Disparities in Rates of Unintended Pregnancy In the United States, 1994 and 2001

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Lawrence B. Finer is director of domestic research, and Stanley K. Henshaw is senior fellow, at the Guttmacher Institute, New York. **CONTEXT:** Many pregnancies are unintended, particularly in certain population groups. Determining whether unintended pregnancy rates and disparities in rates between subgroups are changing may help policymakers target reproductive health services to those women most in need.

METHODS: To calculate rates of unintended pregnancy and related outcomes, data on pregnancy intendedness from the 2002 National Survey of Family Growth were combined with birth, abortion and population data from federal, state and nongovernmental sources.

RESULTS: In 2001, 49% of pregnancies in the United States were unintended. The unintended pregnancy rate was 51 per 1,000 women aged 15–44, meaning that 5% of this group had an unintended pregnancy. This level was unchanged from 1994. The rate of unintended pregnancy in 2001 was substantially above average among women aged 18–24, unmarried (particularly cohabiting) women, low-income women, women who had not completed high school and minority women. Between 1994 and 2001, the rate of unintended pregnancy declined among adolescents, college graduates and the wealthiest women, but increased among poor and less educated women. The abortion rate and the proportion of unintended pregnancies ending in abortion among all women declined, while the unintended birth rate increased. Forty-eight percent of unintended conceptions in 2001 occurred during a month when contraceptives were used, compared with 51% in 1994.

CONCLUSIONS: More research is needed to determine the factors underlying the disparities in unintended pregnancy rates by income and other characteristics. The findings may reflect a need for increased and more effective contraceptive use, particularly among high-risk groups.

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The ability to choose whether and when to bear children is a fundamental aspect of reproductive health. Although some unintended pregnancies come to be wanted, many do not and may result in undesired consequences. About half of unintended pregnancies end in abortion in the United States, ¹ and unintended pregnancies that are continued to term are associated with an increased risk of detrimental prenatal parental behaviors, such as smoking and drinking, ² as well as of negative health and social outcomes for both mother and child. ³

In 1994, the rate of unintended pregnancy (excluding miscarriages) in the United States was 45 per 1,000 women aged 15–44, and such pregnancies accounted for 49% of all pregnancies. However, the rate differed dramatically among population subgroups. For example, the rate among women whose income was below the federal poverty line was three times that of women whose income was at least double the poverty line. These inequalities were manifested in rates of both abortion and unintended births. Such gaps have social justice implications, because they indicate that some groups of women have more difficulty than others in achieving their reproductive goals. Assessing these disparities may help policymakers and public health professionals identify these groups of women.

Moreover, there is reason to believe that the rate of unintended pregnancy may have increased since 1994, for the U.S. population as a whole or for specific subgroups. For example, between 1995 and 2002, the proportion of women at risk of pregnancy who were currently using contraceptives decreased slightly,⁶ and the proportion of births that were unintended increased.⁷ Furthermore, the rate of abortion increased among poor and low-income women between 1994 and 2000.⁸ The purpose of the study described here was to use newly available national data to examine trends in the rates of unintended pregnancy and related outcomes between 1994 and 2001, and to assess whether disparities between subgroups of women have grown or decreased.

DATA AND METHODS Intendedness of Pregnancies

The primary source of information on intendedness of pregnancies in the United States is the National Survey of Family Growth (NSFG), conducted by the National Center for Health Statistics (NCHS). Since 1982, NCHS has periodically surveyed a nationally representative sample of women aged 15–44 in their homes. The most recent surveys, conducted in 1995 and 2002, collected responses from 10,847

and 7,643 women, respectively.* For each pregnancy they had experienced, respondents were asked a series of questions to determine whether the pregnancy was intended (i.e., whether the respondent had wanted to have a baby at the time the pregnancy occurred) or unintended. Unintended pregnancies included both those that were mistimed (i.e., the woman wanted to become pregnant at some point in the future, but not yet) and those that were unwanted (the woman did not want to become pregnant now or in the future). Pregnancies about which women indicated they were indifferent were classified as intended.

