
Teen Pregnancy in Wisconsin

Robert Young

This paper is a brief analysis of national and state teen pregnancy data. It begins with an argument for better data provision. The reader is then shown national trend data for both teen pregnancy and births. The trends show that over the long term teen pregnancies have been on the rise, but that the trend has recently reversed direction. Then the reader is taken behind the scenes to receive a brief explanation of how pregnancy estimates are derived. Finally, Wisconsin data are compared with the national trend. More current data are available at the state level, and it appears that Wisconsin experienced the same downturn as the nation in the pregnancy trend, and it has continued downward.

The need for teen pregnancy data

Teen pregnancy is one of today's more prominent social issues, but it is not a well-documented one. There is no U.S. agency that consistently gathers and publishes national data on this issue, although some agencies have sponsored occasional studies and reports. National leadership is needed to coordinate and improve data collection and reporting. Also, states need to allocate dollars for Health Statistics units to develop teen pregnancy data on a regular basis.

Although the federal government has been only minimally involved in studying the teen pregnancy issue, it has provided support for the work of the Alan Guttmacher Institute, a private research foundation. For decades the Institute has been prominent in conducting reproductive health research, including studies about teen pregnancy. Working together with the National Center for Health Statistics, the Institute has devised a procedure to estimate pregnancies based upon other data that are more readily available. We employed this methodology in developing Wisconsin estimates to compare with national data.

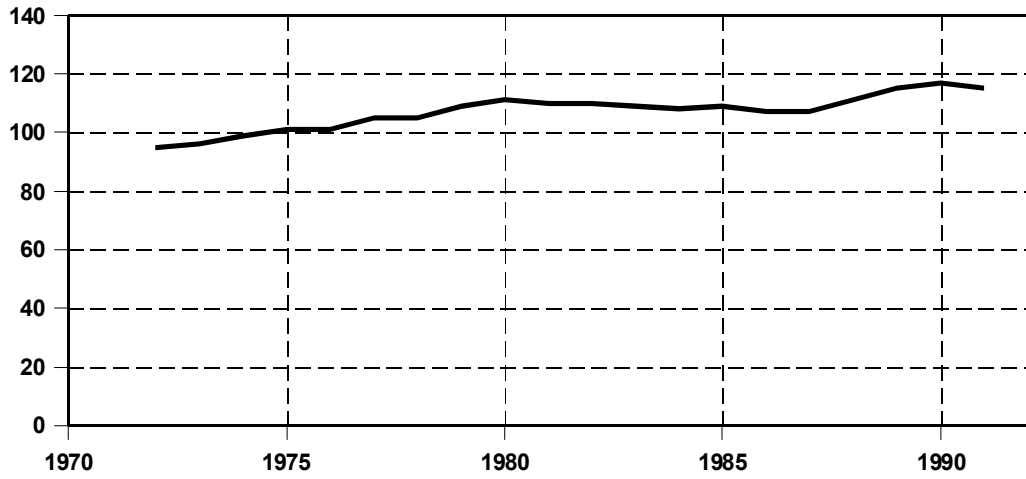
What is the national trend?

Figure 1 shows the national trend for pregnancies for women aged 15–19. Rates gradually increased in the late 1970s, declined slightly in the early 1980s, and climbed again in the late 1980s. The 1970 rate was 95 pregnancies per 1,000 women aged 15–19 (nearly 10%), and in 1990 it had climbed to nearly 12%.

Rates for women under the age of 15 are not shown. If included, the rates would be much lower because the frequency of teen pregnancies declines markedly each successive year below age 15.¹ The majority of teen pregnancies result in births. Figure 2 displays the rate of births for various teen women age groups. Note that the rate of births increases with age. The highest teen birth rates are for women aged 18–19.

