

# IMPACTS OF FOUR TITLE V, SECTION 510 ABSTINENCE EDUCATION PROGRAMS

## EXECUTIVE SUMMARY

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The enactment of Title V, Section 510 of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 significantly increased the funding and prominence of abstinence education as an approach to promote sexual abstinence and healthy teen behavior. Since fiscal year 1998, the Title V, Section 510 program has allocated \$50 million annually in federal funding for programs that teach abstinence from sexual activity outside of marriage as the expected standard for school-age children. Under the matching block grant program administered by the U.S. Department of Health and Human Services (DHHS), states must match this federal funding at 75 percent, resulting in a total of \$87.5 million annually for Title V, Section 510 abstinence education programs. All programs receiving Title V, Section 510 abstinence education funding must comply with the “A-H” definition of abstinence education (Table 1).

In the Balanced Budget Act of 1997, Congress authorized a scientific evaluation of the Title V, Section 510 Abstinence Education Program. This report presents final results from a multi-year, experimentally-based impact study conducted as part of this evaluation. It focuses on four selected Title V, Section 510 abstinence education programs: (1) *My Choice, My Future!* in Powhatan, Virginia; (2) *ReCapturing the Vision* in Miami, Florida; (3) *Families United to Prevent Teen Pregnancy (FUPTP)* in Milwaukee, Wisconsin; and (4) *Teens in Control* in Clarksdale, Mississippi. Based on follow-up data collected from youth four to six years after study enrollment, the report presents the estimated program impacts on youth behavior, including sexual abstinence, risks of pregnancy and sexually transmitted diseases (STDs), and other related outcomes.

### FOCAL PROGRAMS FOR THIS REPORT

The four selected programs offered a range of implementation settings and program strategies, reflecting the array of operational experiences of the Title V, Section 510 programs operating nationwide. The programs served youth living in a mix of urban communities (Miami and Milwaukee) and rural areas (Powhatan, Virginia and Clarksdale, Mississippi). In three of these communities, the youth served were predominantly African-American or Hispanic and from poor, single-parent households. In Powhatan, youth in the programs were mostly white, non-Hispanic youth from working- and middle-class, two-parent households.

**Table 1. A-H Definition of Abstinence Education for Title V, Section 510 Programs**


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A	Have as its exclusive purpose teaching the social, psychological, and health gains to be realized by abstaining from sexual activity
B	Teach abstinence from sexual activity outside marriage as the expected standard for all school-age children
C	Teach that abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems
D	Teach that a mutually faithful, monogamous relationship in the context of marriage is the expected standard of sexual activity
E	Teach that sexual activity outside the context of marriage is likely to have harmful psychological and physical effects
F	Teach that bearing children out of wedlock is likely to have harmful consequences for the child, the child's parents, and society
G	Teach young people how to reject sexual advances and how alcohol and drug use increases vulnerability to sexual advances
H	Teach the importance of attaining self-sufficiency before engaging in sexual activity

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Source: Title V, Section 510 (b)(2)(A-H) of the Social Security Act (P.L. 104-193).

Other key dimensions of program variation include the following (Table 2):

- **Program Delivery.** The four programs differed substantially in their setting, program type, and attendance requirements.
  - **Setting:** Although all four programs served youth in school settings, *FUPTP* served youth after school and the other three programs served youth in classrooms during the school day much like any other course.
  - **Program Type:** Two of the programs were offered on an elective basis (*ReCapturing the Vision* and *FUPTP*), while the other two programs were non-elective classes.
  - **Attendance:** One program had voluntary attendance (*FUPTP*); the other three had mandatory attendance.
- **Ages of Youth Served.** Two of the programs—*My Choice, My Future!* and *ReCapturing the Vision*—targeted youth in middle school grades, while the other two programs targeted youth in upper elementary grades.
- **Program Duration and Intensity.** Although all programs offered more than 50 contact hours, making them relatively intense among programs funded by the Title V, Section 510 grant, two of the programs—*ReCapturing the Vision* and

*FUPTP*—were particularly intensive. These two programs met every day of the school year and youth could participate in *FUPTP* for up to four years.

- **Other Services Available to Youth.** Two of the programs—*ReCapturing the Vision* and *FUPTP*—operated in communities with a rich set of health, family life, and sex education services available through the public schools, while the remaining two programs operated in schools with limited services as part of their existing school curricula.

