State-Specific Pregnancy Rates Among Adolescents — United States, 1992–1995

In the United States during 1985–1990, the pregnancy rate for persons aged 15–19 years increased 9% (*1*). From 1991 to 1992, however, the rate declined substantially in 31 of the 42 states* for which data were available (*2*); from 1992 through 1995, the birth rate declined steadily (*3*), and state-specific abortion rates decreased annually (*4,5*). This report presents estimated state-specific pregnancy rates for 1992–1995† for adolescents aged ≤19 years by age and race and the percentage change in state-specific pregnancy rates for persons aged 15–19 years for 1992 to 1995. The findings indicate a downward trend in pregnancy rates for persons aged 15–19 years during 1992–1995 for all 43 states for which data were available.

Number of pregnancies was estimated as the sum of live births, legal induced abortions, and estimated fetal losses (i.e., spontaneous abortions and stillbirths) among

*The word "state" in this report includes the District of Columbia except where explicitly noted.
†State-specific adolescent pregnancy rates for 1992 were previously reported by CDC (*2*). Data for 1992 are reported here because of the inclusion, for the first time, of estimated fetal losses in the calculation of pregnancy rate. Adolescent pregnancy rates published by CDC before this report should not be used together with those reported here in time series analyses because of this change in methods.

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adolescents aged ≤19 years. Data about live-born infants were obtained from birth certificates and were reported by the mother's state of residence. Because abortion data by residence were not available for all states, abortions were reported by state of occurrence.[§] Estimates of fetal loss were based on sample survey data of women aged 15–44 years from the 1988 and 1995 National Survey of Family Growth (NSFG). A national estimate of fetal loss for all adolescents aged 15–19 years was derived from NSFG data and was used to create annual estimates of fetal losses based on the number of live births and legal induced abortions in a given year (CDC, unpublished data, 1998). Denominators were obtained from postcensal population estimates provided by the Bureau of the Census (*6*).

Rates were calculated as the number of pregnancies per 1000 females aged 15–17, 18–19, or 15–19 years. Because most pregnancies (98% of live-born infants and 94% of legal induced abortions) among persons aged <15 years occur among those aged 13–14 years (CDC, unpublished data, 1995; *7*), the number of persons aged 13–14 years was used as the denominator when the rate was calculated for the <15-year age group. Legal induced abortions for which mother's age or race was unknown were included in categories based on the distribution of mothers with known age or race. Changes in pregnancy rates for persons aged 15–19 years from 1992 to 1995 were tested for statistical significance at $p<0.05$.

Although abortion totals were available for all states, age-specific data were only available from 43 states for 1992–1995; abortion data stratified by age and race were available from 37 states for 1992–1995. Because adequate age and Hispanic ethnicity data for women who had abortions were available for only 19 states in 1992, 21 states in 1993 and 1995, and 22 states in 1994, pregnancy rates by ethnicity are not included.

Pregnancy rates for persons aged 15–19 years ranged from 63.3 (Wyoming) to 126.0 (Georgia) in 1992[¶]; from 62.0 (Minnesota) to 122.0 (Georgia) in 1993; from 57.1 (North Dakota) to 119.0 (Texas) in 1994; and from 56.3 (North Dakota) to 117.1 (Nevada) in 1995 (Table 1). In each year, the rate was highest for persons aged 18–19 years and lowest for those aged <15 years. During 1992–1995, the pregnancy rate for persons aged 15–19 years decreased in each of the 43 states for which age-specific data were available. Declines ranged from 2.8% (Arkansas) to 20.1% (Vermont); all but one of these decreases were statistically significant.

Rates declined for persons aged 18–19 years in all 42 reporting states from 1992 to 1995. However, pregnancy rates increased for those aged <15 years in nine of 40 states for which data were available and for those aged 15–17 years in two of 42 states. Rates for persons aged 15–19 years were, in most cases, higher for blacks than for whites among states for which data were available (Table 2). However, in 24 of the 26 states for which data were available, the decline in pregnancy rate for blacks was greater than for whites from 1992 to 1995.

From 1992 to 1995, abortion and birth rates declined for persons aged 15–19 years. Of 43 states for which data were available, 40 reported a decreased adolescent

[§]For 47 reporting areas during 1992–1994 and for 48 areas in 1995, the number and characteristics of persons who obtained legal induced abortions were provided by the central health agency (state health departments and the health departments of New York City and the District of Columbia). For five areas during 1992–1994 and for four areas during 1995, data about the number of abortions were provided by hospitals and other medical facilities.