Thus, in our analysis, as in most U.S. fertility surveys, pregnancies are categorized as either intended or unintended. In recent years, research has demonstrated the limits of this categorization. Intendedness can be seen as a continuous measure, as a person's pregnancy intentions are often characterized by ambivalence (which may be reflected by inconsistent or ineffective contraceptive use); moreover, women's reports regarding the intendedness of a particular pregnancy may change over time. ¹⁰ In addition, many women who describe a pregnancy as unintended report that they were happy when they discovered the pregnancy. ¹¹ Nonetheless, measures of unintended pregnancy that use the intended/unintended dichotomy remain valuable because they allow us to assess trends over time and differences among population subgroups.

Although we report results for 1994 and 2001, we examined the intendedness of all pregnancies that occurred during the five-year periods ending in December 1994 and December 2001 in order to have a sufficiently large sample of pregnancies for subgroup analysis. The assumption underlying this approach is that the proportion of intended pregnancies during 1997–2000 was similar to the proportion in 2001; in fact, exploratory tabulations indicated that the proportion of 2001 pregnancies reported in the NSFG as intended was within 1% of the proportion reported for 1997–2000.

We also assumed that all abortions resulted from unintended pregnancies. In reality, 8% of the pregnancies ending in abortion that women reported in the face-to-face interviews for the 2002 NSFG were described as intended. However, abortions are substantially underreported in the NSFG (for example, only 45% of the abortions estimated to have occurred in 1991–1994 were reported in the 1995 NSFG);12 as a result, analyses based on these reports are likely to be unreliable. Unreported abortions may be more likely than reported abortions to be the result of unintended pregnancies; if all unreported abortions resulted from unintended pregnancies, then intended pregnancies that were aborted would account for only about 4% of the true number of abortions and 1% of all pregnancies, so classifying all pregnancies ending in abortion as unintended should have minimal impact on our calculated rates.

Pregnancies were tabulated by intendedness for the entire population of women aged 15–44 and for subgroups of women by age, relationship status, income, education, and race and ethnicity. Analyses of women by educational

achievement were limited to women 20 and older, to focus on women who had likely completed their education.

Pregnancy Outcomes

- •Births. The proportions of births that were intended and unintended (as calculated from the NSFG) were applied to the total number of births in the United States in 2001. Birth data are tabulated by NCHS from birth certificates. We used published NCHS tabulations¹³ and individual-level data files¹⁴ for 2001 to distribute births by women's age, relationship status (except cohabitation), education, and race and ethnicity. To calculate births by women's income, we applied the distribution of births by poverty status in the NSFG to the total number of births reported by NCHS. We also used the NSFG data to distribute births to unmarried women by cohabitation status.
- Abortions. Because abortions were underreported in the NSFG, we obtained population-level abortion data from sources that are considered more complete. We obtained the total number of abortions for 2001 by adjusting the total number of abortions reported in a 2000 census of abortion providers ¹⁵ for changes in comparable state-by-state abortion reports between 2000 and 2001; this methodology has been described elsewhere. ¹⁶

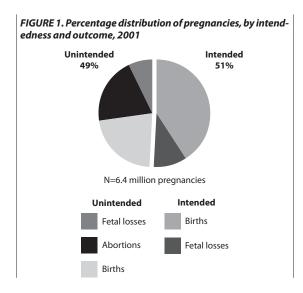
We used three sources to estimate the number of abortions in 2001 by subgroup. For age, we distributed the 2001 abortions according to percentage distributions compiled from 2001 state health department reports by the Centers for Disease Control and Prevention, ¹⁷ with adjustments for year-to-year changes in state reporting. For income, education, and race and ethnicity, we used published tabulations of abortions by women's characteristics from a 2000 nationally representative survey of abortion patients, ¹⁸ and assumed that these distributions held for 2001. For relationship status, we used unpublished tabulations of data from the same survey.

• Fetal losses. Published unintended pregnancy rates for 1994 excluded miscarriages and other fetal losses. To provide a complete estimate of the number of unintended pregnancies and to assess trends since 1994, we have included fetal losses in our estimates. We have also recalculated the 1994 estimates to include fetal losses, and we show these updated estimates alongside the 2001 data. Our estimates include only fetal losses that would typically be observed by the woman, thus excluding very early miscarriages; this approach is consistent with that of previous reports. ¹⁹

We used the fetal losses reported in the NSFG data, distributed by intendedness of the pregnancy and by women's demographic characteristics, rather than the formula of 20% of births plus 10% of abortions that is sometimes used to estimate fetal losses. ²⁰ To estimate the total number of fetal losses in 2001, we multiplied the ratio of fetal losses to births as reported in the NSFG by the total number of births from NCHS reports. ²¹

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^{*}The 2002 survey also collected information from 4,928 men, but detailed information on the pregnancies in which those men were involved was not collected.



