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Davidson County Natality Report Data for 2010

**Metro Public Health
Department of
Nashville/Davidson
County**



Suggested Citation

Holley, A. Thomas-Trudo, S. & Rogers, B. (2012). Davidson County Natality Report Data for 2010. Nashville, TN; Metropolitan Nashville Public Health Department.

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2010 Selected Birth Highlights for Davidson County Residents

Fertility

- ▶ There were 9,557 births in 2010, resulting in a general fertility rate of 64.5 births per 1,000 females aged 15–44. The fertility rate for Hispanics was significantly higher (106.9) than non-Hispanic blacks (65) and non-Hispanic whites (57.9).
- ▶ The fertility rate for teens aged 15–19 was 40.6 births per 1,000. Hispanic teens had a significantly higher rate of births (82.5) compared to non-Hispanic blacks (53.4) and non-Hispanic whites (24.4).

Demographic Profile

- ▶ Over a third (37.2%) of births were to women with an income less than \$25,000 (highest among Hispanics, at 58.3%). The most frequently reported level of educational attainment was a bachelor's degree, 30.1%, (highest among non-Hispanic whites, at 38%). The most frequently reported payment source for maternal and child health services was TennCare (Medicaid), 42.4%, (highest among non-Hispanic blacks, at 59.4%).

Over a third (37.2%) of births were to women with an income less than \$25,000.

Risk Factors

- ▶ In 2010, 9.8% of women giving birth reported smoking during pregnancy. A much higher percentage of non-Hispanic white mothers reported smoking during pregnancy compared to non-Hispanic blacks or Hispanics. The respective percentages were 12.8%, 10.7%, and 1.3%.

Prenatal Care

- ▶ In 2010, 56.7% of women with live births entered prenatal care during the first trimester. The percentage of non-Hispanic white women who entered care during the first trimester was 65.7% compared to 52.8% of non-Hispanic black women and 39.8% of Hispanic women.
- ▶ Teen mothers aged 15–19 had the lowest percentage of early prenatal care initiation (41.3%). In this age group, 40.4% of non-Hispanic black teens and 33.9%

of Hispanic teens received prenatal care in the first trimester. Slightly over 50% of non-Hispanic white teens received prenatal care in the first trimester.

Birth Outcomes

- ▶ During 2010, 8.5% of babies were born preterm (less than 37 weeks of gestation). When examined by race and ethnicity, 11.7% of non-Hispanic black babies were premature compared to 7.3% of non-Hispanic white and 6.5% of Hispanic babies.
- ▶ A significant minority (8.7%) of babies born were low birth weight (less than 2,500 grams or 5 ½ pounds). Non-Hispanic black infants were 1.8 times more likely to be born low birth weight compared to non-Hispanic whites and 2.3 times more likely to be born low birth weight compared to Hispanics.

Non-Hispanic black infants were 1.8 times more likely to be born low birth weight compared to non-Hispanic whites and 2.3 times more likely to be born low birth weight compared to Hispanics.

Healthy People 2020

- ▶ Davidson County missed the Healthy People 2020 targets for both the percent of women and teens (aged 15–19) entering prenatal care in the first trimester, and the percent of women who smoked during pregnancy, but exceeded the preterm and low birth weight targets.

OVERVIEW

There were 9,557 live births in Davidson County in 2010. This represents a 2.2% decrease in the number of live births in Davidson County from the previous year (217 fewer births). Figure 1 depicts the number of births in Davidson County since 2006. The number of births in Davidson County steadily increased then started to decline in 2009. A similar trend is found when examining the number of births in the United States as a whole.

Nationally, the number of live births declined by approximately 3% in 2010.¹ Declines in the number of live births may be influenced by increased contraceptive use, more education and income, and/or better family planning. For example, from 1970 to 2006, the average age of first time mothers increased in the United States by more than 3%, and the proportion of births to women over age 35 increased nearly eight times.²

Unintended births have been associated with delayed prenatal care, substance abuse, and poor breastfeeding (delayed or not initiated).

Figure 1: Davidson County Resident Births, 2006–2010

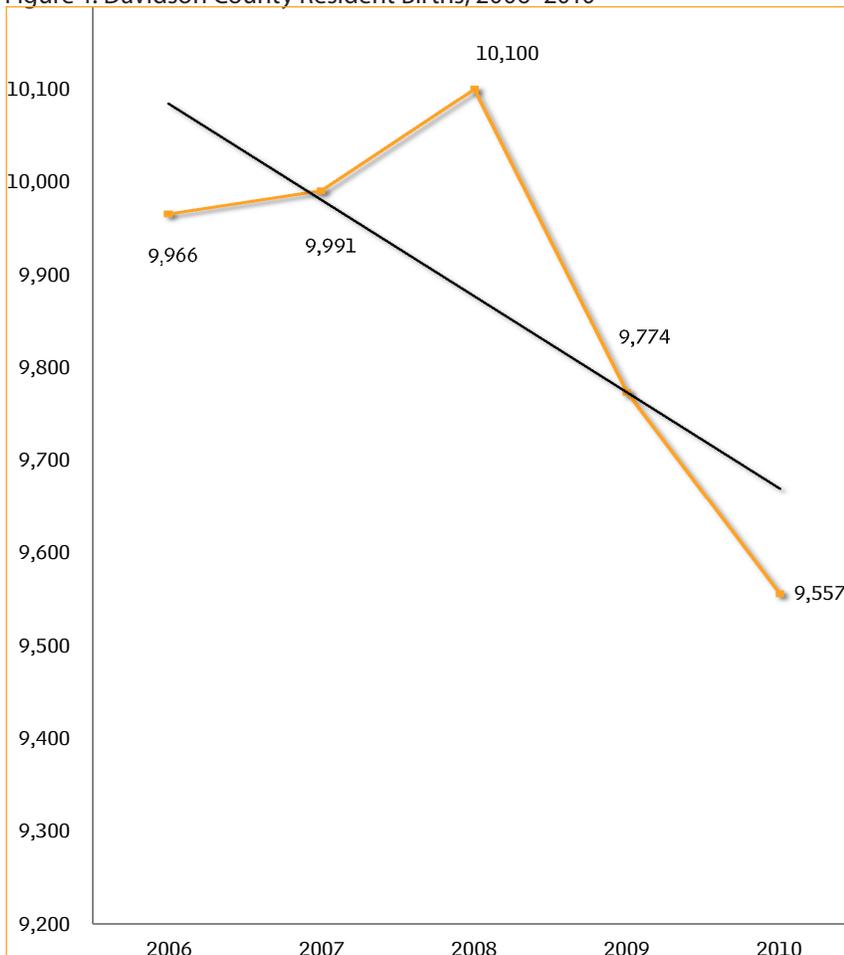


Figure 2: Fertility Rates among Women, aged 15–44, by Race/Ethnicity, Davidson County, TN, 2010

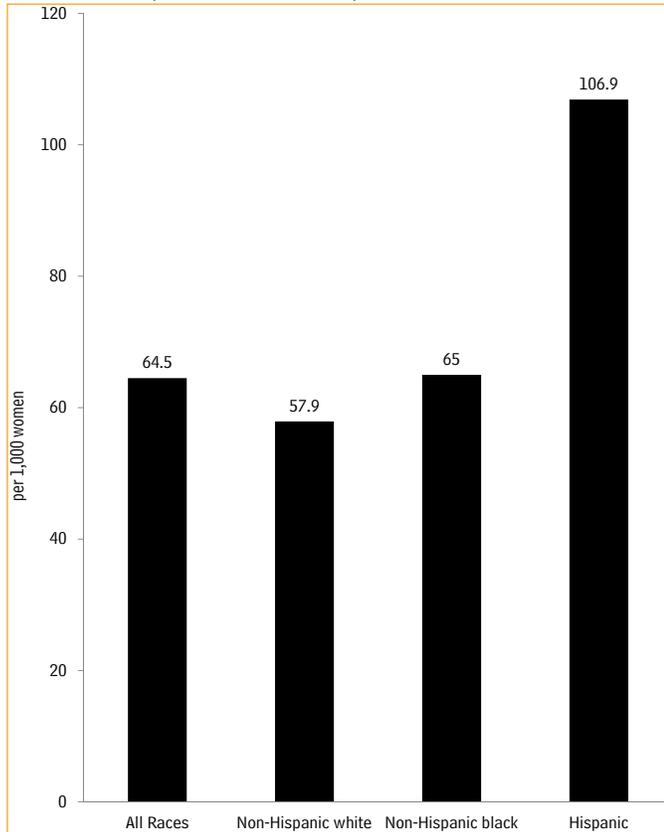
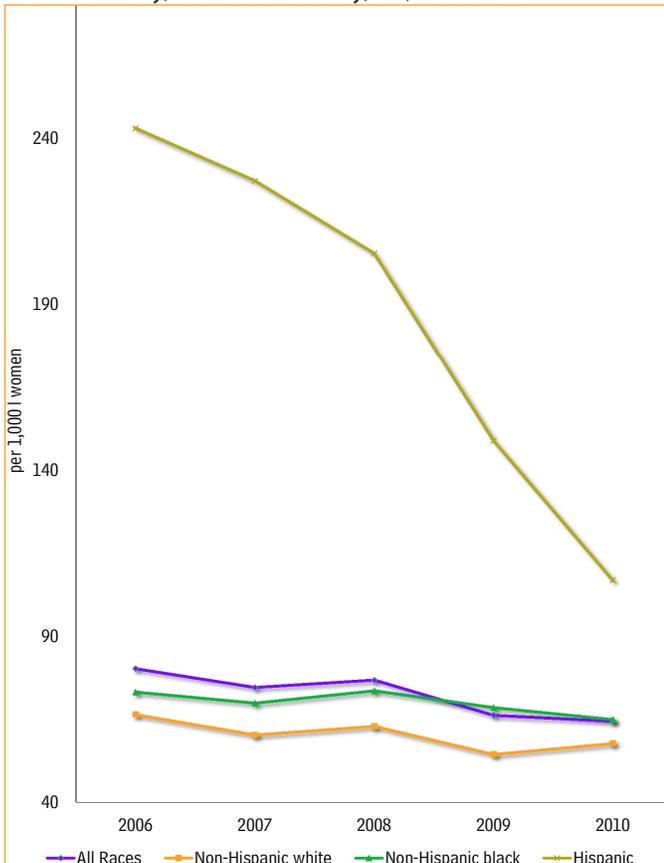


Figure 3: Fertility Rates among Women, aged 15–44, by Race/Ethnicity, Davidson County, TN, 2006-2010



While the number of live births has declined in the United States, the percentage of unintended births¹ has slightly increased. In a recent report by the Centers for Disease Control and Prevention (Division of Vital Statistics), data from the National Survey of Family Growth indicated that 37% of births² in the United States were unintended at the time of conception. This percentage is unchanged from the 1982 baseline (36.5%), but is slightly higher than the percentage of unintended births in 2002 (34.9%).³ Unintended births have been associated with delayed prenatal care, substance abuse, and poor breastfeeding (delayed or not initiated).³ While no local data are available at this time, the national study provides a framework for understanding the association between intentionality and less than optimal birth outcomes. Several measures highlighted throughout this report indicate improvement of birth outcomes, but Davidson County continues to lag behind the nation in critical areas and racial/ethnic disparities persist.

FERTILITY

There are several types of fertility rates; one of the most noteworthy is the general fertility rate. The general fertility rate is calculated by dividing the number of live births in a population, during a given time interval, by the number of females of childbearing age, usually aged 15–44 or aged 15–50. The result is then multiplied by 1,000. General fertility rates for women aged 15–44 were chosen for most tables and figures in this report.

The fertility rate of a population is influenced by a myriad of behavioral, biological and social factors. These factors may include exposure to contraceptives, intercourse practices, attitude and beliefs, and access to health information and other resources.⁴ The degree of fertility in a community is an important public health issue. Proper planning for future population growth ensures continuing access to public services and healthcare. On the other hand, unexpected growth can negatively impact economic and

¹ Unintended pregnancy is defined as a pregnancy that is unwanted or mistimed. It is the most direct measure available of a woman's choice in determining the number of children she wants to have and when.

