

Changing Behavior Risk for Teen Pregnancy in the United States, 1991-2007

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Abstract

Background: After dramatic declines in teen birth from 1991 to 2005, teen birth rates in the United States increased in 2006. We examined behavioral correlates of these trends and the potential for future increases in teen pregnancy.

Methods: We created an index of pregnancy risk based on sexual activity, method of contraception used and contraceptive efficacy. Using data from the Youth Risk Behavior Survey (N~125,000), we calculated changes in pregnancy risk over time using weighted logistic regression.

Results: Our index of pregnancy risk declined from 1991 to 2003, closely following declines in teen birth rates. Improvements in contraceptive use were responsible for 70% of declining pregnancy risk between 1991 and 2003; with declining sexual activity responsible for the remainder. Contraceptive improvements included increased condom use and decreased nonuse. Between 2003 and 2007, sexual activity was unchanged and overall contraceptive efficacy declined ($p=.06$). Small non-significant declines were found for most specific contraceptive methods. Compared to whites, pregnancy risk was higher among blacks and Hispanics, although contraceptive use trends were similar.

Discussion: After improvement in the 1990s and early 2000s, positive trends in sexual behavior and contraceptive use appear to have stalled or even reversed since 2003. These behavioral trends portend stagnant or even rising teen birth and pregnancy rates through 2008.

Introduction

Teen pregnancy rates are directly influenced by teen sexual behaviors including rates of sexual intercourse and condom and contraceptive use. Declines in teen pregnancy rates in the US have been primarily attributed to improved contraceptive use with some contribution of delayed initiation of sexual intercourse, particularly for younger teens (Santelli, Abma et al. 2004; Santelli, Lindberg et al. 2007).

Trends in adolescent sexual and contraceptive behavior reflect both social forces such as concern about HIV/AIDS and the success (or failure) of public health prevention activities such as sexuality education. For example, dramatic increases in condom use among youth over the 1980s and 1990s reflect heightened concern about HIV infection and other STIs - the result of HIV education occurring in multiple venues (Ku, Sonenstein et al. 1994). Similarly, delays in initiation of sexual intercourse since 1991 may be the result of perceived threat of HIV and other STIs or other social forces (Ku, Sonenstein et al. 1994; Brener, Kann et al. 2006; Ventura, Abma et al. 2006).

Teen birth and pregnancy rates have declined dramatically since 1991 – by about a third (Martin, Hamilton et al. 2007) (Ventura, Abma et al. 2008). In 2006, teen birth rates rose 3%, the first increase in 14 years (Hamilton, Martin et al. 2007). Fertility also increased in 2006 among adult women. It is unclear if this increase in teen births is a reversal of the previous trend or simply a one year aberration. Pregnancy data for 2006 are not available given delays in abortion reporting.

While sexual and contraceptive behavior data from household surveys are not available, data from high school students in the national Youth Risk Behavior Survey (YRBS) for 1991-2007 suggest that trends towards reduced sexual experience and increased condom use during the 1990s and early 2000s may have reversed. Recent reversals in sexual experience occurred for black youth and young men; condom use

appears to have decreased among all youth, young women and black youth since 2003 (Balaji, Lowry et al. 2008). YRBS data on contraceptive use other than condom use have not been published for 2005 or 2007.

This paper explores trends in behaviors that lead to teen pregnancy, looking for reversals in behavioral trends that may explain the recent rise in teen birth rates. In two previous papers, we estimated declines in the risk of US teens becoming pregnant using behavioral data from the YRBS (1991 to 2001) and National Survey of Family Growth (1995 to 2002). This paper extends prior estimates for teen pregnancy risk using YRBS data from 2003, 2005, and 2007. Our primary research objective was to examine behavioral explanations for declines in teen births and pregnancy after 1991 and the increases in 2006. [*Reviewers: Please note that 2007 data should be available before this paper will be ready for publication and we will add those data when they become available.*] We also examined trends in pregnancy risk among Hispanic high school teens and non-Hispanic black and whites. A secondary objective was to further validate our method of estimating pregnancy risk from behavioral data.

Methods

The YRBS is a school-based, self-administered, biennial national survey of US private and public high school students conducted in the spring of the school year (Gelman and Hill 2007). YRBS does not include students in alternative schools or drop outs. This analysis uses 9 rounds of data, covering the period from 1991 to 2007.

