The Social and Economic Correlates of Pregnancy Resolution among Adolescents in New York City, by Race and Ethnicity: A Multivariate Analysis

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Abstract: This study utilizes a data set combining vital records from live birth and induced abortion certificates in New York City in 1984 to examine the correlates of the two outcomes among pregnant adolescents. Four groups totaling 31,207 teenagers were examined: Black non-Latinos (51 per cent), White non-Latinos (17 per cent), Puerto Ricans (25 per cent), and non-Puerto Rican Latinos (8 per cent). Multivariate regressions were fit for each group. Simulations based on the regressions reveal that the proportion of live births plus induced abortions among unmarried 18-year-olds, on Medicaid, with a previous live birth, no previous induced abortions, and nine years of completed schooling was .55 in the case of Puerto Ricans, .34 for non-Puerto Rican Latinos, .60 for Blacks, and .51 for Whites. For nulliparous adolescents of the same age and marital status, with an additional year of schooling, but not on Medicaid, and with a previous induced abortion, the fraction of pregnancies that were terminated rose to .84 in the case of Puerto Ricans, .81 for non-Puerto Rican Latinos, .87 for Blacks, and .96 for Whites. The results suggest that attitudes toward abortion as proxied by previous induced terminations substantially increase the likelihood of aborting as well as narrow the racial and ethnic differences with respect to pregnancy resolution. (*Am J Public Health* 1988; 78:626–631.)

Introduction

The social and economic determinants of induced abortion among pregnant adolescents are among the least researched aspects of teenage fertility. Although aggregate characteristics of women who abort are published annually, there has been only a few multivariate analyses at the individual level.[1-4] The primary reason is a lack of data. The National Center for Health Statistics (NCHS) collects detailed information on induced abortions from the vital registration offices in only 13 states.[5] In addition, the underreporting of abortions, especially among minorities, has been a major problem for national surveys that collect information on teenage sexuality and childbearing.[1,6,7]

The purpose of this study is to examine the association between pregnancy resolution and age, schooling, parity, previous induced abortions, method of payment, poverty, and the availability of reproductive health services among teenagers in New York City in 1984. Four racial/ethnic groups are examined: Black non-Latinos, White non-Latinos, Puerto Ricans, and non-Puerto Rican Latinos. The behavior of various racial and ethnic groups is especially important with respect to Latinos, since there has been little research to date on the determinants of induced abortion among this subgroup. Efficient race- and ethnic-specific regression coefficients can be estimated because of the large minority populations in New York City.

Methods

The analysis is based on vital records of live births and induced abortions to New York City residents in 1984. In that year, the New York City Department of Health reported 17,210 induced abortions and 13,175 live births to New York City residents less than 20 years of age. Fetal deaths and all other spontaneous abortions were not included in the study.

Thus, references to pregnancies refer to induced abortions and live births only.

In New York City, the certificate of live birth and induced abortion record indicate the method of payment. We know, therefore, the number of live births and induced terminations that were covered by Medicaid. Data from the vital records were augmented with estimates of the race- and ethnic-specific poverty rate obtained from 1980 census data which had been aggregated from the census tract to the health area level.

New York City is divided into 352 health areas. The average population of a health area is approximately 20,000. The vital records were also augmented with measures of the availability of three reproductive health services: the number of abortion providers, family planning clinics, and prenatal care clinics by health area.

Missing data were not considered a major problem. Except for previous induced abortions, less than 3 per cent of the combined birth and abortion records (n = 30,385) lacked data on the variables of interest. These observation were deleted from the data set.* Data on previous induced abortions were missing for 4.2 per cent (n = 1,289) of the cases. Although not a large proportion, the missing data were unevenly distributed between live births and induced abortions. In particular, 8.2 per cent of the live birth records (n = 1,075) and 1.2 per cent (n = 214) of the induced abortion records lacked information regarding previous abortion experience. The possible implications of this decision are discussed later.

To impute age at conception, one year was subtracted from the age of a randomly chosen fraction of live births and induced abortions. The exact proportion of cases that were "de-aged" is a function of the age distribution of births and abortions by each race and ethnicity. A detailed description of the algorithm is given by Tietze.[8]

Vital statistics do not indicate whether a woman conceived inside or outside of marriage. The distinction is important because the proportion of pregnancies which are conceived premaritally, but born inside of marriage differs markedly by race. For example, estimates for 1980 and 1981 reveal that 28 per cent of the White first births to adolescents and 8 per cent of the Black first births to adolescents were

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*The number of specific items deleted are available on request.

conceived premaritally but born inside marriage.[9] Thus, using vital statistics to examine births and abortions to unmarried women only would tend to overstate the probability of aborting among Whites relative to Blacks. To avoid this bias, the analysis includes all adolescents regardless of marital status.

