

October 2006

ABSTINENCE EDUCATION

Efforts to Assess the Accuracy and Effectiveness of Federally Funded Programs





Highlights of [GAO-07-87](#), a report to congressional requesters

Why GAO Did This Study

Reducing the incidence of sexually transmitted diseases and unintended pregnancies is one objective of the Department of Health and Human Services (HHS). HHS provides funding to states and organizations that provide abstinence-until-marriage education as one approach to address this objective.

GAO was asked to describe the oversight of federally funded abstinence-until-marriage education programs. GAO is reporting on (1) efforts by HHS and states to assess the scientific accuracy of materials used in these programs and (2) efforts by HHS, states, and researchers to assess the effectiveness of these programs. GAO reviewed documents and interviewed HHS officials in the Administration for Children and Families (ACF) and the Office of Population Affairs (OPA) that award grants for these programs.

What GAO Recommends

To address concerns about the scientific accuracy of materials used in abstinence-until-marriage education programs, GAO recommends that the Secretary of HHS develop procedures to help assure the accuracy of such materials used in programs administered by ACF. HHS agreed to consider this recommendation. HHS also provided information on steps it takes to assure accuracy, which we have incorporated into the report, as appropriate.

www.gao.gov/cgi-bin/getrpt?GAO-07-87.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Marcia Crosse at (202) 512-7119 or crossem@gao.gov.

ABSTINENCE EDUCATION

Efforts to Assess the Accuracy and Effectiveness of Federally Funded Programs

What GAO Found

Efforts by HHS and states to assess the scientific accuracy of materials used in abstinence-until-marriage education programs have been limited. This is because HHS's ACF—which awards grants to two programs that account for the largest portion of federal spending on abstinence-until-marriage education—does not review its grantees' education materials for scientific accuracy and does not require grantees of either program to review their own materials for scientific accuracy. In contrast, OPA does review the scientific accuracy of grantees' proposed educational materials. In addition, not all states that receive funding from ACF have chosen to review their program materials for scientific accuracy. In particular, 5 of the 10 states that GAO contacted conduct such reviews. Officials from these states reported using a variety of approaches in their reviews. While the extent to which federally funded abstinence-until-marriage education materials are inaccurate is not known, in the course of their reviews OPA and some states reported that they have found inaccuracies in abstinence-until-marriage education materials. For example, one state official described an instance in which abstinence-until-marriage materials incorrectly suggested that HIV can pass through condoms because the latex used in condoms is porous.

HHS, states, and researchers have made a variety of efforts to assess the effectiveness of abstinence-until-marriage education programs; however, a number of factors limit the conclusions that can be drawn about the effectiveness of abstinence-until-marriage education programs. ACF and OPA have required their grantees to report on various outcomes that the agencies use to measure the effectiveness of grantees' abstinence-until-marriage education programs. In addition, 6 of the 10 states in GAO's review have worked with third-party evaluators to assess the effectiveness of abstinence-until-marriage education programs in their states. Several factors, however, limit the conclusions that can be drawn about the effectiveness of abstinence-until-marriage education programs. Most of the efforts to evaluate the effectiveness of abstinence-until-marriage education programs included in GAO's review have not met certain minimum scientific criteria—such as random assignment of participants and sufficient follow-up periods and sample sizes—that experts have concluded are necessary in order for assessments of program effectiveness to be scientifically valid, in part because such designs can be expensive and time-consuming to carry out. In addition, the results of efforts that meet the criteria of a scientifically valid assessment have varied and two key studies funded by HHS that meet these criteria have not yet been completed. When completed, these HHS-funded studies may add substantively to the body of research on the effectiveness of abstinence-until-marriage education programs.

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Abbreviations

ACF	Administration for Children and Families
AFL	Adolescent Family Life
ASPE	Office of the Assistant Secretary for Planning and Evaluation
CDC	Centers for Disease Control and Prevention
FAR	Federal Acquisition Regulation
HHS	Department of Health and Human Services
HIV	human immunodeficiency virus
HPV	human papillomavirus
HRSA	Health Resources and Services Administration
NAC	National Abstinence Clearinghouse
NIH	National Institutes of Health
OMB	Office of Management and Budget
OPA	Office of Population Affairs
RFP	request for proposal
STD	sexually transmitted disease
TANF	Temporary Assistance for Needy Families

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United States Government Accountability Office
Washington, DC 20548

October 3, 2006

Congressional Requesters

Preventing sexually transmitted diseases (STD) and unintended pregnancies among adolescents is an important public health challenge. Although pregnancy and birth rates among female adolescents in the United States have been declining since the early 1990s, the rates continue to be high when compared with those in other industrialized nations. The Centers for Disease Control and Prevention (CDC) reports that about 141,000 children were born to girls 17 years old and younger in the United States in 2003. CDC also reports that STDs disproportionately affect adolescents, with adolescents and young adults ages 15 to 24 acquiring almost half of the estimated 19 million new infections each year.

Reducing the incidence of STDs and unintended pregnancies among adolescents is an important objective for the Department of Health and Human Services (HHS), which identifies as one of its goals the need to reduce major threats to the health and well-being of Americans. Among the efforts it supports to reduce the incidence of STDs and unintended pregnancies among adolescents, HHS funds abstinence-until-marriage education programs. Abstinence-until-marriage education programs, also referred to as abstinence-only education programs, teach adolescents to abstain from sexual activity until marriage in order to avoid risks of unintended pregnancy, STDs, and related health problems.¹ The content of federally funded abstinence-until-marriage programs is required to be consistent with several principles, such as teaching that a mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity, and that abstinence from sexual activity is the only certain way to avoid STDs. Abstinence-until-marriage education programs are delivered by a variety of entities, including schools, human service agencies, faith-based organizations, youth development groups, and pregnancy crisis centers. Instructors can incorporate a variety of educational materials into their abstinence-until-marriage education programs, including textbooks, student manuals, brochures, slide presentations, and videos.

¹Abstinence-until-marriage education programs also support HHS's objective to promote family formation and healthy marriages.

The three main federally funded abstinence-until-marriage programs are the Abstinence Education Program (State Program), which is administered by HHS's Administration for Children and Families (ACF); the Community-Based Abstinence Education Program (Community-Based Program), which is also administered by ACF; and the Adolescent Family Life (AFL) Program, which is administered by HHS's Office of Population Affairs (OPA) within the Office of Public Health and Science. Funding provided by HHS for the three abstinence-until-marriage programs increased from about \$73 million in fiscal year 2001 to about \$158 million in fiscal year 2005.

Recent studies have raised concerns about the accuracy of educational materials used in abstinence-until-marriage education programs and about the effectiveness of these programs. These studies have reported that some of the materials used in abstinence-until-marriage education programs contain, for example, scientifically inaccurate information about anatomy and physiology as they relate to reproductive health as well as misleading information about contraceptive failure rates and STDs.² State and federal agencies have also documented inaccuracies in abstinence-until-marriage educational materials. Further, studies examining the effectiveness of these programs have reported varied results. For example, some researchers have reported that abstinence-until-marriage education programs have resulted in adolescents reporting less frequent sexual intercourse or fewer sexual partners, while other researchers have reported that these types of programs did not affect the frequency of sexual intercourse or were ineffective in delaying the initiation of sexual intercourse.³

You asked us to describe certain aspects of the oversight of federally funded abstinence-until-marriage education programs. Our objectives were to report on (1) efforts by HHS and states to assess the scientific

²See K. L. Wilson et al., "A Review of 21 Curricula for Abstinence-Only-Until-Marriage Programs," *The Journal of School Health*, vol. 75, no. 3 (2005), and *The Content of Federally Funded Abstinence-Only Education Programs*, United States House of Representatives, Committee on Government Reform-Minority Staff, Special Investigations Division (2004).

³See, for example, E. A. Borawski et al., "Effectiveness of Abstinence-only Intervention in Middle School Teens," *American Journal of Health Behavior*, vol. 29, no. 5 (2005), and J. B. Jemmott III, L. S. Jemmott, and G. T. Fong, "Abstinence and Safer Sex HIV Risk-Reduction Interventions for African American Adolescents: A Randomized Controlled Trial," *Journal of the American Medical Association*, vol. 279, no. 19 (1998).

accuracy of materials used in abstinence-until-marriage education programs and (2) efforts by HHS, states, and researchers to assess the effectiveness of abstinence-until-marriage education programs. You also asked us to describe how HHS selected a contractor for the abstinence-until-marriage technical assistance contract that was awarded in September 2002. This information is provided in appendix I.