² Includes births from 2006-2010.

environmental health, thereby leading to negative effects on a population's physical health.⁵

The overall birth rate for the total population in 2010 was 64.5 infants per 1,000 females aged 15–44. As Figure 2 shows, Hispanics had the highest rate of births compared to other racial/ethnic groups. The State of Tennessee has the second fastest growing Hispanic population in the nation, and Davidson County has one of the highest percentages of Hispanic population in the state.⁶ Although the Hispanic population in Davidson County remains relatively small compared to the non-Hispanic white and non-Hispanic black populations, the population is expected to rapidly increase as reflected by the high rates of fertility.

Figure 3 shows the general fertility rates by race/ethnicity for the years 2006 through 2010. Overall, the birth rate in Davidson County has varied only slightly since 2006. The rates for non-Hispanic blacks have been consistently higher than non-Hispanic whites. Birth rates among Hispanics are declining but remain consistently higher than non-Hispanic blacks and non-Hispanic whites. (Table 8A)

Age Specific Fertility Rates

Births to Females Aged 10–14

Adolescent females aged 10–14 contribute very few births to the overall birth rate; however, the consequences of pregnancy for this age group are likely to be more severe than in older females.⁷ In Davidson County, the overall birth rate for females aged 10–14 was 0.6 per 1,000 population. Racial/ethnic differences in the birth rate among teens aged 10–14 were not analyzed due to low rates of births.

Births to Females Aged 15–19

In 2010, there were 40.6 live births per 1,000 females aged 15–19. There was a significant difference in the birth rate among Hispanic teens compared to non-Hispanic whites and non-Hispanic blacks.

Figure 4: Fertility Rates among Women, aged 15–19, by Race/Ethnicity, Davidson County, TN, 2010

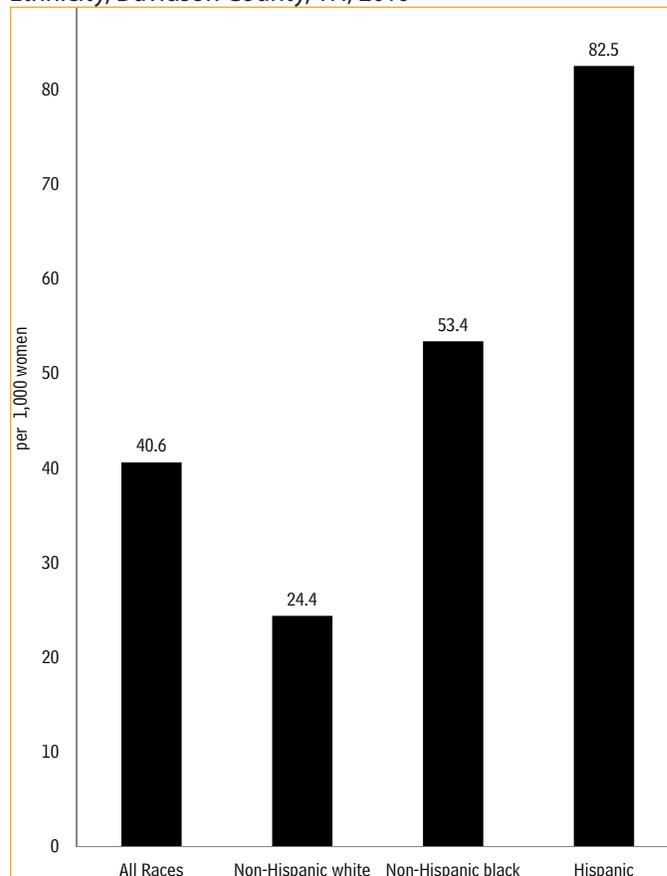
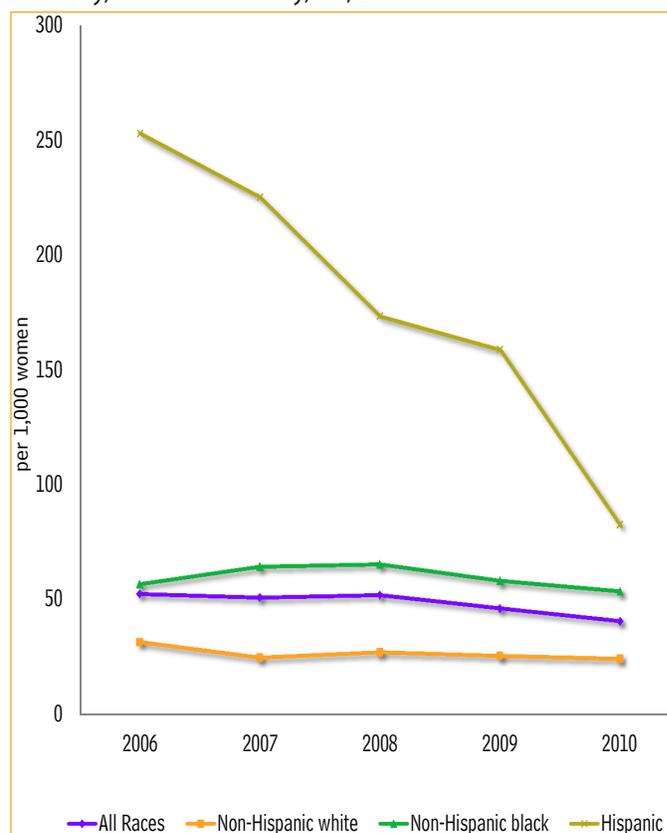


Figure 5: Fertility Rates among Women, aged 15–19, by Race/Ethnicity, Davidson County, TN, 2006–2010



For Hispanic teens, there were nearly 83 infants born per 1,000 females, compared to 53 infants born to non-Hispanic blacks and 24 born to non-Hispanic whites. The birth rate among teens aged 15–19 has been declining in Davidson County since 2006; however, the rate is still significantly higher than the birth rate for females aged 15–19 in the US (34.2).¹ (Figures 4 & 5)

Nationally, after seven decades, the teen birth rate is at the lowest level ever reported.⁸ Declines are thought to be due to strong pregnancy prevention messages, increased use of contraception at first intercourse, and multiple contraception methods.⁸

Births to Females Aged 20+

Among women aged 20–29, the birth rate was highest among Hispanic women, followed by non-Hispanic blacks and non-Hispanic whites. For women aged 30 and older, Hispanics also had the highest birth rates; the birth rate among non-Hispanic white women, however, was higher than non-Hispanic blacks. (Table 1; Table 8A)

Nationally, after seven decades, the teen birth rate is at the lowest level ever reported.

Table 1: Age-Specific Fertility Rates by Race/Ethnicity, Davidson County, TN, 2010* (n=9557)

Total Population			Non-Hispanic White		Non-Hispanic Black		Hispanic	
Age	N	Fertility Rate	N	Fertility Rate	N	Fertility Rate	N	Fertility Rate
10–14	10	0.6	2	0.3	7	1.1	1	0.5
15–17	224	22.6	55	13.3	106	26.4	57	50.9
18–19	561	59.6	155	34.5	295	84.3	108	122.6
20–29	4970	82.7	2254	65.9	1655	98.7	871	148.3
30–34	2499	96.2	1487	102.6	497	71.8	384	126
35–44	1277	30.2	733	31.2	294	23.3	170	43
45+	13	0.6	4	*	3	*	2	*

*0.03% (3) of information was unknown

DEMOGRAPHIC PROFILE

Race/Ethnicity: Multi-Ethnic Births

Early studies conducted on interracial births indicate that the composition of the United States as a whole has drastically changed over the past decades. For example, in the early 1970s less than 1.5% of infants were considered interracial or multi-ethnic.⁹ This percentage increased to 4.3% in 1998.⁹ In 2010, as the minority population younger than a year of age increased to 49.5%, the US Census bureau coined the term “majority-minority” to define a population with greater than 50% minorities.¹⁰ While the non-Hispanic white population remains the largest racial/ethnic group in the United States (72%), it is also growing at the slowest rate; conversely the Hispanic (16% of total population) and Asian (5% of total population) populations continue to increase. The non-Hispanic black population (13% of total population) also continues to increase, but at a much slower rate compared to Hispanics and Asians.¹¹

The large increase in multi-ethnic births in the United States has generally corresponded with trends in multiple-race reporting.⁹ Multi-race reporting was inconsistently used and fairly problematic until the revision of the national census. The 2000 census allowed for individuals to identify themselves as one or more races for the first time. In the 2010 census, 3% or 9 million people reported more than one race. The majority of people (92%) who reported multiple races provided exactly two races; non-Hispanic white and non-Hispanic black was the largest multiple race combination. In Davidson County 2.3% (14,542) of the population reported two races; the largest race combination was between non-Hispanic blacks and non-Hispanic whites (0.7% or 4,658).¹²

Analyzing multi-ethnic births in Davidson County is critically important, not only for understanding the composition of the population but also to understand and track new trends in health. In 2010, 8.7% (835) of live births were multi-ethnic or interracial in Davidson County. Slightly over 40% (346) of multi-ethnic births were between non-Hispanic blacks and non-Hispanic whites, followed by 30.4% (254) of births between Hispanic whites and non-Hispanic whites, and 7.7% (64) of births between non-Hispanic whites and other non-Hispanics. (Table 2, next page)

The 2000 census allowed for individuals to identify themselves as one or more races for the first time.

Income

The relationship between social class and health is remarkably consistent and has been observed for numerous health outcomes. In the United States, social groups are often defined in terms of income, education, and race/ethnicity. Research from studies measuring income and education in relation to health status indicates that individuals with more education and money generally have better health outcomes.¹³ When variables of social class are further stratified by race/ethnicity, minority groups often occupy the lowest social class ranking and therefore may have more severe health outcomes.

According to the 2010 American Community Survey, the median household income in Davidson County was \$43,616. Over 25% of Davidson County's general population had a household income

In 2010, 8.7% (835) of live births were multi-ethnic or interracial in Davidson County.

Table 2: Multi-Ethnic Births, Davidson County, TN, 2010

Mother	Father	Number of Live Births
Hispanic-Black	Non-Hispanic Black	12
	Other Hispanic	0
	Hispanic-White	3
	Non-Hispanic White	3
	Other non-Hispanic	0
Non-Hispanic Black	Hispanic-Black	10
	Other Hispanic	0
	Hispanic-White	17
	Non-Hispanic White	89
	Other non-Hispanic	10
Other Hispanic	Hispanic-Black	0
	Non-Hispanic Black	1
	Hispanic-White	4
	Non-Hispanic White	3
	Other non-Hispanic	0
Hispanic White	Hispanic-Black	1
	Non-Hispanic Black	27
	Other Hispanic	3
	Non-Hispanic White	97
	Other non-Hispanic	15
Non-Hispanic White	Hispanic-Black	4
	Non-Hispanic Black	257
	Other Hispanic	3
	Hispanic-White	157
	Other non-Hispanic	52
Other Non-Hispanic	Hispanic-Black	0
	Non-Hispanic Black	26
	Other Hispanic	0
	Hispanic-White	4
	Non-Hispanic White	52
Total		835

less than \$25,000 (28.9%). The proportion of non-Hispanic blacks (42.9%) with household incomes less than \$25,000 was greater than Hispanics (38.8%). This proportion was higher for both racial/ethnic groups compared to non-Hispanic whites (22.6%).¹⁴

Table 3 shows the income reported by women with live births in Davidson County during 2010. The largest proportion of births were to women who reported their household income as less than \$25,000, (over half of non-Hispanic black and Hispanic women) while a smaller proportion of births (16.6%) were to women who reported their household income as greater than \$75,000 (highest among non-Hispanic whites, at 28%). Because a large percentage of the data are missing (22.2%), information presented in this section should be interpreted with caution.

Education

The 2010 American Community Survey estimated that slightly more than 20% of females in Davidson County had some level of college education. Approximately 10% of females had a master’s degree and 3.7% of females had a professional or doctoral degree.¹⁵ Analyzing the data by race/ethnicity revealed the most frequently reported level of educational attainment among non-Hispanic black women was some college but no degree, a bachelor’s degree for non-Hispanic whites, and a high school diploma for Hispanic women.

According to the 2010 American Community Survey, the median household income in Davidson County was \$43,616.