The YRBS employs a combination of active and “passive” parental permission, depending on the usual practices of the sampled schools. The mix of these two has varied over time without any specific trend and appears not to influence the prevalence of reported behaviors (Kohler and Kreuter 2005).

The YRBS uses a three-stage clustered sample (1- county, 2- schools within counties and 3- classrooms within schools) to obtain cross-sectional data, which - when weighted accordingly - are representative of students in grades 9-12 in the 50 states and the District of Columbia (Brener, Kann et al. 2006). Hispanic and black youth are oversampled. Cases are weighted initially based upon the probability of sampling and secondly to assure a distribution of cases by sex, grade and race/ethnicity that is consistent with national demographic data on school youth.

The post hoc weighting scheme for the national YRBS changed between 1997 and 1999. From 1991-1997, the YRBS weighted sample has approximately equal numbers in each grade. From 1999-2005, the weighted sample by grade reflects the actual distribution of students by grade as reported by the US Department of Education (DOE) (Eaton, Lowry et al. 2004). For example, from 1991-1997 the percentage of 9th grade females varied between 21.5% and 25.2% from 1991-1997 and between 28.7% and 30.5% from 1999-2005 (5 to 7% higher). Thus, since 1999 the YRBS sample using weighted numbers reflects a systematically younger group, i.e., includes more students in grade 9 and fewer in grade 12. As such, we controlled for grade in conducting trend analyses.

Created Variables

We calculated the risk of becoming pregnant based upon data on sexual activity (past 3 months) and contraceptive use at last sexual intercourse. These behavioral data were used to create two related indices: the Contraceptive Risk Index (CRI) which reflects pregnancy risk among sexually active women and the Pregnancy Risk Index (PRI) which reflects pregnancy risk among all women.

To calculate the CRI score for each sexually active young woman, we combined published contraceptive failure rates (CFRs) for teens 15-19 years (Ranjit, Bankole et al.

2001) with information on her method or methods of contraception used at last sexual intercourse. We used CFRs calculated from the 1988 and 1995 NSFG, as data from the 2002 NSFG suggests little change in CFRs over time (Jones and Kost 2007). The CRI score for a woman represents her risk of pregnancy in one year, assuming that her frequency of coitus and the consistency and correctness of her contraceptive use are average for her age group. The CRI for a group is essentially a weighted average of the risk of pregnancy in that group.

We also calculated a pregnancy risk index (PRI) score for each woman. If a woman was not sexually active in the past three months, her PRI score was zero. The PRI score for each sexually active woman was equal to her CRI score. Thus, the PRI for a group is the weighted average PRI of all women in that group, including those who are sexually active and those who are not. In this paper, we compared trends in the PRI to trends in the actual rates of pregnancy and births. We also examined the correlation of PRI scores and rates across racial and ethnic subgroups.

Correlation of Pregnancy Risk and Teen Pregnancy Rates

We would note several caveats about our comparison of the pregnancy risk to actual pregnancy and birth rates. First, rates of pregnancy and births and contraceptive failure rates are not available for high school youth. While high school youth represent a considerable proportion of all teens becoming pregnant, particularly at younger ages, out of school youth are at greater risk of pregnancy. Thus, behaviors found among youth attending high school are proxy measures for those behaviors among high school age youth. Compared to same-age youth in high school, out of school youth are more likely to engage in a variety of health risk behaviors including sexual activity and contraceptive non-use (CDC 1994). YRBS data could be influenced by changing dropout rates

however, these rates have not changed dramatically over time (Laird, Cataldi et al. 2008). Thus, if our method is valid, pregnancy risk and pregnancy rates should be well correlated over time and among demographic subgroups.

Second, the PRI is unlikely to be equal to the actual pregnancy rate for a number of reasons. The PRI represents the *risk of becoming pregnant* while pregnancy rates report the *outcome of pregnancies*. Pregnancy outcomes occur systematically later than conception. Pregnancy rates reflect birth rates, abortion rates, and an estimate for miscarriages (Ventura, Abma et al. 2008). However, if the PRI is an accurate measure of pregnancy risk, it should correlate with the actual teen (15-19 years) pregnancy rate for the same year or the subsequent year with certain caveats. Moreover, trends in pregnancy risk should parallel trends in pregnancy rates. Given the lag between pregnancy risk behaviors and pregnancy outcomes, we compared PRI scores both to pregnancy (and birth) rates for the same year in which the behaviors occurred and to these rates from the subsequent year.