To describe the efforts by HHS and states to assess the scientific accuracy of materials used in abstinence-until-marriage education programs, we reviewed published reports, program announcements, *Federal Register* notices, agency Web sites, and other documents related to abstinence-until-marriage education. We focused our review on efforts related to the three main federally funded abstinence-until-marriage education programs administered by HHS, as well as efforts to review the accuracy of scientific facts included in abstinence-until-marriage education materials. We did not assess the criteria used to determine the scientific accuracy of education materials or the quality of the reviews. We interviewed officials from ACF, the Health Resources and Services Administration (HRSA), OPA, and CDC. We also interviewed officials from the 10 states that received the largest share of federal funding (together accounting for 51 percent of the total funding in fiscal year 2005) through the State Program for abstinence-until-marriage education.⁴

To describe efforts by HHS, states, and researchers to assess the effectiveness of abstinence-until-marriage education programs, we focused on efforts that examined the extent to which these programs achieved their program goals. In general, these goals include teaching adolescents to abstain from sexual activity until marriage in order to avoid unintended pregnancies, STDs, and related health problems. As part of our review, we compared these efforts to the design characteristics that experts have identified as important for a scientifically valid study of

⁴The 10 states that received the largest share of funding in fiscal year 2005 through the State Program were Arizona, Florida, Georgia, Illinois, Louisiana, Michigan, New York, North Carolina, Ohio, and Texas.

program effectiveness.⁵ We reviewed journal articles and other published reports, agency budget submissions, program announcements, agency and grantee performance reports, *Federal Register* notices, agency Web sites, and other documents related to abstinence-until-marriage education. (For a more detailed description of our literature review methodology, see app. II). We also interviewed officials from ACF, HRSA, OPA, CDC, the National Institutes of Health (NIH), the Office of the Assistant Secretary for Planning and Evaluation (ASPE), and 10 states that received the largest share of federal funding for abstinence-only education through the State Program in fiscal year 2005. We also interviewed individuals from the National Campaign to Prevent Teen Pregnancy, The Brookings Institution, ETR Associates, The Heritage Foundation, and Advocates for Youth, and researchers from Case Western Reserve University and Columbia University to obtain general information regarding the state of the research on abstinence-until-marriage education. We focused our review on efforts to assess the scientific accuracy of materials and the effectiveness of the programs during fiscal year 2006, and also reviewed the administration of the programs back to fiscal year 2001. We also attended conferences organized by ACF and OPA to learn about training that is provided to grantees on scientific accuracy and program evaluations.

To describe how HHS selected a contractor for the abstinence-until-marriage technical assistance contract that was awarded in September 2002, we reviewed the Request for Proposals and other related contract documents. We also interviewed officials at HRSA, ACF, and the National Abstinence Clearinghouse about the technical assistance contract. We performed our work from October 2005 through September 2006 in accordance with generally accepted government auditing standards.

⁵See Douglas Kirby, *Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy* (Washington, D.C.: National Campaign to Prevent Teen Pregnancy, 2001). The experts identifying the design characteristics of a scientifically valid study for the National Campaign to Prevent Teen Pregnancy were drawn from institutions that include the National Institutes of Health, the Medical Institute for Sexual Health, the Alan Guttmacher Institute, the Institute for Research and Evaluation, and various universities. See David Satcher, *The National Consensus Process on Sexual Health and Responsible Sexual Behavior: Interim Report* (Atlanta: Morehouse School of Medicine, 2006). The panel convened by David Satcher included experts from a variety of organizations, including the Medical Institute for Sexual Health, the Alan Guttmacher Institute, and the American Academy of Pediatrics. In addition, characteristics of a scientifically valid study have been identified by other experts in the field of evaluation research. For example, see Carol H. Weiss, *Evaluation* (Upper Saddle River: Prentice Hall, 1998).

Results in Brief

Efforts by HHS and states to assess the scientific accuracy of materials used in abstinence-until-marriage education programs have been limited. This is because ACF—which awards grants through two programs that account for the largest portion of federal spending on abstinence-until-marriage education—does not review its grantees’ education materials for scientific accuracy and does not require grantees of either program to review their own materials for scientific accuracy. In addition, not all states that receive funding through ACF’s State Program have chosen to review their program materials for scientific accuracy. In particular, 5 of the 10 states in our review conduct such reviews. Officials from these states reported using a variety of approaches in their reviews. In contrast, OPA does review the scientific accuracy of AFL grantees’ proposed educational materials and any inaccuracies found must be corrected before the materials can be used. While the extent to which federally funded abstinence-until-marriage education materials are inaccurate is not known, in the course of their reviews OPA and some states reported that they have found some inaccuracies in abstinence-until-marriage education materials. For example, OPA has required that a grantee correct several statements in a true/false quiz—including statements about STDs and condom use—in order for the quiz to be approved for use in its curriculum. In addition, one state official described an instance in which abstinence-until-marriage materials incorrectly suggested that HIV can pass through condoms because the latex used in condoms is porous.

HHS, states, and researchers have made a variety of efforts to assess the effectiveness of abstinence-until-marriage education programs; however, a number of factors limit the conclusions that can be drawn about the effectiveness of abstinence-until-marriage education programs. To assess the effectiveness of their abstinence-until-marriage education programs, ACF and OPA have required their grantees to report on various outcomes that the agencies use to measure the effectiveness of grantees’ abstinence-until-marriage education programs. For example, as of fiscal year 2006, states that receive funding through the State Program are required to report annually on four measures of the prevalence of adolescent sexual behavior in their state, such as the rate of pregnancy among adolescents aged 15 to 17 years. To assess the effectiveness of both its State and Community-Based Programs, ACF also analyzes trends in adolescent behavior, as reflected in national data on birth rates among teens and the proportion of surveyed high school students reporting that they have had sexual intercourse. OPA requires grantees of the AFL Program to develop and report on outcome measures that demonstrate the extent to which grantees’ programs are having an effect on program participants. In addition, other HHS agencies and offices—ASPE, CDC and NIH—are

making efforts to assess the effectiveness of abstinence-until-marriage education programs. Further, 6 of the 10 states in our review that receive funding through the State Program have worked with third-party evaluators to assess the effectiveness of abstinence-until-marriage education programs in their states. Several factors, however, limit the conclusions that can be drawn about the effectiveness of abstinence-until-marriage education programs. Most of the efforts to evaluate the effectiveness of abstinence-until-marriage education programs that we describe in our review have not met certain minimum criteria—such as random assignment of participants and sufficient follow-up periods and sample sizes—that experts have concluded are necessary in order for assessments of program effectiveness to be scientifically valid, in part because such designs can be expensive and time-consuming to carry out. In addition, the results of efforts that meet the criteria of a scientifically valid assessment have varied and two key studies funded by HHS that meet these criteria have not yet been completed. When completed, these HHS-funded studies may add substantively to the body of research on the effectiveness of abstinence-until-marriage education programs.

To address concerns about the scientific accuracy of materials used in abstinence-until-marriage education programs, we recommend that the Secretary of HHS develop procedures to help assure the accuracy of such materials used in the State and Community-Based Programs. To help provide such assurance, the Secretary could consider alternatives such as (1) extending the approach currently used by OPA to review the scientific accuracy of the factual statements included in abstinence-until-marriage education to materials used by grantees of ACF's Community-Based Program and requiring grantees of ACF's State Program to conduct such reviews or (2) requiring grantees of both programs to sign written assurances in their grant applications that the materials they propose using are accurate.

In commenting on a draft of this report, HHS agreed to consider requiring grantees of both ACF programs to sign written assurances in grant applications that the materials they use are accurate. In addition, HHS noted that all federal grant applicants attest on a standard form that information in their applications is correct. However, it is not clear that this serves the purpose of assuring the scientific accuracy of the educational materials. Further, the curricula to be used are not required to be included with states' applications. HHS's written comments also stated that ACF requires that the Community-Based Program curricula conform to standards that are grounded in scientific literature by requiring certain types of information. However, the inclusion of certain types of

information does not necessarily ensure the accuracy of the scientific facts included in the abstinence-until-marriage materials. In addition, HHS noted in its written comments that we did not define the term scientific accuracy and stated that it disagreed with certain findings of the report because it was difficult to precisely determine the criteria employed by GAO in making the recommendation as to scientific accuracy. However, the objective of our work was to focus on efforts by HHS and states to review the accuracy of scientific facts included in abstinence-until-marriage education materials and not to perform an independent assessment of the criteria used or the quality of the reviews. With regard to effectiveness, HHS agreed that it may be too soon to draw conclusions about the effectiveness of ACF's and OPA's programs.