Another issue is the potential underreporting of induced abortions. New York State requires that abortion providers file an induced termination record for each procedure performed. The New York City Department of Health reported that 96,802 induced abortions took place in the City in 1984. However, the Alan Guttmacher Institute (AGI), based on its survey of providers, estimated that 124,570 induced abortions** occurred in New York City in the same year. It is not apparent what incentives a provider has for not reporting induced abortions to the Vital Registration Office, nor is it clear what type of providers might be underreporting. In short, it is unknown whether the apparent underreporting is systematically related to a particular group of adolescents so as to bias the study.

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**Personal communications with Jennifer Van Vort, AGI.

Results

Summary characteristics by race, ethnicity, and pregnancy outcome are presented in Table 1. Adolescents whose pregnancy resulted in a live birth, as opposed to an induced abortion, are more likely to be married, nulliparous, and to have had no previous induced abortions. Among teenagers who aborted, Whites, relative to non-Whites, have completed more years of schooling and are less likely to have had the abortion paid by Medicaid.

To understand how age at outcome differs from age at conception, abortion ratios (induced abortions per 100 live births plus induced abortions) were computed by age at outcome as well as by proxy age at conception for each race and ethnicity; crude odds ratios were also computed. The results are presented in Tables 2 and 3. As expected, the abortion ratios by age at outcome are larger than those by age at conception with the greatest differences at the youngest ages (Table 2).[1,10,11]

Differences in abortion ratios within New York City are dramatic (Table 2). Whites are almost twice as likely to terminate a pregnancy as are non-Puerto Rican Latinos. Moreover, the differences by race and ethnicity are quite consistent. At every age, White adolescents are the most

TABLE 1—Means and Proportions for each Race and Ethnicity by Pregnancy Outcome

	Puerto Ricans		Latinos, non- Puerto Ricans		Whites		Blacks	
	Abort	Birth	Abort	Birth	Abort	Birth	Abort	Birth
Individual Characteristics								
Unmarried	.92	.76	.89	.59	.95	.44	.97	.92
Parity								
0	.61	.78	.69	.82	.80	.87	.71	.84
1	.30	.17	.25	.15	.08	.11	.24	.13
2 or more	.09	.05	.05	.03	.02	.02	.05	.03
Age at conception (years)								
15 or less	.12	.14	.10	.09	.08	.07	.16	.16
16	.13	.15	.10	.11	.12	.11	.14	.15
17	.20	.20	.17	.18	.20	.17	.20	.21
18	.28	.25	.28	.24	.28	.26	.24	.24
19	.28	.25	.35	.37	.32	.39	.26	.25
Previous induced abortions								
0	.66	.92	.69	.93	.72	.93	.65	.88
1	.25	.06	.22	.05	.22	.05	.26	.09
2 or more	.09	.02	.09	.02	.06	.02	.09	.03
On Medicaid	.67	.76	.43	.62	.15	.34	.50	.69
Mean years of school completed	10.74	10.32	11.13	10.47	11.54	11.22	11.10	10.96
Mother's origin or descent								
Central and South Americans	—	—	.58	.72	—	—	—	—
Mexican	—	—	.04	.08	—	—	—	—
Cuban	—	—	.12	.03	—	—	—	—
Other or unknown Latino	—	—	.25	.17	—	—	—	—
Health Area Characteristics								
Proportion of women who live in a health area with:								
0 abortion providers	.18	.16	.22	.23	.22	.21	.18	.19
1	.78	.79	.75	.73	.75	.76	.77	.76
2 or more	.04	.05	.03	.04	.04	.03	.05	.05
0 family planning clinics	.32	.29	.29	.31	.23	.24	.30	.32
1	.50	.51	.56	.54	.69	.69	.57	.54
2 or more	.18	.20	.14	.15	.08	.07	.13	.14
0 prenatal clinics	.28	.28	.27	.28	.20	.22	.24	.25
1	.63	.62	.67	.66	.74	.73	.65	.62
2	.09	.10	.06	.06	.06	.05	.11	.13
Per cent poor	39.91	43.97	34.00	35.18	14.14	16.07	31.34	32.47
Observations*	3651	4187	822	1537	3417	1765	9101	6727

NOTE: The proportions may not add up to one due to rounding.
*The total number of observations (31,207) exceeds the number of births to women less than 20 years of age as reported by the New York City Department of Health because of the "de-aging" procedure described in the text.

