## LIVE BIRTHS

According to preliminary data, there were more than 4.3 million live births in the United States in 2007, an increase of 1 percent from the previous year. The number of births rose in every racial and ethnic group, most noticeably among Asian/Pacific Islander women (6 percent). Overall, the crude birth rate was 14.3 births per 1,000 total population (data not shown). Hispanic women continued to have the highest birth rate in 2007 (102.1 per 1,000 women), followed by non-Hispanic Black women (71.6 per 1,000 women). Non-Hispanic White women had the lowest birth rate (60.1 per 1,000 women).

With regard to age, overall birth rates were highest among mothers aged 25–29 years (117.5 live births per 1,000 women), followed by those aged 20–24 years (106.4 births per 1,000 women). The birth rate for non-Hispanic Whites was highest among 25- to 29-year-olds (108.8 per 1,000), while the rates for non-Hispanic Blacks, Hispanics, and American Indian/Alaska Natives were highest among 20- to 24-year-olds (133.6, 178.5, and 116.3 per 1,000 women, respectively). The birth rate among Asian/Pacific Islanders was highest among 30- to 34-year-olds (125.1 per 1,000 women).

The percentage of births delivered by cesarean has steadily increased since 1996. Among all births in 2006 (the latest year for which data are available), nearly one-third (31.1 percent) were delivered by cesarean, a 50 percent increase since 1996. Additionally, induction of labor increased more than 130 percent since 1990, from 9.6 percent in 1990 to 22.5 percent in 2006. In contrast, rates of vaginal births after a previous cesarean (VBAC) continued to decrease from 2005 to 2006 (from 7.9 to 7.6 percent; data not shown).[34]

In 2006, 83.2 percent of women received prenatal care during the first trimester of pregnancy, while 3.6 percent of women received care in the third trimester or not at all (data not shown).[34]

### Live Births per 1,000 Women, by Age and Race/Ethnicity, 2007*

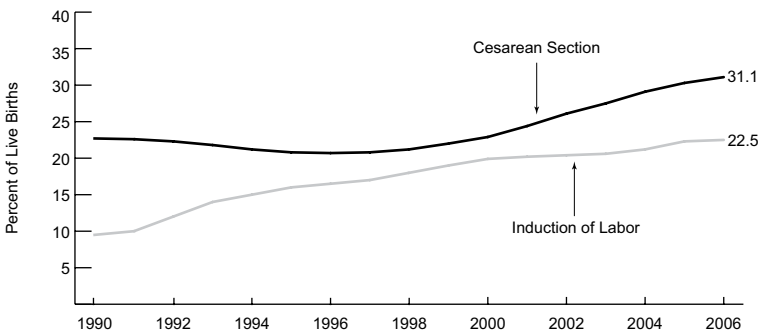
Source II.20: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System

| | Total | Non-Hispanic White | Non-Hispanic Black | Hispanic | American Indian/ Alaska Native** | Asian/Pacific Islander** |
|---|---|---|---|---|---|---|
| Total | 69.5 | 60.1 | 71.6 | 102.1 | 64.7 | 71.4 |
| 15-19 Years | 42.5 | 27.2 | 64.3 | 81.7 | 59.0 | 17.3 |
| 20-24 Years | 106.4 | 83.3 | 133.6 | 178.5 | 116.3 | 66.2 |
| 25-29 Years | 117.5 | 108.8 | 107.5 | 155.6 | 96.4 | 117.9 |
| 30-34 Years | 99.9 | 99.7 | 74.4 | 110.8 | 63.7 | 125.1 |
| 35-39 Years | 47.5 | 45.8 | 36.4 | 56.4 | 29.4 | 66.3 |
| 40-44 Years | 9.5 | 8.6 | 8.6 | 13.4 | 6.1 | 14.5 |

