Riskier Than We Thought: Revised Estimates of Noncontracepting Women Risking Unintended Pregnancy

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SYNOPSIS

Objectives. *Risk-taking* is defined as non-use of contraception among sexually active women who do not desire pregnancy. The published National Survey of Family Growth (NSFG) definition of risk of unintended pregnancy includes sterilized women and women relying on partner sterilization in the statistic. However, this inclusion skews percentages of risk-taking women to appear smaller than is realistic since sterilized women face minimal risk of pregnancy. The objective of this study was to obtain realistic estimates of risk-taking behavior to identify groups at special need for improved services.

Methods. In calculating risk-taking statistics, sterilized women and women relying on partner sterilization are removed from both the numerator and denominator. The numerator includes all non-contracepting women who believe that they are fecund. The authors calculated the proportion of risk-taking women for various age, ethnic, and marital status groups.

Results. Overall, 14.0% of sexually active, fecund women are risk-taking. Except for teenagers, who do not use sterilization, the proportions of risk takers are higher than the NSFG estimates of proportion of women at risk of unintended pregnancy in all groups. Differences in risk estimates ranged from 0.4% to 10.7%, with the greatest differences seen among formerly married and Hispanic black women.

Conclusions. These results indicate that published NSFG percentages of adult women at risk of unintended pregnancy underestimate risk-taking behavior for groups previously thought to be at lower risk of unintended pregnancy.

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Unintended pregnancy is a widespread problem with serious consequences for women, infants, and society. These pregnancies result in less prenatal care, more likely exposure to harmful substances, higher abortion rates, greater risks of low-birthweight babies and, at times, infant death.¹⁻⁴ Results from the 2002 National Survey of Family Growth (NSFG) indicate that the problem of unintended pregnancy may be increasing.⁵

Of the many interesting statistics from the 2002 NSFG, one key finding was that the percentage of sexually active women not using contraception increased from 5.2% in 1995 to 7.4% in 2002. This represents an apparent increase of 1.43 million women who are engaging in unprotected intercourse, despite their desire to avoid pregnancy.⁵

The National Center for Health Statistics (NCHS) defines *at risk for unintended pregnancy* as including “those who are using contraception, plus . . . those who were not using contraception, but had intercourse in the last three months, and were not intentionally pregnant or seeking pregnancy.”⁵ By this definition, the NSFG estimates include sterilized women and women relying on partner sterilization for contraception in the denominator of the women at risk statistic. According to this definition, 10.7% of women at risk for unintended pregnancies in 2002 were not using contraception. This statistic is certainly alarming and bears further investigation into the causes of this growth in contraception non-use.

However, we hypothesize that this striking statistic for risk-taking behavior is actually too low among some populations of women. The inclusion of sterilized women and partners skews the percentages of risk-taking women to appear smaller than it is. In actuality, women who have been surgically sterilized have virtually no risk of pregnancy. The failure rate for tubal ligation is 0.5 percent.⁶ Further, unlike other forms of contraception, user failure is not an issue.

While existing estimates of unintended pregnancy already offer valuable insight for demographers and service providers to understand future fertility and service availability, we also need to understand risk-taking behavior to effectively target public health interventions. The overall number of 4.5 million non-contracepting women will not change by any definition or recalculation. However, sub-group proportions will be altered, and these may be important as we target public health programs.

METHODS

In December 2004, the National Center for Health Statistics (NCHS) at the Centers for Disease Control

and Prevention (CDC) released Cycle 6 of the National Survey for Family Growth (NSFG) with the most recent (2002) data, including contraceptive use by sexually active women. The 2002 sample is a nationally representative multistage area probability sample drawn from 120 areas across the country. The response rate for women was about 80%.⁷

To assess the percentage of women at “non-contracepting risk” for unintended pregnancy, the NSFG statistics measure women who have been sexually active in the last three months and are not contraceptors over a denominator that includes them and contracepting women, regardless of contraceptive method. NCHS excludes women who report that they are infertile and women who report not having been sexually active during the previous three months, as well as women who are pregnant or seeking pregnancy.

For our revised estimates, we consider women who have been surgically sterilized (tubal ligation) to be in the same category as those who are sterile for other reasons, given that they have acted to remove themselves from being at risk of unintended pregnancy, and their actions have resulted in effectively removing their unintended pregnancy risk. Therefore, we excluded all sterilized women from the “at risk of unintended pregnancy” denominator and recalculated the percentage of risk-taking women for various age groups, ethnic groups, and marital status. We also conducted a secondary analysis excluding women who reported sexual partners as sterile. For both sets of calculations, we placed the number of non-contracepting, sexually active women in each category in the numerator and the number of all fecund, sexually active women in the denominator.