Third, we examined the correlation of PRI scores with both pregnancy and birth rates as pregnancy rates are not available after 2004 while birth rates are available through 2006. We would note that the proportion of pregnancies ending in birth and abortion has declined steadily but slowly from 1991 through 2004 (Strauss, Gamble et al. 2007). The abortion ratio was 278 in 1995 and 239 in 2004 among comparable reporting areas in the US.

Statistical Models

We modeled changes over time in sexual and contraceptive behaviors, CRI, and PRI using weighted logistic regression. Models controlled for demographic characteristics either by stratifying on the specific demographic characteristics (i.e., race/ethnicity or grade) or controlling for those characteristic within the multivariate

model. In these models an odds ratio of 1.05 would reflect a 5% increased odds per year over time. We used STATA statistical software, Version 9.2, using the *svy* command to control for the weighted clustered survey design (Cohen 1994).

We initially tested for evidence of both linear and quadratic change (U-shaped) change in sexual behaviors over the period 1991-2007, the method used by CDC in its analyses in the YRBS. A significant quadratic change means that a linear trend has reversed or plateaued (i.e., flattened out). In analyses of HIV and STD-related risk factors for the 1991-2007 period, CDC has reported significant quadratic change in sexual experience for young men and among black youth and in condom use among all youth, young women and black youth.

Visual inspection of data for quadratic trends for sexual activity, the CRI, and individual contraceptive methods suggested a reversal of trends or flattening around 2003. Thus, we also separately tested for linear change in 1991-2003 and 2003-2007.

Results

Correlation of Pregnant Risk with Actual Pregnancy and Birth Rates

Pregnancy risk declined steadily between 1991 and 2003 (29%, $p < .000$) approximating the declines in teen pregnancy rates from 1991 to 2003 (37%) and teen birth rates from 1991 to 2003 (32%). Our index of pregnancy risk between 1991 and 2003, closely following declines in teen birth rates (Table 1). Pregnancy risk over time correlated well with pregnancy rates and birth rates for the current year ($R^2 = .78$ and $.80$ respectively) and subsequent year ($R^2 = .78$ and $.79$). We found strong correlations between pregnancy risk and pregnancy rates for non-Hispanic whites (0.79-.80) and non-Hispanic blacks (0.94-0.96).

Much lower correlations were found for Hispanic teens (0.36-0.26). Inspection of PRI data suggested anomalous data for 1995. When this data point was eliminated, adjusted correlations of 0.79-0.82 were found.

Trends in Sexual Activity, Contraceptive Risk Index and Pregnancy Risk Index

Table 2 and Figure 1 display the key trends in sexual activity, the CRI, and PRI among high school females. Sexuality activity declined only among Black females, reducing but not eliminating differences with other groups. A downward but non-significant trends was found for white females ($p=146$). Quadratic factors were not significant and no change is evident in any group between 2003 and 2007.

The CRI improved linearly from 1991-2007 and from 1991-2003, overall and among each racial and ethnic subgroup. A single quadratic factor was found, among non-Hispanic blacks suggesting a reversal in the longer trend line. The CRI increased overall between 2003 and 2007 ($p=.06$) but not among any subgroup, suggesting a worsening in contraceptive efficacy.

The PRI declined linearly from 1991-2007 and from 1991-2003 among each group, except Hispanics. A single quadratic factor was found for the PRI – suggesting a reversal in pregnancy risk among non-Hispanic blacks. No significant linear trend was found from 2003 and 2007 and figure 1 suggests that declines in pregnancy risk during the 1990s have been followed by a small but non-significant drift towards increased risk.

Using a statistical decomposition method we have used previously (Santelli, Abma et al. 2004; Santelli, Lindberg et al. 2007), we estimated that improvements in contraceptive use between 1991 and 2003 were responsible for 70% of declining pregnancy risk.