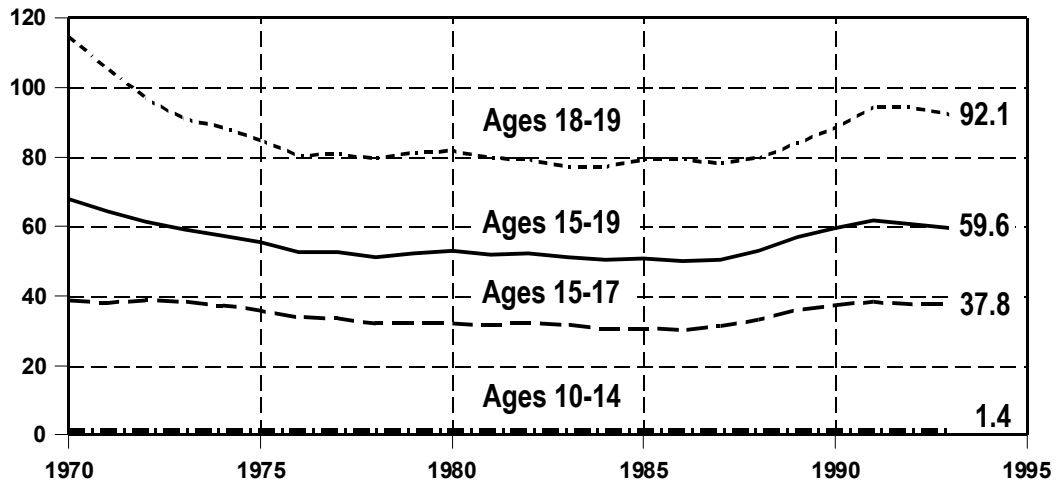
Wisconsin experienced the same downturn as the nation in the pregnancy trend.

Figure 1. Pregnancies per 1,000 women aged 15–19, U.S., 1972–1991



Source: Alan Guttmacher Institute (See Appendix Table 1).

Figure 2. Births per 1,000 women in various maternal age groups, U.S., 1970–1993



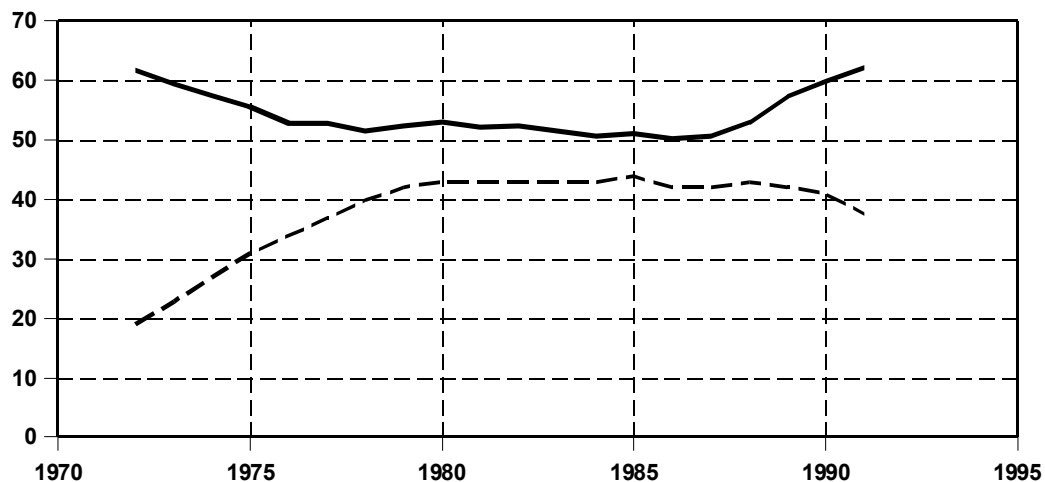
Source: National Center for Health Statistics (See Appendix Table 2).

How are pregnancies counted?

But how are pregnancies counted at all? We could count pregnancies if we could count every birth, induced abortion, and fetal loss (miscarriage). But this is impossible. In most states we *can* account for nearly all births and induced abortions, and we *can* estimate the number of fetal losses. By combining these data we can estimate the number and rate of pregnancies.²

Often birth statistics are used as proxy for teen pregnancy data. But there are obviously many more pregnancies than births. Some argue that inflating the birth statistic by a standard factor would provide a reasonable indicator. This method would probably do well to account for fetal losses, but not for induced abortions. The pregnancy statistic includes an induced abortion measure, and induced abortion rates show only a weak correlation with birth rates.³ Figure 3 shows how strongly they vary.

