

## PURPOSE

This report is the twenty-third annual update of information about pregnancies among females under age 20. The data for 2007 is placed in a temporal context by comparing it with the data from the preceding years.

## METHODS AND SOURCES

In this report, pregnancies are measured as the sum of three components: live births, fetal deaths (or stillbirths) and reported abortions to Arizona resident women, unless otherwise specified. Not included are spontaneous fetal losses that occur at less than 20 weeks of gestation. Induced terminations of pregnancy do not include those performed out-of-state to Arizona residents, since they are not reported in Arizona. Pregnancy statistics for Arizona are not available on a sub-county level.

Teens are defined as 10-14 year old preadolescents and adolescents 15-19 years of age. Where possible, the data presented distinguishes 18-19 year old teenagers from those aged 15-17 and girls less than 15 years of age.

The primary source documents for the data are the certificates of live births, certificates of fetal deaths and reports of induced terminations of pregnancy filed with the Arizona Department of Health Services.

Several data sources were utilized in producing the population denominators for Arizona's resident females, used to calculate rates. The denominators for 2000 are the actual census enumerations from the U.S. Census Bureau. In order to obtain the population denominators for 2001-2005, the 2000 percentages of population breakdowns (or census shares) by age group, gender and race/ethnicity were applied to total state and total county annual population estimates released by the Department of Economic Security (DES).

The longer the time after the census, the less likely it is that the 2000 census shares continue to reflect the "true" proportions of population breakdowns. Beginning with the 2006 population estimates we no longer use the year 2000 census shares. For 2006 and 2007, the totals for the State and each of its counties agree with the projections released by the DES on March 31, 2006 (<http://www.workforce.az.gov/?PAGEID=67&SUBID=138>). The percentages of population breakdowns by single-year of age, gender and race/ethnicity were derived from the "Bridged-Race Vintage 2006 Postcensal Population Estimates for Calculating Vital Rates", available from the National Center for Health Statistics (NCHS: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/datadoc.htm#vintage2005>). These percentages were then applied to total state and county population projections for 2006 and 2007 from DES. The 2006-2007 population estimates by race/ethnicity should not be compared with the previously published estimates for 2001-2005, which used the year 2000 census shares.

The pregnancy rates for 1996-1999 were revised in the 1996-2006 edition of the report using the population denominators that are consistent with the 2000 census. The population projected previously from the 1990 census underestimated the growth of the Hispanic population during the 1990s. According to the 2000 census, there were 118,490 Hispanic females 19 years or younger in Arizona, 37.5 percent more than the estimated by the Census Bureau number of 86,203 in 1999. The revised denominators for 1996-1999 were derived from the "Bridged-race intercensal population estimates for July 1, 1990-July 1, 1999, by year, county, single-year of age, Hispanic origin, and sex" provided by NCHS.

## DATA ORGANIZATION

Tables 1-16 present annual numbers and rates of pregnancy, fertility, and abortion by year from 1997 to 2007, age group, and race/ethnicity for Arizona teens. Temporal trends and changes may be assessed from this data. Proportional contribution of teen births to all births is shown in Table 10 by area of residence and race/ethnic group in Arizona from 1997 to 2007. Table 11 compares birth rates in Arizona to those in the United States. The annual numbers of repeat pregnancies among teenage mothers are shown by age and year from 1997 to 2007 in Table 12.

Three new data tables were added beginning with the 1996-2006 edition of the report. Table 14 presents teen pregnancy rates by race/ethnicity and age group by year from 1997 to 2007. It includes revised pregnancy rates for 1997-1999. Table 15 provides information about the incidence of sexually transmitted infections among females 10-14 and 15-19 years old in Arizona in 1997-2007. Table 16 shows the incidence rates by year from 1997 to 2007.

Frequency counts, proportions and rates in tables 17-32 all apply to the 2007 data. Tables 17-18 and 20-22 provide data by county of residence. Table 19 presents pregnancy rates by single year of age among females 19 and younger. Live births to teenage mothers are also reported in Tables 23-30 by marital status, education, previous pregnancies, trimester of entry into prenatal care, source of payment for labor and delivery and tobacco and alcohol use during pregnancy. The 2007 population denominators for Arizona resident females by age group and race/ethnicity, as well as by age group and county of residence are presented in Table 31 and Table 32. The *Appendix* demonstrates "How to compute the rates of first and repeat childbearing" using the annual data for 2000-2007.

## COMPARATIVE NATIONAL AND STATE DATA

Timely, comparable, and reliable teen pregnancy statistics for other States and the Nation are not easily available. *“Health, United States, 2007”*, the premier annual publication of The Department of Health and Human Services, contains no information about pregnancies. The latest available preliminary national teenage birth rates for 2006 were published in December, 2007. No national abortion or fetal death data have been available since the 2004 calendar data year.

A recent report, *“Estimated Pregnancy Rates by Outcome for the United States, 1990-2004”*\* was published in April 2008. The authors combine the complete count of births provided by every state to the NCHS with the estimated numbers of abortions, early miscarriages, and fetal deaths. The number of abortions is estimated from surveys the Alan Guttmacher Institute conducts of known abortion providers (i.e. these data are by the place of occurrence and not by the woman’s place of residence). The fetal loss estimates – including early miscarriages before 20 weeks of gestation - are from pregnancy history information collected by the National Survey of Family Growth (NFSG). Unlike vital statistics reports of fetal losses occurring at gestations of 20 weeks or more, NFSG include all gestations. Since the majority of fetal losses occur early in pregnancy before the reporting requirements for fetal deaths are in effect, their inclusion dramatically raises both the fetal loss rate and the pregnancy rate. The National Survey of Family Growth data are not state-specific. The pregnancy rates for Arizona teens cannot be compared with the rates for their peers nationally.

No comparable state-by-state data for 2006 or 2007 are available at this time.

## KEY FINDINGS

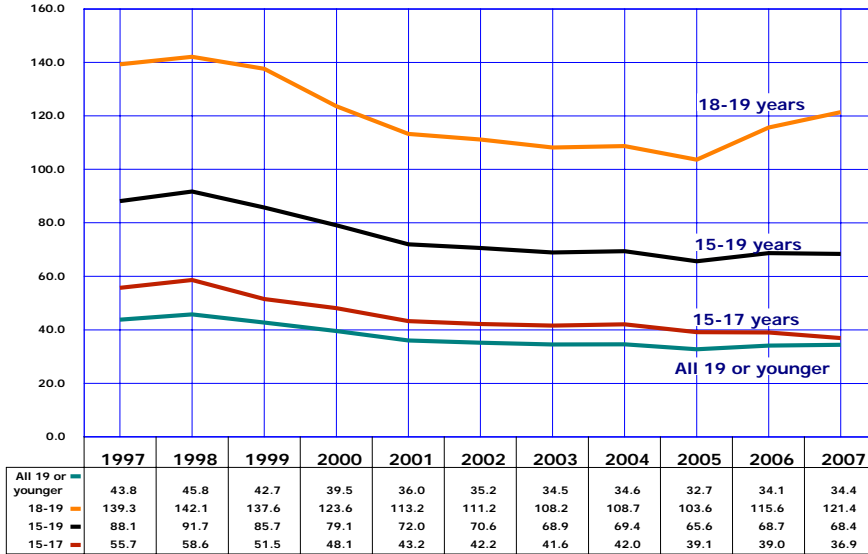
The following section presents some illustrative findings contained in the figures and tables of the report. It is not intended to be an exhaustive analysis of the tabulated data.

