>	8,419	8,038	7,830	7,609	7,362	7,116	6,915	6,669	6,409
White	201,710	196,824	191,171	185,169	179,393	174,602	173,048	170,357	164,771
Black	320,157	323,300	327,601	330,864	334,917	338,555	342,606	344,608	346,360
AIAN	4,673	4,569	4,523	4,467	4,397	4,330	4,340	4,274	4,236
Asian	22,706	21,764	20,967	20,233	19,657	19,175	18,860	18,271	17,634
NHPI	887	851	826	784	774	748	733	699	675
HISPANIC	51,124	49,564	49,108	49,055	48,651	47,941	47,282	46,937	45,237
One race	49,908	48,382	47,983	47,970	47,599	46,942	46,299	45,940	44,245
White	41,043	39,360	38,990	39,253	39,276	39,159	38,674	38,021	36,144
Black	7,484	7,708	7,691	7,434	7,083	6,588	6,455	6,754	6,968
AIAN	775	732	719	719	703	695	684	676	645
Asian	421	409	410	396	375	355	346	359	360
NHPI	185	173	173	168	162	145	140	130	128
Two or more races	1,216	1,182	1,125	1,085	1,052	999	983	997	992

Source: Population Division, U.S. Census Bureau (SC-EST2009-03-11). Release Date: May 14, 2009.