Trends in Individual Contraceptive Methods

Use of several individual contraceptive methods increased linearly between 1991 and 2007 and between 1991 and 2003 (Table 3 and Figure 2). We found increases in condom use and decreases in use of withdrawal and use of no method, overall and among each subgroup. Quadratic trends were found in condom use for the entire group and among Blacks, indicating a reversal in previous trends. A quadratic trend was also found for use of no method among Blacks, indicating an upturn in non-use in the most recent years. We found no significant trends in contraceptive use from 2003 to 2007.

Pill use was much higher among whites compared than among Hispanics and Blacks. Pill use among Hispanics and Blacks declined from 1991 to 2007 with most of the decline coming before 2001 (Figure 2). No similar trend was found among White females. Among Blacks, pill use appears to improve after 2001, as indicated by a significant quadratic trend, although no change was found for 2003-2007. Use of injection has only been measured in the YRBS since 1999; no recent trends in use were found.

Discussion

After improvement in the 1990s and early 2000s, sexual behavioral change related to teen pregnancy appears to have stalled or reversed after 2003. Reported contraceptive use improved from 1991 to 2003 and declined from 2003 to 2007. Declines in pregnancy risk through 2003 were primarily the result of improved contraceptive use which included increased condom use and declines in nonuse and use of withdrawal. After declining from 1991 to 2001, sexual activity has not changed since. These behavioral trends portend stagnant or even rising teen birth and pregnancy rates through 2008. The

increase in teen births from 2005 to 2006 appears to be a harbinger of future increases in teen pregnancy rates. Time will tell.

We found that pregnancy risk correlated well with pregnancy rates and birth rates over time and racial and ethnic groups. This suggests that our index of pregnancy risk provides a valid measure to understand changing pregnancy rates.

These data suggest that changes in contraceptive use was the primary cause of declining teen pregnancy rates and likewise will be the primary driver of future change in teen pregnancy in the US. This trend is consistent with historical trends in teen fertility in other developed nations where teen fertility declined dramatically in the later half of the 20th century while the median age of coitus declined (Teitler 2002).

This paper addresses only proximate determinants of teen fertility and speculates on what is at present a one year reversal in teen birth rates. The increase in birth rates in 2006 included increases among many age groups and may reflect broader social trends. Teen fertility, specifically, may be influenced by educational and economic opportunities, income disparities, and changing social mores about sexuality, contraception, and childbearing. The economy improved in the 1990s and social mores may have become more conservative.

Perhaps, the most direct policy influence to explain both increased condom use and delay in initiation of coitus is concern about HIV among youth. During the later 1980s and 1990s, public health authorities including the US Surgeon General, repeatedly raised concerns about a impending epidemic of HIV among youth. HIV prevention efforts have faltered in many places in what has been called “prevention fatigue.” Our data are consistent with such an explanation.

Limitations

Several limitations temper these findings. All our data are self-reported by high school students. While teens completing the YRBS are generally reliable reporters on sexual behaviors, limited data are available on the validity of these data. Another limitation to the YRBS is the change in post-hoc weighting scheme from 1997 to 1999 as described in our introduction. To address this limitation, we controlled for grade in our statistical testing or stratified analyses by grade. Strengths of the YRBS include the large sample and the consistency in question wording over time.

Public Policy Implications

Public policy in the United States is complicated by shifting and divergent emphasis at the state and national level. Increasingly national policy since 1998 has emphasized promotion abstinence from sexual behavior until marriage (Santelli, Ott et al. 2006). At the same time, the federal government in concert with state government has expanded reproductive health services for women through Medicaid waivers for the family planning program and expanded health insurance coverage for the teenagers through the SCHIP program. Divergence is particularly apparent at the state policy level. Certain states such as California have greatly expanded public reproductive health services and publicly eschewed abstinence-only education programs. Other states such as Texas have embraced abstinence education through the public schools and moved to implement parental consent requirements for reproductive health care for minor adolescents. Many states are now refusing to participate in the federal abstinence-only program given concerns about the efficacy of this approach and scientific accuracy of commonly use curricula.

If the European example is any guide to the reduction of teen fertility, efforts to improve teen contraceptive use are warranted.