Figure 3. Induced abortions and births per 1,000 women aged 15–19, U.S., 1970–1993



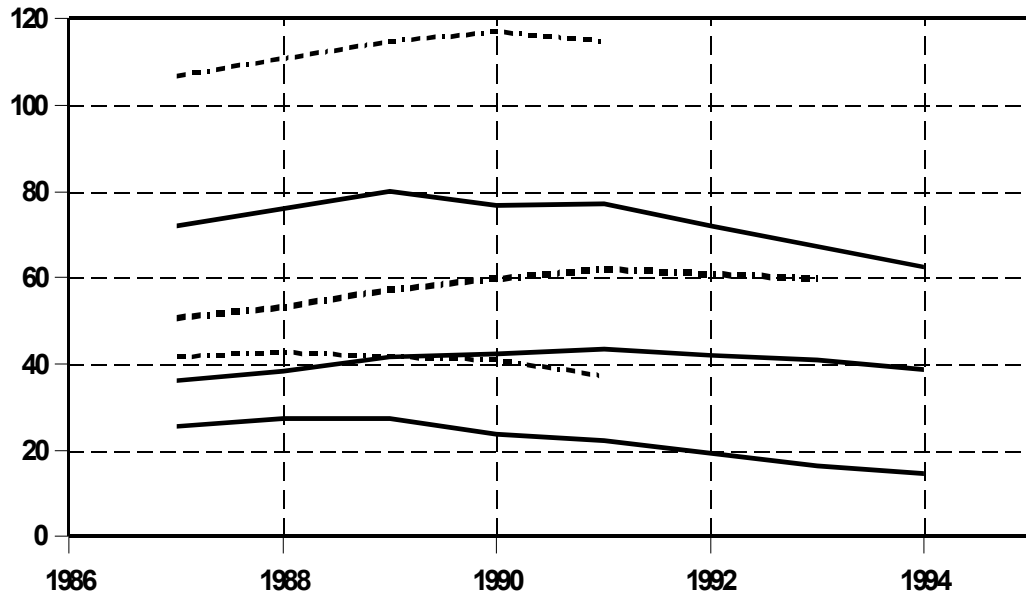
Source: Alan Guttmacher Institute (See Appendix Table 1).

For the 19 years between 1971 and 1990, the trend lines followed the same course during only the middle years (1977 to 1986). During the early 1970s and late 1980s this covariation was not present.

What about Wisconsin trends?

Wisconsin teen pregnancy rates as a rule are significantly lower than those for the nation as a whole. But they tend to follow the same direction as the national trends. Figure 4 compares U.S. and Wisconsin data between the years 1987 and 1991. One can see that Wisconsin teen women have lower birth and induced abortion rates as well.

Figure 4. Rates per 1,000 women aged 15–19, U.S. and Wisconsin, 1987–1994



Source: Appendix Tables 1, 2 and 3.

Wisconsin data prior to 1987 were excluded because that was the first year Wisconsin employed its case-based reporting system for induced abortion data.⁴ The most current year for which U.S. data are available is 1991. Note that in recent years, the Wisconsin trend has declined. This is not surprising given that the teen birth rate dipped after 1991 and that the number of teen abortions has been declining since 1988 (see Appendix Table 3).

Local surveys in Wisconsin suggest that the public perceives teen pregnancies to be increasing. This is probably due to the fact that U.S. trends are publicized more widely than Wisconsin's and the U.S. pregnancy rate was still climbing in the last published report. The unpublished 1991 downturn may be a positive signal that the U.S. trend will show a multi-year decrease as Wisconsin data have.