**Data are preliminary. **Includes Hispanics.*

### Births Involving Cesarean Section and Induction of Labor Among Women, 1990–2006

Source II.21, 22: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



## BREASTFEEDING

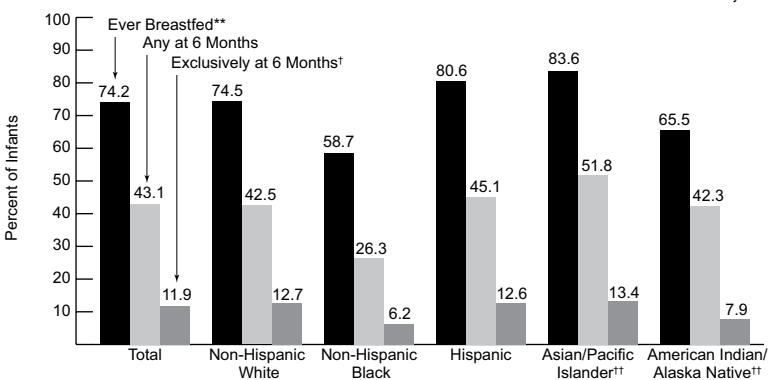
Breastmilk benefits the health, growth, immunity, and development of infants, and mothers who breastfeed may have a decreased risk of breast and ovarian cancers.[35] The Healthy People 2010 objectives for breastfeeding are to increase the percentage of women ever breastfeeding to 75 percent and those breastfeeding at 6 months to 50 percent.[36] Among infants born in 2005, 74.2 percent were reported to have ever been breastfed, representing a significant increase over the 68.3 percent of children ever breastfed in 1999. Other estimates of breastfeeding initiation yield percentages that exceed the HP 2010 goal.[37] Non-Hispanic Black infants were the least likely to ever be breastfed (58.7 percent), while Asian/Pacific Islanders and Hispanics were the most likely (83.6 and 80.6 percent, respectively).

The American Academy of Pediatrics recommends that infants be exclusively breastfed—without supplemental solids or liquids—for the first 6 months of life; however, 11.9 percent of infants born in 2005 were exclusively breastfed through 6 months, and 43.1 percent of infants were fed any breastmilk at 6 months. Breastfeeding practices vary considerably by a number of factors, including educational attainment—infants born to college graduates were most likely to have ever been breastfed (85.9 percent), while infants born to mothers with no high school diploma were least likely (65.7 percent).

Maternal employment can also affect whether and for how long an infant is breastfed; mothers working full-time are less likely to breastfeed at 6 months than those working part-time or not at all.[38] In 2006, 51.9 percent of mothers with children under 1 year of age were employed, and nearly 70 percent of those mothers were employed full-time (data not shown).[39]

### Infants* Who Are Breastfed, by Race/Ethnicity and Duration, 2005–2007

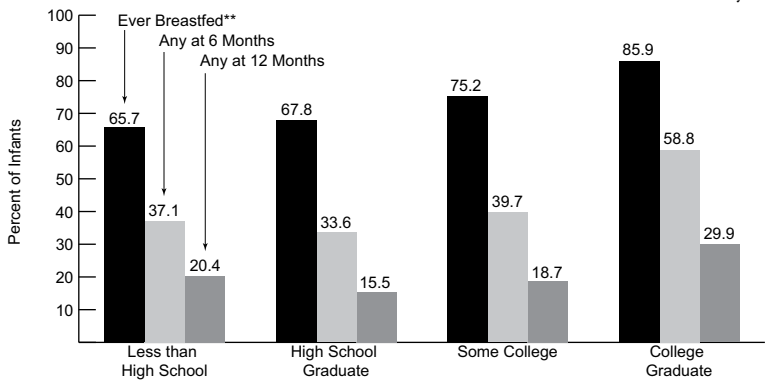
Source II.23: Centers for Disease Control and Prevention, National Immunization Survey




*Includes only infants born in 2005; data are provisional. **Reported that child was ever breastfed or fed human breastmilk. †Exclusive breastfeeding is defined as only human breastmilk—no solids, water, or other liquids. ††Includes Hispanics.