**Table 2. Distinguishing Features of the Focal Programs**

<i>My Choice, My Future!</i>	<i>ReCapturing the Vision</i>	<i>Families United to Prevent Teen Pregnancy</i>	<i>Teens in Control</i>
Powhatan, VA	Miami, FL	Milwaukee, WI	Clarksdale, MS
<b>Socio-Demographic Characteristics</b>			
Middle- and working-class, two-parent, white, non-Hispanic families. Semi-rural setting.	Poor, single-parent, African American and Hispanic families. Urban setting.	Poor, single-parent, African American families. Urban setting.	Poor, single-parent, African American families. Rural setting.
<b>Program Delivery</b>			
Non-elective class during the school day with mandatory attendance.	Year-long elective class during the school day with mandatory attendance.	After-school elective program with voluntary attendance.	Non-elective class during the school day with mandatory attendance.
<b>Ages of Youth Served</b>			
Grade 8 at enrollment.	Grades 6–8 at enrollment; high-risk girls only.	Grades 3–8 at enrollment.	Grade 5 at enrollment.
<b>Program Duration and Intensity</b>			
Three year program: 30 sessions in year one, 8 in year two, and 14 in year three; occasional school assembly and community outreach.	Year-long class that met daily as part of the students’ regular schedule.	Daily two and one-half hour after school program; students could attend for up to four years.	Two year program: weekly pull-out class sessions.
<b>Other Health, Family Life, and Sex Education Services</b>			
Nine-week health and physical education class in 8th grade that did not include topics directly related to abstinence or STD risks. An additional health class in 9th grade covered abstinence, but did not cover STDs or contraceptive use.	Mandated school curriculum for 6th through 8th grades, including a week-long unit on human growth and development; 6th grade curriculum covers STDs, abstinence, and drug and alcohol prevention.	Mandatory family life curricula for K–12; units on abstinence and contraceptive use beginning in 5th grade.	Limited district-wide health, family life, and sex education curricula for middle-school youth.

## EVALUATION DESIGN

In response to the Congressional authorization of a scientific evaluation of the Title V, Section 510 Abstinence Education Program, the evaluation used an experimental design. Under this design, eligible youth were randomly assigned to either the program group, which was offered Title V, Section 510 abstinence education program services, or the control group that was not offered these services. The rigor of the experimental design derives from the fact that, with random assignment, youth in both the program and control groups were similar in all respects except for their access to the abstinence education program services. As a result, differences in outcomes between the program and control groups could be attributed to the abstinence education program and not to any pre-existing unobserved differences between the program and control groups.

### Study Sample

This report is based on a final follow-up survey administered to 2,057 youth; just less than 60 percent (1,209) were assigned to the program group; the remainder (848) were assigned to the control group (Table 3). The survey was administered to youth in 2005 and early 2006—roughly four to six years after they began participating in the study. By this time, youth in the study sample had all completed their programs, in some cases several years earlier, and averaged about 16.5 years of age. Across the programs, the mean age was higher (roughly 18 years of age) for study youth in the two middle school programs, *ReCapturing the Vision* and *My Choice, My Future!*, while it was lower (around 15 years of age) for those in the two upper elementary school programs, *FUPTP* and *Teens in Control*.

**Table 3. Impact Analysis Evaluation Sample**

	<i>My Choice, My Future!</i> Powhatan, VA	<i>ReCapturing the Vision</i> Miami, FL	<i>FUPTP</i> Milwaukee, WI	<i>Teens in Control</i> Clarksdale, MS	Total
Total	448	480	414	715	2,057
Control group	162	205	140	341	848
Program group	286	275	274	374	1,209

### Outcome Measures

The impact evaluation draws on a rich longitudinal data set that includes measures of sexual abstinence and teen risk behavior, knowledge of the consequences of sexual activity, and perceptions about the risks of pregnancy and STDs. Two main sets of outcome measures were constructed from the follow-up survey data:

1. **Sexual Behavior.** Rates of sexual abstinence, rates of unprotected sex, number of sexual partners, expectations to abstain, and reported rates of pregnancy, births, and STDs.