Table 3: Number and Percent of Births by Income and Race/Ethnicity, Davidson County, TN, 2010 (n= 9557)

	<\$25,000		\$25,000–\$34,999		\$35,000–\$49,999		\$50,000–\$74,999		>\$75,000		unknown or refused	
	N	%	N	%	N	%	N	%	N	%	N	%
Total Population	3558	37.2	735	7.7	621	6.5	931	9.7	1589	16.6	2123	22.2
NHW**	1062	22.7	358	7.6	395	8.4	686	14.6	1355	28.9	834	17.8
NHB**	1456	51	244	8.5	139	4.9	150	5.3	129	4.5	739	25.9
Hispanic	929	58.3	107	6.7	49	3.1	38	2.4	40	2.5	430	27

**NHW refers to Non-Hispanic white; NHB refers to Non-Hispanic black

The 2010 American Community Survey estimated that slightly more than 20% of females in Davidson County had some level of college education.

Data for educational achievement for mothers in 2010 are available from the birth certificate research file. These data were consistent with the general female population for the county. The majority of live births in Davidson County were to women who had some level of college education (associate degree or some college but no degree) or who had obtained a bachelor’s degree. The most frequently reported level of educational attainment among non-Hispanic white women was a bachelor’s degree; among non-Hispanic black women the most frequently reported level of educational attainment was some college but no degree. In contrast, the most frequently reported level of educational attainment among Hispanic women was some high school but no diploma. (Table 4)

Insurance

There are numerous evidence-based studies indicating that lack of health insurance impacts access to care and leads to adverse health outcomes. In the United States, the number of people without health insurance declined from 50.7 million (16.7%) in 2009 to 50 million (16.3%) in 2010.¹⁶ Health insurance coverage may play a major role in influencing pregnancy and birth outcomes such as less than adequate prenatal care, method of delivery, and postpartum care.¹⁷

Table 4: Number and Percent of Births by Education and Race/Ethnicity for Women aged 25–44, Davidson County, TN, 2010*(n=6016)

	Some HS but No Diploma		HS graduate		Some College but No Degree		Associate		Bachelors		Masters		Professional or Doctorate	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Total Population	663	11	959	15.9	1100	18.3	392	6.5	1808	30.1	780	13	314	5.2
NHW**	145	3.9	440	12	590	16.1	231	6.3	1394	38	582	15.8	240	6.5
NHB**	200	13.1	355	23.2	396	25.9	124	8.1	236	15.4	125	8.2	27	1.8
Hispanic	295	29.1	116	11.5	76	7.5	22	2.2	82	8.1	26	2.6	17	1.7

*Women for which information was unknown (n=43) and with an 8th grade education or less not included

**NHW refers to Non-Hispanic white; NHB refers to Non-Hispanic black

In Davidson County, several health insurance options are available: private insurance, TennCare (Medicaid), and TriCare/Champus (former name for TriCare). TennCare is a Medicaid program offered to eligible low-income children and families, the elderly, and the disabled. The program is different from traditional Medicaid programs in that the program provides coordinated care by utilizing a managed care organization (MCO). TriCare is a health care program for active duty military members, veterans, and their family members.

Even with these options available, 21.4% of women aged 18–44 were without health insurance in 2010. Among non-Hispanic black women, 24.8% did not have health insurance, 19.2% of non-Hispanic white women had no health insurance, and 74.2% of Hispanic women did not have health insurance.¹⁸

21.4% of women aged 18–44 were without health insurance in 2010.

In 2010, government programs were the primary source of payment for maternal and childbirth services. The primary source of payment among non-Hispanic white women was private insurance. The primary source of payment for non-Hispanic black and Hispanic women was TennCare (Medicaid). A greater percentage, 11.4%, of Hispanic women reported paying out of pocket for medical services compared to non-Hispanic whites and blacks. (Table 5)

Table 5: Number and Percent of Births by Payment Source and Race/Ethnicity, Davidson County, TN, 2010* (n= 9557)

	TennCare (Medicaid)		Private		Self Pay		Champus/ TriCare		Other		Unknown	
	N	%	N	%	N	%	N	%	N	%	N	%
Total Population	4056	42.4	3519	36.8	307	3.2	58	0.6	76	0.8	1541	16.1
NHW**	1353	28.9	2467	52.6	75	1.6	37	0.8	26	0.6	732	15.6
NHB**	1698	59.4	634	22.2	35	1.2	12	0.4	10	0.4	468	16.4
Hispanic	858	53.9	231	14.5	182	11.4	5	*	38	2.4	279	17.5

*Other category includes Indian Health Services and other government

**NHW refers to Non-Hispanic white; NHB refers to Non-Hispanic black

Figure 6: Percent of non-Marital Births by Race/Ethnicity, Davidson County, TN, 2006–2010

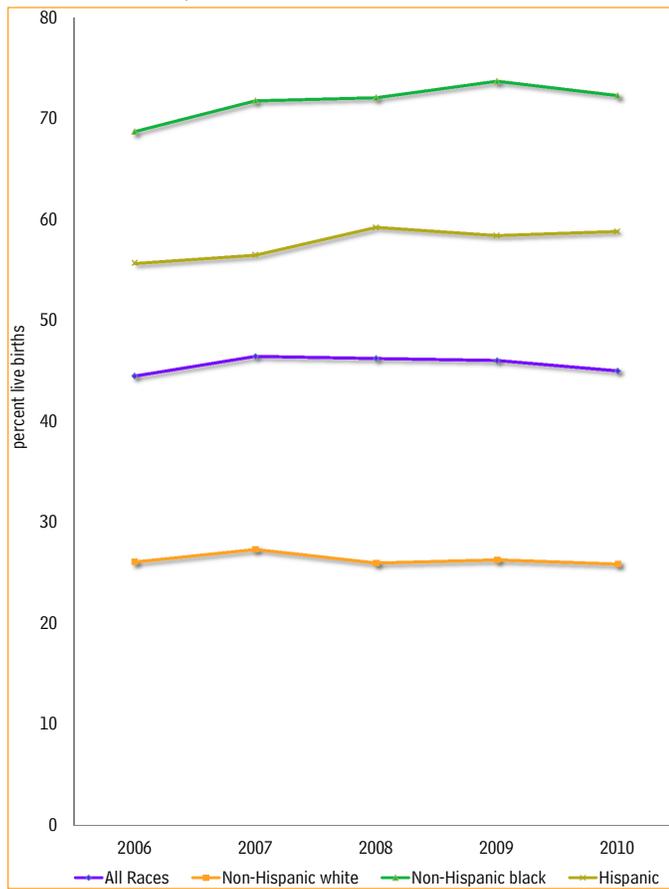


Table 6: Age-Specific Fertility Rates for Women who had a Birth in the past 12 months by Race/Ethnicity and Marital Status, Davidson County, TN, 2010*

	Unmarried	Married
Total Population	3681 (33.1)	4213 (67)
Non-Hispanic White	1342 (23.1)	2876 (74.3)
Non-Hispanic Black	1510 (38.6)	509 (40)
Hispanic	829 (85.7)	690 (101.9)

Marital Status

The association between pregnancy outcomes and marital status has been long recognized. For example, babies born to unmarried mothers are at increased risk for low birth weight, preterm births, and infant mortality. It is important to note that marital status alone is not a consistent risk factor (especially among social and demographic subgroups) for adverse pregnancy outcomes. Interpreting these data requires understanding complex social and demographic shifts; for example, assisted reproductive technology has made childbearing possible for women who are single or in same-sex partnerships.¹⁹

Traditional categories of marital status have included married, single, divorced, but in recent decades, another important trend has emerged: cohabitation. Births to mothers who are not legally married but live in intimate relationships with a partner have become increasingly common and widely accepted. Although research is still in the early stages, preliminary data indicate birth outcomes are worse among mothers who cohabit compared to traditional marriage relationships. More studies are required to understand the causal mechanism underlying this disparity.²⁰ Clearly marital status is not the definitive causal agent for adverse birth outcomes, but most likely a proxy for social and economic risk factors.

As shown in the data from the 2010 American Community Survey, the birth rate among married women in Davidson County was almost twice as high as the birth rate among unmarried women. The birth rate was higher among unmarried non-Hispanic black and Hispanic women compared to non-Hispanic white women.²¹ (Table 6)

Non-Marital Births

Since 2006, the percentages of non-marital births in Davidson County have been relatively stable at approximately 45 to 46%. Percentages of live births among unmarried non-Hispanic black women have remained consistently higher than non-Hispanic white and Hispanic women. (Figure 6; Table 9A)

RISK FACTORS

Smoking

Smoking during pregnancy is one of the most preventable causes of illness and death among mothers and infants. Women who smoke have increased odds (30%) of becoming infertile compared to women who do not.²² Women who smoke are also likely to experience delayed conception and develop medical complications during pregnancy. Many of the 7,000 chemicals present in tobacco can cross the placental membrane and cause babies to be born low birth weight and/or prematurely or die via sudden unexpected infant death.²²

Women are asked after birth to provide information as to whether they smoked before or during pregnancy and how frequently. This information is included in the confidential medical portion of the birth certificate and is available in the research file. In 2010, 9.8% of women giving birth reported smoking during their pregnancy. There were variations by race/ethnicity and age. A much higher percentage of non-Hispanic white women smoked during pregnancy compared to non-Hispanic black and Hispanic women. For 2010, the respective percentages were 12.8%, 10.7%, and 1.3%. Non-Hispanic white teens aged 15-19 had a higher percentage of smokers (25.2%) compared to non-Hispanic black teens (4.7%). The number of live births among Hispanic teens who smoked was extremely small; therefore, percentages were not calculated. (Table 10A)

Since 2006, smoking during pregnancy has decreased by more than 21%. The percentages of live births among women aged 15-19 who smoke during pregnancy remain consistently higher than the general population but are declining. In 2010, the percentage of live births to females aged 15-19 who smoke fell slightly below the general population by 0.1% (Figure 7). The Healthy People 2020 objective aims to increase the percentage of women who do not smoke during pregnancy to 98.6%. Currently, Davidson County is 8.5% away from achieving that goal.

Medical Conditions/Infections

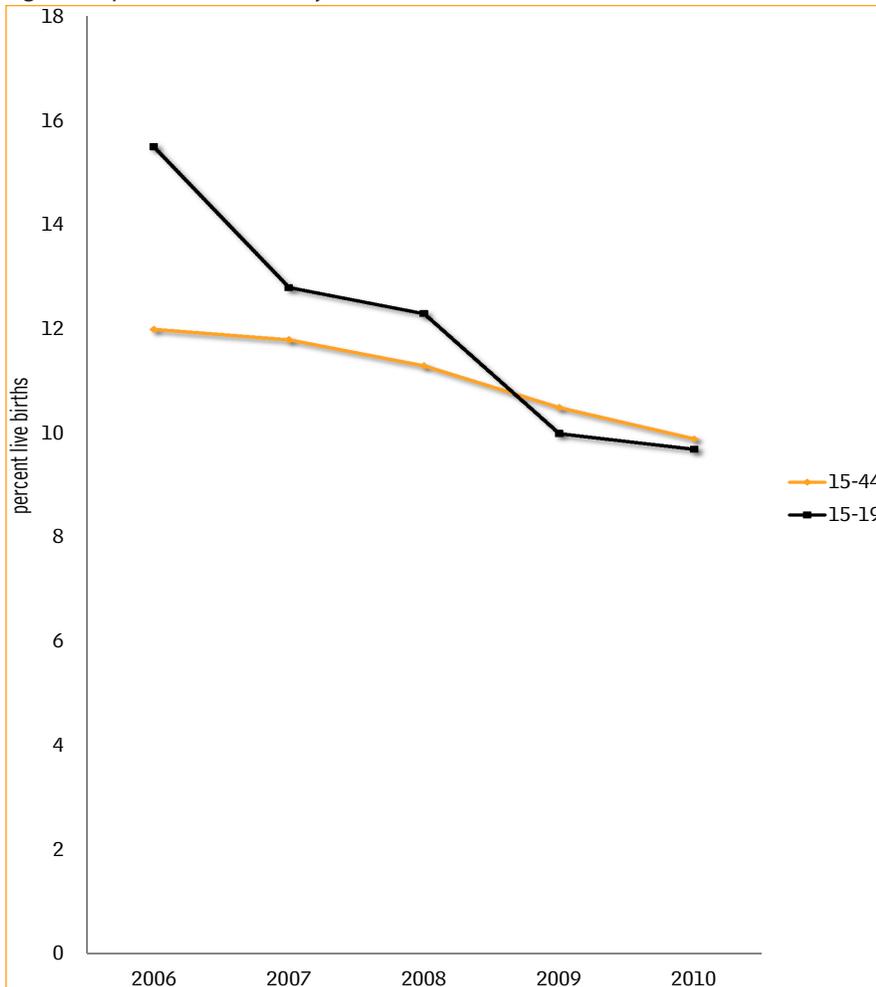
Other risk factors during pregnancy include medical conditions such as gestational diabetes, gestational hypertension, vaginal bleeding, and previous poor pregnancy outcomes. Pregnant women can also become infected with many types of infections (e.g. Hepatitis B & C), including sexually transmitted infections (STIs). STIs can be passed from mother to baby during

Since 2006, smoking during pregnancy has decreased by more than 21% in Davidson County.

pregnancy, during birth, or after birth. Babies who become infected with STIs may be stillborn, have low birth weight, or develop sepsis and other chronic illnesses.²³ The impact of medical conditions and infections can be greatly reduced through routine prenatal care, preconception care, and education.