Calculation of Numbers and Rates

To calculate rates of pregnancy, birth and abortion, we obtained population denominators from three sources. We used census estimates of the female population in July 1994 and July 2001, with distributions by age and race. For marital status, income and education, we used data from the Current Population Survey and its March Demographic Supplement, ²² interpolating between the March 2001 and March 2002 surveys for 2001, and adjusted these to the census totals. We used the NSFG to distribute unmarried women by cohabitation status.

We estimated the total number of unintended pregnancies by determining the proportion of births and fetal losses that followed unintended pregnancies (as reported in the NSFG) and applying those proportions to the actual numbers of each pregnancy outcome, and then adding all abortions. We divided the resulting numbers of events by the population of women of reproductive age to obtain rates, and we divided the number of unintended pregnancies by the total number of pregnancies to obtain the proportion of pregnancies that were unintended. Although the proportion of pregnancies that are unintended is a frequently cited figure, the unintended pregnancy rate is arguably a better measure (particularly when examining trends), since it reflects the frequency with which the event occurs in the population.* However, because the former is often used by researchers and policymakers, we have also included this statistic in our analyses. Finally, we used these data to determine rates of unintended birth and abortion and to calculate the proportion of unintended pregnancies that ended in abortion. We excluded fetal losses from this computation to focus on pregnancies whose outcomes were decided by the woman.

Contraceptive Use

The NSFG contains a contraceptive calendar, in which respondents list the method they used in each month during the four years preceding the interview. To calculate the proportion of unintended births that occurred to women who used contraceptives during the month of conception, we merged these calendar data with data on the intendedness of births and fetal losses. To make the same estimate for pregnancies that were aborted, we used data from a nationally representative survey of abortion patients.²³ These two sources were combined to estimate the proportion for all unintended pregnancies.

RESULTS Overall Findings

Of the 6.4 million pregnancies in the United States in 2001, 4.0 million resulted in births, 1.3 million in abortions and 1.1 million in fetal losses. The proportions of pregnancies that were intended (51%) and unintended (49%) were almost identical (Figure 1). Of the 3.1 million unintended pregnancies, 44% ended in births, 42% in abortions and 14% in fetal losses; these accounted for 22%, 20% and 7% of all pregnancies, respectively. Of the 3.3 million intended pregnancies, 80% (representing 41% of all pregnancies) resulted in births; the remainder resulted in fetal losses.

The pregnancy rate in 2001 was 104 per 1,000 women aged 15–44, down slightly from 107 in 1994 (Table 1). The unintended pregnancy rate was 51 per 1,000, meaning that roughly 5% of women of reproductive age had an unintended pregnancy in 2001. This rate and the proportion of pregnancies that were unintended (49%) were virtually unchanged from 1994. The intended pregnancy rate declined from 56 to 53 per 1,000 women. The proportion of unintended pregnancies (excluding fetal losses) ending in abortion declined from 54% to 48% between 1994 and 2001, coinciding with a decline in the abortion rate and an increase in the rate of unintended birth.

Contraceptives were used during the month of conception for 48% of the unintended pregnancies that ended in 2001 (not shown). This figure represented a small decline from the 1994 figure of 51%; the decrease is consistent with a previously reported decline between 1995 and 2002 in contraceptive use among all women at risk of unintended pregnancy. Forty percent of women who had an unplanned birth had used contraceptives during the month of conception; 54% of those who had an abortion had done so.

Findings for Selected Subgroups

•Age. In 2001, the pregnancy rate was highest among women aged 20–24. The rate of unintended pregnancy was highest among women 18–19 and 20–24; in these agegroups, more than one unintended pregnancy occurred for every 10 women, a rate twice that for women overall. The proportion of pregnancies that were unintended was highest among women 19 and younger; this proportion generally declined with age. Between 1994 and 2001, the intended pregnancy rate fell by 60% among women aged 15–17 and

^{*}Consider a scenario in which the unintended pregnancy rate of a population declines but the intended pregnancy rate declines more sharply. In this case, the proportion of pregnancies that were unintended would increase, even though the unintended pregnancy rate declined.

[†]The 1994 figure previously published was 53% (source: reference 1), but subsequent adjustments to account for women who used contraceptives during the month in which they became pregnant but then stopped to (intentionally) become pregnant resulted in a corrected figure of 51%.