Background

Recent statistics from CDC show that many high school students engage in sexual behavior that places them at risk for unintended pregnancy and STDs. In 2005, 46.8 percent of high school students reported that they have ever had sexual intercourse, with 14.3 percent of students reporting that they had had sexual intercourse with four or more persons. The likelihood of ever having sexual intercourse varied by grade, with the highest rate among 12th grade students (63.1 percent) and the lowest rate among 9th grade students (34.3 percent). CDC also has reported that the prevalence of certain STDs—including the rate of chlamydia infection, the most frequently reported STD in the United States—peaks in adolescence and young adulthood. According to CDC, in 2004 the chlamydia rates among adolescents 15 to 19 years old (1,579 cases per 100,000 adolescents) and young adults 20 to 24 years old (1,660 cases per 100,000) were each more than twice the rates among all other age groups.

HHS's current strategic plan includes the objectives to reduce the incidence of STDs and unintended pregnancies and to promote family formation and healthy marriages. These two objectives support HHS's goals to reduce the major threats to the health and well-being of Americans and to improve the stability and healthy development of American children and youth, respectively. Abstinence-until-marriage

education programs are one of several types of programs that support these objectives.⁶

The three main federal abstinence-until-marriage education programs—the State Program, the Community-Based Program, and the AFL Program—provide grants to support the recipients’ own efforts to provide abstinence-until-marriage education at the local level.⁷ These programs must comply with the statutory definition of abstinence education (see table 1).⁸

⁶HHS’s Family Planning Program, for example, also supports the objective to reduce the incidence of STDs and unintended pregnancies by providing access to contraceptive supplies and family planning information, especially for low-income persons, at community health clinics. This program is authorized under Title X of the Public Health Service Act.

⁷There are other federal sources of funding that are used for abstinence education, such as the Temporary Assistance for Needy Families (TANF) Program that is administered by ACF. Some states have allocated some of their TANF funding for abstinence education programs. For example, Florida has used TANF funds to provide community-based and faith-based organizations with contracts to carry out abstinence education. Other sources of funding that are used for abstinence education include ACF’s Compassion Capital Fund and CDC’s Division of Adolescent and School Health grants.

⁸42 U.S.C. § 710(b)(2). This definition is also referred to as the A-H definition. This statutory provision defines abstinence education for purposes of the State Program. Annual appropriations acts and program announcements have extended this definition to the Community-Based and AFL Programs. *See, e.g.*, Departments of Labor, Health and Human Services, and Education, and Related Agencies Appropriations Act, 2006, Pub. L. No. 109-149, 119 Stat. 2833, 2855-56.

Table 1: Definition of Abstinence Education

Abstinence education refers to an educational or motivational program that:
A. has as its exclusive purpose, teaching the social, psychological, and health gains to be realized by abstaining from sexual activity;
B. teaches abstinence from sexual activity outside marriage as the expected standard for all school age children;
C. teaches 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. teaches that a mutually faithful monogamous relationship in context of marriage is the expected standard of human sexual activity;
E. teaches that sexual activity outside of the context of marriage is likely to have harmful psychological and physical effects;
F. teaches that bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society;
G. teaches young people how to reject sexual advances and how alcohol and drug use increases vulnerability to sexual advances; and
H. teaches the importance of attaining self-sufficiency before engaging in sexual activity.

Source: Social Security Act, § 510(b)(2) (codified at 42 U.S.C. § 710(b)(2)).

The State Program

The State Program, administered by ACF, provides funding to its grantees—states—for the provision of abstinence-until-marriage education to those most likely to have children outside of marriage.⁹ States that receive grants through the State Program have discretion in how they use their funding to provide abstinence-until-marriage education. Some require that organizations apply for funds and use them to administer abstinence-until-marriage education programs. Others may directly administer such programs. At their discretion, states may also provide mentoring, counseling, and adult supervision to adolescents to promote abstinence from sexual activity until marriage.

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 established the State Program, and states were awarded grants beginning in fiscal year 1998.¹⁰ Funds are allotted to each state that submits the required annual application based on the ratio of the number

⁹Through the State Program funds are also provided to insular areas and the District of Columbia.

¹⁰Pub. L. No. 104-193, § 912; 110 Stat. 2353-54 (codified at 42 U.S.C. § 710).

of low-income children in the state to the total number of low-income children in all states. States are required to match every \$4 they receive in federal money with \$3 of nonfederal money and are required to report annually on the performance of the abstinence-until-marriage education programs that they support or administer. In fiscal year 2005, 47 states, the District of Columbia, and 3 insular areas were awarded funding.^{11,12}

The Community-Based Program

The Community-Based Program, which is also administered by ACF, is focused on funding public and private entities that provide abstinence-until-marriage education for adolescents from 12 to 18 years old, with the purpose of creating an environment within communities that supports adolescent decisions to postpone sexual activity until marriage. The Community-Based Program provides grants for school-based programs, adult and peer mentoring, and parent education groups. The Community-Based Program first awarded grants in fiscal year 2001.¹³ Grantees of the Community-Based Program are selected through a competitive process and are evaluated according to several criteria, such as the extent to which they have demonstrated that a need exists for abstinence-until-marriage education for a targeted population or in a specific geographic location. Grantees are required to report to ACF, on a semiannual basis, on the performance of their programs. For fiscal year 2005, 63 grants were awarded to organizations and other entities.¹⁴

¹¹In this report, we refer to U.S. territories and commonwealths as “insular areas.”

¹²Some states and insular areas have not applied for funding under the State Program. California, Maine, and Pennsylvania did not apply for funding under the State Program in fiscal year 2005. In this report, when we refer to “states,” we are referring to all grantees of the State Program—including states, insular areas, and the District of Columbia.

¹³The Community-Based Program is conducted under section 1110 of the Social Security Act. See 42 U.S.C. § 1310.

¹⁴In addition to the 63 grants awarded in fiscal year 2005, ACF is also responsible for other grants that the agency awarded before 2005.

The AFL Program

The AFL Program supports programs that provide abstinence-until-marriage education.¹⁵ The primary purpose of these programs is to find effective means of reaching preadolescents and adolescents before they become sexually active in order to encourage them to abstain from sexual activity and other risky behaviors. Under the AFL Program, OPA awards competitive grants to public or private nonprofit organizations or agencies, including community-based and faith-based organizations, to facilitate abstinence-until-marriage education in a variety of settings, including schools and community centers. Established in 1981, the AFL Program began awarding grants in fiscal year 1982. AFL Program grantees include school districts, youth development groups, and medical centers. Grant applicants are evaluated based on several criteria, such as the extent to which they provide a clear statement of mission, goals, measurable objectives, and a reasonable method for achieving their objectives. Grantees are required to conduct evaluations of certain aspects of their programs and report annually on their performance. As of August 2006, OPA funded 58 abstinence-until-marriage education programs, and most of these were focused on reaching young adolescents from the ages of 9 to 14.

Funding for Abstinence-until-Marriage Education Has Increased

Funding provided by HHS for abstinence-until-marriage education programs has increased steadily since 2001 (see table 2). For the three main programs combined—the State Program, the Community-Based Program, and the AFL Program—the amount of agency funding increased from about \$73 million in fiscal year 2001 to about \$158 million in fiscal year 2005. Nearly all of this increase was for the Community-Based program; funding under this program increased by about \$84 million from fiscal years 2001 through 2005. In fiscal year 2005, agency funding for the Community-Based Program constituted the largest share of the total funding (about 66 percent) for the three main programs combined.

¹⁵See 42 U.S.C. § 300z et seq. The AFL Program also supports other projects for pregnant and parenting adolescents, their infants, male partners, and family members. The purpose of these projects is to improve the outcomes of early childbearing for teen parents, their infants, and their families. However, in this report, when we use the term “AFL Program,” we are referring only to the abstinence-until-marriage component of the AFL Program.