### Infants* Who Are Breastfed, by Maternal Education and Duration, 2005–2007

Source II.23: Centers for Disease Control and Prevention, National Immunization Survey




*Includes only infants born in 2005; data are provisional. **Reported that child was ever breastfed or fed human breastmilk.

## SMOKING DURING PREGNANCY

Smoking during pregnancy can have a negative impact on the health of women, infants, and children by increasing the risk of complications during pregnancy, premature delivery, and low birth weight—leading causes of infant mortality.[4] Maternal cigarette use data is captured on birth certificates; however, a revised birth certificate was introduced in 2003 that captures smoking during pregnancy by trimester, as opposed to any time during pregnancy as is assessed with the unrevised birth certificate. As of 2006, the 1989 Standard Certificate of Live Birth (unrevised) was used in 32 States, New York City, and Washington, DC, while 19 States used the revised birth certificate.[40]

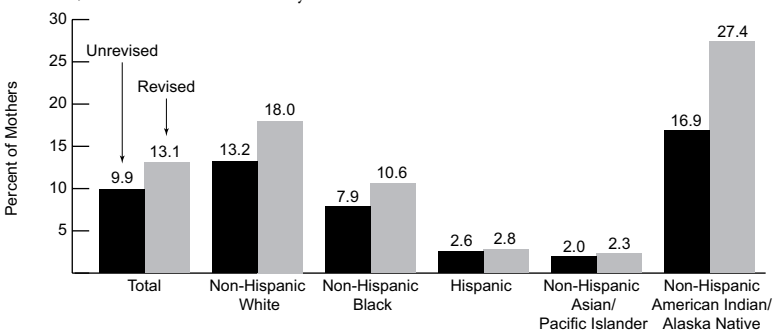
The areas using the revised birth certificate reported higher rates of smoking in pregnancy than those using the unrevised certificate (13.1 versus 9.9 percent, respectively). The proportion of mothers who smoked varied by maternal race and ethnicity. Among women in areas using the revised birth certificate, non-Hispanic American Indian/Alaska Native mothers (27.4 percent) and non-Hispanic White mothers (18.0 percent) were most likely to report having smoked during pregnancy.

Similarly, among women in the unrevised reporting areas, non-Hispanic American Indian/Alaska Native mothers were most likely to have smoked during pregnancy (16.9 percent), followed by non-Hispanic White women (13.2 percent). Non-Hispanic Asian/Pacific Islander and Hispanic mothers were least likely to have smoked during pregnancy in both reporting areas.

Cigarette use also varied by maternal age in 2006. Among women in the revised reporting areas, women under 20 years of age were most likely to have smoked cigarettes during pregnancy (17.3 percent), followed by women aged 20–29 years (15.9 percent). Similarly, 13.5 percent of women under 20 years of age in the unrevised reporting areas smoked during pregnancy, followed by 12.2 percent of women aged 20–29 years.

### Cigarette Smoking During Pregnancy, by Maternal Race/Ethnicity and Birth Certificate Type,* 2006

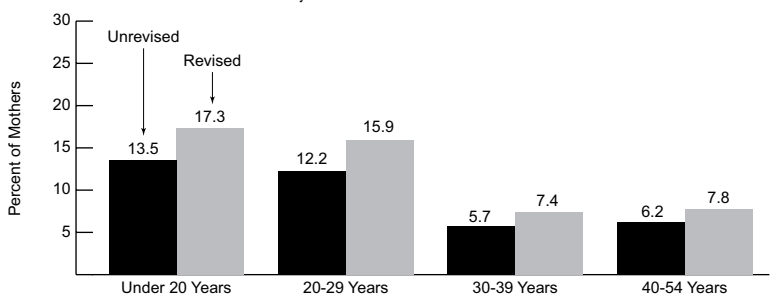
Source II.24: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System




