

Teenage Abortion and Pregnancy Statistics by State, 1992

By Stanley K. Henshaw

In 1992, 112 pregnancies occurred per 1,000 U.S. women aged 15–19; of these, 61 ended in births, 36 in abortions and 15 in miscarriages. Black teenagers' rates of pregnancies, births and abortions were 2–3 times those of whites; Hispanic teenagers had rates of births and abortions between those of blacks and whites. While similar proportions of pregnant black and non-Hispanic white teenagers had abortions (40% and 38%, respectively), the proportion was lower among Hispanics (29%). Among all women 15–19, the birthrate rose 12 points between 1987 and 1991; one-third of the rise (four points) may be attributable to a fall in the abortion rate. Between 1991 and 1995, the birthrate of black teenagers fell from 116 to 96 per 1,000, a level well below that of Hispanics (106 per 1,000). Among the states, pregnancy rates per 1,000 teenagers in 1992 ranged from 159 (in California) to 59 (in North Dakota), birthrates per 1,000 varied from 84 (Mississippi) to 31 (New Hampshire) and abortion rates per 1,000 ranged from 67 (Hawaii) to nine (Utah). The pregnancy rates of white and black teenagers are negatively correlated.

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The most recent published estimates of the numbers and rates of abortions and pregnancies among teenagers, by state and race, were for 1988.¹ Since then, the Centers for Disease Control and Prevention (CDC) and the National Center for Health Statistics (NCHS) have reported on teenage pregnancy rates or birthrates by state, but neither has provided a complete picture of all relevant measures.

In the CDC report, pregnancy rates are presented for 1991 and 1992 among women younger than 15, 15–17 and 18–19; the report also includes rates for black women and whites among all those aged 15–19.² However, the published data do not include abortion rates or abortion ratios. Moreover, the pregnancy rates are based on abortion data that are imperfect in several respects. Abortion reporting is incomplete in most states: In half, 13–51% of abortions are missed.³ In addition, the data have not been adjusted for women who obtain abortions out of state and do not include estimates for the nine states with no information on the age distribution of women having abortions.

The NCHS report shows trends in teenage birthrates by state from 1990 to 1994 and has 1994 breakdowns by race and ethnicity.⁴ However, it contains no estimates of pregnancy rates.

This article provides an update of national trends in rates of abortions and pregnancies among women aged 15–19 through 1992 (the latest year for which data are available) and births through 1995. It also presents the most accurate available estimates of state-level teenage abortion and pregnancy statistics.

Methods

The data sources and methods of estimation used in this study are the same as those used for the 1988 calculations. Birth data were taken from publications of the NCHS,⁵ which obtains birth certificate information from state vital statistics agencies. The most recent NCHS data tabulate race according to the race of the mother rather than the child, and the NCHS has retabulated data from the 1980s in the same way; consequently, the birthrates presented here for the 1980s by race differ from those published previously. Racial groups other than white and black are not shown separately because of small numbers and the heterogeneity of this population. Hispanics may be of any race, and the figures for whites include the large majority of Hispanics.

Surveys conducted by The Alan Guttmacher Institute (AGI) of all known abortion providers in the country were the source for the annual number of abortions.⁶ Information from the surveys was available for 1980–1982, 1984–1985, 1987–1988 and 1991–1992; data for other

years were interpolated, taking into account trends in the totals compiled by the CDC. Sample surveys of physicians and hospitals indicate that the AGI surveys miss some providers that perform small numbers of abortions; the result may be a 3% undercount of abortions.

National totals according to race and age were estimated using the distributions published by the CDC, with adjustments for year-to-year changes in the reporting states.* To estimate the distribution of abortions by race according to age, we applied iterative proportional fitting to calculate cell percentages that are as close as possible to the percentages in the CDC's age-by-race table, but that add up to our separate age and race distributions. We used the same procedure to estimate the age-by-ethnicity and age-by-marital status distributions.

For each state, we used data the CDC obtained from the state health statistics agency to determine the percentage distribution of women who had abortions in the state in 1992 by their state of residence. In 10 states for which CDC data were unavailable, we asked a sample of abortion facilities for information about the state of residence of their patients.[†] To estimate the number of nonresidents who had abortions in each state, we applied the percentage distribution of women having abortions, by their state of residence, to our count of the total number of abortions that took place in the state.

The proportions of abortions in each state that were obtained by women younger than 15, 15–17 and 18–19 were calculated from data published by the CDC.⁷ For the eight states whose health statistics agencies did not have this information

*For a detailed description of the survey methodology and methods for estimating the number of abortions according to women's characteristics, see: S. K. Henshaw and J. Van Vort, *Abortion Factbook, 1992 Edition: Readings, Trends, and State and Local Data to 1988*, AGI, New York, 1992, p. 164.

†The 10 states were Arizona, Connecticut, Delaware, Florida, Illinois, Iowa, Louisiana, Massachusetts, New Hampshire and Oklahoma. In addition, we assumed that no out-of-state women obtained abortions in Alaska, and that for California, the percentage (0.5%) and distribution of out-of-state abortions was the same as in 1982, the last year for which this information is available.

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available, we estimated the proportions from data for neighboring states or nearby states that were similar in racial distribution and degree of urbanization. These proportions were then applied to the number of abortions obtained by residents of each state to yield the number of abortions obtained by teenagers in each state.

Information on the race of teenagers having abortions was unavailable for 14 states and the District of Columbia, and Hispanic ethnicity was unavailable for 31 states and the District of Columbia. No estimates were made for these jurisdictions, but the national estimates assume that their distributions are similar to those of the states with data.

The numbers of teenage abortions estimated in this way are generally higher and more accurate than those published by the state statistics agencies. Nevertheless, some inaccuracy can occur if the age distribution of women whose abortions are not reported to the states differs significantly from the distribution of those whose abortions are reported. Additional inaccuracy can result if the age distri-

bution of residents who have abortions outside a state differs from that of women having abortions in the state.