[¶]District of Columbia is not included in these comparisons because its pregnancy rates were higher than for any state, in part because of large numbers of abortions among nonresidents.

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abortion rate (CDC, unpublished data, 1992, 1995), and birth rates declined in 50 of 51 states (*2,3*). Relative decreases in abortion rates generally exceeded declines in birth rates.

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Editorial Note: The findings in this report indicate a downward trend in adolescent pregnancy rates during the first half of the 1990s. Adolescent pregnancy rates declined in states with high and with low rates, suggesting the potential for all states to achieve lower adolescent pregnancy rates.

The estimation of adolescent pregnancy rates was limited by the lack of age-specific data for eight states and adequate race-specific abortion data for 17 states. The lack of age-specific abortion data by ethnicity in most states also limited this analysis because the ethnic composition of state populations is an important determinant of state variations in pregnancy rates.

Legal induced abortions reported to CDC may undercount the true number of abortions. Use of abortion data by state of occurrence rather than by state of residence may have overestimated the abortion rate in states with large metropolitan areas that might draw from adjoining states, such as New York City and the District of Columbia. Estimates of fetal loss are subject to underreporting, especially because of unrecognized early fetal losses; fetal loss estimates are based on small numbers of adolescent pregnancies. Therefore, pregnancy totals based on births, legal induced abortions reported to CDC, and fetal loss estimates may underestimate the actual pregnancy rate. However, underreporting probably remains relatively constant from year to year and is unlikely to affect the trends in this report substantially.

Sexual experience, sexual activity, and effective contraceptive use are important determinants of changes in pregnancy rates. After increasing in the 1980s, the estimated proportion of adolescent females aged 15–19 years who were sexually experienced (i.e., ever had sexual intercourse) and the percentage who were sexually active (i.e., had had sexual intercourse within 3 months of interview) stabilized from 1988 to 1995 (*8*). The proportion of adolescents who reported having used contraception at first intercourse increased from 1988 to 1995 (*3*) but little change was found in the proportion of persons aged 15–19 years who reported using a contraceptive method within 1 month of interview (*9*). Among those who reported using a contraceptive method within 1 month of interview, use of oral contraceptives declined from 1988 to 1995, and use of condoms and long-acting contraceptive methods increased.

Sexual experience and contraceptive use may be influenced by motivation to avoid pregnancy, access to health-care services, income, education, and other factors. Sustaining the downward trend in adolescent pregnancy will require solutions that address complex individual and community-level factors that can affect adolescents' sexual and reproductive behavior. Programs designed to reduce adolescent pregnancy that address an array of risk factors (e.g., socioeconomic disadvantage, poor educational and employment opportunities, or lack of social support) in addition to specific skills to postpone sexual experience and increase contraceptive use may be more effective in reducing adolescent pregnancy than programs focusing exclusively on changing sexual beliefs or behavior (*10*). Additional characteristics of effective programs are strong educational components, messages tailored to the needs of

TABLE 1. Pregnancy rates* for adolescents aged ≤19 years, by age group and state†, and percentage change§ in rates for 15–19-year-olds — United States, 1992–1995