Although detailed data are not provided in this report, women in Davidson County are at high risk for medical conditions and infections (STIs are most common infections). In 2010, 28% of births (2,672) were to women with a medical condition and 5.7% of births (543) were to women with an infection.

Figure 7: Percent of Live Births to Women who Smoked during Pregnancy by Age Group, Davidson County, TN, 2006–2010



In 2010, 28% of births (2,672) were to women with a medical condition and 5.7% of births (543) were to women with an infection.

PRENATAL CARE

Prenatal care forms the cornerstone of services offered to pregnant females. A total of 13 prenatal care visits are recommended for pregnant mothers, beginning in the first trimester of pregnancy. Prenatal care services typically include risk assessments, medical treatment or interventions, and health education. Several factors can impede a woman's decision to seek prenatal care. Women of childbearing age commonly report such barriers as substance abuse, multiparity (having two or more births), financial barriers such as no insurance, and social barriers such as childcare difficulties.²⁴ Teenagers most often do not seek timely prenatal care due to denial of pregnancy and concealment. Women who receive delayed or no prenatal care are at increased risk for maternal and infant morbidity and mortality.²⁴

Prenatal care utilization is measured by the proportion of women who began receiving care during the first three months of pregnancy. Assessment of prenatal care can be measured in different ways. The adequacy of prenatal care (APNUC) is often used to assess the timing of the first prenatal care visit and frequency of prenatal visits. The APNUC index measures a woman's prenatal care using the following criteria: prenatal care is classified as adequate plus if it is started by the 4th month of pregnancy and a woman makes greater than 110% of expected visits; adequate if care began by the 4th month and the woman made 80–109% of expected visits; and inadequate if care began after the 4th month or woman made less than 50% of expected visits. Prenatal care is characterized as intermediate if care is begun by the 4th month of pregnancy and the woman made 50–79% of visits.²⁵

Adequacy of Prenatal Care

In 2010, 18.3% of births were to women who received greater than adequate prenatal care, compared to 34.2% births with adequate care, and 14.6% of births with inadequate care. More babies were born to non-Hispanic white women with adequate or adequate plus prenatal care compared to non-Hispanic blacks and Hispanics. The percentage of births with inadequate prenatal care was greatest among Hispanic women. Because a large percentage of the data are missing (22.7%), information presented in this section should be interpreted with caution. (Table 7)

More babies were born to non-Hispanic white women with adequate or adequate plus prenatal care compared to non-Hispanic blacks and Hispanics.

Table 7: Adequacy of Prenatal Care, Davidson County, TN, 2010* (n= 9557)

	Inadequate		Intermediate		Adequate		Adequate plus		Missing	
	N	%	N	%	N	%	N	%	N	%
Total Population	1392	14.6	982	10.3	3271	34.2	1745	18.3	2167	22.7
Non-Hispanic White	485	10.3	487	10.4	1840	39.2	915	19.5	963	20.5
Non-Hispanic Black	472	16.5	290	10.2	893	31.3	537	18.8	665	23.3
Hispanic	344	21.6	166	10.4	408	25.6	218	13.7	457	28.7

Among women and teens, all percentages of first trimester prenatal care fall below Healthy People 2020 maternal & child health objective 10.1, which states that 77.9% of women should receive prenatal care during the first trimester of pregnancy.

First Trimester Prenatal Care

Percentages of early prenatal care initiation remain low but have improved in Davidson County, with gains in 2010 over the previous year for most racial/ethnic groups. In 2010, 56.7% of live births were to women who received prenatal care during the first trimester of pregnancy, compared to 55.8% in 2009. Non-Hispanic white females had the highest percentage of first trimester care, 65.7%, followed by non-Hispanic black females with 52.8%. Hispanic women continue to have the lowest percentage of first trimester care with 39.8%; however, this percentage is an improvement from the 2009 percentage (35.2%). (Table 11A)

All of these percentages fall below Healthy People 2020 maternal & child health objective 10.1, which states that 77.9% of women should receive prenatal care during the first trimester of pregnancy. This goal was met throughout the nineties and even the early 2000s, but percentages began to decline in 2003 for Davidson County’s general population and across all racial/ethnic groups.

Using the Healthy People 2020 objective of 77.9% as the gold standard, Davidson County was 27% below the national goal. The proportion of non-Hispanic white mothers was 15.7% below the goal, non-Hispanic black mothers were 32.2% below the goal, and Hispanic mothers were approximately 48.9% below the goal. (Figure 8)

First Trimester Prenatal Care among Teens

In 2010, fewer teen mothers received prenatal care compared to the general population of pregnant women in Davidson County. The percentage of teen mothers who received first trimester prenatal care was 41.3%, considerably lower than the percentage of females who received first trimester care as a whole, 56.7%. The proportion of teen mothers receiving care during the first trimester was highest among non-Hispanic whites (50.5%) compared to 40.4% of non-Hispanic blacks and 33.9% of Hispanics. (Table 11A)

Since 2006, the percentage of teen mothers initiating prenatal care during the first trimester has slightly improved among all races/ethnicities. Trends in first trimester prenatal care among non-Hispanic black teens coincide with trends for the general population. There was a slight decrease in first trimester prenatal care among non-Hispanic white teens, while percentages of first trimester prenatal care among Hispanic teens continue to improve.

Using the Healthy People 2020 Objective of 77.9% as the gold standard, it is clear that no group of teen mothers has achieved the goal. As of 2010, all teens in Davidson County were 47% below the national goal. The proportion of non-Hispanic white teens utilizing prenatal care was 35.2% below the goal, non-Hispanic blacks were 48.1% below the goal, and Hispanics were 56.5% below the goal. (Figure 9)

Late (Third Trimester) or No Prenatal Care

In 2010, 5.5% of women received late or no prenatal care. Examining the data by race/ethnicity shows that Hispanic women had a higher percentage of births with late or no prenatal care (8.4%) compared to non-Hispanic blacks (5.7%). The percentage of late or no prenatal care utilization among non-Hispanic whites remains unchanged from 2009 at 3.9%. (Table 12A)

When prenatal care is examined over time, the number of women receiving late or no prenatal care has been decreasing since 2007. In general, non-Hispanic blacks and Hispanics (or women of other races) have the greatest percentages of births to females who receive late or no prenatal care. Non-Hispanic white women have the lowest percentages. (Figure 10)

Figure 8: Percent of Women, aged 15–44, who Received First Trimester Prenatal Care, by Race/Ethnicity, Davidson County, TN, 2006–2010

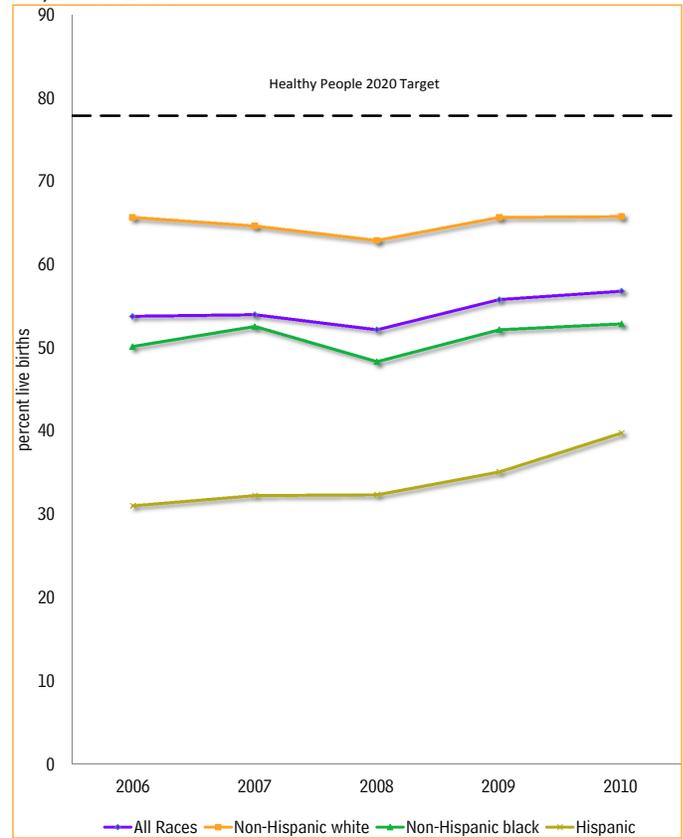


Figure 9: Percent of Teens, aged 15–19, who Received First Trimester Prenatal Care, by Race/Ethnicity, Davidson County, TN, 2006–2010

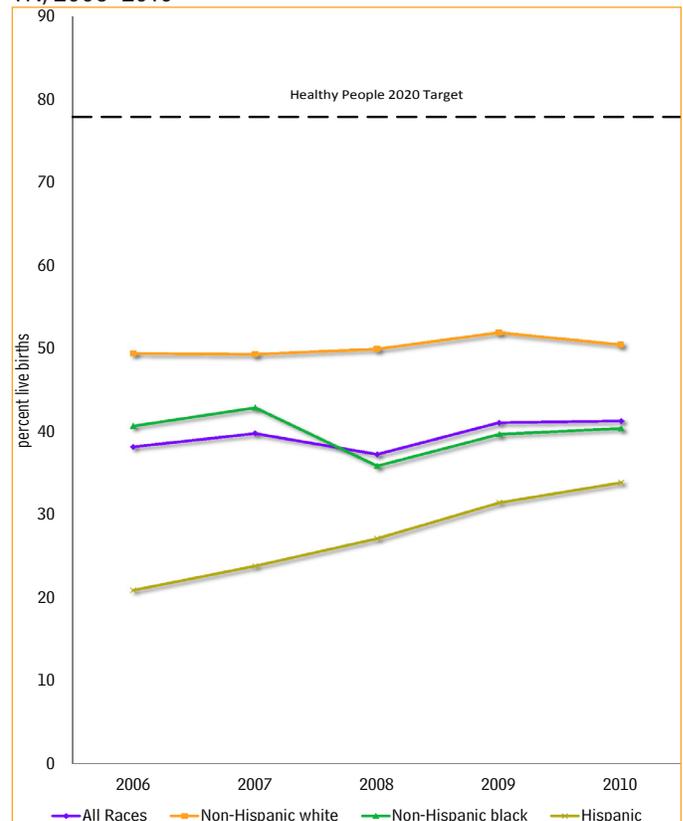
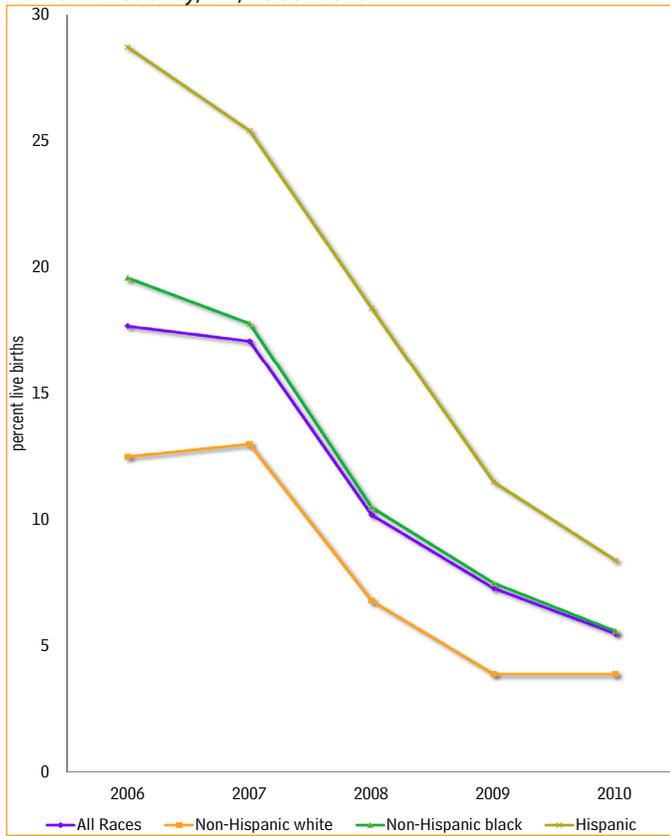