TABLE 2—Abortions per 100 Pregnancies by Age at Outcome and by Age at Conception (In parentheses) for New York City Adolescents*

Age (years)	All Teenagers	Puerto Ricans	Non-PR Latinos	Whites	Blacks
15 or less	66	54	49	80	69
	(54)	(42)	(35)	(71)	(60)
16	59	48	36	78	62
	(52)	(42)	(32)	(71)	(55)
17	56	47	38	75	59
	(51)	(44)	(32)	(69)	(54)
18	55	48	39	74	56
	(52)	(46)	(34)	(66)	(55)
19	52	46	37	66	55
	(50)	(45)	(31)	(60)	(54)

*Pregnancies are the sum of live births and induced abortions.

likely to abort followed by Blacks, Puerto Ricans, and non-Puerto Rican Latinos. The effect of age is most apparent among Whites when abortion ratios are compared by age at outcome (Table 3).

The results of a multiple linear logistic regression are presented in Table 4. With respect to age at conception, the adjusted odds ratios contrast substantially with the crude odds ratios from Table 3. All teenagers 15 years of age or less are substantially more likely to abort than are teenagers 19 years of age, the difference between the adjusted and crude odds ratios being noticeable among Puerto Ricans; for Whites, the differences are minor.

The impact of marital status and parity are particularly dramatic among Whites. Teenagers who have experienced one prior induced abortion are approximately four times more likely to terminate the current pregnancy. Teenagers whose abortion was covered by Medicaid are at least twice as likely to carry their pregnancy to term as are adolescents whose abortion was financed by themselves or by a third party.

The availability measures had little association with outcome. The percentage of persons below the poverty level was inversely related to the odds of abortion in the case of Whites and Puerto Ricans. Among non-Puerto Rican Latinos, Cubans are most likely and Mexicans least likely to seek an abortion.

The fraction of teenagers of similar characteristics whose pregnancy resulted in an induced abortion as opposed to a live birth is presented in Table 5. In general, the estimates are in agreement with the univariate results presented in Table 2. Whites are the most likely to seek an abortion followed by Blacks, Puerto Ricans, and non-Puerto Rican Latinos. However, several exceptions are evident. First, among adolescents with no previous induced abortions and whose current abortion was paid by Medicaid, Blacks are the most likely to abort. Second, among married adolescents, Blacks, followed by Puerto Ricans, are the most likely to terminate a pregnancy.

Table 5 also points up the importance of education and Medicaid as correlates of out-of-wedlock childbearing. For each race and ethnicity, the unmarried women least likely to abort are nulliparous, are receiving Medicaid, have no previous induced abortions, and have low levels of schooling. Another noteworthy result is that previous experience with abortion tends to narrow the differences by race and ethnicity. Among unmarried 18-year-olds, with 11 years of schooling, no previous live births and no Medicaid assistance, the proportion of pregnancies that were aborted is greater than .80.

As mentioned earlier, a disproportionate number of births relative to abortions were deleted because of the uneven distribution of missing data on previous induced abortions. To assess the impact of this decision, the regressions were rerun in several ways. First, race-, ethnic-, age-, and outcome-specific means were substituted for the missing data. The results did not change in any meaningful manner. Second, a random sample of abortion records were deleted which preserved the abortion ratio that existed prior to deleting the missing data on previous induced abortions. Again, the results were essentially unaltered.

Discussion

Hofferth[12] has noted that one of the anomalies associated with adolescent childbearing is that 15 to 17 year old teenagers in the United States are less likely to seek an abortion than their counterparts in Denmark, Sweden, and Norway. However, among older teenagers, little difference exists.

The New York City results do not follow this pattern, however, especially if the comparison is restricted to Whites.