In general, out-of-state abortions should not introduce large errors because, according to our calculations, 94% of U.S. residents who have abortions obtain them within their home state. However, state laws requiring parental consent or notification when minors are seeking abortions may cause a higher proportion of young women to travel outside their state for services. Consequently, in the 21 states that had such laws in 1992,* the estimated number of minors having abortions may be too low; in the neighboring states, to which minors might have traveled to obtain abortions, the number may be too high. Thus, the estimated abortion and pregnancy numbers and rates should not be used to assess the impact of parental involvement laws on minors' abortion and pregnancy rates.

Pregnancies, births and abortions are shown according to the woman's age at the time of the pregnancy outcome, not at the time of conception. Therefore, the data exclude pregnancies that began when the woman was 19 but ended when she was 20, while they include a small number of pregnancies that began when the woman was 14 and ended when she was 15. The numbers and rates of pregnancies include an estimated number of miscarriages and stillbirths.†

The population estimates used to calculate rates were obtained from the Census Bureau. Small differences in state rates, particularly those by race and ethnicity, should be viewed with caution because of variability in the estimates of state population sizes and the numbers of abortions and, for rates based on small populations, because of the possibility of random fluctuations. To minimize the latter problem, rates based on populations of less than 500 were not calculated.

The proportion of females aged 15–19 who have ever had sexual intercourse was taken from surveys conducted in 1976, 1982, 1988 and 1995, and was interpolated for the intervening years.‡ Small differences per 1,000 sexually experienced teenagers should be interpreted with caution because of uncertainties introduced by the interpolations and the margin of error in the surveys.

In examining the geographic patterns of the statistics, we refer to the standard census groupings of states into four regions (Northeast, Midwest, South and West), each of which consists of at least two divisions.‡

Findings

National Trends

In all, 112 pregnancies occurred for each 1,000 women aged 15–19 in 1992; 61 of these pregnancies ended in births, 36 in abortions and 15 in miscarriages (Table 1). When births and abortions are recorded according to the woman's age at conception, the rate is 130 pregnancies per 1,000 (not shown). About half of teenage women are not sexually experienced and therefore not at risk of pregnancy. For teenagers who had ever had intercourse, the pregnancy rate was 216 per 1,000. These rates mean that about 11% of young women aged 15–19 and 22% of those who were sexually experienced had a pregnancy that ended in 1992.

Black teenagers had 2.4 times the pregnancy rate of whites in 1992 (219 vs. 93 per 1,000), 2.2 times the birthrate (112 vs. 52 per 1,000) and 2.7 times the abortion rate (76 vs. 28 per 1,000). White teenagers' birthrate and abortion rate were reduced when Hispanic teenagers were excluded (to 42 and 25 per 1,000, respectively—not shown), but they were still higher than those of teenagers in most developed countries.‡ Hispanic teenagers' birthrate was close to that of blacks, and their abortion rate was between those of whites and blacks (Table 2).

Unmarried teenagers, with a pregnancy rate of 93 per 1,000, accounted for 79% of pregnancies among women aged 15–19; they had 97% of abortions and 70% of births (not shown).§¹⁰ The abortion rate among unmarried young women was somewhat higher than that for married teenagers (36 vs. 26 per 1,000).

Rates have fluctuated considerably since 1980. From 1980 to 1987, the pregnancy rate fell by 4% (from 111 to 107 per 1,000) and the birthrate declined by 5% (from 53 to 51 per 1,000), while the abortion rate changed little. By 1990, however, the pregnancy rate had risen by 10%, to 117 per 1,000, a level higher than any other since 1972, when abortion statistics became available. Between 1987 and 1991, the birthrate climbed by 23% (from 51 to 62 per 1,000), and the abortion rate declined by 10%. By 1995, the birthrate had fallen back to 57 per 1,000 (not shown), still well above the 1987 level. The abortion rate also declined in 1992, and preliminary data suggest that it has continued to fall since then.¹¹

For sexually experienced teenagers, the pregnancy rate fell from 247 to 206 per 1,000 between 1980 and 1987. It then began to climb, reaching 223 per 1,000 in 1990 before declining again, to 216 per 1,000 in 1992.

Among white teenagers, the trends in

*Alabama, Arkansas, Georgia, Indiana, Kansas, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Rhode Island, South Carolina, Tennessee, Utah, West Virginia, Wisconsin and Wyoming.

†Miscarriages and stillbirths are estimated as 10% of abortions plus 20% of births. These proportions attempt to account for miscarriages that occur after the pregnancy has lasted long enough to be noted by the woman (6–7 weeks after the last menstrual period). (See: H. Leridon, *Human Fertility: The Basic Components*, University of Chicago Press, Chicago, 1977, Table 4.20.) This method produces an estimate of 135,000 miscarriages among women younger than 20 in 1992. An alternative method, using the rate of miscarriage calculated from the 1988 National Survey of Family Growth, yields a similar result: 129,000 miscarriages among women aged 15–19 in 1991. (See: S. J. Ventura et al., "Trends in Pregnancies and Pregnancy Rates: Estimates for the United States, 1980–92," *Monthly Vital Statistics Report*, Vol. 43, No. 11, Supplement, 1995.)

‡The Northeast region is divided into New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont) and the Middle Atlantic states (New Jersey, New York and Pennsylvania). The Midwest consists of the East North Central (Illinois, Indiana, Ohio, Michigan and Wisconsin) and West North Central (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota and South Dakota) divisions. The South is divided into South Atlantic (Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia and West Virginia), East South Central (Alabama, Kentucky, Mississippi and Tennessee) and West South Central (Arkansas, Louisiana, Oklahoma and Texas). The West contains the Mountain (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming) and Pacific (Alaska, California, Hawaii, Oregon and Washington) states.

§These data exclude women who married after conceiving. The proportion of teenagers' abortions that were obtained by unmarried women was estimated from unpublished NCHS data on 301,000 abortions in 14 states.