Figure 10: Percent of Women, aged 15–44, who Received Late (Third Trimester) or No Prenatal Care, by Race/Ethnicity, Davidson County, TN, 2006–2010

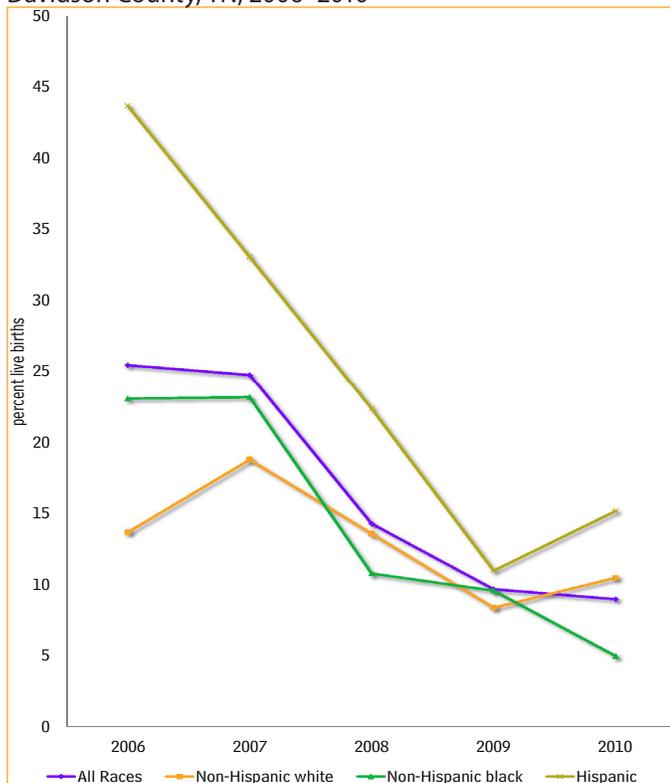


Late (Third Trimester) or No Prenatal Care among Teens

In 2010, 9% of teens received no prenatal care or did not enter prenatal care until the third trimester. Hispanics teens had a higher percentage of births to mothers with late or no prenatal care compared to non-Hispanic whites and non-Hispanic black teens. The respective percentages were 15.2%, 10.5%, and 5%. (Table 12A)

Overall, percentages of births to teens who receive late or no prenatal care have been declining since 2006. Hispanic teens have had the highest percentages receiving late or no prenatal care compared to other racial/ethnic groups, but have also shown the most drastic improvements. (Figure 11)

Figure 11: Percent of Teens, aged 15–19, who Received Late (Third Trimester) or No Prenatal Care, by Race/Ethnicity, Davidson County, TN, 2006–2010



METHOD OF DELIVERY, Caesarean Births

Caesarean section is one of the most commonly performed surgical operations and is a worldwide trend. There has been much debate as to what circumstances are imperative for caesarean births versus vaginal births. The rising numbers of caesarean deliveries suggest that in many cases the operation may be without medical indications, e.g. request by a mother or advice of a practitioner without a clear medical reason. Mothers who undergo caesarean deliveries without a clear medical indication are at increased risk for several adverse outcomes such as maternal death, infections, blood transfusion, or hysterectomy.²⁶ Neonatal deaths are usually low, but do persist and are more prevalent with caesarean births compared to vaginal births. The Healthy People 2020 objective for cesarean births aims to decrease the number of cesarean births for low risk first time mothers to 23.9% and to 81.7% for women who have had a prior cesarean birth.

Since 2006, the number of caesarean births in Davidson County has been on the rise, steadily increasing by 1–2% annually. In 2010, 35.2% (3,368) of the births in Davidson County were by caesarean delivery. Examining the number of women with caesarean births by race/ethnicity, non-Hispanic black females had the highest proportion of caesarean births; Hispanic women had the lowest proportion of caesarean births. The proportion of caesarean births among non-Hispanic white women was similar to that of the general population (Figures 12 & 13). Women aged 40+ had the highest number of caesarean births (51.4%) compared to women aged 30–39 (41.2%) and 20–29 (32.2%). (Table 13A)

Figure 12: Percent of Women who delivered via Caesarean, by Race/Ethnicity, Davidson County, TN, 2006–2010

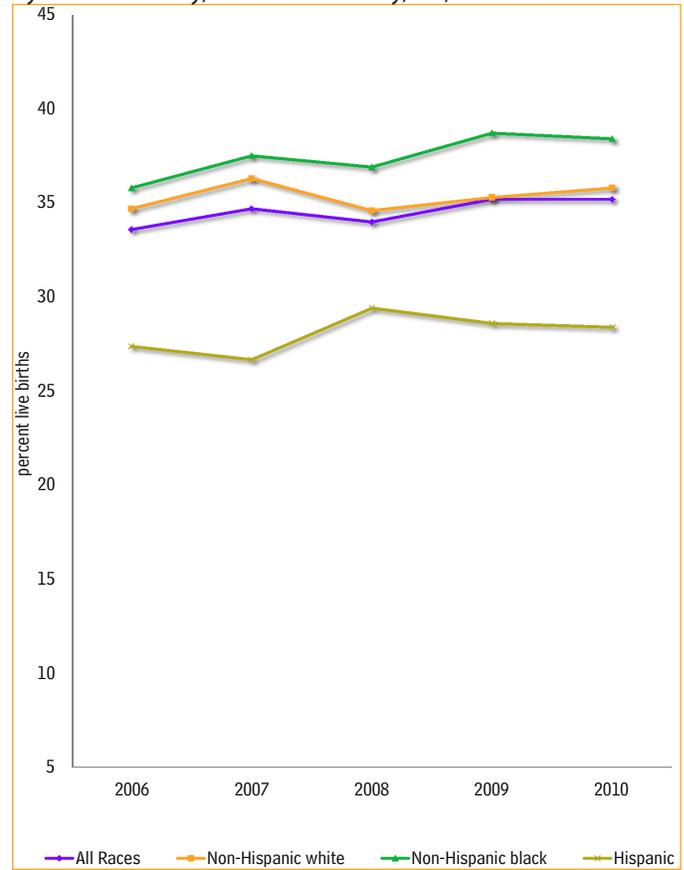
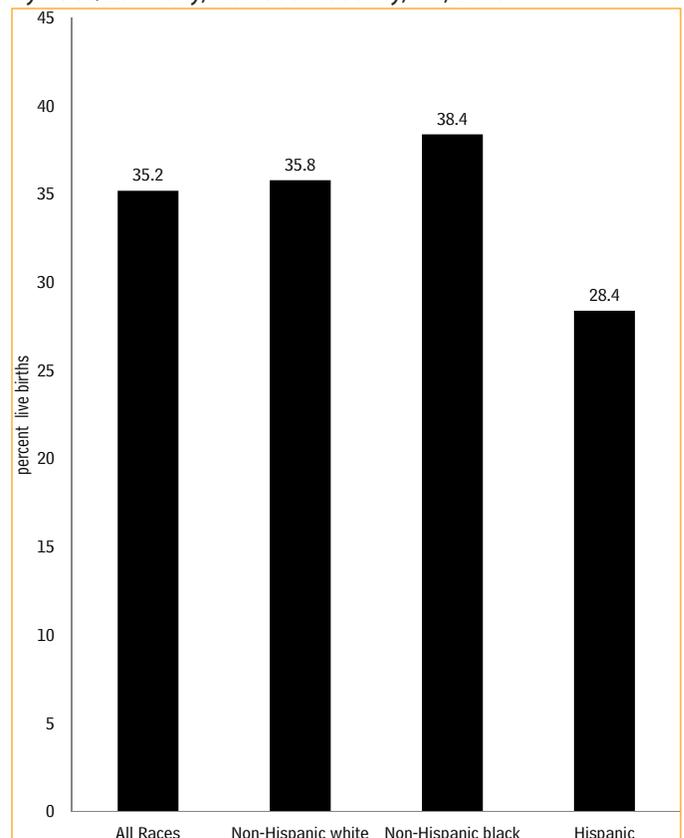


Figure 13: Percent of Women who delivered via Caesarean, by Race/Ethnicity, Davidson County, TN, 2010



BIRTH OUTCOMES

Low birth weight infants are 21 times more likely to die before their first birthday than normal weight babies; very low birth weight infants are 87 times more likely to die.

Birth weight is a powerful predictor of infant mortality and highly correlates with gestational age. Preterm birth is defined as the birth of an infant before 37 weeks of gestational age or three weeks before the due date. Low birth weight results from a shortened duration of gestation (preterm) and/or intrauterine growth restriction;¹ hence babies that are born preterm are also usually low birth weight. Low birth weight is defined as less than 2500 grams (5 ½ pounds) and very low birth weight (less common) is defined as less than 1500 grams (3 ⅓ pounds).

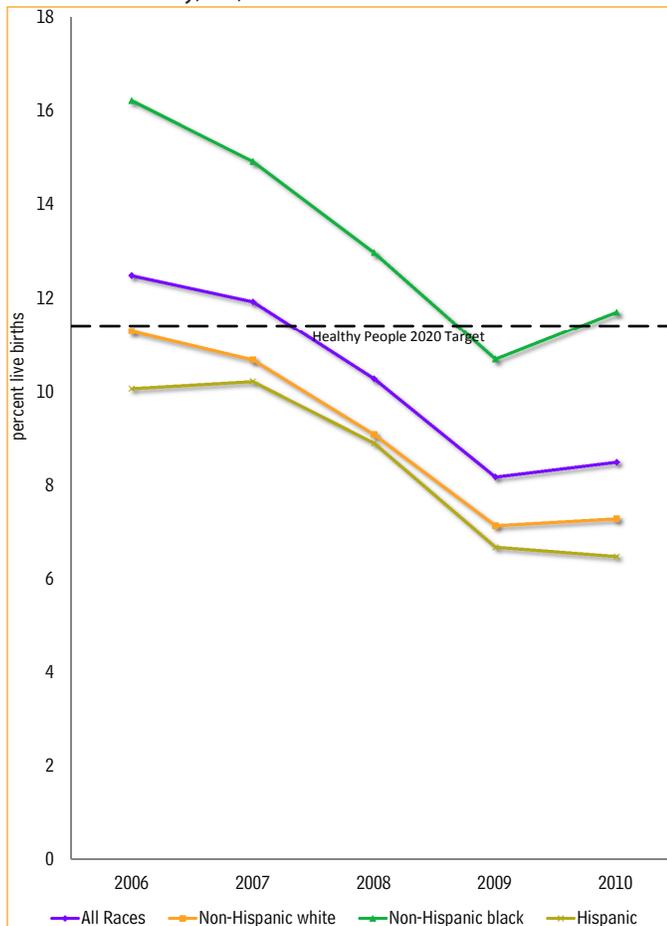
Typically, as birth weight increases, the risk of perinatal mortality decreases. Research shows that low birth weight infants are 21 times more likely to die before their first birthday than normal weight babies; very low birth weight infants are 87 times more likely to die.²⁷ Low birth weight babies that survive are at increased risk for developing lung disorders, heart disease, hyperactivity disorders, and delayed cognitive functioning.