References

- Balaji, A., R. Lowry, et al. (2008). "Trends in HIV- and STD- Related Risk Behaviors Among High School Students-- United States, 1991-2007." MMWR **57**(30): 817-822.
- Brener, N., L. Kann, et al. (2006). "Trends in HIV-related risk behaviors among high school students- United States, 1991-2005." Morbidity & Mortality Weekly Report **55**(31): 851-854.
- CDC (1994). "Health Risk Behaviors Among Adolescents Who Do and Do Not Attend School-- United States, 1992." MMWR **43**(8): 129-132.
- Cohen, J. (1994). "The earth is round ($p < .05$)." American Psychologist **49**(12): 997-1003.
- Eaton, D. K., R. Lowry, et al. (2004). "Passive versus Active Parental Permission in School-Based Survey Research: Does the Type of Permission Affect Prevalence Estimates of Risk Behaviors?" Evaluation Review **28**(6): 564.
- Gelman, A. and J. Hill (2007). Data Analysis Using Regression and Multilevel/hierarchical Models. New York, NY, Cambridge.
- Hamilton, B. E., J. A. Martin, et al. (2007). "Births: Preliminary Data for 2006." National Vital Statistics Reports **56**(7).
- Jones, R. and K. Kost (2007). "Underreporting of induced and spontaneous abortions in the United States: An Analysis of the 2002 National Survey of Family growth." Studies in Family Planning **38**(3): 187-197.
- Kohler, U. and F. Kreuter (2005). Data Analysis Using Stata. College Station, TX, Stata Press.
- Ku, L., F. L. Sonenstein, et al. (1994). "The dynamics of young men's condom use during and across relationships." Family Planning Perspectives **26**: 246-251.
- Laird, J., E. Cataldi, et al. (2008). Dropout and Completion Rates in the United States: 2006 (NCES 2008-053). Washington, D.C., National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.
- Martin, J. A., B. E. Hamilton, et al. (2007). "Births: final data for 2005." National Vital Statistics Report **56**(6): 1-103.
- Ranjit, N., A. Bankole, et al. (2001). "Contraceptive failure in the first two years of use: Differences across socioeconomic subgroups." Family Planning Perspectives **33**(1): 19-27.
- Santelli, J., M. A. Ott, et al. (2006). "Abstinence-only education policies and programs: a position paper of the Society for Adolescent Medicine." Journal of Adolescent Health **38**(1): 83-7.
- Santelli, J. S., J. Abma, et al. (2004). "Can changes in sexual behaviors among high school students explain the decline in teen pregnancy rates in the 1990s?" Journal of Adolescent Health **35**(2): 80-90.
- Santelli, J. S., L. D. Lindberg, et al. (2007). "Explaining recent declines in adolescent pregnancy in the United States: The contribution of abstinence and improved contraceptive use." American Journal of Public Health **97**(1): 150-156.
- Strauss, L., S. Gamble, et al. (2007). "Abortion Surveillance--United States, 2004." MMWR **56**(SS09): 1-33.
- Teitler, J. O. (2002). "Trends in Youth Sexual Initiation and Fertility in Developed Countries: 1960-1995." The ANNALS of the American Academy of Political and Social Science **580**(1): 134-152.

Ventura, S. J., J. Abma, et al. (2006). Recent trends in teenage pregnancy in the United States, 1990-2002, National Center for Health Statistics.

Ventura, S. J., J. Abma, et al. (2008). "Estimated pregnancy rates by outcome for the United States, 1990-2004." National Vital Statistics Report **56**(15).

Table 1. Correlation of Pregnancy Risk Index with Pregnancy and Birth Rates				
	<i>Pregnancy Rates</i>		<i>Birth Rates</i>	
	Same Year	Lagged Year	Same Year	Lagged Year
All Women	0.78**	0.78**	0.80**	0.79**
Non-Hispanic Whites	0.79**	0.80**	0.84**	0.84**
Non-Hispanic Blacks	0.94***	0.96***	0.88**	0.94**
Hispanics	0.36	0.26	0.43	0.30
Hispanics (adjusted)	0.79*	0.82*	0.77**	0.80**
* p < .05; ** p<.01; *** p < .001				
Hispanic adjusted drops data points for 1995				

Table 2. Linear and Quadratic Trends in Sexual Activity, Contraceptive Risk Use and Risk of Pregnancy, High School Females, United States, 1991-2007, National Youth Risk Behavior Survey