Table 2: Funding Provided by HHS for the Three Main Abstinence-until-Marriage Education Programs

Dollars in millions

Fiscal year	State Program ^{a,b}	Community-Based Program	AFL Program
2001	\$43	\$20	\$10
2002	43	40	12
2003	44	55	13
2004	41	75	13
2005	41	104	13

Sources: ACF, OPA, and HRSA.

Notes: Figures are rounded to nearest \$1,000,000. Funding levels represent the total amount of grants awarded and funding for program-related support, such as technical assistance and evaluation.

^aStates that receive funding are required to match every \$4 they receive of federal funds with \$3 of nonfederal money.

^bThe amount of funding provided by HHS for the State Program has generally varied by year because the states that have applied for funding each year have varied.

Within each of the three main abstinence-until-marriage education programs, the amount of individual grants varied.¹⁶ In fiscal year 2005, the State Program’s annual grants ranged from \$57,057 to \$4,777,916 and the median annual grant amount was \$569,675. That same year, the Community-Based Program’s annual grants ranged from \$213,276 to \$800,000 and the median grant amount was \$642,250. In fiscal year 2006, the AFL Program’s annual grants ranged from \$95,676 to \$300,000 and the median grant amount was \$225,000.

Federal Agency Responsibilities Related to Abstinence-until-Marriage Education

Five organizational units located within HHS—ACF, OPA, CDC, ASPE, and NIH—have responsibilities related to abstinence-until-marriage education. ACF and OPA administer the three main federal abstinence-until-marriage education programs. CDC supports abstinence-until-marriage education at the national, state, and local levels. CDC, ASPE, and NIH are sponsoring research on the effectiveness of abstinence-until-marriage programs.

¹⁶ACF awards formula grants under the State Program each year, and states have 2 years to spend the funds they are awarded. In the Community-Based Program and AFL Program, grantees develop multiyear projects—up to 5 years—for which the first year of funding is provided through competitive grants; for subsequent years, grantees may obtain funding through noncompetitive continuation grants.

ACF	ACF is responsible for federal programs that promote the economic and social well-being of families, children, individuals, and communities. ACF administers and provides oversight of both the State Program and the Community-Based Program by, among other things, awarding grants, providing training and technical assistance to grantees, and requiring annual performance reporting from grantees. ACF has been responsible for the State Program since June 2004 and the Community-Based Program since October 2005. HRSA previously administered these programs.
OPA	OPA has responsibility for advising the Secretary of HHS on a wide range of reproductive health topics, including adolescent pregnancy and family planning. The office is also responsible for administering programs that provide services for pregnant and parenting teens and prevention programs, such as abstinence-until-marriage education programs. OPA administers and provides oversight of the AFL Program by awarding grants, providing training and technical assistance to grantees, and requiring annual performance reporting from grantees.
CDC	CDC is primarily responsible for the prevention and control of infectious and chronic diseases, including STDs. CDC provides funding to state and local education agencies in their efforts to support comprehensive school health education and HIV/STD prevention education programs, and CDC officials told us that some of these are focused on abstinence. CDC also provides funding to several state education agencies to implement various abstinence projects, such as collaboration-building among agencies to increase the impact of their efforts to encourage abstinence. Further, CDC develops tools to assist state and local education agencies with their health education programs. CDC provides funding to several national organizations to build the capacity of abstinence-until-marriage education providers. Organizations' activities include, but are not limited to, the development and distribution of educational materials. CDC is also sponsoring research on the effectiveness of an abstinence-until-marriage education program.
ASPE	ASPE advises the Secretary of HHS in several areas, including policy development in health, human services, data, and science. ASPE is responsible for the development of policy analyses and it conducts research and evaluation studies in several areas, including the health of children and adolescents. ASPE is currently sponsoring research on the effectiveness of abstinence-until-marriage education programs.
NIH	NIH is the primary federal agency that conducts and supports medical and behavioral research among various populations, including children and

adolescents. NIH is currently sponsoring research on the effectiveness of abstinence-until-marriage education programs.

Federal and State Efforts to Assess the Scientific Accuracy of Materials Used in Abstinence-until-Marriage Education Programs Have Been Limited

Efforts by HHS and states to assess the scientific accuracy of materials used in abstinence-until-marriage education programs have been limited. ACF—which awards grants to two programs that account for the largest portion of federal spending on abstinence-until-marriage education—does not review its grantees’ education materials for scientific accuracy and does not require grantees of either program to review their own materials for scientific accuracy. In addition, not all states funded through the State Program have chosen to review their program materials for scientific accuracy. In contrast to ACF, OPA has reviewed the scientific accuracy of grantees’ proposed educational materials and corrected inaccuracies in these materials.

ACF Does Not Review Program Materials for Scientific Accuracy and Does Not Require Grantees to Do So, though Some State Grantees Have Conducted Such Reviews

There have been limited efforts to review the scientific accuracy of educational materials used in ACF’s State and Community-Based Programs—the two programs that account for the largest portion of federal spending on abstinence education. ACF does not review materials for scientific accuracy in either reviewing grant applications¹⁷ or in overseeing grantees’ performance. Prior to fiscal year 2006, State Program and Community-Based Program applicants were not required to submit copies of their proposed educational materials with their applications. While ACF required grantees of the Community-Based Program—but not the State Program—to submit their educational materials with their fiscal year 2006 applications, ACF officials told us that grantee applications and materials are only reviewed to ensure that they address all aspects of the scope of the Community-Based Program, such as the A-H definition of abstinence education.¹⁸ Further, documents provided to us by ACF indicate that the agency does not review grantees’ educational materials for scientific accuracy as a routine part of its oversight activities. In addition, ACF also does not require its grantees to review their own

¹⁷In reviewing grantees applications, ACF does examine several issues, including applicants’ stated program goals and need for assistance, their compliance with the A-H definition of abstinence education, their intended approach in carrying out their objectives, and their budget plan.

¹⁸HHS officials told us that if ACF finds inaccurate statements during this more general review process or if inaccuracies are brought to their attention at any time during the grant period, ACF officials work with the grantees to take corrective action.

materials for scientific accuracy. Similarly, when HRSA was responsible for the State and Community-Based Programs, the agency did not review materials used by grantees for scientific accuracy or require grantees to review their own materials.

Not all grantees of the State Program have chosen to review the scientific accuracy of their educational materials. Officials from 5 of the 10 states in our review reported that their states have chosen to conduct such reviews.^{19,20} Officials in these states identified a variety of reasons why their states reviewed abstinence-until-marriage educational materials, including program requirements, state education laws and guidelines, and past lawsuits, to ensure that materials used in abstinence-until-marriage programs were accurate. For example, Michigan's Revised School Code states that materials and instruction in the sex education curricula, including information on abstinence, "shall not be medically inaccurate,"²¹ and Ohio's fiscal year 2007 abstinence-until-marriage education program guidance states that abstinence-until-marriage educational materials "should be medically accurate in all assertions."²²

The five states we contacted that review abstinence-until-marriage educational materials for scientific accuracy have used a variety of approaches in their reviews. Some states contracted with medical professionals—such as nurses, gynecologists, and pediatricians—to serve as medical advisors who review program materials and use their expertise to determine what is and is not scientifically accurate. Some states have created checklists or worksheets to guide their staff conducting the review and document findings of inaccuracy or verification of a statement. All five states use medical professionals in conducting these reviews. One of the states requires that all statistics or scientific statements cited in a

¹⁹In addition to reviewing materials for accuracy, one state requires abstinence-until-marriage providers to sign a written assurance that their materials are scientifically accurate. Officials from this state also reported providing abstinence-until-marriage education programs with public health consultants to provide technical assistance and training to help ensure the accuracy of their educational materials.

²⁰In addition, some state officials we interviewed told us that review committees for local school districts may review the scientific accuracy of educational materials that include information about HIV and other STDs, including abstinence-until-marriage education materials.

²¹Mich. Comp. Laws Ann. § 380.1507b(2)(West 2004).

²²See Ohio Department of Health, "Abstinence Education Program Request for Proposals for Fiscal Year 2007," (program announcement, 2005).

program's materials are sourced to CDC or a peer-reviewed medical journal. Officials from this state told us that if statements in these materials cannot be attributed to these sources, the statements are required to be removed until citations are provided and materials are approved. Officials from this state told us they have also supplemented their review of program materials with on-site classroom observations to assess the scientific accuracy of the information presented to students.