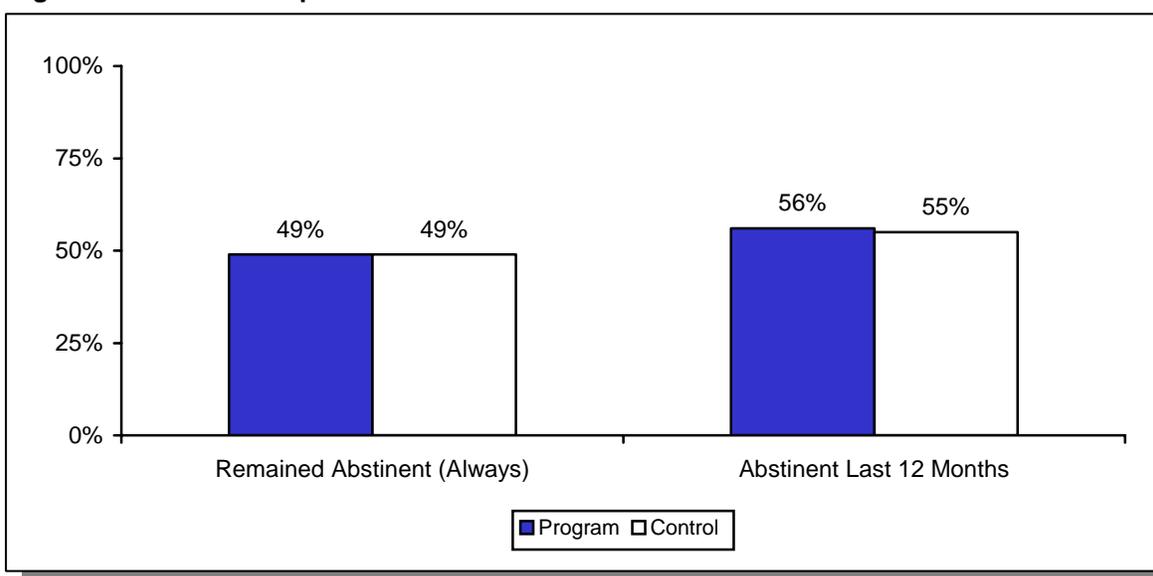
2. **Knowledge and Perceptions of Risks Associated with Teen Sexual Activity.** Scale measures of STD identification (from among a list of diseases), risks of pregnancy and STDs from unprotected sex, and health consequences of STDs; youth perceptions of the effectiveness of condoms and birth control pills for pregnancy prevention and for the prevention of several types of STDs, including HIV, chlamydia and gonorrhea, and herpes and human papillomavirus (HPV).

## IMPACTS ON BEHAVIOR

Findings indicate that youth in the program group were no more likely than control group youth to have abstained from sex and, among those who reported having had sex, they had similar numbers of sexual partners and had initiated sex at the same mean age. Contrary to concerns raised by some critics of the Title V, Section 510 abstinence funding, however, program group youth were no more likely to have engaged in unprotected sex than control group youth. Specific findings follow.

**Sexual Abstinence.** Program and control group youth were equally likely to have remained abstinent (Figure 1). About half of both groups of youth reported remaining sexually abstinent, and a slightly higher proportion reported having been abstinent within the 12 months prior to the final follow-up survey (56 percent of program group youth versus 55 percent of control group youth; this difference was not statistically significant).