Trends from:		1991-2007				1991-2003			2003-2007			
		Linear Time Coeff.		Quadratic Time Coeff.		Linear Time Coeff.			Linear Time Coeff.			
FEMALES		No. Respondents	Odds Ratio	P value	Odds Ratio	P value	Odds Ratio	P value	No. Respondents	Odds Ratio	P value	No. Respondents
Sexually Active Among All Resp.	All	60682	0.99	0.146	1.00	0.686	0.99	0.103	47770	1.01	0.638	19507
	White	24531	1.00	0.513	1.00	0.622	0.99	0.252	18880	1.02	0.302	8461
	Black	15411	0.98	0.000	1.00	0.324	0.97	0.001	12579	0.99	0.735	4403
	Hispanic	16138	1.01	0.243	1.00	0.644	1.01	0.175	12675	0.99	0.818	5265
CRI	All	22777	-0.33	0.000	0.02	0.228	-0.48	0.000	17960	0.56	0.063	7311
	White	8503	-0.28	0.000	0.00	0.770	0.68	0.000	6587	1.73	0.182	2883
	Black	7418	-0.42	0.000	0.05	0.026	0.50	0.000	6079	1.74	0.288	2067
	Hispanic	5468	-0.43	0.006	0.02	0.476	0.51	0.006	4210	1.58	0.539	1930
PRI	All	60140	-0.17	0.000	0.01	0.278	-0.24	0.000	47388	0.21	0.180	19277
	White	24391	-0.12	0.001	0.00	0.663	0.84	0.000	18809	1.29	0.160	8372
	Black	15154	-0.40	0.000	0.04	0.019	0.54	0.000	12367	1.22	0.498	4330
	Hispanic	16022	-0.11	0.169	0.00	0.839	0.84	0.118	12602	1.10	0.797	5206

Table 3. Linear and Quadratic Trends in Contraceptive Method Use, High School Females, United States, 1991-2007, National Youth Risk Behavior Survey

Trends from:		1991-2007				1991-2003			2003-2007			
		Linear Time Coeff.		Quadratic Time Coeff.		Linear Time Coeff.			Linear Time Coeff.			
FEMALES		No. Respondents	Odds Ratio	P value	Odds Ratio	P value	Odds Ratio	P value	No. Respondents	Odds Ratio	P value	No. Respondents
Condom Last Sex (Sex Active)	All	23098	1.04	0.000	1.00	0.021	1.05	0.000	18195	0.98	0.34	7438
	White	8618	1.04	0.000	1.00	0.231	1.04	0.000	6656	0.98	0.47	2945
	Black	7555	1.05	0.000	0.99	0.000	1.08	0.000	6197	0.97	0.47	2103
	Hisp	5517	1.06	0.000	1.00	0.267	1.08	0.000	4240	1.00	0.97	1953
Pill Used Last Sex	All	22803	0.99	0.161	1.00	0.558	0.99	0.374	17970	0.96	0.15	7326
	White	8518	1.00	0.740	1.00	0.787	1.01	0.488	6593	0.96	0.23	2892
	Black	7426	0.95	0.000	1.01	0.008	0.92	0.000	6084	1.00	0.94	2072
	Hisp	5472	0.97	0.022	1.00	0.861	0.98	0.324	4209	0.91	0.22	1932
Injection Used Last Sex	All									0.96	0.57	7326
	White									1.04	0.69	2892
	Black									0.91	0.28	2072
	Hisp									0.83	0.14	1932
Withdrawl Last Sex	All	22803	0.95	0.000	1.00	0.194	0.95	0.000	17970	1.00	0.93	7326
	White	8518	0.95	0.000	1.00	0.128	0.94	0.000	6593	1.00	0.95	2892
	Black	7426	0.97	0.006	1.00	0.112	0.94	0.002	6084	1.09	0.17	2072
	Hisp	5472	0.94	0.000	1.00	0.288	0.95	0.007	4209	0.92	0.16	1932
No Method Last Sex	All	22803	0.98	0.000	1.00	0.304	0.96	0.000	17970	1.06	0.08	7326
	White	8518	0.98	0.050	1.00	0.898	0.97	0.015	6593	1.07	0.15	2892
	Black	7426	0.97	0.000	1.01	0.015	0.94	0.000	6084	1.05	0.34	2072
	Hisp	5472	0.97	0.022	1.00	0.647	0.96	0.019	4209	1.03	0.63	1932