Officials from two of the five states reported that they have found inaccuracies as a result of their reviews. For example, one state official stated that because information is constantly evolving, state officials have had to correct out-of-date scientific information. In addition, this official cited an instance where materials incorrectly suggested that HIV can pass through condoms because the latex used in condoms is porous. In addition, this official provided documentation that the state has had to correct a statement indicating that when a person is infected with the human papillomavirus,²³ the virus is "present for life" because, in almost all cases, this is not true. State officials who have identified inaccuracies told us that they informed their grantees of inaccuracies so that they could make corrections in their individual programs. One state official added that she contacted the authors of the materials to report an inaccuracy.

Some of the educational materials that states have reviewed are materials that are commonly used in the Community-Based Program. Officials from four of the five states that review materials for scientific accuracy told us that they have each reviewed at least one of the five curricula most commonly used in the Community-Based Program because programs in their state were using them: *Choosing the Best*, *WAIT Training*, *Sex Can Wait*, *A.C. Green's Game Plan Abstinence Program*, and *Worth the Wait*. Based on ACF documents, we found that there were 58 different curricula used by grantees of the Community-Based Program in fiscal year 2005. However, more than half of the grantees of the Community-Based Program reported using at least one of these five curricula.²⁴

While there has been limited review of materials used in the State and Community-Based Programs, grantees of these programs have received some technical assistance designed to improve the scientific accuracy of

²³The human papillomavirus (HPV) causes an STD called genital HPV infection.

²⁴Some grantees of the Community-Based Program reported using more than one of these curricula in fiscal year 2005.

their materials. For example, ACF officials reported that the agency provided a conference for grantees of the Community-Based Program in February 2006 that included a presentation focused on medical accuracy, including a discussion of state legislative proposals that would require medical accuracy in abstinence-until-marriage education, and how to identify reliable data. In addition, in 2002, HRSA awarded a contract to the National Abstinence Clearinghouse requiring, among other things, that the contractor develop and implement a program to provide medically accurate information and training to grantees of the State and Community-Based Programs.²⁵ (See app. I for a description of HRSA's process for awarding this contract). The portion of the contract that focused on providing medically accurate information to grantees was subcontracted to the Medical Institute for Sexual Health (Medical Institute),²⁶ which has conducted presentations at regional educational conferences to provide grantees with medical and scientific information, such as updated information on condoms and STD transmission. The Medical Institute has also provided consultative services to grantees by responding to medical and scientific questions.

OPA Reviews Materials Used by AFL Program Grantees for Scientific Accuracy

In contrast to ACF, OPA reviews for scientific accuracy the educational materials used by AFL Program grantees. Specifically, OPA reviews its grantees' proposed educational materials for scientific accuracy before they are used. Agency officials stated that they began to review these materials while litigation concerning the AFL Program was ongoing. OPA continued to review these materials as part of a 1993 settlement to this lawsuit.²⁷ The settlement agreement expired in 1998, though the agency has continued to review grantees' proposed educational materials for accuracy as a matter of policy. OPA officials told us that grant applicants submit summaries of materials they propose to use, though the materials are not reviewed for scientific accuracy until after grantees have been selected. OPA officials said that after grants are awarded, a medical education specialist (in consultation with several part-time medical experts) reviews the grantees' printed materials and other educational media, such as

²⁵The administration of this contract was transferred to ACF in May 2005.

²⁶The Medical Institute is a nonprofit organization that provides educational resources, conferences, and seminars to educators, health professionals, pregnancy care centers, and faith-based groups about behaviors to decrease STDs and out-of-wedlock pregnancies, including abstinence.

²⁷See generally *Bowen v. Kendrick*, 487 U.S. 589 (1988), 657 F. Supp 1547 (D.D.C. 1987).

videos. OPA officials explained that the medical education specialist must approve all materials before they are used. On many occasions, OPA grantees have proposed using—and therefore OPA has reviewed—materials commonly used in the Community-Based Program. For example, an OPA official told us that the agency had reviewed three of the Community-Based Program’s commonly used curricula—*Choosing the Best, Sex Can Wait*, and *A.C. Green’s Game Plan Abstinence Program*—and is also currently reviewing another curriculum commonly used by Community-Based Program grantees, *WAIT Training*.²⁸

OPA officials stated that the medical education specialist has occasionally found and addressed inaccuracies in grantees’ proposed educational materials. OPA officials stated that these inaccuracies are often the result of information being out of date because, for example, medical and statistical information on STDs changes frequently. OPA has addressed these inaccuracies by either not approving the materials in which they appeared or correcting the materials through discussions with the grantees and, in some cases, the authors of the materials. In fiscal year 2005, OPA disapproved of a grantee using a specific pamphlet about STDs because the pamphlet contained statements about STD prevention and HIV transmission that were considered incomplete or inaccurate. For example, the pamphlet stated that there was no cure for hepatitis B, but the medical education specialist required the grantee to add that there was a preventive vaccine for hepatitis B. In addition, OPA required that a grantee correct several statements in a true/false quiz—including statements about STDs and condom use—in order for the quiz to be approved for use. For example, the medical education specialist changed a sentence from “The only 100% effective way of avoiding STDs or unwanted pregnancies is to not have sexual intercourse.” to “The only 100% effective way of avoiding STDs or unwanted pregnancies is to not have sexual intercourse and engage in other risky behaviors.”

²⁸In addition, a CDC official told us that some of its grantees are producing educational materials with CDC funds to be used by abstinence-until-marriage education programs, which are likely to include State and Community-Based Program grantees. These materials are required to be reviewed for scientific accuracy. CDC officials told us that they have made corrections to some of these materials. Materials used in school-based HIV prevention education programs that are supported with CDC funds are also reviewed for scientific accuracy. A CDC official told us that some of these programs are abstinence-until-marriage education programs.

While OPA and some states have reviewed their grantees' abstinence-until-marriage education materials for scientific accuracy,²⁹ these types of reviews have the potential to affect abstinence-until-marriage education providers more broadly. Such efforts may create an incentive for authors of abstinence-until-marriage education materials to ensure they are accurate. Thus, some authors of abstinence-until-marriage education materials have recently updated materials in their curricula following reports that questioned their accuracy. For example, one of the most widely used curricula used by grantees of the Community-Based Program—*WAIT Training*—has been recently updated and provides the updated information on its Web site. A representative from WAIT Training stated that the company recently revised its curriculum, in part, in response to a congressional review that found inaccuracies in its abstinence-until-marriage education materials.

A Variety of Efforts Have Been Made to Assess the Effectiveness of Abstinence-until-Marriage Education Programs, but a Number of Factors Limit the Conclusions That Can Be Drawn

HHS, states, and researchers have made a variety of efforts to assess the effectiveness of abstinence-until-marriage education programs; however, a number of factors limit the conclusions that can be drawn about the effectiveness of these programs. ACF and OPA have required their grantees to report on various outcomes used to measure the effectiveness of grantees' abstinence-until-marriage education programs,³⁰ though the reporting requirements for each of the three abstinence-until-marriage programs differ. In addition, to assess the effectiveness of the State and Community-Based Programs, ACF has analyzed national data on adolescent birth rates and the proportion of adolescents who report having had sexual intercourse. Other organizational units within HHS—ASPE, CDC, and NIH—are funding studies designed to assess the effectiveness of abstinence-until-marriage education programs in delaying sexual initiation, reducing pregnancy and STD rates, and reducing the frequency of sexual activity. Despite these efforts, several factors limit the

²⁹In addition to OPA and some states, others have also reviewed the scientific accuracy of abstinence-until-marriage education materials. See, for example, Wilson et al.