Table 1. Pregnancy, birth and abortion rates per 1,000 women aged 15–19, and abortion ratio, by race, 1980–1992

Race and measure	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Total													
Pregnancy rate*													
All women 15–19	111.0	109.9	109.8	109.3	107.9	109.0	106.7	106.6	111.4	114.9	117.1	115.8	111.9
Sexually active women 15–19	246.7	241.5	238.2	230.6	222.9	220.6	212.1	206.2	208.2	216.6	222.6	222.0	216.3
Birthrate	53.2	52.2	52.4	51.4	50.6	51.0	50.2	50.6	53.0	57.3	60.4	62.1	60.7
Abortion rate	42.8	42.9	42.7	43.2	42.9	43.5	42.3	41.8	43.5	42.0	40.6	37.6	35.5
Abortion ratio†	44.6	45.1	44.9	45.7	45.9	46.0	45.7	45.2	45.1	42.3	40.2	37.7	36.9
White													
Pregnancy rate*	96.8	95.9	95.6	94.4	93.0	93.2	90.0	89.6	93.0	95.8	98.3	97.0	93.0
Birthrate	45.6	44.9	45.0	43.9	42.9	43.3	42.3	42.5	44.4	47.9	50.8	52.8	51.8
Abortion rate	38.3	38.2	37.9	37.9	37.7	37.5	35.6	35.1	36.1	34.8	33.9	30.5	28.1
Abortion ratio†	45.6	46.0	45.7	46.3	46.8	46.4	45.7	45.2	44.9	42.1	40.1	36.6	35.2
Nonwhite													
All													
Pregnancy rate*	181.2	177.1	176.4	177.5	175.5	180.0	180.7	180.1	189.1	193.4	189.6	189.6	185.2
Birthrate	90.9	87.5	87.1	85.9	85.1	85.4	84.8	85.5	89.2	95.9	96.5	98.4	95.5
Abortion rate	65.5	65.6	65.3	67.6	66.7	70.5	71.8	70.4	74.6	71.3	67.1	65.1	64.2
Abortion ratio†	41.9	42.9	42.8	44.0	43.9	45.2	45.8	45.2	45.5	42.6	41.0	39.8	40.2
Black													
Pregnancy rate*	u	u	u	u	u	u	u	u	u	u	224.3	223.7	218.7
Birthrate	97.9	94.5	94.3	93.9	94.1	95.4	95.8	97.6	102.7	111.5	113.1	115.5	112.4
Abortion rate	u	u	u	u	u	u	u	u	u	u	80.5	77.4	76.2
Abortion ratio†	u	u	u	u	u	u	u	u	u	u	41.6	40.1	40.4

*Includes estimated number of pregnancies ending in miscarriages and stillbirths. †Percentage of pregnancies (excluding miscarriages) that end in abortion. Notes: No data are presented separately for nonwhite women other than blacks because of small numbers and the heterogeneity of the group. In this and subsequent tables, data are tabulated according to the woman's age at the pregnancy outcome and according to the mother's race (not the child's); u=unavailable.

pregnancy rates and birthrates followed the overall pattern, dropping until 1987, then rising sharply to peaks in 1990 and 1991, respectively. The birthrate then drifted down 5% (to 50 per 1,000) by 1995. Excluding Hispanics, the birthrate declined 7% between 1990 and 1994, the latest year for which data are available. The abortion rate of white teenagers tracked the birthrate in a slow decline until 1987, then plateaued until 1989 and fell by 19% through 1992.

Nonwhite teenagers' pregnancy rate changed little between 1980 and 1986, but their birthrate fell 7% because of a 10% increase in the abortion rate. From 1986 to 1991, the birthrate rose 16% among nonwhites, a smaller change than occurred among whites (25%). Over this period, the abortion rate fell 9%, accounting for some of the increase in the birthrate. From 1991 to 1995, the birthrate declined by 17%, to 82 per 1,000 (not shown). Almost half of the drop occurred between 1994 and 1995. Among black teenagers alone, there was also a 17% drop in the birthrate, to 96 per 1,000, a level close to the

Table 2. Pregnancy, birth and abortion rates per 1,000 Hispanic women aged 15–19, and abortion ratio, 1990–1992

Measure	1990	1991	1992
Pregnancy rate*	163.4	172.5	176.0
Birthrate	100.3	106.7	107.1
Abortion rate	39.1	40.4	43.2
Abortion ratio†	28.0	27.5	28.7

*Includes estimated number of pregnancies ending in miscarriages and stillbirths. †Percentage of pregnancies (excluding miscarriages) that end in abortion.

lows of the mid-1980s.

Among Hispanic teenagers, both the abortion rate and the birthrate increased between 1990 and 1992 (Table 2). Like white teenagers, Hispanics experienced only a small birthrate decline between 1992 (107 per 1,000) and 1995 (106 per 1,000—not shown).

Another way to understand teenagers' reproductive behavior is to look at the proportion of pregnancies terminated by abortion (the abortion ratio). Of the 15–19-year-olds who had a birth or an abortion in 1992, 37% had an abortion. The proportion was about the same for young women aged 15–17 and those aged 18–19 (38% and 36%, respectively—not shown).

Once pregnant, black teenagers were about as likely as non-Hispanic white teenagers to end their pregnancy by abortion (40% and 38%, respectively). Hispanic teenagers were less likely to do so (29%).

Between 1980 and 1987, the national abortion ratio hovered around 45–47% for all teenagers and for whites. Among nonwhites, the ratio rose from 42% to 45%. After 1987, it dropped sharply for white teenagers (from 45% to 35%) and less steeply among nonwhites (from 45% to 40%). No trend was evident among Hispanics over the three years for which data were available.

State-Level Statistics

Nationally, there were 960,000 teenage pregnancies in 1992 (Table 3, page 118). The numbers in each state largely reflect

the size of the teenage population: California, Texas and New York had the largest number of both teenagers (not shown) and teenage pregnancies (154,000, 80,000 and 70,000, respectively). The fewest teenage pregnancies were found in states with relatively small teenage populations: North Dakota, Vermont and Wyoming (1,300–1,400 pregnancies).