State	1992				1993				1994				1995				% Change in rate for 15–19-year-olds from 1992 to 1995§
	<15	15–17	18–19	15–19	<15	15–17	18–19	15–19	<15	15–17	18–19	15–19	<15	15–17	18–19	15–19	
Alabama	10.8	71.7	164.4	109.9	11.6	72.8	158.3	108.1	10.6	75.5	160.6	110.1	10.1	71.1	158.2	106.3	–3.3
Arizona	6.5	76.0	192.4	122.1	5.6	73.9	187.3	118.4	6.7	74.7	183.7	117.1	6.3	70.5	164.4	108.2	–11.4
Arkansas	8.2	66.1	166.4	107.0	7.7	64.0	161.6	103.7	8.1	68.8	166.8	108.3	8.4	68.1	158.3	104.1	–2.8
Colorado	5.5	61.4	144.0	94.2	5.0	58.1	134.4	88.0	4.9	56.3	130.2	85.1	4.2	54.2	121.0	80.4	–14.7
Connecticut	7.7	63.6	135.5	92.8	7.4	63.5	130.3	90.2	5.6	62.5	122.1	85.8	5.0	53.8	114.7	77.3	–16.8
District of Columbia	36.1	¶	¶	245.7	28.4	¶	¶	278.1	41.3	¶	¶	267.3	26.0	¶	¶	229.6	–6.6
Georgia	12.5	82.0	188.6	126.0	12.3	81.9	181.1	122.0	12.4	80.0	175.3	117.5	11.9	79.2	172.4	115.6	–8.3
Hawaii	7.8	66.5	149.3	101.9	5.6	64.5	153.4	102.1	6.4	68.4	152.9	103.7	7.3	58.5	139.4	92.3	–9.4
Idaho	2.3	38.5	119.9	70.4	2.3	39.2	110.1	67.3	2.7	35.8	99.9	61.2	2.9	35.1	105.6	63.4	–9.9
Indiana	4.8	50.0	136.4	85.2	4.2	48.3	132.8	82.6	5.1	49.8	133.6	83.4	4.8	49.9	132.0	82.4	–3.2
Kansas	5.8	63.3	164.0	102.6	6.6	63.1	164.4	102.6	5.3	60.5	154.5	96.9	7.1	59.6	150.7	94.9	–7.5
Kentucky	7.1	61.4	148.1	96.4	6.7	61.7	142.7	94.3	6.6	59.7	144.8	93.5	5.8	55.9	138.0	88.6	–8.1
Louisiana	10.3	73.3	162.5	109.2	9.9	73.2	158.4	107.6	9.6	71.4	156.7	105.6	8.2	63.7	149.9	98.2	–10.1
Maine	2.5	37.6	104.4	65.1	2.8	36.9	103.3	63.4	2.6	33.0	102.2	60.0	2.7	36.3	94.2	58.7	–9.8
Maryland	8.5	60.5	134.2	90.7	8.8	61.3	129.3	88.4	8.4	57.6	129.6	85.8	7.0	54.9	123.3	81.4	–10.2
Massachusetts	5.7	50.0	125.3	82.0	6.0	49.1	138.4	86.1	5.5	47.9	127.9	80.2	4.3	44.3	113.1	71.8	–12.5
Michigan	6.0	56.7	148.1	94.0	5.7	55.9	139.1	89.2	5.7	53.0	137.4	86.1	5.3	50.1	128.9	80.6	–14.2
Minnesota	3.7	37.4	107.9	65.1	3.5	35.9	102.9	62.0	3.5	34.4	100.8	59.8	2.7	34.0	92.9	56.4	–13.3
Mississippi	12.9	83.9	169.5	118.8	13.2	77.7	167.9	114.2	11.6	73.9	156.0	106.8	10.8	73.4	147.8	103.1	–13.2
Missouri	5.5	55.5	147.0	92.0	6.0	52.7	137.6	86.3	5.6	51.0	138.5	85.0	5.2	46.7	131.0	79.3	–13.8
Montana	4.2	51.2	132.6	82.8	3.2	48.6	127.5	79.1	3.6	43.1	123.1	73.7	2.7	43.9	118.6	72.8	–12.0
Nebraska	3.9	41.7	124.1	74.7	3.8	40.4	119.9	72.5	3.8	42.3	120.6	73.6	3.1	38.9	103.5	64.6	–13.5
Nevada	8.6	77.3	195.9	125.0	7.4	75.8	184.7	118.8	6.8	76.1	180.4	116.6	6.7	74.6	185.1	117.1	–6.3
New Jersey	6.8	51.9	126.9	82.2	6.8	52.1	117.1	78.0	6.3	49.6	116.7	75.9	5.0	46.3	112.8	72.0	–12.4
New Mexico	5.8	78.9	182.8	120.0	5.9	77.6	179.5	117.6	6.8	74.2	167.3	110.1	6.7	70.2	164.4	106.8	–11.0
New York	10.1	76.4	169.0	113.9	9.3	77.2	168.2	113.8	8.7	76.1	165.9	111.9	7.8	70.0	160.0	105.8	–7.1
North Carolina	10.0	80.5	183.5	123.4	9.5	79.1	178.4	119.7	10.3	80.4	175.2	118.4	9.6	75.4	168.5	112.4	–8.9
North Dakota	**	31.6	115.5	63.9	**	30.7	112.9	62.3	**	27.4	104.8	57.1	**	30.8	97.0	56.3	–11.8
Ohio	5.3	52.2	140.0	88.0	5.6	54.3	140.2	89.0	5.4	53.1	136.1	86.0	4.8	51.5	132.4	83.3	–5.4
Oregon	4.8	57.6	156.0	95.5	4.9	58.5	151.0	94.3	5.0	59.2	146.7	93.0	5.4	58.2	146.9	92.5	–3.2
Pennsylvania	7.4	54.9	127.2	84.6	6.8	54.6	124.7	82.9	6.5	48.8	118.7	76.4	5.6	44.4	113.9	71.6	–15.3
Rhode Island	7.3	58.5	166.6	103.9	5.9	63.6	171.6	107.7	7.5	61.4	162.2	101.1	5.3	54.1	154.4	93.5	–10.1
South Carolina	8.9	68.1	153.7	103.8	9.0	65.0	147.1	98.9	8.5	68.8	143.1	99.0	8.8	64.8	142.0	96.0	–7.5
South Dakota	**	42.6	113.3	70.1	1.9	38.1	104.9	64.2	**	35.1	102.5	61.2	1.8	34.0	99.0	59.5	–15.1