TABLE 3—Crude Odds Ratios and 95 Per Cent Confidence Intervals (CI) for Abortions per 100 Pregnancies by Age at Outcome and Age at Conception

	Puerto Ricans		Latinos, Non-Puerto Rican		Whites		Blacks	
	Odds Ratio	95% CI	Odds Ratio	95% CI	Odds Ratio	95% CI	Odds Ratio	95% CI
Age at Outcome (years)								
15 or less	1.16	(1.06,1.27)	1.23	(1.03,1.14)	1.36	(1.16,1.59)	1.30	(1.22,1.38)
16	1.05	(.97,1.13)	.96	(.81,1.14)	1.30	(1.15,1.40)	1.13	(1.07,1.20)
17	1.02	(.96,1.09)	1.02	(.89,1.17)	1.21	(1.10,1.33)	1.06	(1.02,1.12)
18	1.04	(.98,1.10)	1.02	(.91,1.14)	1.18	(1.09,1.28)	1.02	(.98,1.07)
19	1.00	—	1.00	—	1.00	—	1.00	—
Age at Conception years								
15 or less	.96	(.89,1.03)	1.08	(.93,1.26)	1.23	(1.10,1.38)	1.10	(1.04,1.15)
16	.96	(.90,1.03)	1.01	(.86,1.16)	1.23	(1.12,1.36)	1.02	(.97,1.07)
17	.98	(.92,1.04)	1.02	(.90,1.15)	1.20	(1.11,1.31)	.99	(.94,1.04)
18	1.02	(.96,1.08)	1.06	(.95,1.18)	1.12	(1.04,1.20)	1.01	(.96,1.05)
19	1.00	—	1.00	—	1.00	—	1.00	—

*Pregnancies are the sum of live births and induced abortions.

TABLE 4—Adjusted Odds Ratios and 95 Per Cent Confidence Intervals (CI) for Abortion from Logistic Regressions by Race and Ethnicity

	Puerto Ricans		Latinos, Non-Puerto Rican		Whites		Blacks	
	Adjusted Odds Ratio	95% CI	Adjusted Odds Ratio	95% CI	Adjusted Odds Ratio	95% CI	Adjusted Odds Ratio	95% CI
Unmarried	5.47	(4.65,6.44)	6.97	(5.25,9.26)	40.81	(32.70,50.93)	4.37	(3.70,5.16)
Parity								
0	1.00	—	1.00	—	1.00	—	1.00	—
1	3.22	(2.82,3.67)	3.15	(2.38,4.16)	2.09	(1.58,2.77)	2.72	(2.47,3.00)
2 or more	4.00	(3.24,5.10)	4.03	(2.37,6.84)	11.60	(6.10,22.06)	3.10	(2.57,3.74)
Age (years) at conception								
15 or less	2.19	(1.80,2.66)	2.09	(1.41,3.10)	1.88	(1.34,2.63)	2.10	(1.83,2.41)
16	1.45	(1.21,1.73)	1.42	(0.99,2.03)	1.12	(.85,1.47)	1.45	(1.28,1.64)
17	1.28	(1.09,1.49)	1.31	(0.97,1.77)	1.21	(.96,1.53)	1.22	(1.10,1.36)
18	1.15	(1.00,1.33)	1.30	(1.00,1.69)	1.18	(.96,1.46)	1.12	(1.01,1.24)
19	1.00	—	1.00	—	1.00	—	1.00	—
Previous induced abortions								
0	1.00	—	1.00	—	1.00	—	1.00	—
1	4.62	(3.95,5.41)	5.58	(4.03,7.72)	6.99	(5.25,9.31)	3.83	(3.46,4.24)
2 or more	5.31	(4.07,6.93)	4.30	(2.65,6.98)	5.91	(3.56,9.79)	4.36	(3.67,5.16)
Medicaid (yes=1)	.53	(.47,.59)	.33	(.27,.41)	.17	(.14,.21)	.35	(.32,.37)
Years of school completed†	1.28	(1.23,1.32)	1.24	(1.16,1.33)	1.16	(1.10,1.23)	1.07	(1.04,1.10)
Mother's origin/descent								
Central/South American	—	—	1.00	—	—	—	—	—
Mexican	—	—	.91	(.57,1.45)	—	—	—	—
Cuban	—	—	3.88	(2.55,5.92)	—	—	—	—
Other or unknown Latino	—	—	1.81	(1.41,2.31)	—	—	—	—
Abortion providers								
0	1.00		1.00	—	1.00	—	1.00	—
1	.94	(.80,1.12)	1.28	(.88,1.85)	1.05	(.80,1.38)	.95	(.85,1.07)
2 or more	.63	(.45,.88)	1.42	(.71,2.85)	1.20	(.77,2.03)	.93	(.77,1.13)
Family planning clinics								
0	1.00	—	1.00	—	1.00	—	1.00	—
1	.84	(.73,.96)	0.92	(.67,1.25)	1.23	(.93,1.62)	1.06	(.95,1.18)
2 or more	.97	(.81,1.16)	0.86	(.58,1.29)	1.15	(.77,1.71)	1.24	(1.07,1.42)
Prenatal care clinics								
0	1.00	—	1.00	—	1.00	—	1.00	—
1	1.11	(.95,1.29)	.90	(.64,1.27)	.68	(.49,.93)	1.13	(1.00,1.28)
2 or more	1.03	(.80,1.33)	.76	(.41,1.42)	.74	(.47,1.15)	.85	(.73,.99)
Per cent poor#	.76	(.73,.79)	.99	(.92,1.07)	.91	(.85,.99)	.97	(.95,1.00)
Observations*	7838		2359		5182		15828	