RESULTS

With one exception, the percentage of risk-taking women in each of the age groups is higher than the published NSFG estimates of non-contracepting women at risk of unintended pregnancy (Table). Teenagers (ages 15–19) are the exception, with no difference between the two statistics. For the age range of 20–24, the difference in statistics was from 12.1% at risk in NSFG estimates to 12.5% risk-taking in the revised estimate; for ages 30–34 the percentages differed from 9.2% at risk to 12.2% risk-taking. The biggest difference was for older women (ages 40–44), where the NSFG at risk percentage was 8.9, while our risk-taking percentage was 15.9.

A similar trend was seen with regard to race and ethnicity. For Hispanic women, the at-risk percentage was 11.6, while the risk-taking percentage was 16.5. The at-risk percentage was 9.4 for non-Hispanic white

Table. How to characterize women who risk an unintended pregnancy?
Impact of denominator on percentage of population at risk of an unintended pregnancy

	Total U.S. women by category		Number with no method (000s)	Proportion who are risk- taking, Definition 1 ¹ (Exclude from denominator if woman sterile)			Proportion who are risk- taking, Definition 2 ² (Exclude from denominator if woman or partner sterile)			NSFG Definition ³ (include sterile women and women with sterile partner in denominator)		
				Total	Without method		Total	Without method		Total	Without method	
	Number (000s)	Percent		Number (000s)	Percent	SE	Number (000s)	Percent	SE	Number (000s)	Percent	SE
Total	61,561	100	4,574	32,671	14.0	0.01	28,887	15.8	0.01	42,683	10.7	0.01
Age												
15–19	9,834	16.0	679	3,783	18.0	0.02	3,775	18.0	0.02	3,775	18.0	0.02
20–24	9,840	16.0	827	6,590	12.5	0.01	6,535	12.6	0.01	6,798	12.1	0.01
25–29	9,249	15.0	740	6,102	12.1	0.01	5,818	12.7	0.01	7,028	10.5	0.01
30–34	10,272	16.7	719	5,920	12.2	0.01	5,224	13.9	0.01	7,829	9.2	0.01
35–39	10,853	17.6	836	5,407	15.5	0.02	4,266	19.6	0.02	8,524	9.8	0.01
40–44	11,512	18.7	771	4,869	15.9	0.02	3,268	23.7	0.03	8,728	8.9	0.01
Marital status												
Married	28,327	46.0	1,785	16,488	10.7	0.01	13,095	13.5	0.01	22,426	7.9	0.01
Cohabiting	5,570	9.0	462	3,514	13.2	0.02	3,354	13.8	0.02	4,501	10.3	0.01
Never married	21,568	35.0	1,833	10,394	17.7	0.02	10,298	17.9	0.02	11,331	16.2	0.01
Formerly married	6,096	9.9	500	2,276	22.0	0.03	2,140	23.4	0.03	4,425	11.3	0.02
Race												
Hispanic	9,107	14.8	701	4,274	16.5	0.02	4,024	17.5	0.02	6,075	11.6	0.01
Non-Hispanic white	40,420	65.7	2,708	22,728	11.8	0.01	19,480	13.8	0.01	28,755	9.4	0.01
Non-Hispanic black	8,587	13.9	876	3,890	22.5	0.02	3,766	23.2	0.02	5,800	15.1	0.02

¹Calculated from CONSTAT1 codes 2-21, 32, 34, 36, 42 representing all sexually active, fecund women using non-permanent contraceptive or no contraceptive.

²Calculated from CONSTAT1 codes 3-21 and 42, representing all non-sterile women, women with non-sterile partners, or women using no contraceptive but sexually active.

³Calculated from CONSTAT1 codes 1-21 and 42, represent all methods of contraception plus those using no contraception but sexually active.

women and 15.1 for non-Hispanic black women, while risk-taking percentages were higher, at 11.8 and 22.5, respectively.

Differences were also seen across the board by marital status. For married women, the percentages differed from 7.9% at risk to 10.7% risk-taking; for cohabiting women, the percentages differed from 10.3% at risk to 13.2% risk-taking. For never-married women, the at-risk percentage was 16.2, compared with risk-taking of 17.7%. The largest difference was seen for formerly married women, from 11.3% at risk to 22.0% risk-taking.

The most striking differences occur for older women (ages 40–44), for non-Hispanic black women, and for formerly married women. Notably, the only population for which there was no discrepancy was the same population that did not show a growth in lack of contraception usage, i.e., teenagers, who rely exclusively on interval methods of contraception.

As expected, results from the secondary analysis found similar but heightened differences in risk for unintended pregnancy in each category.