As Table 4 (page 119) shows, the five highest pregnancy rates per 1,000 women aged 15–19 were in the West*: California (159), Nevada (145), Hawaii (138), Arizona (133) and New Mexico (129). The next five highest rates were in the South: Georgia, Florida, Texas, Mississippi and North Carolina. The lowest rates were in geographically scattered states: Minnesota, New Hampshire, North Dakota and Utah. Of the other rates that ranked among the lowest 10, four were in West North Central states (Iowa, Nebraska, South Dakota and Wisconsin) and two were in New England (Maine and Vermont). The rates among women aged 15–17 and 18–19 followed similar patterns by state; the correlation between the pregnancy rates of the two age-groups was high ($r=.96$).

Differences between the rates shown here and those reported by the CDC illustrate the effects of the incompleteness

*The District of Columbia was not ranked because it is not a state. Its pregnancy rate (277 per 1,000 women aged 15–19) is higher than that of any state, probably because large sections of the District are inner-city areas, and such areas usually have high teenage birthrates and abortion rates. The District also was omitted from all correlation analyses.

of the CDC data. For example, according to the CDC, Georgia had the highest pregnancy rate for women aged 15–19, while our data show five states with rates higher than Georgia's. The CDC shows a rate of 77 pregnancies per 1,000 teenagers for Maryland and 23 states with higher rates; our data indicate a rate of 118 per 1,000 (or 103 per 1,000 when miscarriages are excluded, as in the CDC data) and only 12 states with higher rates.

Overall, the birthrate among women 15–19 years old was 61 per 1,000 in 1992; the rate per 1,000 teenagers varied from 84 in Mississippi to 31 in New Hampshire. Six of the 10 highest birthrates were in the South (Alabama, Arkansas, Georgia, Louisiana, Mississippi and Texas), three were in Mountain states (Arizona, New Mexico and Nevada) and one was in the Pacific division (California). The 10 lowest birthrates were in five New England states (Connecticut, Maine, Massachusetts, New Hampshire and Vermont), four West North Central states (Iowa, Minnesota, Nebraska and North Dakota) and one Middle Atlantic state (New Jersey).

Statewide rates for women aged 15–17 and women aged 18–19 followed similar patterns, with some minor differences. For example, Arizona and New Mexico replaced Mississippi as the states with the highest birthrates among women 18–19.

Patterns of abortion rates were distinctly different. The highest rates per 1,000 women 15–19 years old were in Hawaii (67), California (64) and New York (60). The 10 highest rates were in three Pacific states (California, Hawaii and Washington), three South Atlantic states (Delaware, Florida and Maryland), two Middle Atlantic states (New Jersey and New York), Connecticut and Nevada. The 10 lowest abortion rates were in relatively rural states: four in the West North Central division (Iowa, Minnesota, North Dakota and South Dakota), four in the South (Kentucky, Louisiana, Oklahoma and West Virginia) and two in the Mountain division (Idaho and Utah).

As with pregnancy rates and birthrates, the relative rankings of the states with respect to abortion rates among 15–17-year-olds and 18–19-year-olds are similar ($r=.97$, excluding states for which the proportion of teenage abortions was estimated). The same 10 states have the highest rates for both age-groups, and differences among the 10 states with the lowest rates are generally minor. One exception is Kentucky,

*For 1988 state rates of pregnancies, births and abortions, by race, see: reference 1.

Table 3. Number of pregnancies among women younger than 20, by age-group, according to state, 1992

State	≤19	<15	15–17	18–19
U.S.	960,180	28,780	350,900	580,500
Ala.*	18,410	700	6,820	10,890
Alaska†	2,200	50	750	1,400
Ariz.	16,950	380	6,220	10,350
Ark.*	10,400	310	3,680	6,410
Calif.†	153,810	4,510	57,350	91,950
Colo.	12,480	320	4,850	7,310
Conn.	9,330	300	3,680	5,350
Del.†	2,680	120	1,070	1,490
D.C.‡	4,280	220	1,650	2,410
Fla.†	50,140	1,990	18,480	29,670
Ga.*	30,890	1,180	11,350	18,360
Hawaii	5,220	180	1,960	3,080
Idaho	3,390	50	1,110	2,230
Ill.†	43,740	1,430	15,510	26,800
Ind.*	19,270	450	6,530	12,290
Iowa†	6,490	150	2,110	4,230
Kans.†	7,690	160	2,740	4,790
Ky.	13,710	400	5,060	8,250
La.*	18,270	680	7,060	10,530
Maine*	2,910	50	990	1,870
Md.	17,830	700	6,850	10,280
Mass.*	15,510	420	5,280	9,810
Mich.*	36,090	970	12,610	22,510
Minn*	9,440	230	3,210	6,000
Miss.	13,350	550	5,350	7,450
Mo.*	17,650	460	6,230	10,960
Mont.	2,420	50	890	1,480
Nebr.*	4,010	80	1,310	2,620
Nev.	5,690	180	2,050	3,460
N.H.†	2,150	50	630	1,470
N.J.	23,680	840	8,610	14,230
N.Mex.	7,670	160	2,990	4,520
N.Y.	69,570	2,390	26,880	40,300
N.C.	28,010	840	10,300	16,870
N.Dak.*	1,300	10	390	900
Ohio*	35,440	860	12,130	22,450
Okla.†	11,490	260	3,950	7,280
Ore.	9,740	200	3,540	6,000
Penn.	32,510	1,090	12,010	19,410
R.I.*	2,870	80	920	1,870
S.C.*	14,630	480	5,420	8,730
S.Dak.	1,920	20	710	1,190
Tenn.*	19,680	630	7,010	12,040
Tex.	79,640	1,990	29,450	48,200
Utah*	5,580	110	1,900	3,570
Vt.	1,310	20	420	870
Va.	20,990	640	7,340	13,010
Wash.	17,840	380	6,760	10,700
W.Va.*	5,820	120	2,010	3,690
Wis.*	12,600	330	4,320	7,950
Wyo.*	1,440	10	450	980

*Number shown may be too low because parental notification or consent for abortion was required during all or part of 1992 and minors may have obtained abortions in other states.†Abortion estimates are based on the proportion of abortions obtained by women of the same age in neighboring or similar states.‡Distribution of abortions among women aged 15–17 and 18–19 is based on the distribution among all black teenagers nationally. Notes: Includes estimated number of pregnancies ending in miscarriages and stillbirths. Numbers are rounded to the nearest 10 and may not add to totals because of rounding.

which has the eighth lowest rate for women 18–19 but the 20th lowest for 15–17-year-olds. The reason for the relatively higher rate among the younger teenagers may be the lack of a parental involvement

law in Kentucky in 1992 and the ability of minors from Indiana, Ohio and West Virginia to avoid restrictions in those states by obtaining abortions in Kentucky.