Tennessee	9.3	69.4	170.2	110.9	8.5	66.6	167.8	107.5	9.0	66.0	170.5	107.3	7.7	64.1	167.1	104.5	–5.8
Texas	7.7	77.4	189.0	122.3	7.7	77.2	185.4	120.8	7.6	78.0	180.9	119.0	7.3	76.6	176.7	116.3	–4.8
Utah	3.0	37.2	110.8	65.6	2.4	36.6	104.4	62.9	2.2	35.0	96.5	59.1	2.2	34.3	92.7	58.1	–11.5
Vermont	3.4	45.5	132.1	81.0	3.0	44.0	124.9	76.2	3.2	41.2	118.8	71.6	3.4	36.7	109.3	64.7	–20.1
Virginia	7.2	58.0	141.3	93.2	7.1	56.4	135.9	89.6	6.7	56.0	136.8	89.2	6.2	54.4	127.8	84.2	–9.6
Washington	5.0	64.1	155.8	100.4	5.3	62.2	153.2	98.2	5.3	59.4	142.5	91.9	5.2	56.8	137.0	88.2	–12.1
West Virginia	3.8	45.9	125.2	78.0	4.9	46.5	121.3	76.7	3.5	45.8	115.2	73.5	3.7	43.7	117.4	73.3	–6.0
Wisconsin	4.5	41.6	118.1	71.7	4.7	39.7	109.3	67.2	4.1	37.4	101.4	62.4	4.1	36.2	95.5	59.2	–17.4
Wyoming	**	31.8	114.5	63.3	**	34.6	109.0	63.2	2.5	31.0	105.3	59.1	**	30.7	102.7	58.0	–8.4

*Per 1000 females in age group (per 1000 females aged 13–14 years for the <15-year age group).
†Pregnancy rate could not be calculated for the following states because they did not provide abortion data by age for 1992–1995: Alaska, California, Delaware, Florida, Illinois, Iowa, New Hampshire, and Oklahoma.
§All percentage changes except for Arkansas were statistically significant at $p<0.05$.
¶Pregnancy rate could not be calculated because the state did not provide abortion data for certain age groups.
**Pregnancy rate was not calculated for groups with <20 pregnancies or <1000 adolescent females.

TABLE 2. Pregnancy rates* for adolescents aged 15–19 years, by race† and state§ and percentage change in rate — United States, 1992–1995