†Odds ratios evaluated for a one-year increase in schooling
#Odds ratios evaluated for a 10 percentage point increase in the per cent poor.
*The total number of observations (31,207) exceeds the number of live births and induced abortions to New York City residents less than 20 years of age as reported by the New York City Department of Health because of the "de-aging" procedure described in the text.

TABLE 5—Proportion of Pregnancies Resulting in an Induced Abortion for Teenagers of Similar Characteristics by Race and Ethnicity*

Characteristics						Proportion			
Age (years)	Married	Parity	Education	Previous Abortions	Medicaid	Puerto Ricans	Latino, non-PR	Whites	Blacks
16	no	0	9	0	no	.48	.35	.73	.67
16	no	0	8	0	yes	.27	.13	.29	.40
17	no	0	10	1	yes	.71	.54	.81	.71
17	no	1	9	0	yes	.58	.34	.52	.62
17	no	0	9	0	yes	.30	.14	.34	.37
17	no	0	10	0	no	.51	.38	.77	.65
18	yes	0	11	0	no	.18	.07	.09	.29
18	no	0	11	1	no	.84	.81	.96	.87
18	no	1	9	0	yes	.55	.34	.51	.60

*Pregnancies refer to live births and induced terminations only.
Estimates were obtained by transforming the results from the logistic regressions. The above calculations assume that there was one abortion provider, one family planning clinic, and one prenatal care clinic in the health area. The total sample poverty rate of 32.0 per cent was used for each group.

In 1983, the ratio of abortions to births plus abortions among teenagers 15 to 17 years of age was 66.2 in Sweden, 66.1 in Denmark, and 56.1 in Norway. The comparable figure for all US teenagers in 1983 was 43.2[13]; yet in New York City in

1984, there were approximately 70 abortions per 100 known pregnancies among White teenagers 15 to 17 years old (Table 2). Clearly, in terms of race and socioeconomic status, White adolescents in New York City are more comparable to adolescents in northern Europe than are Blacks and Latinos. Moreover, in few areas in the US are abortion services as accessible financially, legally, and geographically as they are in New York City. Thus, differences in the proportion of teenagers in poverty as well as unequal accessibility to abortion services may explain in part why young US teenagers are less likely to abort than young adolescents in Denmark, Sweden, and Norway. Additional international evidence relating teenage childbearing to poverty is presented by Jones, et al.[14]

A related result is the contrast between the adjusted odds ratios and the crude odds ratios with respect to age at conception. The multivariate estimates control for marital status, education, method of finance, and neighborhood poverty rates. In combination, these measures may effectively proxy socioeconomic status (SES). Adolescents from families of low SES are more likely to become pregnant and to deliver out-of-wedlock than adolescents from higher SES families.[1,4] Thus, when differences in SES are held constant, younger teens are more likely to abort because their pregnancies are less likely to be wanted. It is noteworthy that the change between the crude and adjusted odds ratios is most noticeable among Puerto Ricans and least remarkable among Whites. Puerto Ricans have the highest, and Whites the lowest proportion of pregnant adolescents on Medicaid.

Whether the availability of welfare encourages out-of-wedlock childbearing among pregnant adolescents remains a much disputed issue.[2-4,12,15,16] At first glance, the results reported in Table 4 and Table 5 suggest that it does. That is, if Medicaid is a good proxy for welfare eligibility, then the results from this study are in agreement with the studies that conclude that welfare serves as an economic incentive to carry a pregnancy to term.[2,3] The fact that abortion is so accessible in New York City bolsters this interpretation.