Figure 1. Trends in Sexual Activity, Contraceptive Risk Index, and Pregnancy Risk Index, 1991-2007

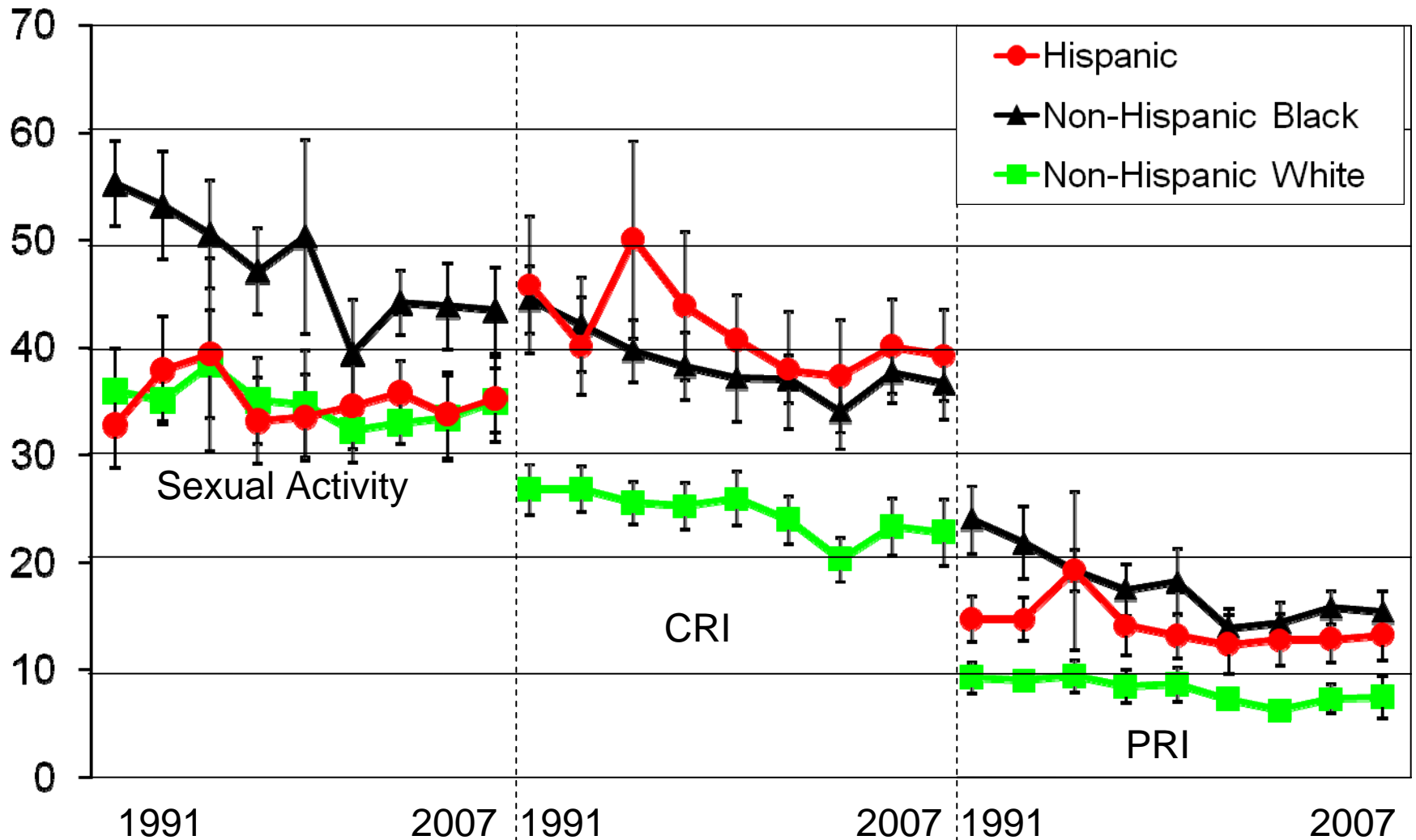


Figure 2. Trends in Contraceptive use (YRBS) by race, 1991-2007