³⁰This reporting is a part of ACF's efforts to collect evaluative information about these programs. These efforts include both performance measurement—the ongoing monitoring and reporting of program accomplishments toward preestablished goals—and program evaluation—individual systematic studies to assess how well a program is working. Both types of assessments aim to support decisions to improve service delivery and program effectiveness. See GAO, *Performance Measurement and Evaluation: Definitions and Relationships*, [GAO-05-739SP](#) (Washington, D.C.: May 2005), for more information on types of assessments.

conclusions that can be drawn about the effectiveness of abstinence-until-marriage education programs. Most of the efforts to evaluate the effectiveness of abstinence-until-marriage education programs that we describe in our review have not met certain minimum criteria that experts have concluded are necessary in order for assessments of program effectiveness to be scientifically valid, in part because such designs can be expensive and time-consuming to carry out. In addition, the results of some efforts that meet the criteria of a scientifically valid assessment have varied, and two key studies that meet these criteria have not yet been completed.

HHS, States, and Researchers Have Made a Variety of Efforts to Assess the Effectiveness of Abstinence-until-Marriage Education Programs

Efforts of HHS, states, and researchers to assess the effectiveness of abstinence-until-marriage education programs have included ACF and OPA requiring grantees to report data on outcomes of their abstinence-until-marriage education programs; ACF analyzing national data on adolescent behavior and birth rates; and other HHS agencies, states, and researchers funding or conducting studies to assess the effectiveness of abstinence-until-marriage education programs.

ACF and OPA Have Required Grantee Reporting of Data on Outcomes

ACF has made efforts to assess the effectiveness of abstinence-until-marriage education programs funded by the State Program and the Community-Based Program. One of ACF's efforts has been to require grantees of both programs to report data on outcomes, though the two programs have different requirements for the outcomes grantees must report. For the State Program, as of fiscal year 2006, grantees must report annually on four measures of the prevalence of adolescent sexual behavior in their states, such as the rate of pregnancy among adolescents aged 15 to 17 years, and compare these data to program targets over 5 years. To report on these four measures, states may choose the data sources they will use.³¹ States must also develop and report on two additional performance measures that are related to the goals of their programs.³²

³¹Previously, to report on the four measures, states have relied on either state or national data sources, such as CDC's Youth Risk Behavior Surveillance System.

³²For example, in fiscal year 2002, state grantees developed such measures as the percentage of teens surveyed who show an increase in participating in structured activities after school hours; the percentage of live births to women younger than 18, fathered by men age 20 and older; the percentage of program participants proficient in refusal skills; the percentage of high school students who reported using drugs or alcohol before intercourse; and the percentage of high school students who had sexual intercourse for the first time before age 13.

(See table 3 for a list of ACF's fiscal year 2006 reporting requirements for the State Program.)

Table 3: ACF's Reporting Requirements for the State Program and the Community-Based Program, Fiscal Year 2006

State Program	Community-Based Program
<ul style="list-style-type: none"> • Report on four performance measures: (1) rate of pregnancy among female teenagers aged 15 to 17, (2) proportion of adolescents who have engaged in sexual intercourse, (3) incidence of youths 15 to 19 years old who have contracted selected STDs, and (4) rate of births among female teenagers aged 15 to 17. • Develop and report on two additional performance measures that are related to individual program goals. Past examples of these additional measures have included the percentage of high school students who reported using drugs or alcohol before intercourse and the percentage of high school students who had sexual intercourse for the first time before age 13. 	<ul style="list-style-type: none"> • Report on program goals that are developed by grantees with a third-party evaluator. Such outcomes could include changes in knowledge about abstinence or declared behavior among participants of abstinence-until-marriage programs. • Report on program "outputs": the number of youth served, the hours of service provided to each youth, and the number of youths who complete the program. Grantees choose additional outputs that allow for effective monitoring and management of the project. The additional outputs may include tracking the number of staff trained to provide services, the number of events hosted, number of marketing materials distributed, and so forth.

Sources: State and Community-Based Programs' announcements, fiscal year 2006.

As of fiscal year 2006, ACF requires Community-Based Program grantees to develop and report on outcome measures designed to demonstrate the extent to which grantees' community-based abstinence education programs are accomplishing their program goals.³³ ACF requires grantees of the Community-Based Program to contract with third-party evaluators, who are responsible for both helping grantees develop the outcome measures and monitoring grantee performance against the measures,³⁴ but

³³The fiscal year 2006 program announcement for the Community-Based Program provides examples of outcome measures that grantees could use, including increased knowledge of the benefits of abstinence, the number of youths who commit to abstaining from premarital sexual activity, and increased knowledge of how to avoid high-risk situations and risk behaviors.

³⁴Fiscal year 2006 Community-Based Program grantees are required to devote a minimum of 15 percent of their requested budgets to performance monitoring by third-party contractors.

because this is a new requirement established for fiscal year 2006 grantees, ACF has not yet received the results of these evaluations. In addition to outcome reporting, ACF requires grantees of the Community-Based Program to report on program “outputs,” which measure the quantity of program activities and other deliverables, such as the number of participants who are served by the abstinence-until-marriage education programs. According to ACF officials, the agency requires grantees of both the State Program and the Community-Based Program to report on program outcomes in order to monitor grantees’ performance, target training, and technical assistance, and help grantees improve service delivery. (See table 3 for a list of ACF’s fiscal year 2006 reporting requirements for the Community-Based Program.)

ACF’s fiscal year 2006 reporting requirements for grantees of the State Program are the same as HRSA’s when it administered the State Program. In contrast, ACF’s fiscal year 2006 reporting requirements for the Community-Based Program differ from HRSA’s reporting requirements for the program. For example, for Community-Based Program grants awarded in fiscal year 2001, HRSA required³⁵ grantees to report on the effectiveness of their programs, as measured by program participation as well as behavioral and biological outcomes.³⁶ These performance measures were modified for fiscal year 2002, in part HHS officials explained, because of concerns expressed by members of the abstinence-education community that the original performance measures did not accurately reflect the efforts of the grantees of the Community-Based Program. For grants awarded from fiscal years 2002 through 2004, HRSA required grantees of the Community-Based Program to report on a combination of program outputs, such as the proportion of adolescents who completed an abstinence-until-marriage education program, and measures of adolescent intentions, such as the proportion of adolescents who committed to

³⁵Some grantees of the Community-Based Program may have to meet reporting requirements established by HRSA. Grants under this program are awarded for projects that may extend over a period of several years. Grantees that were awarded grants when HRSA administered the program and have since received noncompetitive continuation grants for these projects are required to meet the reporting requirements in place at the time they first received the competitively awarded grants.

³⁶In fiscal year 2001, HRSA required grantees of the Community-Based Program to report on the following four performance measures: the proportion of program participants who successfully complete or remain enrolled in an abstinence-only education program; the proportion of program participants who have engaged in sexual intercourse; the proportion of program participants who report a reduction in risk behaviors, such as tobacco, alcohol, and drug use; and the rate of births to female program participants.

abstaining from sexual activity until marriage.³⁷ For grants awarded in fiscal year 2005, when ACF assumed responsibility for the Community-Based Program from HRSA, grantees were not required to report on any specific performance measures.

OPA has also made efforts to assess the effectiveness of the AFL Program. Specifically, OPA requires grantees of the AFL Program to develop and report on outcome measures that are used to help demonstrate the extent to which grantees' programs are having an effect on program participants.³⁸⁻³⁹ According to OPA officials, the agency recommends that grantees report on outcome measures, such as participants' knowledge of the benefits of abstinence and their reported intentions to abstain from sexually activity, reported beliefs in their ability to remain abstinent, and reported parental involvement in their lives. To collect data on these outcome measures and any others, OPA requires all grantees funded in fiscal year 2004 and beyond to administer, at a minimum, a standardized questionnaire—developed by OPA—to their program participants, both when participants begin an abstinence-only education program and after

³⁷Specifically, HRSA required grantees of the Community-Based Program to report annually on the following six performance measures: the proportion of program participants who successfully completed or remained enrolled in an abstinence-only education program; the proportion of adolescents who understood that abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy and STDs; the proportion of adolescents who indicated an understanding of the social, psychological, and health gains to be realized by abstaining from premarital sexual activity; the proportion of participants who reported that they had the skills necessary to resist sexual urges and advances; the proportion of youth who committed to abstaining from sexual activity until marriage; and the proportion of participants who intended to avoid situations and risk behaviors, such as drug use and alcohol consumption, which make them more vulnerable to sexual advances and urges.

³⁸In addition to these outcomes, grantees of the AFL Program are required to report on program outputs, such as the number of program participants, the average number of participants per session, and the average number of sessions attended by participants. Agency officials stated that OPA has implemented a new format for its grantees' reports, which is intended to standardize their reporting on these outputs.