Abortion rates showed much greater variation by state than did birthrates. The highest rate of abortions per 1,000 teenagers (67, in Hawaii) was 74 times the lowest rate (9, in Utah), while the highest birthrate per 1,000 (84, in Mississippi) was only 2.7 times the lowest rate (31, in New Hampshire).

The proportion of teenage pregnancies that were terminated by abortion also varied considerably by state—from 57% in New York to 16% in Utah. The abortion ratio tended to be highest in the states with the highest abortion rates. Of the 10 highest abortion ratios, three each were in New England (Connecticut, Massachusetts and Rhode Island) and Pacific states (California, Hawaii and Washington), and two were in the Middle Atlantic division (New Jersey and New York); the remaining two were in Maryland and Nevada. Except Massachusetts and Rhode Island, these states also had the highest abortion rates.

Two of the lowest abortion ratios were in Utah and Idaho, possibly in part because these states have large populations of Mormons, who generally value high fertility and oppose abortion. The remainder of the 10 lowest abortion ratios (including three that tied for 10th) were in four West South Central states (Arkansas, Louisiana, Oklahoma and Texas), five states elsewhere in the South (Kentucky, Mississippi, Tennessee, South Carolina and West Virginia) and South Dakota.

For comparison, the last column of Table 4 shows the 1988 pregnancy rate for women aged 15–19.* In general, the rates were similar in the two years ($r=.95$). However, decreases of 10% or more occurred in six states, all in the Northeast (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey and Vermont), and increases at least that large were found in the District of Columbia and three states (Mississippi, Montana and Rhode Island).

For U.S. teenagers as a whole, the birthrate was 15% higher in 1992 than in 1988; all but three states (Maine, Maryland and New Hampshire) also had higher rates in 1992. The District of Columbia experienced by far the greatest increase—57%. Rates were 20–27% higher in five states: California, Colorado, Iowa, North Dakota and Rhode Island.

Between 1988 and 1992, the national abortion rate among women aged 15–19 decreased by 18%. Only Mississippi and the District of Columbia registered in-

Table 4. Ranking of pregnancy, birth and abortion rates per 1,000 women aged 15–19, these rates by age-group, and abortion ratio, 1992; and pregnancy rate among women aged 15–19, 1988; all according to state

State	Pregnancy rate*				Birthrate				Abortion rate				Abortion ratio†	Pregnancy rate, 1988
	Rank	15–19	15–17	18–19	Rank	15–19	15–17	18–19	Rank	15–19	15–17	18–19		
U.S.	na	112	71	172	na	61	38	94	na	35	23	54	37	111
Ala.‡	14	117	77	175	9	73	46	110	23	27	19	39	27	110
Alaska§	20	109	63	179	17	64	34	109	22	30	20	44	32	111
Ariz.	4	133	83	211	2	82	51	128	19	32	20	51	28	127
Ark.‡	15	116	72	181	6	75	47	117	29	23	14	37	24	115
Calif.§	1	159	102	246	8	74	46	116	2	64	42	97	46	154
Colo.	18	111	73	168	22	58	37	92	12	37	27	53	39	102
Conn.	30	96	66	140	44	39	26	59	7	44	32	63	53	107
Del.§	11	121	86	170	20	60	44	82	8	44	30	65	43	117
D.C.**	na	277	209	355	na	116	89	148	na	125	94	161	52	209
Fla.§	7	127	82	193	15	66	42	102	9	43	28	64	39	133
Ga.‡	6	127	83	190	7	75	48	112	16	34	22	51	31	122
Hawaii	3	138	94	197	27	54	32	83	1	67	51	89	56	134
Idaho	40	77	42	132	30	52	28	88	48	14	7	24	21	73
Ill.§	16	112	69	178	18	64	40	99	18	33	18	54	34	112
Ind.‡	32	95	55	152	21	59	35	94	31	22	13	36	27	89
Iowa§	46	67	36	115	42	41	21	72	43	16	10	26	29	69
Kans.‡	34	90	54	147	26	56	30	96	34	21	16	30	28	88
Ky.	28	99	63	152	16	65	39	103	41	19	15	26	23	96
La.‡	21	109	73	161	5	76	52	112	45	15	9	24	17	107
Maine‡	45	70	41	112	43	40	21	67	37	20	14	29	34	82
Md.	13	118	80	173	32	51	33	77	5	52	37	74	51	129
Mass.‡	35	87	53	134	46	38	25	56	11	38	21	61	50	97
Mich.‡	22	108	65	170	24	57	34	90	13	37	23	57	39	111
Minn.‡	48	64	37	106	48	36	21	60	42	19	11	31	34	69
Miss.	9	122	86	174	1	84	59	121	39	19	14	27	19	106
Mo.‡	25	100	60	160	19	63	38	101	32	22	13	35	26	99
Mont.	38	81	50	131	37	46	26	78	28	24	17	33	34	74
Nebr.‡	44	71	39	118	41	41	23	68	38	20	11	32	32	75
Nev.	2	145	90	226	10	71	43	114	4	54	35	81	43	142
N.H.§	49	62	32	104	50	31	15	54	33	22	12	35	41	87
N.J.	29	97	61	149	45	39	24	61	6	45	29	69	54	112
N.Mex.	5	129	85	196	3	80	51	124	21	30	21	43	27	124
N.Y.	12	120	81	178	38	45	29	69	3	60	42	86	57	116
N.C.	10	121	78	180	14	70	44	106	17	34	24	48	33	122
N.Dak.‡	50	59	29	107	47	37	18	68	49	13	7	24	27	57
Ohio‡	33	93	55	148	23	58	35	92	35	21	12	35	27	96
Okla.§	26	100	58	162	13	70	41	113	46	14	8	24	17	105
Ore.	27	99	60	161	28	53	30	90	20	32	21	49	38	105
Penn.	37	84	55	127	39	45	29	69	24	27	18	40	38	87
R.I.‡	31	96	55	153	35	48	30	72	14	36	17	60	43	86
S.C.‡	19	110	72	163	12	70	46	105	30	23	16	34	25	114
S.Dak.	41	74	45	119	34	48	27	82	47	14	12	18	23	69
Tenn.‡	17	112	70	172	11	71	45	110	27	24	15	37	25	110
Tex.	8	123	78	190	4	79	51	120	25	26	15	42	25	117
Utah‡	47	65	37	111	36	46	26	78	50	9	5	15	16	69
Vt.	43	71	39	117	49	36	17	62	26	26	17	39	42	81
Va.	24	101	63	152	29	52	31	80	15	35	23	51	40	106
Wash.	23	107	69	166	31	51	31	81	10	42	29	62	45	109
W.Va.‡	36	85	50	136	25	56	32	91	44	16	10	25	22	78
Wis.‡	42	73	43	121	40	42	24	70	36	21	13	33	33	74
Wyo.‡	39	81	41	145	33	50	25	90	40	19	10	34	28	82