However, a number of factors temper the conclusion that welfare encourages out-of-wedlock childbearing. First, vital statistics only measure individuals supported by Medicaid at the time of their birth or induced abortion. It is unknown, for instance, how many adolescents, who financed the abortion themselves, would have been eligible for Medicaid and possibly Aid to Families with Dependent Chilaren (AFDC) had they had children. As Moore and Burk[16] point out, those who seek out Medicaid may represent a self-selected group predisposed to giving birth. Similarly, Medicaid may serve as a better proxy for low SES than it does for welfare eligibility because financial support under Medicaid's Medical Assistance program does not ensure support for a mother and child under AFDC's more stringent guidelines. Thus, if Medicaid is a good measure of poverty, it may be impossible to determine without experimental data how many adolescents who choose to give birth are responding to the economic incentive of welfare, and how many perceive childbearing as a means of overcoming low self-esteem and emotional deprivation. In sum, the results reported here are consistent with the interpretation that welfare encourages out-of-wedlock childbearing, but they are far from conclusive.

A related result is the positive association between parity and the probability of abortion. Since unmarried, pregnant adolescents with one child are likely to be receiving public assistance, their response to the current pregnancy does not appear to be influenced by the additional benefits for an extra dependent. This accords with the finding that women with one child who are receiving public assistance desire families that are no larger than their counterparts who are non-AFDC recipients.[17]

Regardless of how the abortion ratios are calculated, their magnitudes in all ethnic groups are striking (Table 2). In 1984 the abortion ratio measured by age at outcome for adolescents 15 to 19 years of age in the 12 states other than New York that reported to the National Center for Health Statistics (NCHS) was 35.7.*** The contrast between the New York City abortion ratios relative to the other 12 states highlights the link between abortion utilization and the factors related to accessibility, including financial assistance for those in need, numerous providers, and no laws requiring parental notification.

Despite the accessibility of the abortion option, racial and ethnic differences persist. It would seem apparent that attitudes towards abortion conditioned by cultural norms determine a major part of the differences. However, Eisen, et al,[2] report that attitudes, and not ethnicity, appear to be the more important discriminating factor between those seeking abortion and those who carry to term. It is of interest, therefore, that prior experience with an induced termination narrows the racial and ethnic differences with respect to the likelihood of abortion (Table 5). Previous induced abortions may reflect positive attitudes toward abortion by the adolescent and her significant others. Although there is some evidence for this explanation,[18] information on the attitudes of women with repeat abortions is limited.

From a policy perspective, two findings stand out. The proportion of adolescent pregnancies that are carried to term will be lower in areas that provide easy access and financial support for abortion services. Although preventing unintended pregnancies is clearly a preferable strategy, until contraceptive practices among adolescents improve, abortion remains an important option that is readily sought when available. Second, regardless of how accessible abortion services are, teenagers in poverty will be less likely to seek abortion than their more educated, and financially better-off counterparts. This latter result is especially troubling. If access to abortion services is essentially equal among teenagers of all income groups, then the question of why adolescent childbearing is a more acceptable option to the poor than it is to the non-poor must be addressed. Some analysts believe that welfare encourages the birthing option for the poor because the financial returns to their academic as well as labor market opportunities are less attractive. However, cutbacks in child support would be a punitive response that may have only marginal effects because it fails to address the more important issue of why adolescents become pregnant. Ellwood and Bane[19] found that state variations in welfare benefits had no impact on out-of-wedlock childbearing among women less than 24 years of age. Thus, reducing welfare payments might impact on pregnancy resolution, but it would have much less effect on unwanted pregnancies. A less punitive and potentially more effective policy would be to expand the educational and employment opportunities available to adolescents so that pregnancy as well as childbearing have less appeal.

***New York State of Health (personal communications). Although a portion of the difference is due to urban/rural variations, 81 per cent of all abortions reported to NCHS, excluding New York City, were to metropolitan residents.[5]

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Third National Conference Announced
on Chronic Disease Prevention and Control

The Centers for Disease Control (CDC) and the Association of State and Territorial Health Officials (ASTHO) will cosponsor the Third National Conference on Chronic Disease Prevention and Control: *Putting Science Into Practice,* October 19–21, 1988, at the Hyatt Regency Denver, in Denver, Colorado. The conference is open to the public; there will be no registration fee.

The conference will build on the strategies identified by participants at the two earlier national conferences which emphasized interactions among federal, state, and local health departments, voluntary health agencies, professional organizations, and others. This has served as a basis for new working relationships and the building of a strong, broadly representative coalition for chronic disease prevention.

Plenary sessions at this year's conference will address the following topics:

● Health education/mass media approaches for changing behaviors;
● Preventive health services in primary care settings (including benefit/cost and cost-effectiveness of chronic disease prevention and control strategies);
● Long-term/broad strategic issues for public health chronic disease control.

Concurrent afternoon sessions will focus on breast cancer, cervical cancer, cholesterol/cardiovascular disease, diabetes, and smoking.

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