Characteristic	No. of pregnancies, 2001 (in 000s)	Pregnancy rate*						Unintended pregnancies				Abortion		Unintended	
		Total		Intended		Unintended		As % of total		% ending in abortion†		rate*		birth rate*	
		1994	2001	1994	2001	1994	2001	1994	2001	1994	2001	1994	2001	1994	2001
All women	6,404	107	104	56	53	51	51	48	49	54	48	24	21	20	22
Age															
<15	29	5	3	1	0	4	3	79	100	66	51	2	1	1	1
15–19	811	107	82	25	15	82	67	77	82	47	40	33	23	38	34
15–17	271	76	46	15	6	61	40	80	87	47	39	24	14	27	21
18-19	540	155	137	40	29	115	108	74	79	47	41	48	37	54	53
20–24	1,681	184	174	79	70	105	104	57	60	55	49	52	45	43	46
25-29	1,566	170	168	104	96	66	71	39	43	56	50	32	32	25	32
30-34	1,364	120	133	82	89	38	44	32	33	55	49	18	19	15	20
35–39	766	56	69	35	49	21	20	38	29	56	60	10	10	8	6
≥40	186	15	16	8	10	7	6	45	38	70	56	3	3	1	3
Marital status															
Married	3,496	118	119	85	87	33	32	28	27	32	27	9	8	19	20
Unmarried	2,909	96	90	25	23	71	67	74	74	62	58	39	33	23	24
Marital history‡															
Never married	2,331	102	92	25	22	77	70	76	77	61	57	41	35	27	26
Formerly married	578	80	82	26	30	54	52	68	63	69	67	33	29	14	14
Cohabitation status‡															
Cohabiting	1,026	u	197	u	59	u	138	u	70	u	54	57	63	u	54
Not cohabiting	1,883	u	69	u	17	u	52	u	76	u	61	36	27	u	18
Income as % of pover	rty														
<100	1,513	142	182	55	69	87	112	61	62	48	42	37	42	40	58
100-199	1,625	122	144	58	62	65	81	53	57	53	50	31	36	27	35
≥200	3,266	94	78	57	48	37	29	39	38	60	54	19	13	12	11
Education§															
<high diploma<br="" school="">High school</high>	878	146	151	75	75	71	76	49	50	38	36	23	22	37	40
diploma/GED	1,699	108	115	61	61	47	54	43	47	49	46	20	21	20	25
Some college	1,501	92	91	49	43	43	47	47	52	71	60	27	25	11	16
College graduate	1,485	103	109	70	83	33	26	32	24	57	55	16	12	12	10
Race/ethnicity															
White	3,552	88	88	52	53	37	35	42	40	52	44	16	13	15	17
Black	1,182	146	141	45	43	101	98	69	69	58	58	51	49	38	35
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*Per 1,000 women. †Excluding fetal losses. ‡Among unmarried women. §Among women aged 20 and older. *Notes*: Age and marital status are measured at pregnancy outcome. u=unavailable. GED=general equivalency diploma.

by 28% among those 18–19; overall, it fell by 40% among women aged 15–19. The unintended pregnancy rate also fell in these age-groups, but less steeply, so the proportion of pregnancies that were unintended increased. The rate of unintended pregnancy changed little among most older age-groups, but it increased among women aged 25–29 and 30–34. The intended pregnancy rate increased rather sharply among women 30 and older.

The proportion of unintended pregnancies that ended in abortion declined for every age-group except for women aged 35–39; the decline was particularly large among teenagers. As a result, the abortion rate for teenagers fell as well. The rate of unintended birth increased for all age-groups older than 19 except for women 35–39, for whom it decreased.

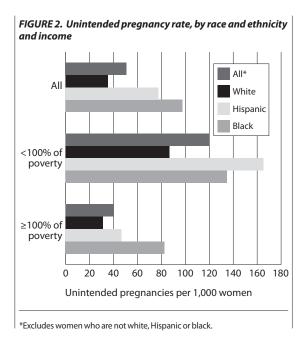
• Relationship status (marital status, marital history and cohabitation status). Rates of unintended pregnancy and abortion were higher among unmarried women than among

married women, and they were particularly high among cohabiting women. In fact, the rate of unintended birth among cohabiting women was more than twice that of married women or of unmarried women who were not cohabiting. On the other hand, the rate of intended pregnancy was also high among these women; three in 10 of cohabiting women's pregnancies and one-quarter of all unmarried women's pregnancies were intended. Among married women, more than one-quarter of pregnancies were unintended; however, only 27% of these pregnancies were ended by abortion, compared with 58% of unmarried women's.