³⁹OPA's grantees are required to perform evaluations of their programs that are directly tied to their program objectives. For these evaluations, OPA requires grantees to develop research hypotheses that reflect the outcomes the grantees intend to achieve. This type of evaluation is generally considered to be an outcome evaluation—which assesses the extent to which a program achieves its outcome-oriented objectives. These evaluations focus on outputs and outcomes to judge program effectiveness but may also assess program process to understand how outcomes are produced. In addition, grantees of the AFL Program are required to perform implementation evaluations.

the program's completion.⁴⁰ The standardized questionnaire includes questions intended to obtain information on participants' reported involvement in extracurricular activities, behaviors linked to health risks, attitudes and intentions about abstinence, and opinions about the consequences of premarital sexual activity. Like ACF, OPA requires its grantees to contract with independent evaluators, such as colleges or universities, which are responsible for evaluating the effectiveness of grantees' individual abstinence-until-marriage education programs.⁴¹ In addition to evaluating the extent to which grantees are meeting their goals, OPA officials stated that the independent evaluators may also provide input to grantees of the AFL Program on other aspects of the program to improve their service delivery. Unlike ACF, OPA requires that the third-party evaluations incorporate specific methodological characteristics, such as control groups or comparison groups⁴² and sufficient sample sizes.⁴³ In addition, OPA requires that the evaluations for grantees funded in fiscal year 2004 and beyond account for baseline and follow-up data obtained from the standardized questionnaires.

OPA's requirement that grantees use a standardized set of questionnaires, with data from these questionnaires used in evaluations, differs from OPA's previous requirements. Previously, grantees of the AFL Program were not required to use a standardized method for collecting data that

⁴⁰OPA officials stated that grantees may also supplement the standardized questionnaire with additional data collection instruments to obtain information on the effectiveness of their abstinence-until-marriage education programs.

⁴¹OPA has required that its grantees perform independent evaluations of their programs since the program first awarded grants in 1982, and requires that grantees devote from 1 percent to 5 percent of grant funds to the evaluation of their programs. In cases where a more rigorous or comprehensive evaluation is proposed, OPA may allow these grantees to use up to 25 percent of their grant funds.

⁴²A control group is a group of individuals or communities in a study that is compared to an intervention group—a group in a study that is receiving or participating in the program being studied. A control group is a randomly assigned group that does not receive the program. A comparison group is not randomly assigned like a control group. However, individuals or communities in well-matched comparison groups should have similar characteristics.

⁴³Specifically, OPA requires that third-party evaluations of grantees of the AFL Program compare, when possible, randomized control or matched comparison groups with groups receiving abstinence-until-marriage education. In addition, OPA requires that these evaluations include a sufficient sample size to ensure that any observed differences between the groups are statistically valid and that the evaluations include a follow-up assessment of program participants at least 6 months after the abstinence-until-marriage intervention has been tested.

could be used to assess the effectiveness of their programs; instead, grantees chose their own data collection instruments. As a result, an OPA official explained, the collected data varied from one project to another. OPA officials said that the agency developed the standardized questionnaire to ensure uniformity in the data collected and allow the agency to more effectively aggregate the data reported in evaluations of individual abstinence-until-marriage education programs.

OPA officials told us that they plan to aggregate information from certain questions in the standardized set of questionnaires in order to report on certain performance measures as part of the agency's annual performance reports.⁴⁴ The measures include the extent of parental involvement in adolescents' lives and the extent to which adolescents understand the benefits of abstinence. An agency official stated that the agency expects to begin receiving data from grantees that are using these questionnaires in January 2007. OPA did not previously have long-term measures of the performance of the AFL Program. Its current measures were developed in collaboration with the Office of Management and Budget (OMB) in response to an OMB review in 2004 that found that the AFL Program did not have any annual performance measures for measuring progress toward long-term goals.

In addition to requiring their grantees to report on outcomes used to assess program effectiveness, both ACF and OPA have provided technical assistance and training to their grantees in order to support grantees' own program evaluation efforts. For example, in November 2005 the two agencies sponsored an evaluation conference for abstinence-until-marriage grantees that included presentations about evaluations and their methodology. Similarly, ACF's Office of Planning, Research, and Evaluation sponsors annual evaluation conferences, and an ACF official told us that a recent conference placed "a significant emphasis" on the evaluation of abstinence-until-marriage education programs. In addition, HHS officials told us that ACF, along with ASPE, is funding a multiyear project that is designed to identify gaps in abstinence education evaluation and technical assistance needs, develop materials on abstinence education evaluation, deliver technical assistance and capacity-building activities related to program evaluation, and develop research reports related to

⁴⁴OPA prepares annual performance reports as a part of HHS's responsibilities under the Government Performance and Results Act, which include program performance measures to help link funding decisions with performance and review of related outcome measures.

ACF Uses National Data on Adolescent Behavior as a Measure of the Overall Effectiveness of Its Two Programs

abstinence education. OPA officials also told us that they attempt to help ensure grantees' progress and effectiveness by offering various technical assistance workshops and conferences. For example, in May 2006 OPA provided a 2-day training conference to its grantees on the importance of program evaluations and administering evaluation instruments. In addition, OPA officials stated that the agency contracts with evaluation consultants, who review grantees' evaluation tools and activities. OPA officials explained that these consultants provide in-depth technical assistance to grantees on how to improve grantees' evaluations.

Requiring outcome reporting from state and community-based grantees is not ACF's only effort to assess the effectiveness of its two programs. ACF also analyzes trends in adolescent behavior, as reflected in national data on birth rates among teens and the proportion of surveyed high school students reporting that they have had sexual intercourse.⁴⁵ ACF uses these national data as a measure of the overall effectiveness of its State and Community-Based Programs, comparing the national data to program targets. In its annual performance reports, the agency summarizes the progress being made toward lowering the rate of births to unmarried teenage girls and the proportion of students (grades 9-12) who report having ever had sexual intercourse.

ACF's use of national data to assess the effectiveness of the State and Community-Based Programs represents a change from how HRSA assessed the overall effectiveness of these programs. Whereas ACF compares national data on adolescent behavior to program targets, HRSA aggregated data from its state and community-based grantees. HRSA's state grantees were allowed to select the data sources used to gauge their progress against certain performance measures. For example, in its annual performance reports on the State Program, HRSA reported information on the percentage of its state grantees meeting target rates for reducing the proportion of adolescents who have engaged in sexual intercourse, the incidence of youths aged 15 to 19 who have contracted selected STDs, and the rate of births among youths aged 15 to 17. To determine their progress in meeting their target rates, some state grantees, for example, reported national data from the Youth Risk Behavior Surveillance System, while

⁴⁵Data on teen birth rates and adolescents' reported sexual behavior are contained in the National Vital Statistics System and the Youth Risk Behavior Surveillance System, respectively. The former is a national data set of public health statistics reported by states to CDC, and the latter is a national data set based on nationwide surveys administered to high school students by CDC.

other grantees reported state-collected data. After ACF assumed responsibility for the State and Community-Based Programs from HRSA, ACF began using national data on adolescent behavior as a measure of the programs' effectiveness. According to ACF officials, the agency changed how it assessed its programs out of concern over the quality of the data state grantees were using in their performance reporting and because the agency wanted to use parallel measures of effectiveness for both programs. For example, according to state performance reports for fiscal year 2001 that we reviewed, two reports did not include adolescent pregnancy rates that year because the states did not collect data on abortions among this population.⁴⁶ In addition, ACF officials told us that they decided not to use national data on STDs as a measure of program effectiveness because the goal of reducing STD rates is not as central to the State and Community-Based Programs as reducing sexual activity and birth rates among teens. However, one official stated that reducing STDs is an important "by-product" of the programs.

Some States Have Made Additional Efforts to Assess the Effectiveness of Abstinence-until-Marriage Education Programs

Some states have made additional efforts to assess the effectiveness of abstinence-until-marriage education programs, although they are not required by ACF.⁴⁷ Specifically, we found that 6 of the 10 states in our review that receive funding through ACF's State Program have made efforts to conduct evaluations of selected abstinence-until-marriage programs in their state. All 6 of the states worked with third-party evaluators, such as university researchers or private research firms, to perform the evaluations, which in general measure self-reported changes in program participants' behavior and attitudes related to sex and abstinence as indicators of program effectiveness. To obtain this information, the third-party evaluators have typically relied on surveys administered to program participants at the start of a program, its conclusion, and during a follow-up period anywhere from 3 months to almost 3 years after the conclusion. The third-party evaluations for 4 of the

⁴⁶In order to estimate pregnancy rates among adolescents, states use data on both birth rates and abortions among adolescents.