While the exact causes of preterm birth and low birth weight are unknown, risk factors include previous preterm birth, socioeconomic status, smoking, and medical complications such as preeclampsia and fetal distress. Preterm and low birth weight births also occur more often among some racial/ethnic groups. For example, non-Hispanic black women are at a greater risk for delivering preterm and low birth weight babies compared to non-Hispanic whites and Hispanic women.²⁸

Preterm Births

In Davidson County, 8.5% of infants were born preterm in 2010, compared to 8.2% in 2009. When examined by race/ethnicity, 11.7% of non-Hispanic black infants were preterm compared to 7.3% of

Figure 14: Percent of Preterm Births, by Race/Ethnicity, Davidson County, TN, 2006–2010



¹ Intrauterine growth restriction (IUG) is poor growth of a baby while in mother's womb. The baby is considered small for gestational age (SGA) if it weighs 90% less than other babies that are the same gestational age.

non-Hispanic white infants, and 6.5% of Hispanic infants. An examination of preterm births through time can be found in Figure 14. Non-Hispanic blacks consistently had the highest percentage of preterm births; Hispanics had the lowest percentage of preterm births. Trends in preterm births among non-Hispanic white women have been similar to Hispanics. The Healthy People 2020 objective is to reduce the percentage of preterm births to 11.4%. Davidson County exceeded the 2020 goal (8.5%). Non-Hispanic blacks fell short of the goal by 2.6%. Non-Hispanic whites exceeded the goal by 36% and Hispanics exceeded the goal by 43%. (Table 14A)

Low & Very Low Birth Weight Births

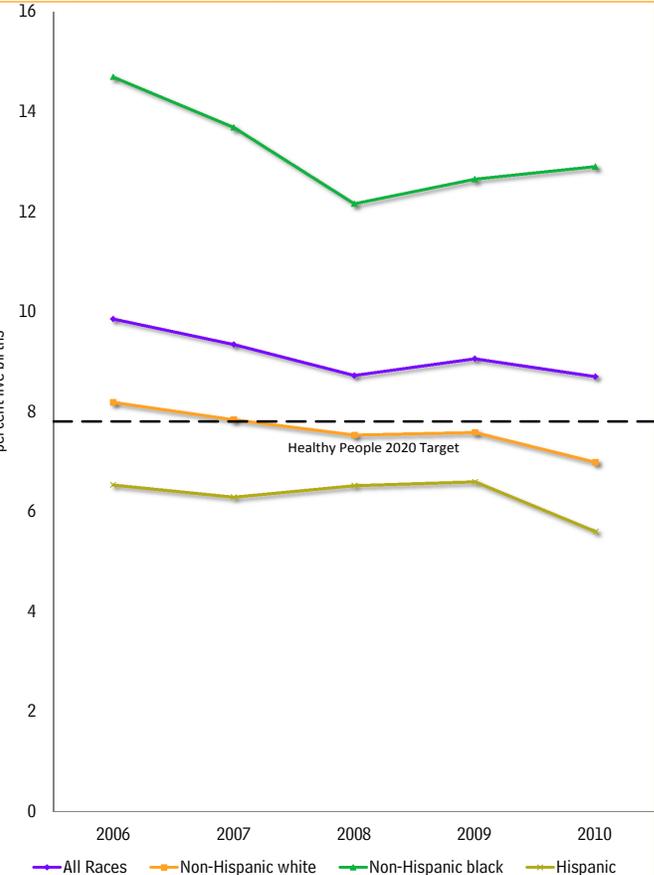
In 2010, 8.7% of all babies born in Davidson County weighed less than 2,500 grams. Both nationally and locally, there has been little change in the proportion of low birth weight infants over the past few years and the “black-white” disparity gap has remained fairly constant.

When examined by race/ethnicity, Davidson County closely mimics the national trend where the percentage of low birth weight infants hovers between 13 and 16 percent among non-Hispanic blacks and between 7 and 9 percent among non-Hispanic whites. For Hispanics, the proportion is smaller, with only 5 to 7 percent of babies born weighing less than 2,500 grams (Table 15A). The Healthy People 2020 objective for low birth weight is to reduce the percentage of births weighing less than 2,500 grams to 7.8%. Davidson County as a whole and all racial/ethnic groups exceeded this goal, with the exception on non-Hispanic blacks. Non-Hispanic blacks fell short of reaching this goal by 65.4%. (Figure 15)

Very low birth weight births (less than 1500 grams) continued to decline in Davidson County in 2010. Davidson County’s proportion of very low birth weight births is equivalent to the Healthy People 2020 target of 1.4%. This target was exceeded by all racial/ethnic groups beginning in 2005; however, non-Hispanic blacks continue to lag behind (71.4% above target). (Table 16A)

When examined by race/ethnicity, Davidson County closely mimics the national trend where the percentage of low birth weight infants hovers between 13 and 16% among non-Hispanic blacks and between 7 and 9% among non-Hispanic whites.

Figure 15: Percent of Low Birth Weight Births, by Race/Ethnicity, Davidson County, TN, 2006–2010



References

1. Martin, J.A., Hamilton, B.E., Ventura, S.J., Osterman, J.K., Wilson, E.C., & Matthews, T.J. (2010). Births: Final Data for 2010. Centers for Disease Control and Prevention National Center for Health Statistics: Division of Vital Statistics reports, vol 61:1.
2. Matthews, T.J., & Hamilton, B.E. (2009). Delayed Childbearing: More Women Are Having Their First Child Later in Life. Centers for Disease Control and Prevention National Center for Health Statistics: Division of Vital Statistics reports, no 21.
3. Mosher, W.D., Jones, J., & Abma, J.C. (2012). Intended and Unintended Births in the United States: 1982-2010. Centers for Disease Control and Prevention National Center for Health Statistics: Division of Vital Statistics, no 55.
4. Young, T.K. (1998). Population Health: Concepts and Methods. New York: Oxford University Press.
5. Mausner, J.S., & Kramer, S. (1985). Epidemiology: An Introductory Text. Philadelphia: W.B. Saunders Company.
6. U.S. Census Bureau: American Community Survey. (2010). 2010 American Survey Population Estimates. Retrieved August 24, 2012 from <http://factfinder2.census.gov/>
7. Hamilton, B.E., Martin, J.A., & Sutton, P.D. (2003). Births: Preliminary Data for 2003. Centers for Disease Control and Prevention National Center for Health Statistics: Division of Vital Statistics reports, vol 53:9.
8. Hamilton, B.E., & Ventura, S.J. (2012). Birth Rates for Teenagers Reach Historic Lows for all Age and Ethnic Groups. Centers for Disease Control and Prevention National Center for Health Statistics reports: Division of Vital Statistics, no 89.
9. Parker, J.D., & Maddens, J.H. (2010). The Correspondence between Interracial Births and Multiple Race Reporting. American Journal of Public Health, 92:12, 1976-1981.
10. U.S. Census Bureau. (2011). Overview of Race and Hispanic Origin: 2010. 2010 Census Briefs, March 2011.
11. U.S. Census Bureau. (2012). Most Children Younger than Age 1 are Minorities. 2010 Census Briefs, May 2012.
12. U.S. Census Bureau: American Community Survey. (2010). Race, Combinations of Two Races, and not Hispanic or Latino; generated by Amanda Holley using American FactFinder; <<http://factfinder.census.gov/>>; 12 October 2012).
13. Kotch, J.B. (1997). Eds. Maternal and Child Health: Programs, Problems, and Policy in Public Health. Maryland. Aspen Publications.

14. U.S. Census Bureau: American Community Survey. (2010). One Year Estimates: Household Income in the Past 12 Months (in 2010 Inflation Adjusted Dollars); generated by Amanda Holley using American FactFinder; <<http://factfinder.census.gov/>>; 31 August 2012).
15. U.S. Census Bureau: American Community Survey. (2010). One Year Estimates: Sex by Educational Attainment for Population 25 and Older; generated by Amanda Holley using American FactFinder; <<http://factfinder.census.gov/>>; 31 August 2012).
16. U.S. Census Bureau. (2011). Income, Poverty, and Health Coverage in the United States: 2011. Retrieved 09/13/2012 from http://www.census.gov/newsroom/releases/archives/income_wealth/cb12-172.html.
17. Riley, T., & Yondorf, B. (2000). Access for the Uninsured: Lessons from 25 Years of State Initiatives. National Academy for State Health Policy: Portland, ME.
18. U.S. Census Bureau. American Community Survey. (2010). One Year Estimates: Health Insurance Coverage Status by Sex by Age; generated by Amanda Holley using American FactFinder; <<http://factfinder2.census.gov/>>; 31 August 2012).
19. Bennett, T., Braveman, P., Egerter, S. & Kiely, J. L. (1994). Maternal Marital Status as a Risk Factor for Infant Mortality. *Family Planning Perspectives*, 26:252-256 &271.
20. Luo, Z.C., Wilkins, R., & Kramer, M.S. (2004). Disparities in Pregnancy Outcomes According to Marital and Cohabitation Status. *Journal of Obstetrics and Gynecology*, 103:6, 1300-1307.
21. U.S. Census Bureau. American Community Survey. (2010). One Year Estimates: Births by Marital Status and Age; generated by Amanda Holley using American FactFinder; <<http://factfinder.census.gov/>>; 31 August 2012).
22. Bailey, B.A., McCook, J.G., Hodge, A., & McGrady, L. (2011). Infant Birth Outcomes among Substance Using Women: Why Quitting Smoking during Pregnancy is just as important as Quitting Illicit Drug Use. *Journal of Maternal and Child Health*.
23. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. (2010). Retrieved 05/23/2011 from www.mchb.hrsa.gov/chusa10popchae/pages/109ma.html
24. Friedman, S.H., Heneghan, A., & Rosenthal, M. (2009). Characteristics of Women Who Do Not Seek Prenatal Care and Implications for Prevention. *Journal of Obstetrics, Gynecology, and Neonatal Nursing*, 38:174-181.
25. Johnson, A.A., Hatcher, B.J., El-Khorazaty, M.N., & Milligan, R.A. (2007). Determinants of Inadequate Prenatal Care Utilization by African American Women. *Journal of the Poor and Underserved*, 18:3, 620-636.
26. Souza, J.P., Gulmezoglu, A., Lumbiganon, P., Laopaiboon, M., Carroli, G., & Fawole, B. et al. (2010). Cesarean Section without Medical Indications is Associated with an Increased Risk of Adverse Short-term Maternal Outcomes: the 2004-2008 WHO Global Survey on Maternal and Perinatal Health. *BMC Medicine*, 8:71.

27. Centers for Disease Control and Prevention. Preterm Birth. Retrieved 07/25/2011 from www.cdc.gov/reproductivehealth/MaternalInfantHealth/PretermBirth.htm
28. Martin, J.A., Kirmeyer, S., Osterman, M., & Shephard, R.A. (2009). Born a Bit Too Early: Recent Trends in Late Preterm Births. National Center for Health Statistics Data Brief, 21.