State	1992		1993		1994		1995		% Change in rate from 1992 to 1995	
	White	Black	White	Black	White	Black	White	Black	White	Black
Alabama	86.5	158.8	84.9	156.9	85.6	161.0	84.9	146.8	–1.8	–7.6
Arizona	120.6	177.6	116.8	168.2	116.3	152.5	109.0	113.4	–9.6	–36.2
Arkansas	90.5	168.2	88.5	158.4	91.5	168.3	88.3	158.6	–2.4	–5.7
Colorado	¶	¶	¶	¶	¶	¶	¶	¶	—	—
Georgia	93.9	192.1	92.1	182.4	88.9	174.4	90.2	165.6	–3.9	–13.8
Hawaii	76.3	**	75.2	**	73.6	**	51.7	80.0	–32.2	—
Idaho	70.0	**	66.6	**	60.7	**	63.3	**	–9.7	—
Indiana	74.2	184.8	72.4	178.1	74.1	169.6	74.1	158.4	–0.2	–14.3
Kansas	91.7	249.9	92.0	232.6	88.5	210.7	85.9	210.7	–6.3	–15.7
Kentucky	89.1	176.8	87.4	171.3	86.4	171.8	82.2	156.4	–7.7	–11.5
Louisiana	77.0	157.7††	73.7	157.4††	73.7	152.0††	71.6	136.1††	–6.9	–13.7††
Maine	64.8	**	62.6	**	59.1	**	57.6	**	–11.1	—
Maryland	60.2	161.7	58.7	153.4	58.2	146.6	58.1	132.3	–3.4	–18.2
Minnesota	55.8	257.2	52.9	227.5	51.3	213.9	47.1	215.1	–15.6	–16.4
Mississippi	84.8	159.4	77.7	157.2	73.2	146.7	72.7	137.7	–14.3	–13.6
Missouri	71.9	219.4	69.0	197.3	69.6	183.1	66.4	161.0	–7.6	–26.6
Montana	72.9	**	70.4	**	66.5	**	65.5	**	–10.3	—
Nevada	120.2	201.9	115.3	180.4	114.4	163.0	117.7	141.5	–2.0	–29.9
New Jersey	48.6	211.9	48.4	211.0	46.1	200.3	46.4	177.5	–4.5	–16.2
New Mexico	120.6	118.9	116.4	126.7	109.5	103.8	106.8	99.6	–11.4	–16.2
New York	91.2	207.4	89.6	211.9	88.9	203.9	85.4	186.0	–6.3	–10.3
North Carolina	98.2	183.2	95.2	177.9	95.2	172.1	92.5	157.8	–5.8	–13.9
North Dakota	56.4	**	55.3	**	50.7	**	49.6	**	–12.1	—
Ohio	¶	¶	¶	¶	70.9	185.4	69.2	173.4	—	—
Oregon	93.6	214.3	92.4	218.2	90.5	206.4	90.5	184.7	–3.4	–13.8
Pennsylvania	63.1	249.4	61.6	246.6	56.8	224.9	53.7	208.1	–15.0	–16.6
Rhode Island	92.0	249.8	95.7	240.4	90.6	225.0	83.5	197.2	–9.2	–21.1
South Carolina	80.9	141.1	78.9	130.7	78.2	131.6	78.6	123.3	–2.8	–12.6
South Dakota	54.8	**	51.2	**	50.3	**	48.7	**	–11.1	—
Tennessee	91.3	191.6	88.1	186.0	88.5	181.8	87.3	170.5	–4.3	–11.0
Texas	115.8	175.5	115.7	166.0	115.0	157.0	114.3	142.2	–1.3	–19.0

Utah	64.0	**	61.5	**	57.7	**	56.6	**	–11.5	—
Vermont	80.6	**	75.9	**	71.6	**	65.4	**	–19.0	—
Virginia	74.2	164.4	72.2	153.3	72.9	148.4	68.5	139.0	–7.7	–15.5
Washington	¶	¶	¶	¶	¶	¶	¶	¶	—	—
West Virginia	76.2	137.4	75.0	135.1	71.5	138.8	71.1	137.6	–6.7	0.2
Wisconsin	53.4	267.6	51.2	239.3	48.2	212.3	46.5	194.9	–13.1	–27.2

* Per 1000 adolescent females aged 15–19 years in each racial group. Rates were not calculated for some states according to the following hierarchy: 1) abortion data by age and race were not reported by state; 2) <20 pregnancies or <1000 adolescent females were in the group; and 3) for >15% of the abortion data, age or race of the woman was unknown.
† Pregnancy rate for adolescents of races other than white or black are not presented because the composition of this category varied widely by state and because abortion information was not available on the race breakdown of "others" for each state.
§ Pregnancy rate could not be calculated for the following states because they did not provide abortion data by age and race for 1992–1995: Alaska, California, Connecticut, Delaware, District of Columbia, Florida, Illinois, Iowa, Massachusetts, Michigan, Nebraska, New Hampshire, Oklahoma, and Wyoming.
¶ Pregnancy rate was not calculated because race information was missing for >15% of females who had had an abortion.
** Pregnancy rate was not calculated for groups with <20 pregnancies or <1000 adolescent females.
†† Rate and percentage change is for all races other than white.

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different groups of adolescents, and youth development approaches that seek to strengthen self-esteem and planning for the future (*10*).

In 1995, CDC funded 13 Community Coalition Partnership Programs for the Prevention of Teen Pregnancy to demonstrate how communities can mobilize resources in support of community-wide, sustainable efforts to prevent initial and repeat adolescent pregnancies. Rigorous evaluation of adolescent pregnancy prevention measures is an essential component of these community demonstration programs. The identification of effective strategies will assist state and local agencies in implementing successful approaches to continuing the downward trend in adolescent pregnancy.

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