*Includes estimated number of pregnancies ending in miscarriages and stillbirths. †Percentage of pregnancies (excluding miscarriages) that end in abortion. ‡Abortion and pregnancy rates shown may be too low because parental notification or consent for abortion was required during all or part of 1992 and minors may have obtained abortions in other states; rates in neighboring states may be too high. §Abortion estimates are based on the proportion of abortions obtained by women of the same age in neighboring or similar states. **Distribution of abortions among women aged 15–17 and 18–19 is based on the distribution among all black teenagers nationally. Notes: State rankings are based on rates for women aged 15–19; na=not applicable.

creases, while nine states had declines of more than 30% (Iowa, Louisiana, Maine, Minnesota, New Hampshire, Ohio, Oklahoma, Utah and Vermont).*

There was a slight but not statistically significant tendency for decreases in abortion rates to be associated with decreases or below-average increases in birthrates. New

Hampshire, for example, had the largest proportional decrease in both its birthrate and its abortion rate. On the other hand, Iowa and North Dakota saw little change in their pregnancy rates but large increases in birthrates and decreases in abortion rates. Thus, while changes in pregnancy rates generally affected both births and abortions, a

reduction in abortions was associated with an increase in births in some areas.

*The comparisons of state abortion rates for different years are somewhat less certain than comparisons of birthrates because the proportion of abortions obtained by teenagers was estimated for some states, and teenagers may have differed from older women in the proportions who sought abortions in other states.

Table 5. Number of pregnancies and pregnancy, birth and abortion rates among women aged 15–19, by race and ethnicity, according to state, 1992

State	White				Black				Hispanic			
	No. of pregnancies*	Rate per 1,000 women			No. of pregnancies*	Rate per 1,000 women			No. of pregnancies*	Rate per 1,000 women		
		Pregnancy	Birth	Abortion		Pregnancy	Birth	Abortion		Pregnancy	Birth	Abortion
U.S.†	615,760	93	52	28	285,630	219	112	76	176,520	176	107	43
Ala.‡	9,230	93	55	24	8,390	168	109	34	u	u	66	u
Alaska	u	u	50	u	u	u	87	u	u	u	70	u
Ariz.	14,040	132	80	33	980	196	112	56	6,500	194	135	29
Ark.‡	6,580	99	63	21	3,450	181	122	32	110	117	93	7
Calif.	u	u	79	u	u	u	95	u	u	u	123	u
Colo.	10,700	107	56	36	1,020	184	108	49	u	u	121	u
Conn.	u	u	32	u	u	u	94	u	u	u	131	u
Del.	u	u	41	u	u	u	123	u	u	u	132	u
D.C.	u	u	26	u	u	u	131	u	u	u	130	u
Fla.	u	u	51	u	u	u	126	u	u	u	58	u
Ga.‡	14,340	94	55	26	15,160	193	115	50	560	136	97	17
Hawaii	1,110	111	33	65	150	174	67	85	u	u	99	u
Idaho	3,220	77	51	14	10	§	§	§	500	177	127	21
Ill.	u	u	45	u	u	u	145	u	u	u	106	u
Ind.‡	14,530	82	51	19	4,190	206	126	50	u	u	70	u
Iowa	u	u	38	u	u	u	138	u	u	u	89	u
Kans.‡	6,050	81	50	19	1,330	221	137	51	580	136	97	18
Ky.	11,180	91	61	17	2,040	182	112	43	u	u	48	u
La.	u	u	51	u	u	u	118	u	u	u	23	u
Maine‡	2,790	70	40	20	20	§	§	§	u	u	§	u
Md.	7,520	80	32	38	9,210	206	95	83	u	u	58	u
Mass.	u	u	33	u	u	u	97	u	u	u	128	u
Mich.	u	u	42	u	u	u	125	u	u	u	86	u
Minn.‡	7,250	54	30	17	1,120	254	163	54	360	130	94	14
Miss.	4,880	88	57	17	7,830	164	116	22	20	27	27	0
Mo.‡	11,280	78	51	15	5,750	241	144	62	u	u	63	u
Mont.	1,900	71	38	23	10	§	§	§	u	u	65	u
Nebr.	u	u	36	u	u	u	126	u	u	u	98	u
Nev.	4,490	141	66	56	790	222	137	53	u	u	123	u
N.H.	u	u	31	u	u	u	§	u	u	u	§	u
N.J.	9,730	54	26	20	10,830	253	103	117	4,680	151	78	52
N.Mex.	6,370	130	80	31	190	129	76	35	4,200	156	103	30
N.Y.	38,990	96	39	45	27,170	219	74	119	17,430	192	83	84
N.C.	14,780	96	53	29	11,630	180	108	46	u	u	132	u
N.Dak.‡	1,040	52	31	14	10	§	§	§	30	§	§	§
Ohio‡	23,510	74	47	16	10,710	221	132	56	u	u	75	u
Okla.	u	u	63	u	u	u	116	u	u	u	91	u
Ore.	8,640	97	52	31	500	222	114	78	1,000	193	134	29
Penn.	20,330	63	35	20	10,710	249	127	87	2,060	187	132	26
R.I.‡	2,220	85	40	33	440	235	131	71	330	156	121	12
S.C.‡	6,700	86	52	21	7,360	148	100	26	120	98	66	16
S.Dak.	1,320	58	35	15	10	§	§	§	u	u	§	u
Tenn.‡	12,360	92	59	20	6,600	194	124	41	150	104	70	15
Tex.	61,330	117	75	24	15,450	176	113	37	34,350	159	112	22
Utah‡	5,110	64	45	8	70	§	§	§	650	146	107	15
Vt.	1,270	71	36	26	10	§	§	§	0	§	§	§
Va.	11,910	80	40	30	8,130	176	98	54	u	u	63	u
Wash.	14,800	104	49	40	1,270	204	92	86	u	u	133	u
W.Va.‡	5,310	83	56	14	380	161	77	62	u	u	§	u
Wis.‡	8,210	55	30	17	3,420	273	167	66	u	u	95	u
Wyo.	u	u	48	u	u	u	§	u	u	u	79	u