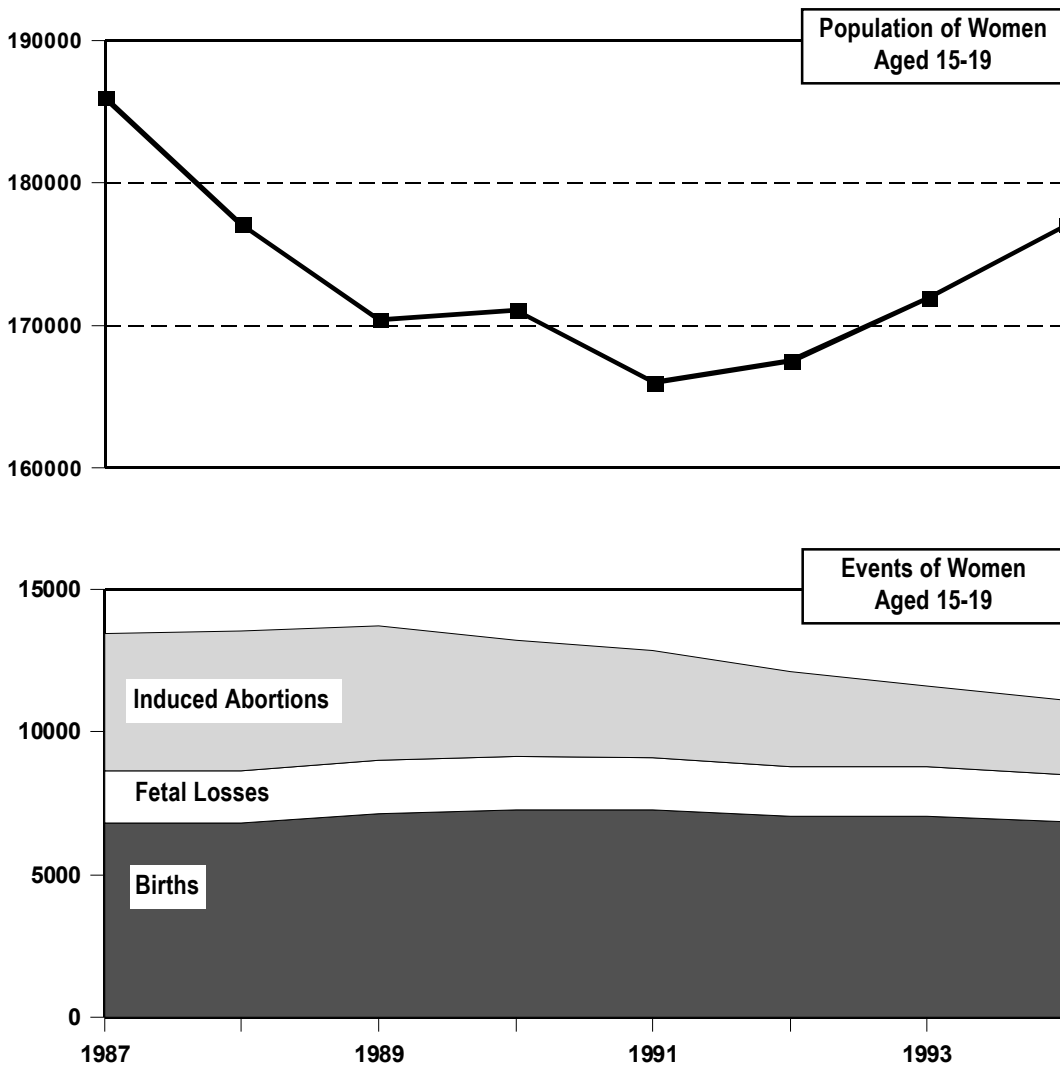
Numbers versus rates

Up to this point, this report has focused on rates. Rates allow for more fair comparisons across the years, but they don't tell the full story. As these rates have been changing from year to year, the population of teen women has showed dramatic change. Figure 5 has two parts. The upper portion shows the trend line for population of Wisconsin women aged 15–19. This age group realized a decrease of about 10% (20,000 less teen women) in the late 1980s. This decrease

mirrors the national phenomenon we call the *Baby Bust Generation* which followed the *Baby Boom*. Since 1991 the numbers have increased again, but not up to the 1987 level.

Now consider the bottom portion of Figure 5. The three events added together are the estimated number of pregnancies. Generally, when the population of women goes down, so does the number of pregnancies. But note that the population decrease was not reflected in the number of births and fetal losses. These stayed relatively constant. The number of induced abortions did decline significantly, but not until after 1989.

Figure 5. Trends in population and numbers of births, fetal losses, and induced abortions, Wisconsin teen women, 1987–1994



Source: Wisconsin Department of Health & Human Services (See Appendix Table 3).

Despite the upswing in population starting in 1991, the number of pregnancies and the pregnancy rate continued to decline.

In other words, were it not for this population decline, the number of pregnancies would have been significantly higher between 1988 and 1992. Perhaps more important is the good news that despite the upswing in population starting in 1991, the number of pregnancies and the pregnancy rate continued to decline.