**Figure 1. Estimated Impacts on Sexual Abstinence**

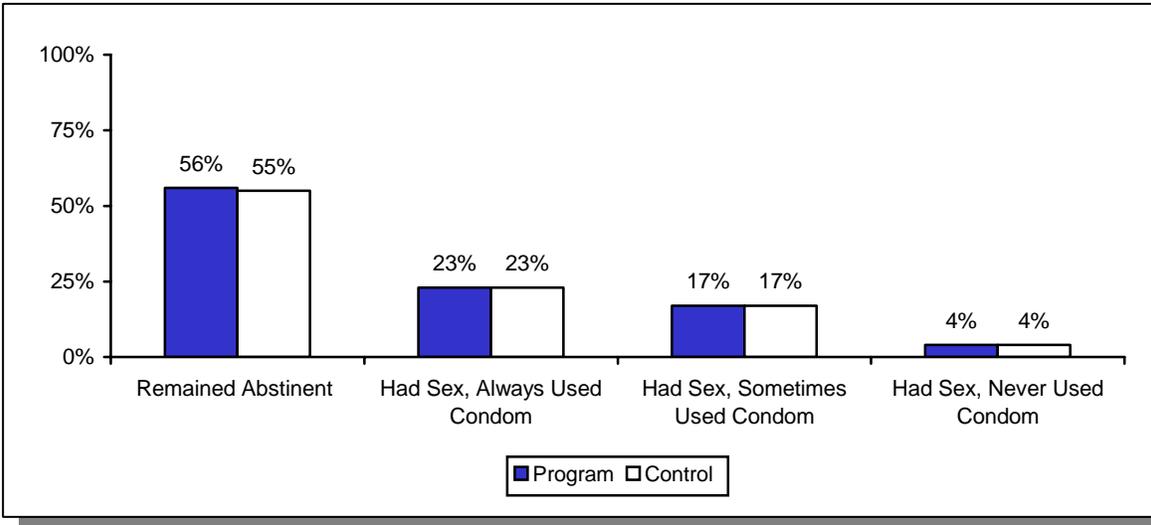


Source: Wave 4 Survey of Teen Activities and Attitudes (Mathematica Policy Research, Inc., 2005), administered to youth 42 to 78 months after enrolling in the Title V, Section 510 Abstinence Education Program study sample.

\*\*\**p*-value (of program-control difference) < 0.01; \*\**p*-value < 0.05; \**p*-value < 0.10, two-tailed test.

**Unprotected Sex.** Program and control group youth did not differ in their rates of unprotected sex, either at first intercourse or over the last 12 months. Over the last 12 months, 23 percent of both groups reported having had sex and always using a condom; 17 percent of both groups reported having had sex and only sometimes using a condom; and 4 percent of both groups reported having had sex and never using a condom (Figure 2).

**Figure 2. Estimated Impacts on Unprotected Sex, Last 12 Months**



Source: Wave 4 Survey of Teen Activities and Attitudes (Mathematica Policy Research, Inc., 2005), administered to youth 42 to 78 months after enrolling in the Title V, Section 510 Abstinence Education Program study sample.

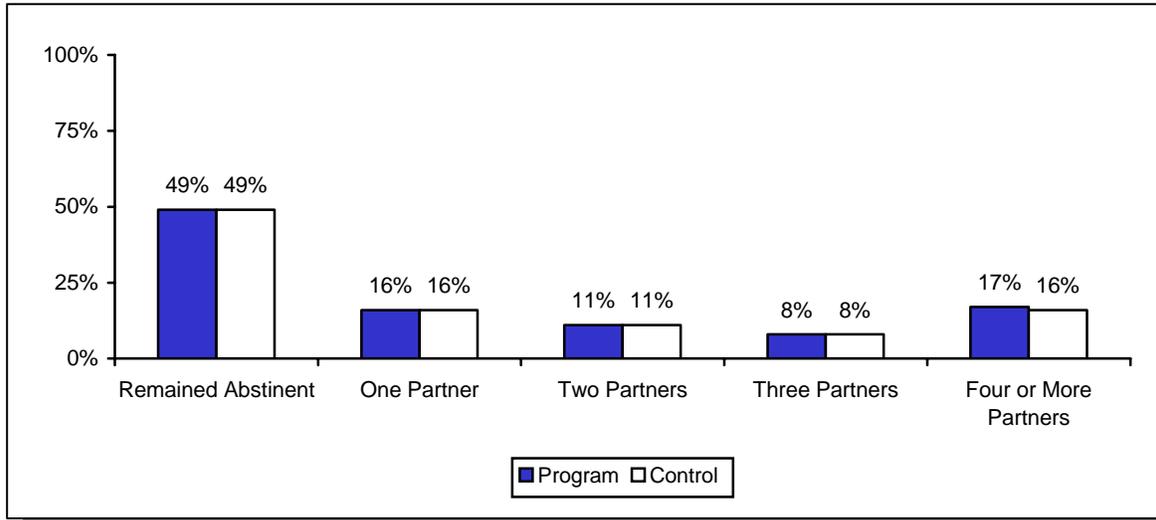
\*\*\* $p$ -value (of program-control difference) < 0.01; \*\* $p$ -value < 0.05; \* $p$ -value < 0.10, two-tailed test.