**The 1989 Standard Certificate of Live Birth (unrevised) was used in 34 reporting areas including New York City and Washington, DC; the 2003 revised birth certificate was used in 19 reporting areas.*

### Cigarette Smoking During Pregnancy, by Maternal Age and Birth Certificate Type,* 2006

Source II.24: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System




**The 1989 Standard Certificate of Live Birth (unrevised) was used in 34 reporting areas including New York City and Washington, DC; the 2003 revised birth certificate was used in 19 reporting areas.*

## MATERNAL MORBIDITY AND RISK FACTORS IN PREGNANCY

Since 1989, diabetes and hypertension have been the most commonly reported health conditions among pregnant women. Diabetes, both chronic and gestational (developing only during pregnancy), may pose health risks to both a woman and her baby. Women with gestational diabetes are at increased risk for developing diabetes later in life.[41] In 2006, diabetes of any type during pregnancy occurred at a rate of 42.3 per 1,000 live births. This varied by race/ethnicity; Hispanic mothers were more likely to have had diabetes (43.0 per 1,000 live births) than non-Hispanic Whites and non-Hispanic Blacks (40.1 and 37.1 per 1,000, respectively).

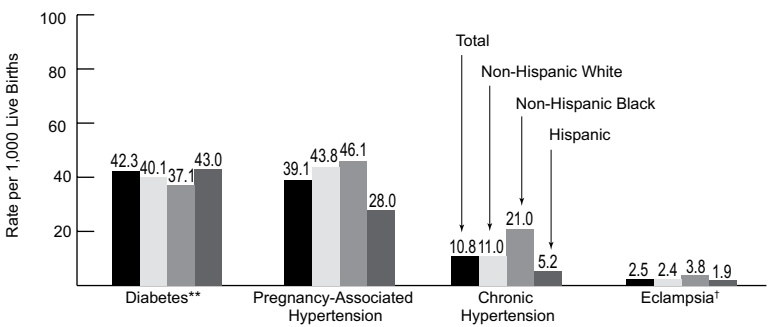
Hypertension during pregnancy can also be either chronic in nature or gestational. Severe hypertension during pregnancy can result in preeclampsia, fetal growth restriction, premature birth, placental abruption, and stillbirth.[42] Chronic hypertension was present in 10.8 per 1,000 live births in 2006, and most common among non-Hispanic Black women (21.0 per 1,000). The rate of pregnancy-associated hypertension was 39.1 per 1,000 live births and was more common among non-Hispanic Black and non-Hispanic White women (46.1 and 43.8 per 1,000 births) than among Hispanic women (28.0 per 1,000).

Eclampsia, which involves seizures and is usually preceded by a diagnosis of preeclampsia, is a life-threatening complication of pregnancy. In 2006, eclampsia occurred among 2.5 women per 1,000 live births.

Rates of maternal morbidities and risk factors also varied by maternal age. In 2006, women aged 40–54 years were at highest risk of diabetes during pregnancy (94.3 per 1,000 live births), pregnancy-associated hypertension (50.5 per 1,000) and chronic hypertension (30.4 per 1,000). Women under 20 years of age were least likely to have diabetes during pregnancy or chronic hypertension (13.3 and 3.9 per 1,000, respectively). Rates of pregnancy-associated hypertension did not vary significantly between age groups for women under 40 years of age.