- **In 2007, the pregnancy rate of 34.4 pregnancies per 1,000 females 19 years or younger was 21.5 percent lower than the rate of 43.8/1,000 in 1997.**
- **However, the absolute number of teen pregnancies increased by 11.9 percent from 13,438 in 1997 to 15,038 in 2007. The latter is the highest number of teen pregnancies ever recorded in the State.**
- **While the overall teen pregnancy rate has fallen in Arizona, the drop in the rate has not been enough to offset the growth in the female teenage population.**
- **From 2006 to 2007, only White non-Hispanic females 19 years or younger experienced a decline in the number of pregnancies. In contrast, the number of pregnancies increased for Hispanic, American Indian, Black, and Asian females.**
- **In 2007, the number of pregnancies increased by an unprecedented 34.3 percent among females aged 14 years or younger (from 242 to 325), and by 1.7 percent for females aged 18-19 years (from 9,571 to 9,738).**
- **In contrast, the number of pregnancies among females 15-17 years old decreased by 130 from 5,105 in 2006 to 4,975 in 2007.**
- **Nineteen percent of teenagers who already had one child gave birth again in 2007.**
- **The number of teen births paid for by the Arizona Health Care Cost Containment System (AHCCCS, the State’s Medicaid program) increased by 55.2 percent from 6,698 in 1997 to 10,394 in 2007.**
- **The National Campaign to Prevent Teen and Unplanned Pregnancy estimated that in 2004, teen childbearing cost taxpayers an average of \$1,430 per teen mother annually. This per capita cost of teen childbearing translates into at least \$18,549,960 (in 2004 dollars) expended on public assistance, health care, and child welfare in Arizona in 2007.**

\* Ventura SJ, Abma JC, Mosher WD, Henshaw SK. Estimated pregnancy rates by outcome for the United States, 1990-2004. National vital statistics reports; vol. 56 no 15. Hyattsville, MD: National Center for Health Statistics. 2008

KEY FINDINGS

**Figure 1**  
Pregnancy Rates by Age Group and Year among Females 19 or Younger, Arizona, 1997-2007

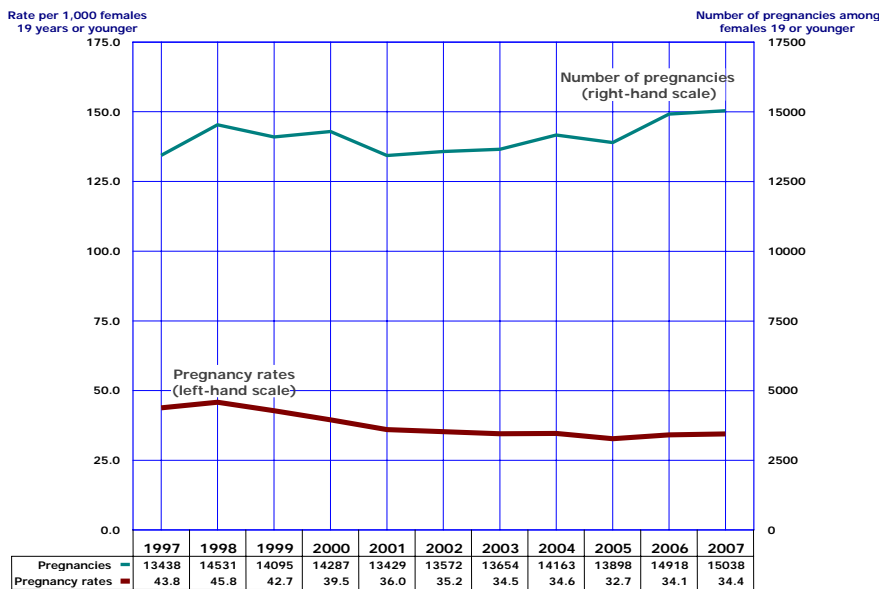


Note: All rates are per 1,000 females in specified group.

The pregnancy rate for Arizona teenagers 15-19 years old in 2007 remained essentially unchanged at 68.4 pregnancies per 1,000 females (compared to 68.7 in 2006; **Figure 1, Table 2**). The pregnancy rate for younger teenagers 15-17 years old decreased by 5.4 percent from 39.0/1,000 in 2006 to 36.9/1,000 in 2007. In contrast, the pregnancy rate for older teenagers 18-19 years old increased for the second consecutive year from 103.6/1,000 in 2005 to 121.4/1,000 in 2007 (**Figure 1, Table 2**).

In 2007, the number of pregnancies increased by an unprecedented 34.3 percent among females aged 14 years or younger (from 242 to 325), and by 1.7 percent for females aged 18-19 years (from 9,571 to 9,738; **Table 1**). Among females 15-17 years old the number of pregnancies decreased by 130 from 5,105 in 2006 to 4,975 in 2007. Overall, there were 120 more pregnancies among females 19 years or younger in 2007 (15,038) than they were in 2006 (14,918).

**Figure 2**  
Trends in the Number of Pregnancies and Pregnancy Rates among Females 19 or Younger, Arizona, 1997-2007



Pregnancy rate = the number of pregnancies per 1,000 females in specified group.

Trends in the number of pregnancies to teenage women do not always parallel the pregnancy rate. The teen pregnancy rate measures the proportion of teenagers becoming pregnant in a given year; in other words, the relative "risk for pregnancy" in a population "at risk". The number of pregnancies is, however, also determined by the size of the population "at risk": or in this case by the number of teenage females in the population.