**Age at First Intercourse.** For both the program and control group youth, the reported mean age at first intercourse was identical, 14.9 years. This age is seemingly young, but recall that the outcome is defined only for youth who reported having had sex and the average age of the evaluation sample was less than 17.

**Sexual Partners.** Program and control group youth also did not differ in the number of partners with whom they had sex. Comparing the program and control groups overall, the distributions on the number of reported sex partners are nearly identical (Figure 3). About one-quarter of all youth in both groups had sex with three or more partners, and about one in six had sex with four or more partners.

## IMPACTS ON KNOWLEDGE OF RISKS ASSOCIATED WITH TEEN SEX

Overall, the programs improved identification of STDs but had no overall impact on knowledge of unprotected sex risks and the consequences of STDs. Both program and control group youth had a good understanding of the risks of pregnancy but a less clear understanding of STDs and their health consequences.

**Figure 3. Estimated Impacts on Reported Number of Sexual Partners**

Source: Wave 4 Survey of Teen Activities and Attitudes (Mathematica Policy Research, Inc., 2005), administered to youth 42 to 78 months after enrolling in the Title V, Section 510 Abstinence Education Program study sample.

\*\*\* $p$ -value (of program-control difference) < 0.01; \*\* $p$ -value < 0.05; \* $p$ -value < 0.10, two-tailed test.

**STD Identification.** On the follow-up survey, youth were given a list of 13 diseases and asked whether or not each was a sexually transmitted disease; nine were actual STDs and four were not STDs. Youth in the program group identified an average of 69 percent of these diseases correctly (Table 4). This rate is two percentage points higher than the average among youth in the control group, and the difference is statistically significant.

Findings remain consistent when examining impacts separately for diseases that are STDs and those that are not. This consistency suggests that programs did not simply raise the likelihood that youth believed any disease was transmitted sexually; rather, they had a beneficial long-term impact on STD identification.

**Knowledge of Unprotected Sex Risks.** Most youth are knowledgeable about the risks of unprotected sex. On a two-item [0-1] scale measuring knowledge of these risks, youth in both the program and control group reported a high mean score (0.88) (Table 4).

**Knowledge of STD Consequences.** In contrast to high levels of knowledge about the risks of unprotected sex, study youth are less knowledgeable about the potential health risks from STDs. On a three-item [0-1] scale measuring their understanding of these risks, youth in the program and control groups had nearly identical mean scores of 0.52 and 0.51, respectively, which corresponded to a typical youth answering only about half the items of the scale correctly (Table 4).

**Table 4. Estimated Impacts on Selected Measures of Knowledge of STDs and Risk Behavior**

	Program Group (Scale Mean)	Control Group (Scale Mean)	Program-Control Difference	<i>p</i> -value
<b>STD Identification</b>				
Overall identification of STDs	0.69	0.67	0.02	0.00 ***
<b>Knowledge of Pregnancy and STD Risks</b>				
Knowledge of unprotected sex risks	0.88	0.88	0.00	0.85
Knowledge of STD consequences	0.52	0.51	0.02	0.20

Source: Wave 4 Survey of Teen Activities and Attitudes (Mathematica Policy Research, Inc., 2005), administered to youth 42 to 78 months after enrolling in the Title V, Section 510 Abstinence Education Program study sample.

Note: Program-control difference may not equal difference in means due to rounding.

\*\*\**p*-value (of program-control difference) < 0.01; \*\**p*-value < 0.05; \**p*-value < 0.10, two-tailed test.

#### IMPACTS ON PERCEPTIONS OF PREGNANCY AND STD PREVENTION

**Perceived Effectiveness of Condoms.** Program and control group youth had similar perceptions about the effectiveness of condoms for pregnancy prevention (Table 5). About half of the youth in both groups reported that condoms usually prevent pregnancy, and 38 percent reported that condoms sometimes prevent pregnancy. Only three percent of youth reported that condoms never prevent pregnancy, while seven percent reported being unsure.