Between 1994 and 2001, the rate of unintended pregnancy declined among unmarried women, especially those who had never been married. Among these women, the decrease in unintended pregnancy, together with a drop in the proportion of unintended pregnancies ending in abortion, translated into a decline in the rate of abortion.

•Income. The unintended pregnancy rate ranged from 112

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per 1,000 among women whose income was below the poverty line to 29 per 1,000 among those whose income was at least twice the poverty level. The rate of unintended birth also declined sharply with greater income, whereas the proportion of unintended pregnancies ended by abortion increased with income.

The disparity in unintended pregnancy by income grew between 1994 and 2001. The rate of unintended pregnancy among poor women increased by 25 points, or 29%, while the rate among women at or above 200% of poverty declined by eight points, or 20%. Similarly, the rate of unintended birth increased by 44% among poor women but declined among women at or above 200% of poverty; the disparity in abortion rates increased as well. In 2001, poor women had unintended births at five times the rate of their counterparts in the highest income category.

• Education. Among women aged 20 and older, those without a high school diploma had an unintended pregnancy rate about three times that of college graduates, and they were less likely than women in other education subgroups to end an unintended pregnancy by abortion. As a consequence, their rate of unintended childbearing was four times that of college graduates.

Between 1994 and 2001, the rates of unintended pregnancy and abortion fell among college graduates. Among other education groups, abortion rates generally showed little change, but rates of unintended pregnancy and unintended birth rose. As a result, the disparity in unintended pregnancy rates between college graduates and women with lower educational attainment increased during the study period.

•Race and ethnicity. Unintended pregnancy rates varied dramatically by race. Black and Hispanic women had higher rates of unintended pregnancy and, as a result, higher rates of unintended birth and abortion than white women. Although the unintended pregnancy rate of white women changed little between 1994 and 2001, the proportion of

their unintended pregnancies ending in abortion declined, resulting in a slight drop in the abortion rate and a slight increase in the rate of unintended births. Among black women, the unintended pregnancy rate declined somewhat. Hispanic women's unintended pregnancy rate was stable, although their intended pregnancy rate fell. As it did among white women, the proportion of unintended pregnancies ending in abortion declined among Hispanic women, resulting in a shift toward unintended births.

To disentangle the associations between race and income, we calculated unintended pregnancy rates by income within racial and ethnic groups (Figure 2). Although the unintended pregnancy rate was high among poor women of all races, differences between racial and ethnic groups persisted; poor Hispanic women had a particularly high rate. Among women whose incomes were at or above the poverty line, however, the rate among black women was substantially higher than that among Hispanic or white women. Because of the small sample sizes, the specific rates in Figure 2 should be interpreted with caution; the broad comparisons, however, should be valid.

DISCUSSION

One in 20 American women has an unintended pregnancy each year, and the burden falls even more heavily on some groups: women aged 18–24, low-income women, cohabiting women and minority (particularly black) women. As a result of their high unintended pregnancy rates, women in these groups also have above-average rates of unintended birth and abortion.

Cohabiting women are particularly vulnerable to unintended pregnancy. These women use contraceptives at rates similar to those of married women, ²⁵ but their levels of sexual activity are typically higher; ²⁶ moreover, because they are younger, on average, than married women, ²⁷ their level of fecundity may be higher. Although many cohabiting women may indicate that they do not intend to become pregnant, they may in fact be deferring to their partners' desires to avoid pregnancy, and as a result these women's efforts to avoid childbearing may not always be great. ²⁸ The high rates of unintended birth and abortion among cohabiting women suggest that both they and their partners would benefit from improved social and medical services related to pregnancy planning.

The national unintended pregnancy rate was constant between 1994 and 2001, but this overall stability masked changes by subgroup. The rate declined among teenagers but increased among adults aged 25–34. Although the rate of unintended pregnancy showed little change among married women, it decreased substantially among nevermarried women; this finding echoed the decline among women 19 and younger, as the majority of teenagers have never married. In addition, the increase among women aged 25–34 could partially reflect that a higher proportion of women in this age-group were unmarried in 2001 than in 1994. ²⁹ Because unmarried women are at greater risk of unintended pregnancy, an increase in the proportion of un-

married women could have resulted in an increase in unintended pregnancy, even if other factors did not change.