Appendix

Table 8A: Number of Births, General Fertility Rates, and Age-Specific Fertility Rates by Race/Ethnicity and Age, Davidson County, TN, 2005–2010

Year	Total Population				Non-Hispanic White			
	All	Reproductive Age	Teens		All	Reproductive Age	Teens	
		15–44	10–14	15–19		15–44	10–14	15–19
Number								
2010	9,557	9,531	10	785	4,690	4,684	2	210
2009	9,774	9,742	12	866	4,641	4,630	2	237
2008	10,100	10,064	14	1,033	4,700	4,690	2	280
2007	9,991	9,970	15	1,028	4,583	4,578	2	255
2006	9,966	9,928	22	960	4,662	4,647	4	299
2005	9,409	9,370	23	1,020	4,475	4,464	3	326
Fertility Rate**								
2010	54.9	64.5	0.6	40.6	48.5	57.9	0.3	24.4
2009	66.6	66.3	0.7	46.1	54.7	54.6	**	25.7
2008	77	76.8	0.8	51.8	63.1	63	**	27.2
2007	74.8	74.6	0.8	50.7	60.4	60.4	**	24.9
2006	80.5	80.2	1.3	52.3	66.7	66.5	**	31.6
2005	78.5	78.2	1.4	71.7	64.7	64.6	**	44.1
Year	Non-Hispanic Black				Hispanics			
	All	Reproductive Age	Teens		All	Reproductive Age	Teens	
		15–44	10–14	15–19		15–44	10–14	15–19
Number								
2010	2,857	2,847	7	401	1,593	1,590	1	165
2009	3,004	2,992	9	428	1,657	1,654	1	181
2008	3,092	3,075	10	498	1,876	1,869	2	232
2007	2,997	2,986	8	501	2,008	2,003	5	251
2006	2,942	2,925	13	403	1,949	1,944	5	238
2005	2,842	2,823	16	472	1,722	1,714	4	206
Fertility Rate**								
2010	55	65	**	53.4	96.9	106.9	**	82.5
2009	68.8	68.6	**	57.9	149	148.8	**	158.8
2008	74	73.6	1.6	65	206	205.2	**	173.4
2007	70.2	69.9	**	64	227.5	227	**	225.1
2006	73.6	73.2	2.1	56.5	221.3	242.8	**	252.9
2005	75.9	75.4	2.7	41.8	218.2	217.2	**	376.6

** Fertility Rates not calculated when the number of births less than 10

**Table 9A: Number and Percent of non-Marital Births by Race/
Ethnicity and Age ,Davidson County, TN, 2005–2010**

Year	Total Population							Non-Hispanic White								
	All	Reproductive Age		Teens		Adults			All	Reproductive Age		Teens		Adults		
		15–44	10–14	15–19	20–29	30–39	40+	15–44		10–14	15–19	20–29	30–39	40+		
	Number							Number								
2010	4,299	4,284	10	713	2,682	842	50	1,214	1,211	2	179	780	233	20		
2009	4,497	4,483	12	798	2,861	778	48	1,219	1,216	2	204	809	188	16		
2008	4,667	4,647	13	951	2,898	759	46	1,224	1,222	2	243	792	174	13		
2007	4,637	4,622	15	920	2,971	686	45	1,249	1,247	2	212	824	186	25		
2006	4,449	4,424	22	812	2,914	658	43	1,217	1,211	4	230	798	174	11		
2005	4,248	4,224	23	903	2,668	622	32	1,188	1,184	3	270	730	168	17		
	Percent of Live Births							Percent of Live Births								
2010	45	44.9	100	90.8	54	23.8	20.2	25.9	25.9	*	85.2	34.6	11.2	13.6		
2009	46	46	100	92.1	54.3	23	19.7	26.3	26.3	*	86.1	34.8	9	12.1		
2008	46.2	46.2	92.9	92.1	53.4	22.3	21.2	26	39.7	*	86.8	34.1	8.9	9.8		
2007	46.4	46.4	100	89.5	52.9	22	21.1	27.3	27.2	*	83.1	34.7	10.2	19.4		
2006	44.5	44.6	100	84.6	52.2	20.5	21.2	26.1	26.1	*	76.9	34.1	9.2	9.4		
2005	45.1	45.1	100	88.5	51.5	20.8	16.1	26.5	26.5	*	82.8	32.9	9.4	12.1		
Year	Non-Hispanic Black							Hispanic								
	All	Reproductive Age		Teens		Adults			All	Reproductive Age		Teens		Adults		
		15–44	10–14	15–19	20–29	30–39	40+	15–44		10–14	15–19	20–29	30–39	40+		
	Number							Number								
2010	2,066	2,058	7	388	1,318	335	18	937	936	1	139	539	249	9		
2009	2,214	2,205	9	420	1,398	367	20	967	965	1	158	603	195	10		
2008	2,228	2,216	9	490	1,384	326	19	1,110	1,105	2	198	661	237	12		
2007	2,153	2,145	8	495	1,377	264	9	1,134	1,129	5	196	708	215	10		
2006	2,053	2,039	13	382	1,375	266	17	1,086	1,081	5	182	693	195	11		
2005	2,009	1,993	16	455	1,265	263	10	976	972	4	165	628	176	3		
	Percent of Live Births							Percent of Live Births								
2010	72.3	72.3	*	96.8	79.6	45.4	32.1	58.8	58.9	*	84.2	61.9	47.1	33.3		
2009	73.7	73.7	*	98.1	79.4	49.3	32.3	58.4	58.3	*	87.3	61	42.6	34.5		
2008	72.1	72.1	*	98.4	76.5	45	40.4	59.2	59.1	*	85.3	59.8	46.5	52.2		
2007	71.8	71.8	*	98.8	75.4	42.2	*	56.5	56.4	*	78.1	58.2	42.2	38.5		
2006	69.8	69.7	100	94.8	76	39.7	36.2	55.7	55.6	*	76.5	56.2	43.8	40.7		
2005	70.7	70.6	100	96.4	74.5	41.9	33.3	56.7	56.7	*	80.1	57.6	43.5	*		

* Percentage not calculated when the number of births is less than 10

Table 10A: Number & Percent of Births to Women who Smoked During Pregnancy by Race/Ethnicity and Age, Davidson County, TN, 2005–2010

Year	Total Population			Non-Hispanic White			Non-Hispanic Black			Hispanic		
	Reproductive Age Teens			Reproductive Age Teens			Reproductive Age Teens			Reproductive Age Teens		
	Total	15–44	15–19									
	Number			Number			Number			Number		
2010	941	941	76	602	602	53	305	305	19	20	20	3
2009	1,022	1,020	87	651	650	52	332	332	32	24	24	3
2008	1,139	1,136	127	744	744	81	338	337	36	40	38	9
2007	1,174	1,173	132	780	779	83	338	338	41	35	35	4
2006	1,198	1,193	149	805	801	106	332	332	35	41	41	4
2005	1,199	1,194	172	836	832	119	316	316	47	34	33	5
	Percent Live Births			Percent Live Births			Percent Live Births			Percent Live Births		
2010	9.8	9.9	9.7	12.8	12.9	25.2	10.7	10.7	4.7	1.3	1.3	*
2009	10.5	10.5	10	14	14	21.9	11.1	11.1	7.5	1.4	1.5	*
2008	11.3	11.3	12.3	15.8	15.9	28.9	10.9	11	7.2	2.1	2	*
2007	11.8	11.8	12.8	17	17	32.5	11.3	11.3	8.2	1.7	1.7	*
2006	12	12	15.5	17.3	17.2	35.5	11.3	11.4	8.7	2.1	2.1	*
2005	12.7	12.7	16.9	18.7	18.6	36.5	11.1	11.2	10	2	1.9	*

* Percentage not calculated when the number of births is less than 10

Table 11A: Number and Percent of Births to Women who Entered Prenatal Care during the First Trimester by Race/Ethnicity and Age, Davidson County, TN, 2005–2010

Year	Total Population						Non-Hispanic White					
	Reproductive						Reproductive					
	All	Age 15–44	Teens 15–19	Adults 20–29	30–39	40+	All	Age 15–44	Teens 15–19	Adults 20–29	30–39	40+
	Number						Number					
2010	5,423	5,413	324	2,727	2,229	140	3,082	3,080	106	1,400	1,487	89
2009	5,448	5,434	356	2,808	2,140	141	3,048	3,041	123	1,439	1,399	86
2008	5,268	5,255	385	2,730	2,023	127	2,961	2,954	140	1,387	1,349	84
2007	5,385	5,382	409	2,926	1,924	125	2,965	2,963	126	1,470	1,278	91
2006	5,356	5,346	367	2,850	2,028	107	3,061	3,055	148	1,455	1,381	76
2005	4,990	4,977	391	2,626	1,841	128	2,837	2,832	153	1,351	1,234	99
	Percent of Live Births						Percent of Live Births					
2010	56.7	56.8	41.3	54.9	62.9	56.7	65.7	65.8	50.5	62.1	71.6	60.5
2009	55.8	55.8	41.1	53.3	63.4	57.8	65.7	65.7	51.9	61.9	72	65.2
2008	52.2	52.2	37.3	50.3	59.5	58.5	63	63	50	59.7	68.8	63.6
2007	53.9	54	39.8	52.1	61.6	57.9	64.7	64.7	49.4	61.9	70.1	70.5
2006	53.7	53.8	38.2	51.1	63.3	52.7	65.7	65.7	49.5	62.1	72.7	65
2005	53	53.1	38.3	50.7	61.7	64.3	63.4	63.4	46.9	60.8	69.3	70.7
	Non-Hispanic Black						Hispanic					
	Reproductive						Reproductive					
	All	Age 15–44	Teens 15–19	Adults 20–29	30–39	40+	All	Age 15–44	Teens 15–19	Adults 20–29	30–39	40+
	Number						Number					
2010	1,508	1,507	162	898	416	31	634	632	56	347	219	12
2009	1,565	1,563	170	947	415	32	583	581	57	323	192	10
2008	1,495	1,498	179	899	390	25	605	605	63	363	170	9
2007	1,572	1,572	215	986	355	16	648	647	60	381	200	6
2006	1,471	1,468	164	912	372	21	605	604	50	385	162	7
2005	1,429	1,424	195	864	352	15	511	508	36	317	149	8
	Percent of Live Births						Percent of Live Births					
2010	52.8	52.9	40.4	54.3	56.4	55.4	39.8	39.7	33.9	39.8	41.4	44.4
2009	52.1	52.2	39.7	53.8	55.8	51.6	35.2	35.1	31.5	32.7	41.9	34.5
2008	48.4	48.7	35.9	49.7	53.9	53.2	32.2	32.4	27.2	32.8	33.3	*
2007	52.5	52.6	42.9	54	56.8	43.2	32.3	32.3	23.9	31.3	39.3	*
2006	50	50.2	40.7	50.4	55.5	44.7	31	31.1	21	31.2	36.4	*
2005	50.3	50.4	41.3	50.9	56.1	50	29.7	29.6	17.5	29.1	36.8	*

* Percentage not calculated when the number of births is less than 10

Table 12A: Number and Percent of Births to Women who Received Late or No Prenatal Care during Pregnancy by Race/Ethnicity and Age, Davidson County, TN, 2005–2010

Year	Total Population						Non-Hispanic White					
	Reproductive						Reproductive					
	All	Age 15–44	Teens 15–19	Adults 20–29	30–39	40+	All	Age 15–44	Teens 15–19	Adults 20–29	30–39	40+
	Number						Number					
2010	524	520	71	298	133	18	185	185	22	106	51	6
2009	637	635	84	382	163	6	182	182	20	109	51	2
2008	1,039	1,031	148	590	273	23	320	318	38	184	86	11
2007	1,716	1,709	255	977	438	41	595	593	48	322	206	18
2006	1,765	1,755	245	1,020	454	41	584	581	41	308	215	19
2005	1,015	1,010	178	593	221	20	254	254	35	149	64	6
	Percent of Live Births						Percent of Live Births					
2010	5.5	5.5	9	6	3.8	7.3	3.9	3.9	10.5	4.7	2.5	*
2009	6.5	6.5	9.7	7.2	4.8	*	3.9	3.9	8.4	4.7	2.6	*
2008	10.3	10.2	14.3	10.9	8	10.6	6.8	6.8	13.6	7.9	4.4	8.3
2007	17.2	17.1	24.8	17.4	14	19.2	13	13	18.8	13.6	11.3	14
2006	17.7	17.7	25.5	18.3	14.2	20.2	12.5	12.5	13.7	13.1	11.3	16.2
2005	10.8	10.8	17.5	11.5	7.4	10	5.7	5.7	10.7	6.7	3.6	*
Year	Non-Hispanic Black						Hispanic					
	Reproductive						Reproductive					
	All	Age 15–44	Teens 15–19	Adults 20–29	30–39	40+	All	Age 15–44	Teens 15–19	Adults 20–29	30–39	40+
	Number						Number					
2010	162	159	20	97	38	4	134	133	25	67	37	4
2009	227	225	41	130	53	1	191	191	20	125	43	3
2008	329	324	54	184	81	6	345	344	52	201	88	4
2007	537	533	116	306	103	9	510	509	83	310	106	10
2006	579	573	93	355	114	13	557	557	104	334	113	6
2005	342	339	67	196	72	4	388	387	73	238	74	3
	Percent of Live Births						Percent of Live Births					
2010	5.7	5.6	5	5.9	5.1	*	8.4	8.4	15.2	7.7	7	*
2009	7.6	7.5	9.6	7.4	7.1	*	11.5	11.5	11	12.7	9.4	*
2008	10.6	10.5	10.8	10.2	11.2	*	18.4	18.4	22.4	18.2	17.3	*
2007	17.9	17.8	23.2	16.8	16.5	*	25.4	25.4	33.1	25.5	20.8	38.5
2006	19.7	19.6	23.1	19.6	17	27.7	28.6	28.7	43.7	27.1	25.4	*
2005	12	12	14.2	11.5	11.5	*	22.5	22.6	35.4	21.8	18.3	*