DISCUSSION

Our rationale for close examination of the NCHS “at-risk” statistics stems from a belief that perceptions of adult risk of unintended pregnancy are widely under-rated (as is demonstrated by our findings), but also that currently available statistics do not focus on the proportions of women taking risks by not using contraception. An advantage to this approach is that efforts can be focused on women and couples who most need assistance. For example, when considering the difference between the NSFG definition and our risk-taking statistic, the total population of women 40–44 years of age at risk of unintended pregnancy drops from 8.7 million to 4.9 million, while the proportion

of women who are risk-taking by not contracepting increases from 8.9% to 15.9%. This higher proportion shows us that older, nonsterilized women may be a priority population on which to focus unintended pregnancy interventions.

Notably, there may be reasons to use other definitions of risk-taking. For example, some researchers may hold concerns about the NCHS exclusion of women self-reporting to be nonsurgically sterile. NCHS reports that approximately 1.6% of its female study population in 2002 reported being nonsurgically sterile, that is, the respondent reported that "either it was impossible for her or her husband or cohabitating partner to have a baby for any reason other than surgical sterilization . . . including unexplained inability to conceive."⁵ While many of the self-reports may be accurate, many others may simply be cases where women or their partners have misjudged or misstated their fertility. In the case of dependence on male infertility, there is also an implied monogamy that may or may not be accurate. It is also notable that women with sterilized partners may change partners in later time frames, so their removal from risk of unintended pregnancy may be only temporary. That may be why, whereas the lowest expected and typical usage pregnancy rates for female surgical sterilizations (tubal ligations) are identical at 0.5%, they increase from 0.1% with expected usage to 0.15% with typical usage when considering dependence on male sterilization (vasectomy).⁸

The Alan Guttmacher Institute (AGI) definition of women in need of contraceptive services and supplies is comparable to the denominator of our risk-taking statistic.⁹ However, they also exclude women whose reported partners were surgically or non-surgically sterile.⁹ To present comparable data, we recalculated risk-taking estimates after removing women who indicated that their partners are sterile for any reason (Table). As noted above, we found similar estimates of risk-taking for this definition as well for all categories. The AGI estimates provide the overall scope of need for family planning services, whereas our risk-taking statistic provides an estimate of unmet need within specific subpopulations.

Existing contraceptive estimates, such as those used for the NSFG, are not designed to highlight populations with the highest need or those who are risk-taking. Rather, these estimates focus on the greater population of women at risk. It is not surprising then, that across virtually all populations of women examined in the NSFG, we found that the NCHS measurements undervalued the potential for unintended pregnancy. However, given the significant costs associated

with unintended pregnancy, this minimizing of risk is a disservice to women, their families, and the public health professionals working to serve them.

For example, our findings indicate that nearly 16% of the oldest fecund women sampled (ages 40–44) are taking risks through non-use of contraceptives, compared to only 8.9% reported by the NCHS.⁵ Besides being a drastic difference, this statistic highlights a population of older women that has not been a priority target for family planning research and programming. This finding might be attributed to an increased proportion of women opting for sterilization between 1995 and 2002, except that the 2002 data indicate that fewer women in this age group (or their male partners) actually chose sterilization as a contraceptive option in 2002 than in 1995.⁵ Rather, we believe this finding is more likely indicative of a real issue, such as recent unpublished findings suggesting that older women in some populations may become increasingly open or ambivalent towards unintended pregnancy. (Unpublished data. Lifflander A, Gaydos L, Hogue C, Calles D. Characterizing and understanding mistimed pregnancies. Emory University Women's and Children's Center; Atlanta, GA.) Are sexually active older women placing themselves at risk for unintended pregnancy because they are more secure in their finances or family situations and have become more ambivalent about pregnancies? Are they facing increased risk because they believe they are no longer able to conceive or fear an end to fertility? We do not know the answers to these questions or whether other factors heretofore unidentified are involved. However, given the large proportion of older women at risk for unintended pregnancy, the ageing of the population in general, and the greater risks of pregnancy that accompany older age, this finding highlights an important area for further study.

Similarly, the finding that proportionately more married women are using contraception than sexually active unmarried women is important, especially when we identify that nearly one-quarter of sexually active and fecund, previously married women are not using contraception. This statistic raises questions about the need to reeducate previously married women about contraception and to examine whether the lack of contracepting is due to ambivalence regarding pregnancy, an incorrect assumption about infertility due to age, or other issues that may apply to older and/or previously married women.

Currently, virtually all programming and most research conducted in the United States on the issue of unintended pregnancy focuses on teenagers. The small amount of resources focused outside of the teenage

realm typically focuses on young, never-married adults. Even by the NCHS statistics, 85.1% of sexually active unprotected women are twenty years of age or older,⁵ indicating that a continued exclusive focus on teenagers is not appropriate. In addition, the statistics presented in this article highlight the fact that older women and women who are married or have previously been married are also a key demographic that need to be considered for prevention of unintended pregnancy. We believe these revised estimates offer indications for future research and programming for adult women in the area of unintended pregnancy prevention.

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