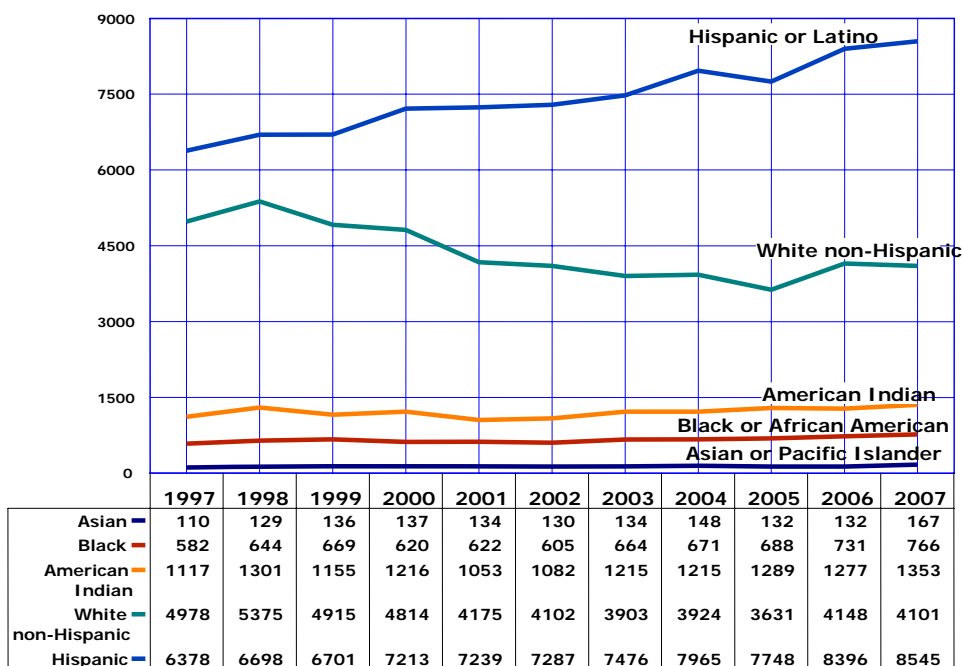
The number of teen pregnancies increased by 11.9 percent from 13,438 in 1997 to 15,038 in 2007 (**Figure 2, Table 1**). However, the proportional increase in the number of females 19 years old or younger was 3 times greater at 35.4 percent from 322,868 in 1997 to 437,239 in 2007. While the teen pregnancy rate has fallen in Arizona, the drop in the rate has not been enough to offset the growth in the female teenage population (**Figure 2**). In fact, the number of 15,038 pregnancies to females 19 years old or younger in Arizona in 2007 was the highest number ever recorded in the State.

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**Figure 3**  
Trends in the Number of Pregnancies\* by Race/Ethnicity among Females 19 or Younger, Arizona, 1997-2007

The number of pregnancies to Hispanic females aged 19 years or younger exceeded the number of pregnancies among white non-Hispanic peers in every year since 1994 (Figure 3 and Table 8 in this report show only the data for 1997-2007). In 2007, Hispanic or Latino mothers accounted for 56.8 percent of all pregnancies in this age group, followed by White non-Hispanics (27.3 percent). Black or African American, Asian or Pacific Islander and American Indian females aged 19 years or younger accounted for larger share of pregnancies in 2007 (15.9 percent) than they did in 1997 (13.5 percent).

From 2006 to 2007, only White non-Hispanic females 19 years or younger experienced a decline in the number of pregnancies. In contrast, the number of pregnancies increased for Hispanic, American Indian, Black, and Asian females.



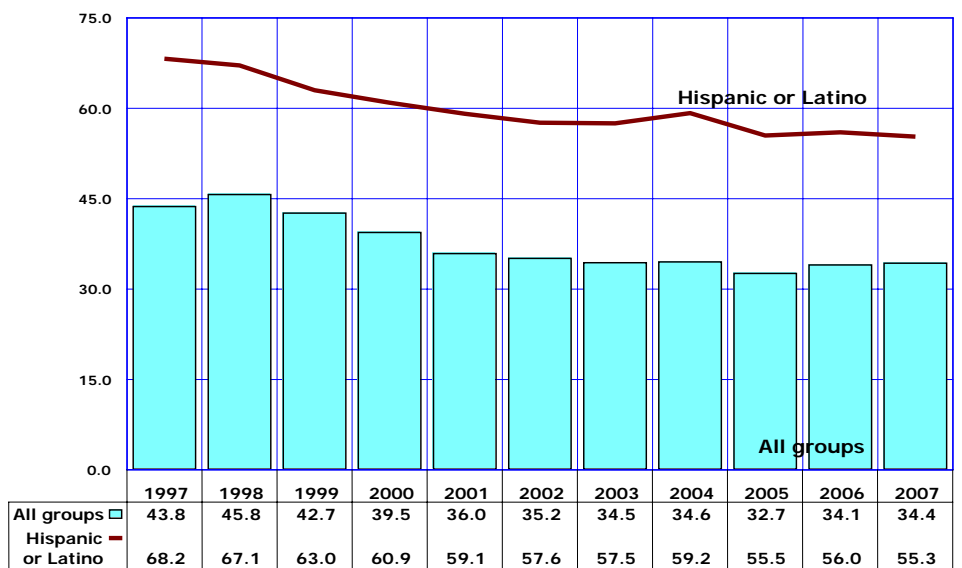
The sum of live births+induced abortions+spontaneous fetal deaths.

**Figure 4**  
Comparison of Pregnancy Rates by Year among Hispanic or Latinos and all Females 19 or Younger, Arizona, 1997-2007

The teen pregnancy rates for all race and ethnic groups were lower in 2007 than in 1997 (Figure 1). However, the temporal trends in annual teen pregnancy rates differed considerably by race/ethnicity.

Figures 4, 5, 6, 7 and 8 reveal race/ethnicity-specific trends in teen pregnancy rates in Arizona in 1997-2007.

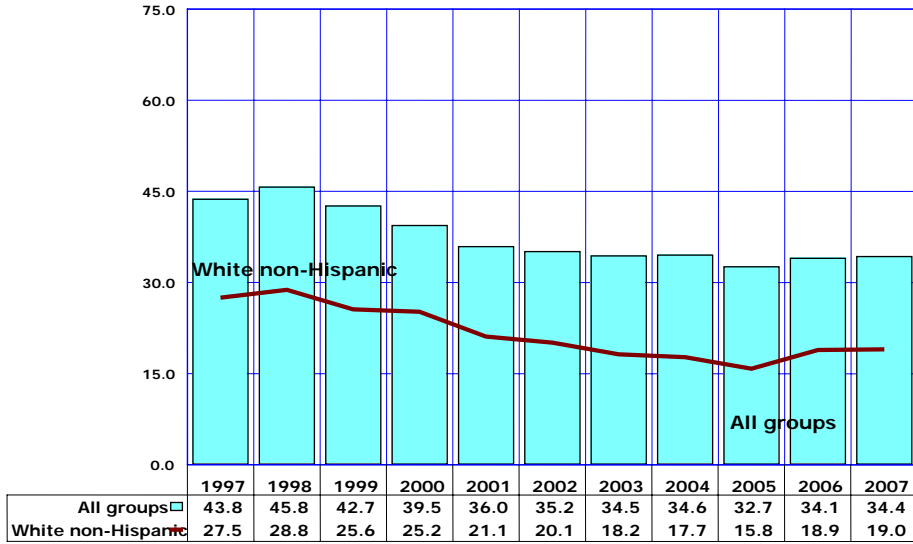
The pregnancy rate fell 17.4 percent for Hispanic or Latino females 19 years or younger in 1997-2003 and then increased in 2004 and 2006. (Figure 4). In each year from 1997 to 2007, the pregnancy rates of Hispanic or Latino females were consistently greater than the average rates for all females 19 years or younger in Arizona. In 2007, the Hispanic rate exceeded the average rate for all groups by 60.8 percent.