Finally, we should consider in Figure 5 the decreasing trend in numbers of abortions in the light of the relatively stable trend of births and fetal losses. The decrease in induced abortions largely accounts for the decrease in pregnancies. But because pregnancy always precedes abortion, we must conclude that pregnancies have been decreasing for various reasons, and that once pregnant, an increasing number of teen women are choosing birth over abortion.



Notes

1. The very small frequencies of births to very young teens tend to vary considerably from year to year, making the rate of any single year unreliable. Theoretically, this problem can be alleviated by grouping years together (for example, ages 10–14), but when the younger ages are included, the rate (already very low) becomes increasingly close to zero and less statistically meaningful.

Why not report the rates for individual years then? Because demographers find it much more difficult to develop accurate and reliable population estimates for single-year age groups. Without accurate population estimates, the rates are subject to corruption from the population base.

2. Birth statistics are generated from birth records (certificates) completed at the time of birth. Copies of these are filed with state government offices, and are aggregated and tabulated. Induced abortions data are typically estimated from surveys of institutions that perform abortions, or from case-based continuous reporting systems, such as the one implemented in Wisconsin in 1987. Both of these data types are tied to place of residence. Fetal losses are very difficult to track. Based on survey research studies, the Alan Guttmacher Institute developed a formula for estimating them. To estimate the number fetal losses, one first determines the product that is 20% of births, and adds that to the product that is 10% of induced abortions.

Now that fetal losses have been calculated, one merely adds all three elements together to estimate total pregnancies.

Estimating pregnancy rates:

- a. Define the maternal age group.
- b. Estimate the population of the age group for the years in question (P).
- c. Obtain the number or estimate of births for those years (B).
- d. Obtain the number or estimate of induced abortions for those years (IA).
- e. Estimate fetal losses for each year (FL).
 $FL = (B * .20) + (IA * .10)$
- f. Sum the three variables to obtain the pregnancy estimate (PR).
- g. Calculate pregnancy rate by dividing the number of pregnancies in the age group by the population of the age group, and then multiplying the product by the rate base (typically 1,000).

$$\text{Pregnancy rate per 1,000 women of specified age group} = (PR/P) * 1,000$$

3. Using U.S. abortion and birth rates from Tables 1 and 2, a Pearson correlation was calculated for these variables across a 20-year span. The coefficient was only .325. Pearson coefficients range between 0 (no association) and 1 (100% association).

4. Wisconsin induced abortion data are available for earlier years, but the data were collected by a different method—an abortion-provider survey. To avoid confusion, data for those earlier years were excluded altogether.

Appendix

Table 1. Pregnancy and abortion rates for U.S. teen women, 1972–1991

	Women Aged 15-19	
	Pregnancies per 1,000	Induced Abortions per 1,000
1972	95	19
1973	96	23
1974	99	27
1975	101	31
1976	101	34
1977	105	37
1978	105	40
1979	109	42
1980	111	43
1981	110	43
1982	110	43
1983	109	43
1984	108	43
1985	109	44
1986	107	42
1987	107	42
1988	111	43
1989	115	42
1990	117	41
1991	115	37.6

Source: Alan Guttmacher Institute (1994). *Sex and America's Teenagers*. New York, NY. Pages 41 and 47. 1991 data are unpublished numbers from A.G.I.

Table 2. Births per 1,000 women in each of 10 maternal age groups, U.S., 1970–1993