*Rounded to the nearest 10. †Includes estimates for states for which data were unavailable. ‡Number of pregnancies and abortion and pregnancy rates may be too low because parental notification or consent for abortion was required during all or part of 1992 and minors may have obtained abortions in other states; rates in neighboring states may be too high. §Not calculated because population of women aged 15–19 was less than 500. Notes: Numbers of pregnancies and pregnancy rates include estimates of the number of miscarriages. Race and ethnicity are not mutually exclusive.

Race and Ethnicity

White women aged 15–19 had 616,000 births, abortions and miscarriages in 1992 (Table 5), or 66% of all pregnancies among teenagers. Black women had 286,000 pregnancies (31% of the total), and Hispanics had 177,000 (19%). Among white and Hispanic teenagers, the largest number of pregnancies undoubtedly occurred in Cal-

ifornia, but racial and ethnic breakdowns are unavailable for that state. Of the states with data, Texas accounted for the largest number of pregnancies among white and Hispanic teenagers, and New York reported the largest number among blacks. Among white teenagers in states with data, pregnancy rates and birthrates tended to be highest in the West and Southwest.

To some extent, this could reflect a concentration of Hispanics in those areas. Many of the lowest rates were in the West North Central states, but abortion data by race were unavailable for New England states other than Rhode Island. Of the six highest abortion rates, four were in the West (Colorado, Hawaii, Nevada and Washington), one was in the Northeast (New York) and

one was in the South (Maryland). By far the lowest abortion rate among white teenagers was in Utah. The next lowest rates were in rural states with small populations (Idaho, North Dakota, South Dakota and West Virginia); these were followed by rates in Missouri and Ohio.

For black teenagers, the highest pregnancy rates were in Wisconsin and Minnesota. A third midwestern state (Missouri) also had one of the highest rates, as did three states in the Northeast (New Jersey, Pennsylvania and Rhode Island). The highest birthrates among black teenagers also were in Wisconsin and Minnesota, and four more of the 10 highest rates were in the Midwest (Illinois, Iowa, Kansas and Missouri). The lowest pregnancy rates were in the South and West (Alabama, Hawaii, Mississippi, New Mexico, South Carolina and West Virginia), but the lowest birthrates were not concentrated in any particular area (Alaska, Hawaii, New Mexico, New York, Washington and West Virginia).

The highest abortion rates for black teenagers were in New Jersey and New York, which may help to explain why birthrates in those states were low or average. The lowest abortion rates were in the South and West (Alabama, Arkansas, Mississippi, New Mexico, South Carolina and Texas).

Many southern states that had high overall teenage pregnancy and abortion rates were close to the national rates for black and white teenagers examined separately. Pregnancy rates of white teenagers in the South tended to be close to the national rate, birthrates slightly above it and abortion rates well below it. Among black teenagers, pregnancy and abortion rates were usually below, and birthrates close to, the national rates for blacks. The fact that black teenagers represent a higher proportion of the population in the South than in other regions explains the high overall rates in these states.

Little geographic consistency is evident in Hispanic teenagers' rates of pregnancies, births and abortions, except that the states with the four lowest pregnancy rates (Arkansas, Mississippi, South Carolina and Tennessee) and birthrates (Kentucky, Louisiana, Maryland and Mississippi) were all in the South. The highest abortion rates were in New Jersey and New York.

Discussion

Three factors can contribute to shifts in birthrates and abortion rates: changes in intended pregnancy rates, in unintended pregnancy rates and in the proportion of unintended pregnancies that are resolved

by abortion. Since only 15% of pregnancies among teenagers are intended,¹² however, the desire to have children presumably is a minor factor in explaining teenage pregnancy. Nevertheless, changes in the level of motivation to prevent childbearing could affect pregnancy rates and decisions about pregnancy resolution. The most important factors are probably the rate of unintended pregnancy (which is a function of contraceptive use and the level of sexual activity) and the decision between abortion and childbearing when an unintended pregnancy occurs (which is affected by the accessibility of abortion services, attitudes toward abortion, the level of motivation to avoid childbearing and other factors).

The sharp increase in the birthrate of teenagers between 1987 and 1991 has never been fully explained. Reduced use of abortion appears to account for only about one-third of the change, since the abortion rate declined by four abortions per 1,000 teenagers, while the birthrate increased by 12 births per 1,000. Rising opposition to abortion among teenagers may have resulted in less use, although no data are available to demonstrate a change in attitude, and public opinion about the legality of abortion has changed little or become more favorable over time.¹³

Greater acceptance of childbearing outside marriage could have been a factor, as could reduced availability of abortion services.¹⁴ New parental consent or notification laws probably had at most a very small effect: Between the beginning of 1986 and the beginning of 1991, six states (Alabama, Arkansas, Maine, Ohio, South Carolina and Wyoming) implemented new parental involvement laws, but these states contain only 10% of all women aged 15–19.