Note: All rates are per 1,000 females in specified group.

KEY FINDINGS

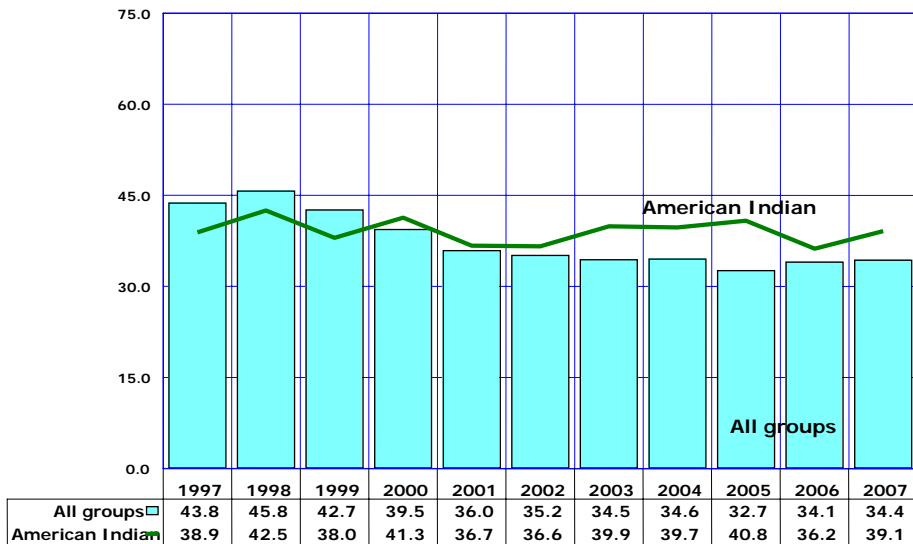
**Figure 5**  
**Comparison of Pregnancy Rates by Year among White non-Hispanics**  
**and all Females 19 or Younger, Arizona, 1997-2007**



The pregnancy rate for White non-Hispanics sharply increased by 19.6 percent in 2006 (Figure 5). The rate remained essentially unchanged at 19.0 in 2007. In each year from 1996 to 2006, the pregnancy rates for White non-Hispanic females were lower than the average rates for all females 19 years or younger in Arizona.

Note: All rates are per 1,000 females in specified group.

**Figure 6**  
**Comparison of Pregnancy Rates by Year among American Indian or Alaska**  
**Natives and all Females 19 or Younger, Arizona, 1997-2007**



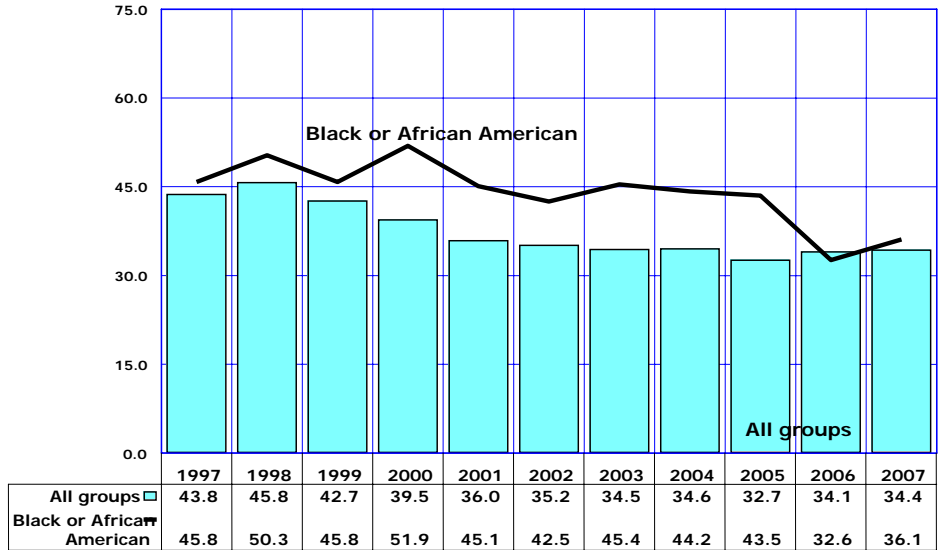
Despite some of the decreases noted between 1997 and 2007, the annual pregnancy rates among American Indian females 19 years or younger erratically varied from year to year (Figure 6). The American Indian rates were lower than the average in each year from 1997 to 1999, but higher in 2000-2007.

Note: All rates are per 1,000 females in specified group.

KEY FINDINGS

**Figure 7**  
**Comparison of Pregnancy Rates by Year among Black or African Americans and all Females 19 or Younger, Arizona, 1997-2007**

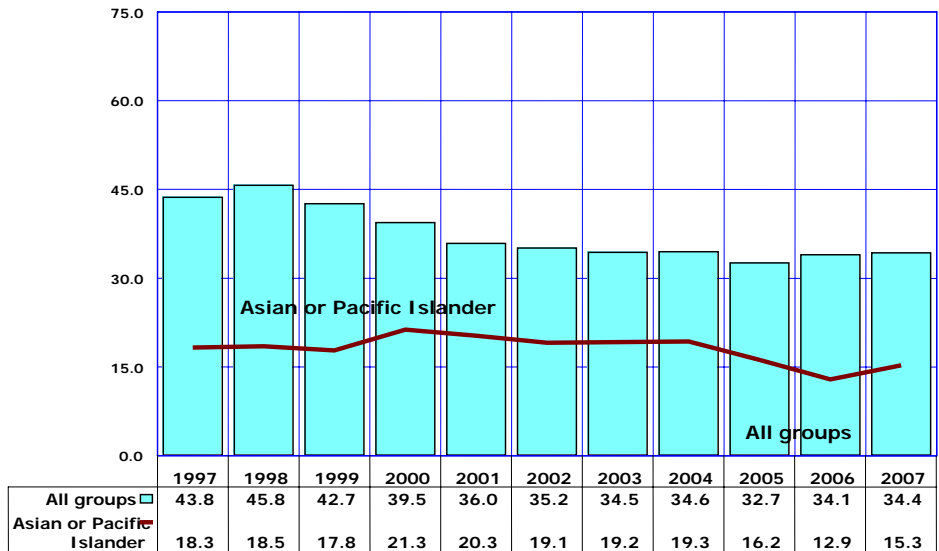
The pregnancy rates for Black or African American females 19 years or younger increased from 32.6/1,000 in 2006 to 36.1/1,000 in 2007 (Figure 7). As in 1997-2005 the 2007 pregnancy rate for Black or African American teenagers was greater than the pregnancy rate for all groups.