	Teen Women				Other Women					
	Aged	Aged 15-19			Aged 20-24	Aged 25-29	Aged 30-34	Aged 35-39	Aged 40-44	Aged 45-49
	10-14	Total	15-17	18-19						
1970	1.2	68.3	38.8	114.7	167.8	145.1	73.3	31.7	8.1	0.5
1971	1.1	64.5	38.2	105.3	150.1	134.1	67.3	28.7	7.1	0.4
1972	1.2	61.7	39.0	96.9	130.2	117.7	59.8	24.8	6.2	0.4
1973	1.2	59.3	38.5	91.2	119.7	112.2	55.6	22.1	5.4	0.3
1974	1.2	57.5	37.3	88.7	117.7	111.5	53.8	20.2	4.8	0.3
1975	1.3	55.6	36.1	85.0	113.0	108.2	52.3	19.5	4.6	0.3
1976	1.2	52.8	34.1	80.5	110.3	106.2	53.6	19.0	4.3	0.2
1977	1.2	52.8	33.9	80.9	112.9	111.0	56.4	19.0	4.2	0.2
1978	1.2	51.5	32.2	79.8	109.9	108.5	57.8	19.0	3.9	0.2
1979	1.2	52.3	32.3	81.3	112.8	111.4	60.3	19.5	3.9	0.2
1980	1.1	53.0	32.5	82.1	115.1	112.9	61.9	19.8	3.9	0.2
1981	1.1	52.2	32.0	80.0	112.2	111.5	61.4	20.0	3.8	0.2
1982	1.1	52.4	32.3	79.4	111.6	111.0	64.1	21.2	3.9	0.2
1983	1.1	51.4	31.8	77.4	107.8	108.5	64.9	22.0	3.9	0.2
1984	1.2	50.6	31.0	77.4	106.8	108.7	67.0	22.9	3.9	0.2
1985	1.2	51.0	31.0	79.6	108.3	111.0	69.1	24.0	4.0	0.2
1986	1.3	50.2	30.5	79.6	107.4	109.8	70.1	24.4	4.1	0.2
1987	1.3	50.6	31.7	78.5	107.9	111.6	72.1	26.3	4.4	0.2
1988	1.3	53.0	33.6	79.9	110.2	114.4	74.8	28.1	4.8	0.2
1989	1.4	57.3	36.4	84.2	113.8	117.6	77.4	29.9	5.2	0.2
1990	1.4	59.9	37.5	88.6	116.5	120.2	80.8	31.7	5.5	0.2
1991	1.4	62.1	38.7	94.4	115.7	118.2	79.5	32.0	5.5	0.2
1992	1.4	60.7	37.8	94.5	114.6	117.4	80.2	32.5	5.9	0.3
1993	1.4	59.6	37.8	92.1	112.6	115.5	80.8	32.9	6.1	0.3

Source: National Center for Health Statistics. Monthly Vital Statistics Report, Vol. 44, No. 3, Supplement, September 21, 1995.

Table 3. Natality, abortion, fetal loss, and pregnancy information for Wisconsin women aged 15–19, 1987–1994

Year	Popula- tion	Births		Reported Induced Abortions		Fetal Losses		Estimated Pregnancies	
		No.	Rate*	No.	Rate*	No.	Rate*	No.	Rate*
1987	186,000	6,791	36.5	4,787	25.7	1,837	9.9	13,415	72.1
1988	177,100	6,804	38.4	4,869	27.5	1,848	10.4	13,521	76.3
1989	170,400	7,123	41.8	4,689	27.5	1,894	11.1	13,706	80.4
1990	171,107	7,258	42.4	4,073	23.8	1,859	10.9	13,190	77.1
1991	166,000	7,268	43.8	3,722	22.4	1,826	11.0	12,816	77.2
1992	167,500	7,048	42.1	3,306	19.7	1,740	10.4	12,094	72.2
1993	172,000	7,052	41.0	2,854	16.6	1,696	9.9	11,602	67.5
1994	177,080	6,869	38.8	2,603	14.7	1,634	9.2	11,106	62.7
Source Key	1	2		3		4		5	

*Note: All rates are per 1,000 women in age group.

Sources:

1. Wisconsin Department of Health and Social Services. Vital Statistics (annual) Table P1.4.
2. Wisconsin Department of Health and Social Services. Vital Statistics (annual) Table 1.4.
3. Wisconsin Department of Health and Social Services. Reported Induced Abortions in Wisconsin, (annual). In this publication, Induced Abortions (IA) data were not available by age group except as “occurrence data.” This meant that for approximately 5% of the IAs age could not be determined (because these IAs were performed out of state). Therefore “residence data” were imputed from the published tables by inflating the figures by the same percentage that “total occurrence IAs” differed from “total residence IAs”. That is why these figures are approximately 4% greater than those in the publication.
4. Fetal losses are calculated as 20% of births plus 10% of induced abortions for each year.
5. Pregnancies are estimated as births plus induced abortions, plus fetal losses.

Robert Young is the Family Demographics Specialist for Cooperative Extension at the University of Wisconsin-Madison. His areas of work have included Family Demographics, Leadership Development, In-Placement and other Administration, and Web Resource Development.