With respect to STD prevention, a number of youth in both the program and control groups reported being unsure about the effectiveness of condoms at preventing STDs. For example, roughly one-quarter of youth in both groups reported being unsure about whether condoms are effective at preventing chlamydia and gonorrhea or at preventing herpes and HPV. In addition, a sizeable fraction in both groups, about one-in-seven, reported being unsure about condoms' effectiveness for preventing HIV. These findings are in sharp contrast to those for pregnancy, for which very few youth in either group reported being unsure about their effectiveness.

Program group youth were less likely than control group youth to report that condoms are usually effective at preventing STDs; and they were more likely to report that condoms are never effective at preventing STDs. For example, 21 percent of program group youth reported that condoms never prevent HIV, compared to 17 percent of control group youth. For herpes and HPV, 23 percent of program group youth reported that condoms are never effective, compared to 15 percent of control group youth.

**Table 5. Estimated Impacts on Perceived Effectiveness of Condoms for Preventing Pregnancy and STDs**

	Program Group (Percentage)	Control Group (Percentage)	Program-Control Difference (Percentage Points)	<i>p</i> -value
<b>Condoms Prevent Pregnancy</b>				
Usually	51	52	-1	0.63
Sometimes	38	38	0	0.88
Never	3	3	1	0.49
Unsure	7	7	0	0.83
<b>Condoms Prevent HIV</b>				
Usually	34	38	-4	0.07*
Sometimes	30	30	0	0.97
Never	21	17	5	0.01**
Unsure	14	15	-1	0.76
<b>Condoms Prevent Chlamydia and Gonorrhea</b>				
Usually	30	35	-5	0.03**
Sometimes	27	25	2	0.37
Never	20	14	6	0.00***
Unsure	23	26	-3	0.15
<b>Condoms Prevent Herpes and HPV</b>				
Usually	26	31	-5	0.03**
Sometimes	26	26	1	0.77
Never	23	15	7	0.00***
Unsure	25	28	-3	0.10*

Source: Wave 4 Survey of Teen Activities and Attitudes (Mathematica Policy Research, Inc., 2005), administered to youth 42 to 78 months after enrolling in the Title V, Section 510 Abstinence Education Program study sample.

Notes: Program-control difference may not equal difference in percentages due to rounding. *F*-tests of the difference in the distribution of the outcome measures between control and program groups are in Appendix Tables A.10–A.13.

\*\*\**p*-value (of program-control difference) < 0.01; \*\**p*-value < 0.05; \**p*-value < 0.10, two-tailed test.

**Perceived Effectiveness of Birth Control Pills.** Just over 55 percent of the youth in both the program and control groups reported that, when used properly, birth control pills usually prevent pregnancy (Table 6). With respect to STD prevention, more than two out of three youth reported, correctly, that birth control pills do not prevent STDs. And, for each type of STD investigated, a significantly higher proportion of youth in the program group than in the control group reported this was the case. For example, 73 percent of program group youth correctly reported that birth control pills never prevent HIV compared to 69 percent of control group youth, a statistically significant difference of four points.

**Table 6. Estimated Impacts on Perceived Effectiveness of Birth Control Pills for Preventing Pregnancy and STDs**

	Program Group (Percentage)	Control Group (Percentage)	Program-Control Difference (Percentage Points)	p-value
<b>Birth Control Pills Prevent Pregnancy</b>				
Usually	56	55	1	0.55
Sometimes	33	36	-2	0.32
Never	3	3	0	0.62
Unsure	7	7	1	0.65
<b>Birth Control Pills Prevent HIV</b>				
Usually	6	6	0	0.94
Sometimes	6	7	-2	0.15
Never	73	69	4	0.04**
Unsure	16	18	-2	0.15
<b>Birth Control Pills Prevent Chlamydia and Gonorrhea</b>				
Usually	4	5	-1	0.15
Sometimes	6	5	0	0.71
Never	71	67	4	0.03**
Unsure	19	23	-3	0.06*
<b>Birth Control Pills Prevent Herpes and HPV</b>				
Usually	4	5	-1	0.54
Sometimes	4	6	-2	0.08*
Never	71	67	3	0.09*
Unsure	21	22	-1	0.64

Source: Wave 4 Survey of Teen Activities and Attitudes (Mathematica Policy Research, Inc., 2005), administered to youth 42 to 78 months after enrolling in the Title V, Section 510 Abstinence Education Program study sample.

Note: Program-control difference may not equal difference in percentages due to rounding.