* Percentage not calculated when the number of births is less than 10

Table 13A: Number & Percent of Cesarean Births by Race/Ethnicity and Age, Davidson County, TN, 2005–2010

Year	Total Population						Non-Hispanic White					
	All	Reproductive			40+		All	Reproductive			40+	
		Age 15–44	Teens 15–19	Adults 20–29				Age 15–44	Teens 15–19	Adults 20–29		
		Number						Number				
2010	3,368	3,360	178	1,601	1,460	127	1,677	1,675	39	709	846	83
2009	3,445	3,428	241	1,668	1,397	134	1,636	1,630	67	695	803	71
2008	3,437	3,421	246	1,746	1,336	106	1,628	1,621	65	722	778	62
2007	3,464	3,458	269	1,842	1,255	95	1,664	1,661	77	793	735	59
2006	3,348	3,336	254	1,699	1,295	96	1,618	1,611	75	723	766	53
2005	3,023	3,009	251	1,545	1,124	95	1,466	1,459	81	653	657	72
		Percent of Live Births						Percent of Live Births				
2010	35.2	35.3	22.7	32.2	41.2	51.4	35.8	35.8	18.6	31.5	40.7	56.5
2009	35.2	35.2	27.8	31.6	41.4	54.9	35.3	35.2	28.3	29.9	41.3	53.8
2008	34	34	23.8	32.2	39.3	48.8	34.6	34.6	23.2	31.1	39.7	47
2007	34.7	34.7	26.2	32.8	40.2	44.6	36.3	36.3	30.2	33.4	40.3	45.7
2006	33.6	33.6	26.5	30.5	40.4	47.3	34.7	34.7	25.1	30.9	40.3	45.3
2005	32.1	32.1	24.6	29.8	37.7	47.7	32.8	32.7	24.8	29.4	36.9	51.4
Year	Non-Hispanic Black						Hispanic					
	All	Reproductive			40+		All	Reproductive			40+	
		Age 15–44	Teens 15–19	Adults 20–29				Age 15–44	Teens 15–19	Adults 20–29		
		Number						Number				
2010	1,098	1,097	106	617	345	29	452	450	33	220	190	9
2009	1,163	1,159	134	655	335	35	474	471	36	252	171	14
2008	1,141	1,136	144	665	302	28	552	549	32	320	187	13
2007	1,123	1,120	147	674	281	18	536	536	41	311	178	6
2006	1,053	1,050	124	605	296	26	535	534	46	317	158	13
2005	987	982	133	569	266	14	473	471	33	287	147	6
		Percent of Live Births						Percent of Live Births				
2010	38.4	38.5	26.4	37.3	46.7	51.8	28.4	28.3	20	25.3	35.9	*
2009	38.7	38.7	31.3	37.2	45	56.5	28.6	28.5	19.9	25.5	37.3	48.3
2008	36.9	36.9	28.9	36.7	41.7	59.6	29.4	29.4	13.8	28.9	36.7	56.5
2007	37.5	37.5	29.3	36.9	45	48.6	26.7	26.8	16.3	25.6	35	*
2006	35.8	35.9	30.8	33.4	44.2	55.3	27.4	27.5	19.3	25.7	35.5	48.1
2005	34.7	34.8	28.2	33.5	42.4	46.7	27.5	27.5	16	26.3	36.3	*

* Percentage not calculated when the number of births is less than 10

Table 14A: Number and Percent of Preterm Births by Race/Ethnicity and Age, Davidson County, TN, 2005–2010

Year	Total Population						Non-Hispanic White					
	All	Reproductive Age			Adults		All	Reproductive Age			Adults	
		15–44	15–19	20–29	30–39	40+		15–44	15–19	20–29	30–39	40+
	Number						Number					
2010	813	811	67	412	306	28	343	343	15	160	156	12
2009	800	796	82	401	288	28	332	331	21	153	151	6
2008	1,037	1,027	118	513	372	30	427	422	26	191	188	21
2007	1,191	1,188	130	648	388	22	489	488	27	241	211	9
2006	1,244	1,238	141	672	396	31	526	523	39	263	203	19
2005	1,042	1,035	114	607	302	15	437	435	28	246	154	9
	Percent of Live Births						Percent of Live Births					
2010	8.5	8.5	8.5	8.3	8.6	11.3	7.3	7.3	7.1	7.1	7.5	8.2
2009	8.2	8.2	9.5	7.6	8.5	11.5	7.2	7.1	8.9	6.6	7.8	*
2008	10.3	10.2	11.4	9.5	10.9	13.8	9.1	9	9.3	8.2	9.6	15.9
2007	11.9	11.9	12.6	11.5	12.4	10.3	10.7	10.7	10.6	10.1	11.6	*
2006	12.5	12.5	14.7	12	12.4	15.3	11.3	11.3	13	11.2	10.7	16.2
2005	11.1	11	11.2	11.7	10.1	7.5	9.8	9.7	8.6	11.1	8.6	*
Year	Non-Hispanic Black						Hispanic					
	All	Reproductive Age			Adults		All	Reproductive Age			Adults	
		15–44	15–19	20–29	30–39	40+		15–44	15–19	20–29	30–39	40+
	Number						Number					
2010	334	334	40	181	101	12	104	104	10	59	34	1
2009	321	320	44	174	92	11	111	110	13	62	31	5
2008	401	397	66	215	111	6	167	166	24	89	52	2
2007	447	446	80	271	90	5	205	204	18	117	67	2
2006	477	477	72	278	121	6	196	194	28	109	53	4
2005	420	415	65	241	104	6	166	166	21	109	36	0
	Percent of Live Births						Percent of Live Births					
2010	11.7	11.7	10	10.9	13.7	21.4	6.5	6.5	6.1	6.8	6.4	*
2009	10.7	10.7	10.3	9.9	12.4	17.7	6.7	6.7	7.2	6.3	6.8	*
2008	13	12.9	13.3	11.9	15.3	*	8.9	8.9	10.3	8	10.2	*
2007	14.9	14.9	16	14.8	14.4	*	10.2	10.2	7.2	9.6	13.2	*
2006	16.2	16.3	17.9	15.4	18.1	*	10.1	10	11.8	8.8	11.9	*
2005	14.8	14.7	13.8	14.2	16.6	*	9.6	9.7	10.2	10	8.9	*

* Percentage not calculated when the number of births is less than 10

Table 15A: Number and Percent of Low Birth Weight Births by Race/Ethnicity and Age, Davidson County, TN, 2005–2010

Year	Total Population						Non-Hispanic White					
	All	Reproductive Age			Adults		All	Reproductive Age			Adults	
		15–44	15–19	20–29	30–39	40+		15–44	15–19	20–29	30–39	40+
	Number						Number					
2010	827	823	84	419	288	34	330	330	23	154	138	15
2009	885	883	100	464	288	32	352	351	26	171	140	14
2008	881	872	96	473	281	29	354	350	17	178	142	17
2007	933	932	121	489	302	20	359	359	24	171	157	7
2006	981	974	111	549	284	35	381	376	22	198	141	18
2005	893	889	104	491	275	20	392	389	28	210	137	15
	Percent of Live Births						Percent of Live Births					
2010	8.7	8.6	10.7	8.4	8.1	13.8	7	7	11	6.8	6.6	10.2
2009	9.1	9.1	11.5	8.8	8.5	13.1	7.6	7.6	11	7.4	7.2	10.6
2008	8.7	8.7	9.3	8.7	8.3	13.4	7.5	7.5	6.1	7.7	7.2	12.9
2007	9.3	9.3	11.8	8.7	9.7	9.4	7.8	7.8	9.4	7.2	8.6	*
2006	9.8	9.8	11.6	9.8	8.9	17.2	8.2	8.1	7.4	8.5	7.4	15.4
2005	9	9.5	10.2	9.5	9.2	10.1	8.8	8.7	8.6	9.5	7.7	10.7
Year	Non-Hispanic Black						Hispanic					
	All	Reproductive Age			Adults		All	Reproductive Age			Adults	
		15–44	15–19	20–29	30–39	40+		15–44	15–19	20–29	30–39	40+
	Number						Number					
2010	368	366	47	200	106	13	90	90	11	50	26	3
2009	380	380	56	216	97	11	109	109	13	63	30	3
2008	376	373	61	214	90	9	122	120	16	68	36	2
2007	410	410	77	236	91	6	126	125	16	67	38	4
2006	432	431	63	256	103	10	127	127	23	72	27	5
2005	386	385	61	216	105	3	91	91	15	53	23	0
	Percent of Live Births						Percent of Live Births					
2010	12.9	12.9	11.7	12.1	14.4	23.2	5.6	5.7	6.7	5.7	4.9	*
2009	12.6	12.7	13.1	12.3	13	17.7	6.6	6.6	7.2	6.4	6.6	*
2008	12.2	12.1	12.2	11.8	12.4	*	6.5	6.4	6.9	6.1	7.1	*
2007	13.7	13.7	15.4	12.9	14.6	*	6.3	6.2	6.4	5.5	7.5	*
2006	14.7	14.7	15.6	14.2	15.4	21.3	6.5	6.5	9.7	5.8	6.1	*
2005	13.6	13.6	12.9	12.7	16.7	*	5.3	5.3	7.3	4.9	5.7	*

* Percentage not calculated when the number of births is less than 10

Table 16A: Number and Percent of Very Low Birth Weight Births by Race/Ethnicity and Age, Davidson County, TN, 2005–2010

Year	Total Population						Non-Hispanic White					
	All	Reproductive			40+		All	Reproductive			40+	
		Age 15–44	Teens 15–19	Adults 20–29				Age 15–44	Teens 15–19	Adults 20–29		
		Number						Number				
2010	133	132	10	67	51	5	46	46	5	24	15	2
2009	152	151	22	71	52	7	53	53	8	17	25	3
2008	154	151	18	76	53	4	50	50	2	30	16	2
2007	174	174	21	89	59	5	66	66	3	29	33	1
2006	178	177	19	89	64	5	67	66	2	33	29	2
2005	181	180	18	102	60	0	58	57	5	28	24	0
		Percent of Live Births						Percent of Live Births				
2010	1.4	1.4	1.3	1.3	1.4	*	1	1	*	1.1	0.7	*
2009	1.6	1.5	2.5	1.3	1.5	*	1.1	1.1	*	0.7	1.3	*
2008	1.5	1.5	1.7	1.4	1.6	*	1.1	1.1	*	1.3	0.8	*
2007	1.7	1.7	2	1.6	1.9	*	1.4	1.4	*	1.2	1.8	*
2006	1.8	1.8	2	1.6	2	*	1.4	1.4	*	1.4	1.5	*
2005	1.9	1.9	1.8	2	2	*	1.3	1.3	*	1.3	1.3	*
Year	Non-Hispanic Black						Hispanic					
	All	Reproductive			40+		All	Reproductive			40+	
		Age 15–44	Teens 15–19	Adults 20–29				Age 15–44	Teens 15–19	Adults 20–29		
		Number						Number				
2010	68	67	4	34	27	2	13	13	1	8	4	0
2009	80	80	13	45	21	1	14	14	1	6	5	2
2008	84	82	16	36	28	2	15	14	0	9	5	0
2007	83	83	14	48	19	2	17	17	4	8	4	1
2006	86	86	14	41	28	3	22	22	3	13	6	0
2005	95	95	12	56	27	0	25	25	1	16	8	0
		Percent of Live Births						Percent of Live Births				
2010	2.4	2.4	*	2.1	3.7	*	0.8	0.8	*	*	*	*
2009	2.7	2.7	3	2.6	2.8	*	0.8	0.8	*	*	*	*
2008	2.7	2.7	0.3	2	3.9	*	0.8	0.7	*	*	*	*
2007	2.8	2.8	2.8	2.6	3	*	0.8	0.8	*	*	*	*
2006	2.9	2.9	3.5	2.3	4.2	*	1.1	1.1	*	1.1	*	*
2005	3.3	3.4	2.5	3.3	4.3	*	1.5	1.5	*	1.5	*	*

* Percentage not calculated when the number of births is less than 10