It is even more difficult to explain the increased pregnancy rate, but factors such as a rising proportion of teenagers living in poverty and the immigration of Hispanics from high-fertility cultures may have played a role. Also, the effectiveness of contraceptive use may have declined if there was a shift from pill to condom use in response to messages on how to prevent infection with the human immunodeficiency virus (HIV).

Between 1991 and 1995, the birthrate of black teenagers dropped a surprising 17%, to a historically low level. (The fertility of black women in their 20s also fell, by a slightly smaller percentage.¹⁵) We cannot yet say exactly what role abortion played in this decline, but preliminary data suggest that abortion rates were decreasing, so unintended pregnancy probably de-

creased substantially among black teenagers; this would also explain the drop in the abortion rate between 1991 and 1992.

The CDC's Youth Risk Behavior Survey found that between 1991 and 1995, the proportion of non-Hispanic black high school students who had used a condom at last intercourse increased from 48% to 66%, with no offsetting decline in pill use.¹⁶ The availability of the contraceptive implant and injectable, which are long-acting and highly effective, may also have contributed to a decline in unintended pregnancy. The proportion of black women aged 15–19 who were sexually experienced did not change significantly during the period.¹⁷

The increase in condom use may reflect more favorable attitudes toward condoms resulting from concern about HIV infection. Among the signs and causes of such a change in the 1990s are awareness that well-known sports figures have contracted HIV through heterosexual intercourse, positive references to condom use in rap songs and music videos, and condom commercials on television. The experiences of black sports figures and rap musicians may have particular impact in the black community. Other possible influences may be sexuality education and other efforts emphasizing HIV prevention.

Between 1991 and 1994, the birthrate among non-Hispanic white teenagers fell by 7%; it probably continued to fall in 1995. This group may have been affected by some of the same influences as black teenagers, but not as powerfully. The Youth Risk Behavior Survey found that the proportion of white teenagers who had used a condom at last intercourse increased from 47% in 1991 to 53% in 1995, a smaller rise than was seen among blacks.¹⁸ In addition, the 1995 National Survey of Family Growth found that the proportion of white non-Hispanic female teenagers who had ever had intercourse dropped from 52% in 1988 to 50% in 1995.¹⁹

In contrast to the other subgroups, Hispanic teenagers experienced a distinct increase in rates of pregnancies, births and abortions between 1990 and 1992; in 1995, their birthrate was 11% higher than that of blacks. The reasons are unclear. One possible factor is a deterioration of traditional cultural norms among recent immigrants, which may be reflected in the increase in the proportion of Hispanic young women aged 15–19 who had ever had intercourse—from 49% in 1988 to 55% in 1995.²⁰ New attitudes toward condom use may not have been incorporated into Hispanic culture yet, and teenagers may have been exposed to different media

messages from those in the black and non-Hispanic white communities.

Distinct regional patterns are evident in teenage reproductive behavior. Pregnancy rates and birthrates are generally higher in the South and West than in the Northeast and Midwest. Abortion rates are highest in three Pacific states (California, Hawaii and Washington), Nevada, a contiguous group of states in the East (New York, New Jersey, Delaware and Maryland) and Florida. Highly urban states tend to have higher abortion rates than rural states.

The changes from 1988 to 1992 show few regional patterns. Pregnancy and abortion rates fell in all the New England states except Rhode Island; otherwise, changes in rates of births, abortions and pregnancies were distributed evenly around the country. Although an increase in births appears to have been associated with a decrease in abortions in some states, changes in pregnancy rates caused rises or falls in both births and abortions in others.

State variations in pregnancy rates and birthrates are very different for white and black teenagers. Surprisingly, for the 29 states with data, there is a negative correlation between the pregnancy rates of these two groups ($r = -.59$, $p < .05$) and a small and nonsignificant negative correlation for birthrates. For example, in Minnesota and Wisconsin, black teenagers have very high pregnancy rates and birthrates, while white teenagers have among the lowest rates in the country. In New Mexico and Texas, on the other hand, rates are low or average for black teenagers and are above average for whites. With respect to rates of pregnancies and births, correlations are also low between Hispanic and white teenagers and between Hispanic and black teenagers.

One implication of these findings is that state policies and other state characteristics either have little influence on teenage pregnancy rates and birthrates or exert different influences on black and white teenagers. For example, if differences in state sexuality education or public assistance policies affect pregnancy, the effects either are small or are different for white and

black adolescents.

Abortion rates, on the other hand, have a marginally significant positive correlation for white and black teenagers ($r = .35$, $p < .10$). A possible explanation is that the availability of abortion services affects the ability of adolescents of both races to terminate unintended pregnancies. This factor, or other common influences, may also be affecting Hispanic teenagers, whose abortion rate is highly correlated with that of both whites ($r = .62$) and blacks ($r = .81$).

Overall trends in recent years have been toward lower rates of pregnancies, births and abortions, but more research is needed to understand the reasons, which may differ by race and ethnicity. Research is also needed on the impact of state policies affecting minors and teenagers, and on the factors that influence a majority of pregnant teenagers in some states to end their pregnancies and in others to carry them to term.

The incompleteness of the abortion data, however, limits the research that can be done and the conclusions that can be drawn. In this study, the abortion rates of minors in many states may be inaccurate because information is lacking on the number of minors who obtain abortions outside their state of residence. Our assumption that teenagers obtain abortions out of state at the same rate as do older women is unjustified where parental involvement requirements or other policies might give teenagers an incentive to seek abortions in other states. Some states have data exchange agreements that provide them with information on their residents who obtain abortions in other states, but the data may still be incomplete if reporting in neighboring states is incomplete. Thus, improved abortion reporting systems would yield important benefits.

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