\*\*\*p-value (of program-control difference) < 0.01; \*\*p-value < 0.05; \*p-value < 0.10, two-tailed test.

## SITE-LEVEL IMPACTS

Findings for each of the four individual sites indicate few statistically significant differences in behavior between program and control group youth. In each site, most differences between youth in the program and control groups were small and inconsistent in direction. *ReCapturing the Vision* displayed the largest positive differences with respect to abstinence from sex; 48 percent of program youth in this site reported being abstinent in the last 12 months compared with 43 percent of control group youth. *ReCapturing the Vision* also displayed a positive difference of seven points in the proportion of youth who reported expecting to abstain from sex until marriage. Neither of these differences is statistically significant. Given the smaller sample sizes available for estimating impacts at the site level, however, the study cannot rule out modest site-specific impacts on these outcomes.

Remaining site-level findings show that *My Choice, My Future!* increased youth knowledge of STD and pregnancy risks, and changed their perceptions of the effectiveness of condoms and birth control pills. Compared to youth in the control group, youth in the program group for *My Choice, My Future!* were more likely to identify STDs correctly and to have greater knowledge of both unprotected sex risks and the potential health consequences of STDs. All differences were statistically significant. With respect to perceptions, program group youth in *My Choice, My Future!* were less likely than their control group counterparts to perceive condoms as effective at preventing a range of STDs. Youth in the program group were also less likely than control group youth to perceive birth control pills as effective in preventing STDs. As with the knowledge measures, differences across all of the measures of perceptions were statistically significant for *My Choice, My Future!*

## LOOKING FORWARD

The evaluation highlights the challenges faced by programs aiming to reduce adolescent sexual activity and its consequences. Nationally, rates of teen sexual activity have declined over the past 15 years, yet even so, about half of all high school youth report having had sex, and more than one in five report having had four or more partners by the time they graduate from high school. One-quarter of sexually active adolescents nationwide have an STD, and many STDs are lifelong viral infections with no cure.

Some policymakers and health educators have questioned whether the Title V, Section 510 programs' focus on abstinence elevates these STD risks. Findings from this study suggest that this is not the case, as program group youth are no more likely to engage in unprotected sex than their control group counterparts. However, given the lack of program impacts on behavior, policymakers should consider two important factors as they search for effective ways to reduce the high rate of teen sexual activity and its negative consequences:

### ► Targeting youth solely at young ages may not be sufficient.

As with the four programs in this study, most Title V, Section 510 abstinence education programs were implemented in upper elementary and middle schools. In addition, most Title V, Section 510 programs are completed before youth enter high school, when rates of sexual activity increase and many teens are either contemplating or having sex.

Findings from this study provide no evidence that abstinence programs implemented in upper elementary and middle schools are effective in reducing the rate of teen sexual activity. However, the findings provide no information on the effects programs might have if they were implemented for high school youth or began at earlier ages but continued to serve youth through high school.

### ► Peer support may be protective but erodes sharply during the teen years.

An analysis of teen sexual activity, presented in Chapter VI of the report, finds that friends' support for abstinence is a significant predictor of future sexual abstinence. Although the programs had at most a small impact on this measure in the short-term and no

impact in the longer-term, this finding suggests that promoting support for abstinence among peer networks should be an important feature of future abstinence programs.

While friends' support for abstinence may have protective benefits, maintaining this support appears difficult for most youth as they move through adolescence. At the time when most Title V, Section 510 abstinence education programs are completed and youth enter their adolescent years, data from the study find that support for abstinence among friends drops dramatically. For example, survey data from the start of the impact study show that nearly all youth had friends who exhibited attitudes and behaviors supportive of abstinence. Four years later, however, the typical youth in the study reported that only two of his or her five closest friends remained supportive of abstinence.

Youth who participate in Title V, Section 510 programs may also find themselves unable to maintain their peer networks as they advance from elementary to middle school or from middle school up through high school. In some urban settings, for example, the parent(s) of a child attending a particular middle school might have the option of sending that child to potentially dozens of high schools in the school district. Alternatively, in many other communities, children from several elementary (or middle) schools might feed into a single middle (or high) school. To the extent that the Title V, Section 510 abstinence programs aim to influence peer networks, this dispersal or dilution of peer networks after youth complete the programs presents a significant challenge to sustaining positive change.