Note: All rates are per 1,000 females in specified group.

**Figure 8**  
**Comparison of Pregnancy Rates by Year among Asian or Pacific Islanders and all Females 19 or Younger, Arizona, 1997-2007**

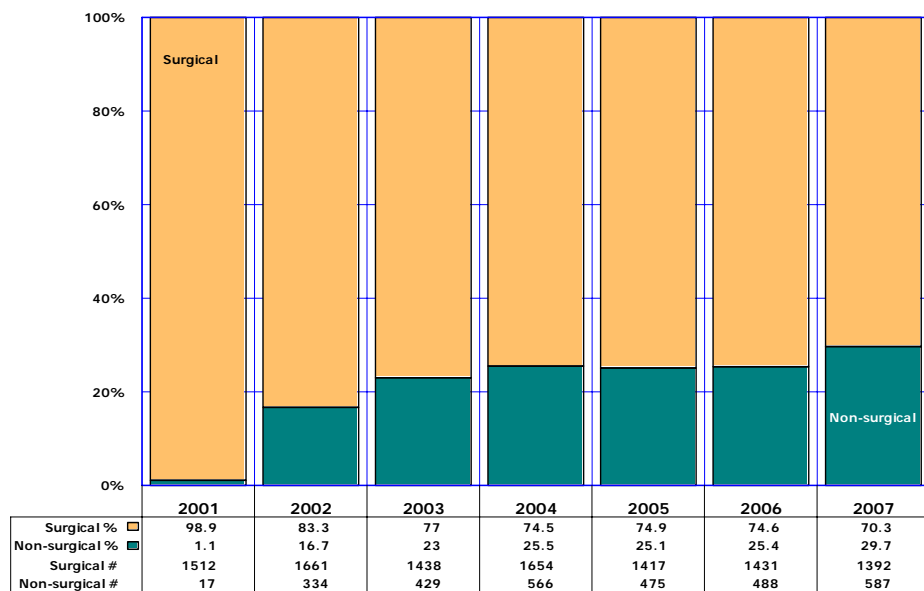
In each year from 1997 to 2007, the pregnancy rates for Asian or Pacific Islander females 19 years or younger were substantially lower than the average rates among all females 19 years or younger in Arizona (Figure 8). In 2007, the Asian rate (15.3/1,000) was 55.5 percent lower than the rate for all groups (34.4/1,000).



Note: All rates are per 1,000 females in specified group.

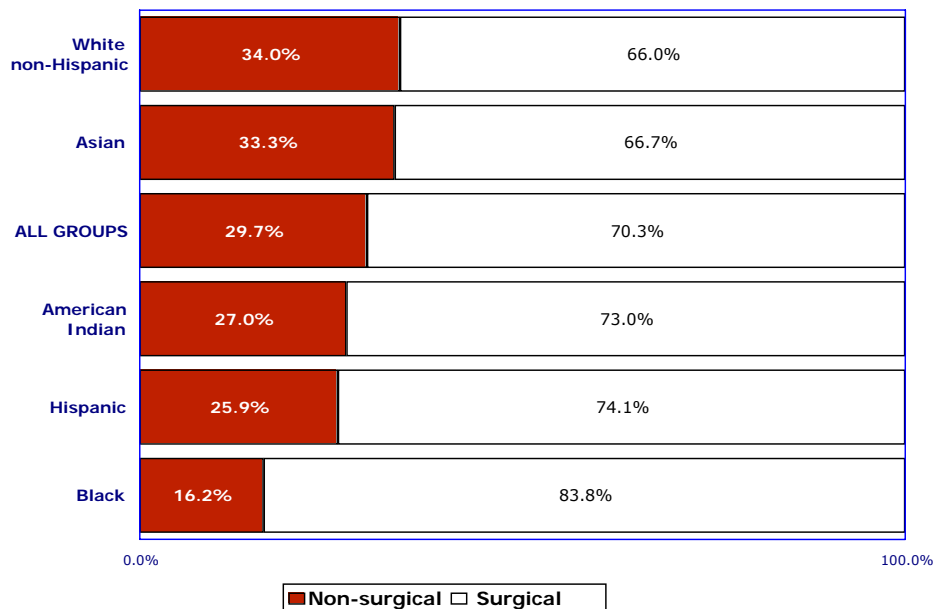
KEY FINDINGS

**Figure 9**  
**Proportional Contribution of Surgical and Non-Surgical Abortions**  
**by Year among Females 19 or Younger, Arizona, 2001-2007**



The number of reported abortions to females 19 years or younger slightly increased from 1,919 in 2006 to 1,979 in 2007 (Table 1). In 2007, non-surgical abortions accounted for approximately 30 percent of all procedures reported in Arizona for females 19 years old or younger.

**Figure 10**  
**Proportional Contribution of Non-Surgical and Surgical Abortions by**  
**Race/Ethnicity among Females 19 or Younger, Arizona, 2007**



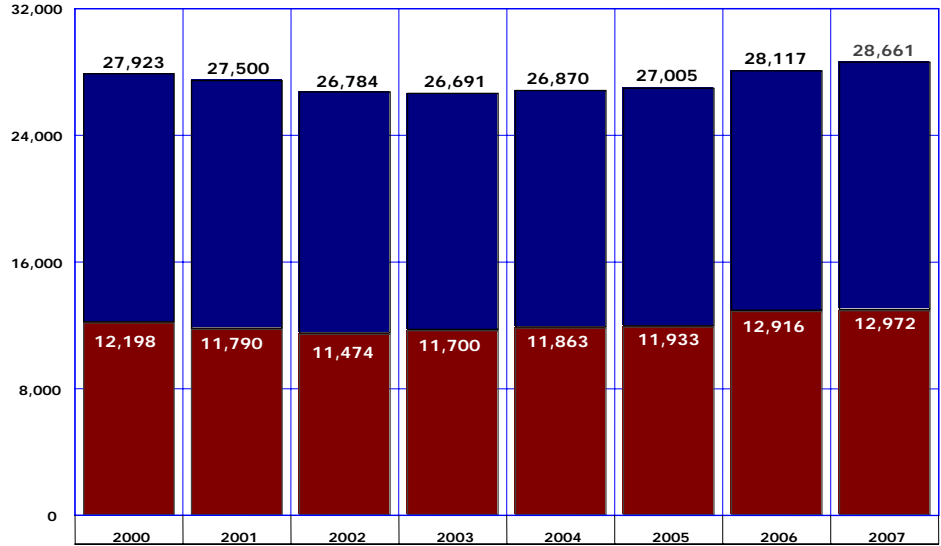
Only among White non-Hispanic and Asian teens the proportion of non-surgical abortions exceeded the average for all groups (Figure 10). The ratios of reported non-surgical abortions among Black and Hispanic females were the lowest among ethnic groups.