Among teenagers, one likely reason for the reduced rate of pregnancy was an increase in contraceptive use, ³⁰ which in turn was probably driven by a marked increase in the desire to prevent childbearing. The latter trend is indicated by the 40% drop in the intended pregnancy rate among those aged 15–19. Such a change suggests a widespread decline in the motivation to have a baby, which may have impacted the unintended pregnancy rate as well. In 2001, the proportion of adolescents ambivalent about having a child may have been smaller than it was in 1994, and a growing proportion may have decided to take steps to prevent pregnancy, most likely by using contraceptives. This change presumably prevented abortions as well as births.

Low-income women had much higher rates of unintended pregnancy than did wealthier women; this disparity increased between 1994 and 2001, manifesting as growing disparities in the rates of both abortion and unintended birth. Financially disadvantaged women are more likely than other women to have unprotected intercourse, 31 and when they use contraceptives, they experience markedly higher rates of method failure. 32 NSFG data for 1995 and 2002 indicate that poor women at risk of pregnancy were less likely to use contraceptives than women above the poverty line, a disparity that grew during the study period. 33 The disparity may in part reflect differentials in insurance: Poor women are twice as likely as women overall to have no health insurance.³⁴ In addition, spending under Title X, the only federal stream of dollars dedicated to family planning services for low-income women, declined between 1994 and 2001 after controlling for inflation.³⁵

The proportion of unintended pregnancies ending in abortion fell among women in many subgroups. Among white women and Hispanic women, the decline in the proportion of unintended pregnancies ending in abortion resulted in an increase in the rate of unintended birth. This decline may have resulted in part from increased difficulties in obtaining abortions, especially in areas with decreased availability of services. ³⁶ In addition, increased stigmatization of abortion may have played a role, even though a 2003 report found that American public opinion toward abortion has been notably consistent over the past quartercentury. ³⁷ Among black women, however, the proportion of unintended pregnancies that resulted in abortion remained stable; this may be due to continued high levels of unintended pregnancy in this group.

Our study is subject to several limitations. Because of the potential for sampling error, small reported changes in pregnancy intendedness should be viewed with caution. There may be additional sampling error for some population subgroup denominators calculated using data from the Current Population Survey. As a result, we have focused on substantive rather than statistically significant differences. Changes in the NSFG methodology from cycle to cycle, although minimal, may have had an impact on the responses to the questions on pregnancy intention.

In addition, as discussed earlier, a woman's pregnancy intentions cannot always be accurately ascertained or neatly dichotomized. Women are often ambivalent about whether a pregnancy was intended; moreover, some women may redefine an unintended pregnancy as intended or, probably less commonly, an intended pregnancy as unintended. If the former occurred more commonly than the latter, our analysis would underestimate pregnancy unintendedness. Studies based on other data sources have found an even higher proportion of unintended births than are reported in the NSFG. ³⁸ Finally, as mentioned earlier, some abortions likely followed intended pregnancies. For example, some women who had abortions may have desired a child but, when faced with a pregnancy, found that they had less support than expected and could not take on the responsibility.

It is unfortunate that some sources of public financial support and services are being cut back at a time when the national unintended pregnancy rate has not improved in seven years and a small but increasing proportion of low-income women are not using contraceptives. Title X was intended to give low-income women the same fertility control as higher income women. It played a key role in nearly equalizing contraceptive use between the early 1980s and the mid-1990s, ³⁹ but the disparities in rates of contraceptive use and unintended pregnancy between poor women and those with higher incomes have since increased.

Further research is needed to determine the factors underlying the increases in unintended pregnancy rates that occurred among women living in poverty and other subgroups. However, the disparities and trends identified in this study suggest that policy efforts to reduce unintended pregnancy should focus on improving access to contraceptives, particularly for high-risk groups. In addition, providers should aim to help women plan pregnancies through the use of well-suited and effective contraceptive methods. Some very effective reversible long-term methods, such as the IUD, are used less in the United States than in many other industrialized nations, ⁴⁰ and societal or structural influences likely have as much to do with this as does individual choice. ⁴¹ A reduction in barriers to the use of more effective methods would prevent many unintended pregnancies.

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