### Selected Maternal Morbidities and Risk Factors in Pregnancy, by Maternal Race/Ethnicity,* 2006

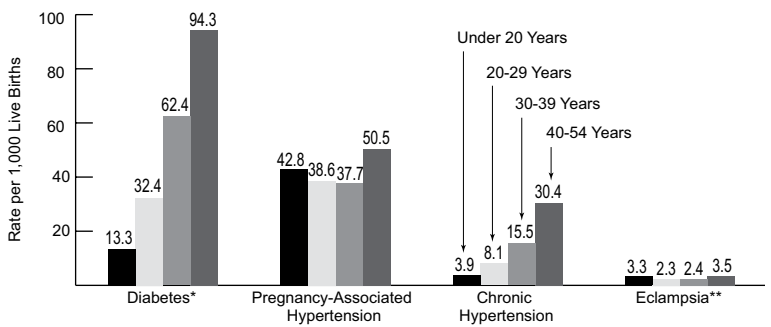
Source II.21, II.24: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System




*Data not reported for American Indian/Alaska Natives, Asian/Pacific Islanders, and persons of more than one race. **Includes gestational and chronic diabetes. †Eclampsia is characterized by seizures and generally follows preeclampsia, which is marked by high blood pressure, weight gain, and protein in the urine.*

### Selected Maternal Morbidities and Risk Factors in Pregnancy, by Maternal Age, 2006

Source II.21, II.24: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System




*Includes gestational and chronic diabetes. **Eclampsia is characterized by seizures and generally follows preeclampsia, which is marked by high blood pressure, weight gain, and protein in the urine.*

## MATERNAL MORTALITY

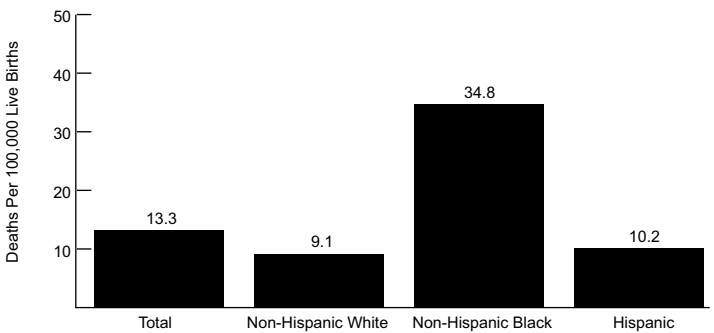
Maternal deaths are those reported on the death certificate to be related to or aggravated by pregnancy or pregnancy management that occur during or within 42 days after the end of the pregnancy. The maternal mortality rate has declined dramatically since 1950 when the rate was 83.3 deaths per 100,000 live births; however, the maternal mortality rate in 2006 (13.3 per 100,000 live births) was 62 percent higher than the rate reported in 1990 (8.2 per 100,000). According to the National Center for Health Statistics, this increase may largely be due to changes in how pregnancy status is recorded on death certificates; beginning in 1999, the cause of death was coded according to International Classification of Diseases, 10th Revision (ICD-10). Other methodological changes in reporting and data processing have been responsible for apparent increases in more recent years, including question formatting and revisions to the U.S. Standard Certificate of Death.[43]

In 2006, there were a total of 569 maternal deaths. This does not include 191 deaths of women that were due to complications during pregnancy or childbirth and that occurred after 42 days postpartum or the deaths of pregnant women due to external causes such as unintentional injury, homicide, or suicide. In 2006, the maternal mortality rate among non-Hispanic Black women (34.8 per 100,000 live births) was more than 3 times the rates among non-Hispanic White and Hispanic women (9.1 and 10.2 per 100,000, respectively).

The risk of maternal death increases with age for women of all races and ethnicities. In 2006, the maternal mortality rate was highest among women aged 35 years and older (29.3 per 100,000 live births), compared to 5.0 per 100,000 live births to women under 20 years of age and 10.2 per 100,000 live births among women aged 20–24 years. There was little variation in maternal mortality rates by age group among women aged 20–34 years.

### Maternal Mortality Rates, by Race/Ethnicity,* 2006

Source II.4: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System




*Data not reported for Asian/Pacific Islanders, American Indian/Alaska Natives, persons of more than one race, and persons of other races not specified.*

### Maternal Mortality Rates, by Age, 2006

Source II.25: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System