Non-surgical: Mifepristone, Methotrexate, RU486, etc.

KEY FINDINGS

**Figure 11**  
**Cumulative Number of Mothers who were 19 or Younger in Arizona by Year, 2000-2007**

■ Gave birth that year ■ Gave birth before and was still 19 years old or younger

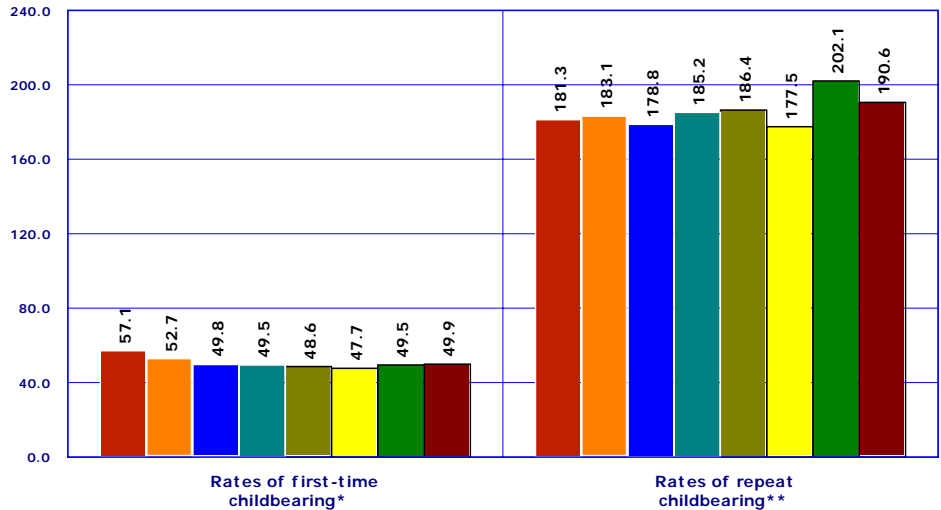


There were approximately 28,661 mothers under age 20 in Arizona in 2007, the highest number ever reported in the State. Among them there were the 12,972 who gave birth that year and the 15,689 who gave birth prior to 2007 and were still 19 years old or younger (Figure 11, Table 13). The cumulative number of mothers who were 19 years or younger in Arizona increased by 7.4 percent from 26,691 in 2003 to 28,661 in 2007.

\*See Table 13 for more details.

**Figure 12**  
**Rates of First and Repeat Births to Females 15-19 Years, Arizona, 2000-2007**

■ 2000 ■ 2001 ■ 2002 ■ 2003 ■ 2004 ■ 2005 ■ 2006 ■ 2007

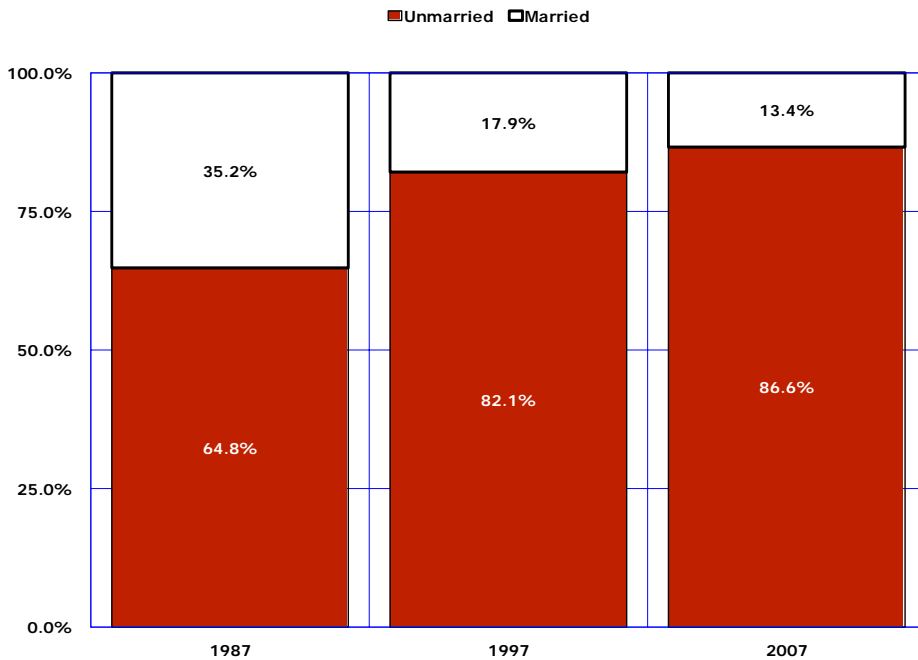


The first birth rate for childless teenagers has dropped 16.5 percent from 57.1 first-time births per 1,000 females 15-19 years old in 2000, to 47.7/1,000 in 2005. The first birth rate increased by 3.8 percent in 2006 and by an additional 0.8 percent in 2007 to 49.9/1,000 (Figure 12). The repeat birth rates for teenagers who had already had a child decreased by 5.7 percent from 202.1 in 2006 to 190.6 in 2007 (Figure 7). Nineteen percent of teenagers (190.6/1,000) who already had one child gave birth again in 2007, compared to twenty percent (202.1 /1,000) in 2006.

\* Number of first births per 1,000 females 15-19 years old who have not had a birth.  
 \*\*Number of repeat births per 1,000 females 15-19 years old who have had a previous birth.  
 See Appendix "How to compute rates of first and repeat childbearing."

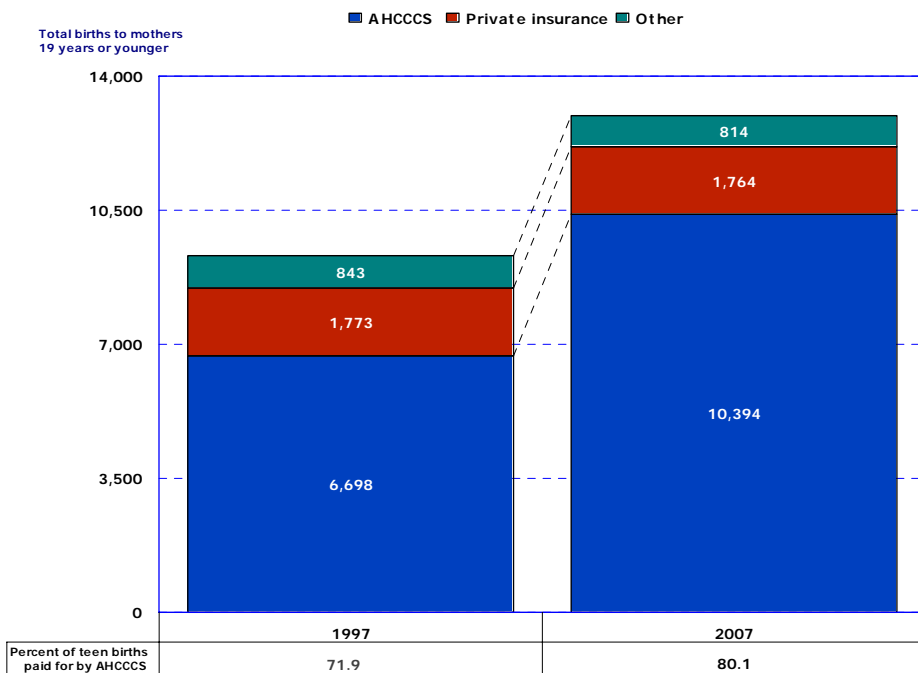


**Figure 13**  
Births to Mothers 19 or Younger by Marital Status, Arizona, 1987, 1997 and 2007



Unwed mothers have accounted for an increasing annual proportion of births throughout the 1980s and 1990s. Two decades ago, the proportion of nonmarital births among teenagers 19 years old or younger was still around 65 percent (**Figure 13**). In 2007, nonmarital births accounted for 86.6 percent of births to mothers 19 years or younger.

**Figure 14**  
Number of Births to Mothers 19 or Younger by Payee, Arizona, 1997 and 2007



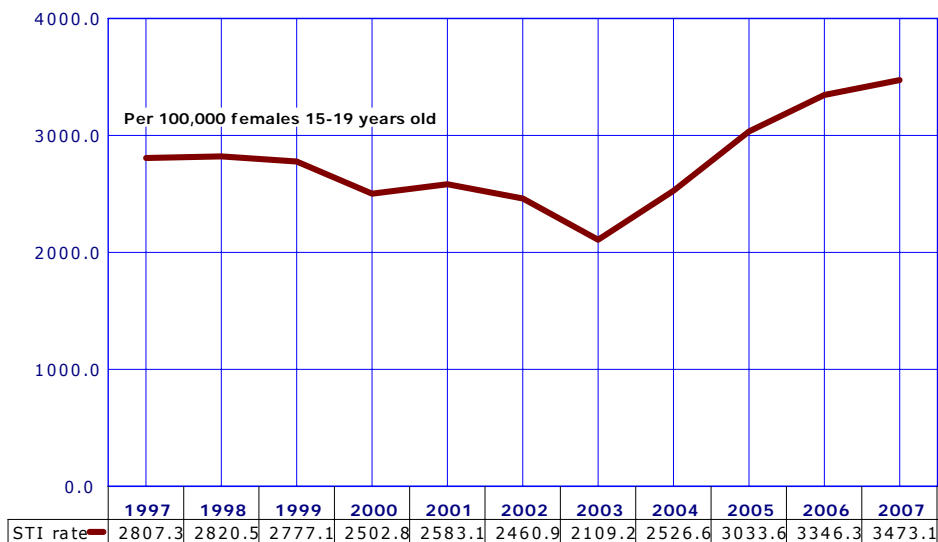
The total number of births to mothers 19 years or younger increased by 17.0 percent from 11,085 in 1997 to 12,972 in 2007 (**Table 1**). In contrast, the number of teen births paid for by the Arizona Health Care Cost Containment System (AHCCCS, the State's Medicaid program) increased by 55.2 percent from 6,698 in 1997 to 10,394 in 2007.

In 2007, the Arizona Health Care Cost Containment System paid for 80.1 percent of the deliveries to mothers 19 or younger (**Table 23**), compared to 71.9 percent in 1997 (**Figure 14**).

The National Campaign to Prevent Teen and Unplanned Pregnancy ([www.teenpregnancy.org](http://www.teenpregnancy.org)) estimated that in 2004, teen childbearing cost taxpayers an average of \$1,430 per teen mother annually. This per capita cost of teen childbearing translates into at least \$18,549,960 (in 2004 dollars) expended on public assistance, health care, and child welfare in Arizona in 2007.

KEY FINDINGS

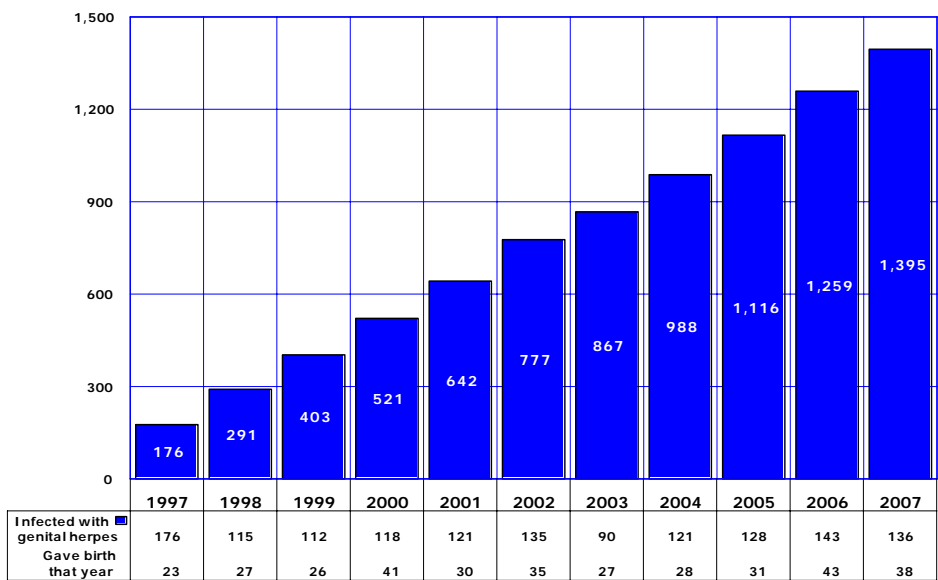
**Figure 15**  
Trends in the Incidence of Sexually Transmitted Infections\* among Females 15-19 Years, Arizona, 1997-2007



In 2007, the total number of sexually transmitted infections (STI) among females aged 19 or younger exceeded 7,700 (Table 15) compared to almost 4,400 reported in 1997. Females aged 15-19 years accounted for 95.6 percent of all sexually transmitted infections in 2007. The rate of STI among females 15-19 years old increased by 64.7 percent from 2109.2 cases per 100,000 in 2003 to 3473.1/100,000 in 2007.

\* The sum of annually reported cases of gonorrhea, chlamydia, genital herpes and early syphilis.  
Source: Bureau of Epidemiology and Disease Control Services, Office of Infectious Disease Services.

**Figure 16**  
Cumulative Number of Cases of Genital Herpes among Females 15-19 Years, Arizona, 1997-2007



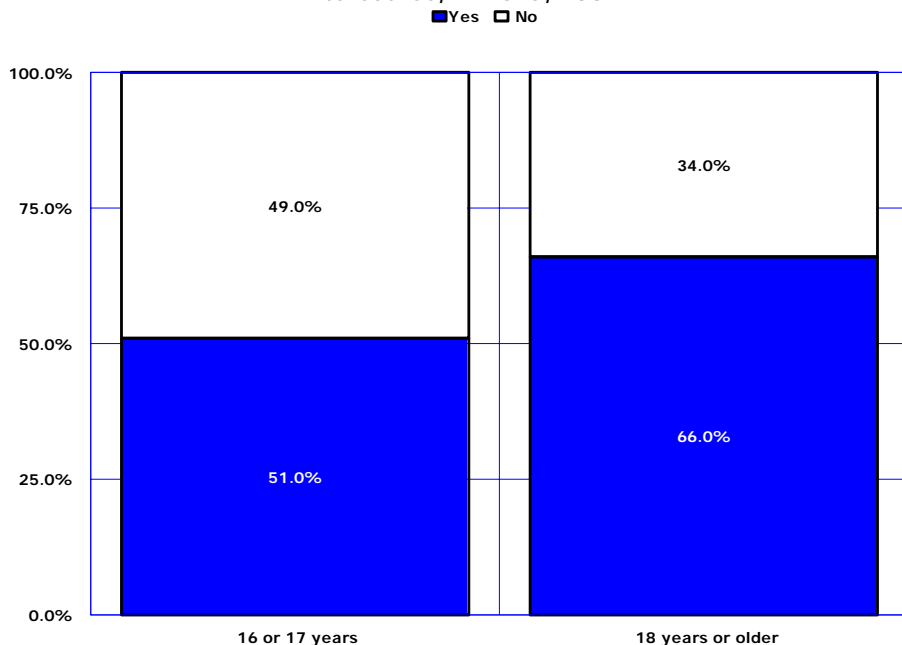
Unlike gonorrhea or chlamydia, genital herpes cannot be cured. Since genital herpes is not a fatal disease, new cases arising each year may add to the pool of people infected with the disease who can then transmit the disease to others.

Assuming that females 15-19 years old reported with genital herpes since 1997 have not died or left the State, the 2007 prevalence of this disease based on 1,395 cases (Figure 16) would be 648.6/100,000. In other words, one in every 143 females aged 15-19 years may be infected.

Genital herpes also is a threat to newborns. Out of 136 females aged 15-19 years who were diagnosed with genital herpes in 2007, 38 (or 27.9 percent) also gave birth that year (Figure 16).

KEY FINDINGS

**Figure 17**  
**Percentage of Female High School Students who ever had Sexual Intercourse, Arizona, 2007**

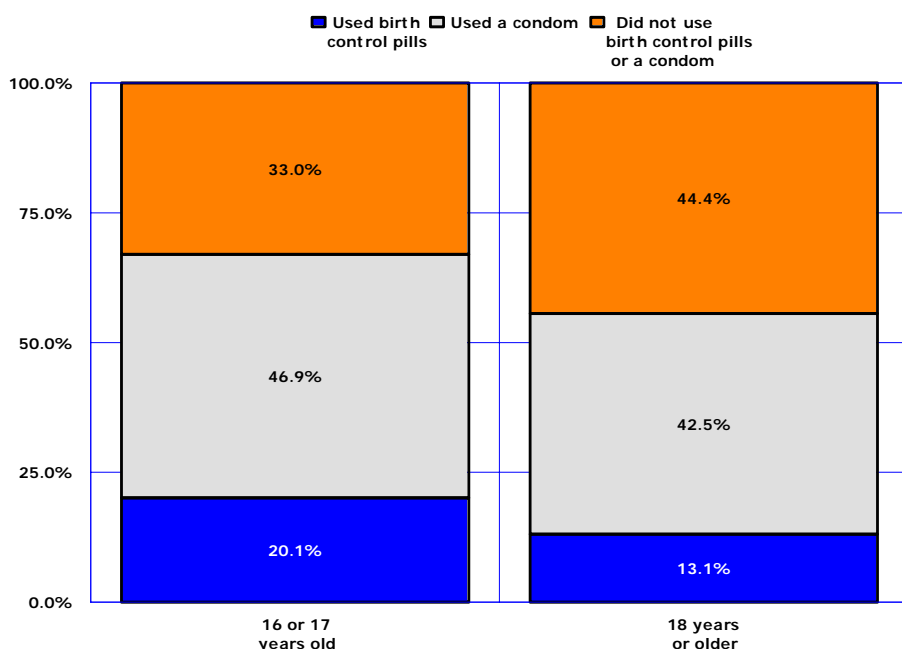


Patterns in sexual activity such as the age at first intercourse and the frequency of intercourse are among the factors accounting for both pregnancy rates and the incidence of sexually transmitted infections.

Nationally, more than one-half (51 percent) of 15-17-year-old females have had sexual contact with another person. At age 18-19, 83 percent of females have had a sexual experience with another person.<sup>1</sup>

The age-specific proportions of female high school students who ever had sexual intercourse in **Figure 17** are from the latest Arizona Youth Risk Behavior Survey conducted in 2007.<sup>2</sup>

**Figure 18**  
**Percentage of Female High School Students who used Birth Control Pills Or Condoms to Prevent Pregnancy, Arizona, 2007**



According to the National Survey of Family Growth, the oral contraceptive pill is the leading method of contraception in the United States.<sup>3</sup> The survey provides no state-specific data.

The 2007 Arizona Youth Risk Behavior Survey results for “students who had sexual intercourse during the past three months”<sup>4</sup> reveal that compared to younger teens, older teens were less likely to use birth control pills before or a condom during, the last intercourse (**Figure 18**). It is quite unlikely that over 44 percent of sexually active females 18-19 years old in 2007 have used other methods instead (such as female sterilization or a 3-month injectable contraceptive Depo-Provera). From 2005 to 2007, the birth rate per 1,000 females 18-19 years old increased by an unprecedented 18.9 percent. Perhaps, not a small fraction of those who were sexually active but not using contraception in 2007 were not so much placing themselves at a risk of unintended pregnancy but intentionally trying to have a baby?

<sup>1</sup> Mosher WD, Chandra A, Jones J. Sexual behavior and selected health measures: Men and women 15-44 years of age, United States, 2002. Advance data from vital and health statistics; no 362. Hyattsville, MD: National Center for Health Statistics, 2005.

<sup>2</sup> Percentage of students who ever had sexual intercourse. See the Arizona YRBS results at <http://www.azed.gov/sa/health/matrix/YRBS2007Results.asp>

<sup>3</sup> Mosher WD, Martinez GM, Chandra A, Abma JC, Wilson SJ. Use of contraception and use of family planning services in the United States, 1982-2002. Advance data from vital and health statistics; no 350. Hyattsville, Maryland: National Center for Health Statistics, 2004.

<sup>4</sup> Percentage of students who used a condom during or birth control pills before last sexual intercourse. See the Arizona Youth Risk Behavior Survey results at <http://www.azed.gov/sa/health/matrix/YRBS2007Results.asp>