⁴⁷ACF does require grantees of the State Program to describe, in their grant applications, their plans for "tracking activities and measuring achievement" of their program goals and objectives.

6 states in our review have been completed as of February 2006, and the results of these studies have varied.⁴⁸

Among the 4 states that have completed third-party evaluations, 3 states require the abstinence programs in their state to measure reported changes in participants' behavior as an indicator of program effectiveness—both at the start of the program and after its completion. The 3 states require their programs to track participants' reported incidence of sexual intercourse. In addition, 2 states require their programs to track biological outcomes, such as pregnancies, births, or STDs. In addition, 6 of the 10 states in our review require their programs to track participants' attitudes about abstinence and sex, such as the number of participants who make pledges to remain abstinent.

Some states also provide technical assistance to the abstinence-until-marriage programs they support in their state. This assistance is designed to help programs evaluate and improve their effectiveness. Officials from 5 of the 10 states in our review either told us or provided documentation that they provide technical assistance on evaluations to abstinence programs in their state. One state official said that the abstinence-until-marriage programs supported by the state were found to be ill-prepared to conduct evaluations themselves, and that she now requires these programs to dedicate a portion of their grants to contract with a third-party or state evaluator to assist them in program-level evaluations. Officials from another state told us that they contract with a private organization of public health professionals in order to provide evaluation consultation and technical assistance for the abstinence-until-marriage programs the state supports.

⁴⁸See, for example, LeCroy & Milligan Associates, Inc., *Abstinence Only Education Program: Fifth Year Evaluation Report*, a report prepared for the Arizona Department of Health Services, 2003; Patricia Goodson et al., *Abstinence Education Evaluation: Phase 6*, a report prepared for the Texas Department of State Health Services, 2005; MGT of America, *Evaluation of Georgia Abstinence Education Programs Funded Under Title V, Section 510*, a report prepared for the Georgia Department of Human Resources, 2005; Thomas E. Smith, *It's Great to Wait: An Interim Evaluation*, a report prepared for the Florida Department of Health, 2001.

ASPE, CDC, and NIH Are Funding Studies Designed to Assess the Effectiveness of Abstinence-until-Marriage Education Programs

In addition to ACF and OPA, other organizational units within HHS have made efforts to assess the effectiveness of abstinence-until-marriage education programs. ASPE is currently sponsoring a study of the Community-Based Program and a study of the State Program.⁴⁹ For the former program, ASPE has contracted with Abt Associates to help design the study, and an ASPE official told us that once the agency selects an appropriate design, it will competitively award a contract to conduct the study.⁵⁰ For the latter program, ASPE has contracted with Mathematica Policy Research, Inc. (Mathematica), which is in the process of examining the impact of five programs funded through the State Program on participants' attitudes and behaviors related to abstinence and sex.⁵¹ As of August 2006, Mathematica has published two reports on findings from its study—an interim report documenting the experiences of schools and communities that receive abstinence-until-marriage education funding, and a report on the first-year impacts of selected state abstinence-until-marriage education programs.^{52,53} Mathematica's final report, which has not been completed, will examine the impact of the State Program on behavioral outcomes, including abstinence, sexual activity, risk of STDs,

⁴⁹According to the House Appropriations Committee report accompanying the fiscal year 2005 appropriation act for Labor, HHS, Education, and related agencies, the effectiveness of abstinence education programs should be determined by measures that include the prevention and reduction of adolescent pregnancies and STD infections, age at first sexual activity and intercourse, frequency of sexual activity and intercourse, and numbers who postpone sexual activity or intercourse through adolescence. See H.R. Rep. No. 108-636, at 139-140 (2004).

⁵⁰According to ASPE officials, one factor that has contributed to delays in the initiation of this study is the difficulty in recruiting schools to participate.

⁵¹The five abstinence-until-marriage education programs being studied are *My Choice, My Future!* in Powhatan, Virginia; *ReCapturing the Vision* in Miami, Florida; *Teens in Control* in Clarksdale, Mississippi; *Families United to Prevent Teen Pregnancy* in Milwaukee, Wisconsin; and *Heritage Keepers* in Edgefield, South Carolina.

⁵²See B. Devaney et al., *The Evaluation of Abstinence Education Programs Funded Under Title V Section 510: Interim Report*, a report prepared for ASPE, 2002.

⁵³See R. Maynard et al., *First-Year Impacts of Four Title V, Section 510 Abstinence Education Programs*, a report prepared for ASPE, 2005. Mathematica's report on the first-year impacts of selected state abstinence-until-marriage education programs focused on intermediate outcomes, including attitudes about abstinence, teen sex, and marriage; perceived consequences of teen and nonmarital sex; and expectations to abstain from sexual intercourse.

risk of pregnancy, and drug and alcohol use.⁵⁴ An ASPE official told us that the agency expects a final report to be published in 2007.

Like ASPE, CDC has made its own effort to assess the effectiveness of abstinence-until-marriage education. CDC is sponsoring a study to evaluate the effectiveness of two middle school curricula—one that complies with abstinence education program requirements and one that teaches a combination of abstinence and contraceptive information and skills.⁵⁵ In CDC's study, five middle schools chosen at random will receive a program consisting of abstinence-until-marriage education exclusively; five schools will receive comprehensive sex education, which also includes information on contraception; and five schools will be assigned to a control group. The study will examine the relative effectiveness of the programs on behavioral outcomes such as reported sexual risk behaviors and changes in attitudes related to abstinence and sex. CDC plans to recruit approximately 1,500 seventh grade students into its study and will follow them over a 2-year period. The agency expects to complete the study in 2009.

NIH has funded studies comparing the effectiveness of education programs that focus only on abstinence with the effectiveness of sex education programs that teach both abstinence and information about contraception. As of August 2006, NIH is funding five studies, which in general are comparing the effects of these two types of programs on the sexual behavior and related attitudes among groups of either middle school or high school students. For example, in one NIH study, researchers are using groups of seventh and eighth grade adolescents to assess the impact of a variety of programs on, among other issues, adolescents' reported sexual activities, knowledge, and beliefs. For this study, researchers are comparing these outcomes among students who received abstinence-until-marriage education; students who received a combination of abstinence and contraceptive education; and students who participated in a general health class, who serve as a comparison group.

⁵⁴An impact evaluation assesses the net effect of a program by comparing program outcomes with an estimate of what would have happened in the absence of the program. This form of evaluation is employed when external factors are known to influence the program's outcomes, in order to isolate the program's contribution to achievement of its objectives.

⁵⁵HHS officials told us that the two curricula being tested are intended to be comparable in length, intensity, and other characteristics.

NIH expects both this study and its other four studies to be completed in 2006.

Other Researchers Have Also Made Efforts to Assess the Effectiveness of Abstinence-until-Marriage Education Programs

In addition to the efforts of researchers working on behalf of HHS and states, other researchers—such as those affiliated with universities and various advocacy groups—have made efforts to study the effectiveness of abstinence-until-marriage education programs. This work includes studies of the outcomes of individual programs and reviews of other studies on the effectiveness of individual abstinence-until-marriage education programs. In general, research studies on the effectiveness of individual abstinence-until-marriage education programs have examined the extent to which they changed participants' demonstrated knowledge, declared intentions, and reported behavior related to sexual activity and abstinence. For example, some studies examined the impact of abstinence-until-marriage education programs on participants' knowledge of concepts taught in the programs, as well as participants' declared attitudes about abstinence and teen sex. Some studies examined the impact of these programs on such outcomes as participants' declared commitment to abstain from sex until marriage, participants' understanding of the potential consequences of having intercourse, and participants' reported ability to resist pressures to engage in sexual activity. Some of the studies we reviewed examined the impact of abstinence-until-marriage programs on participants' sexual behavior, as measured, for example, by the proportion of participants who reported having had sexual intercourse and the frequency of sexual intercourse reported by participants. In general, the efforts to study and build a body of research on the effectiveness of most abstinence education programs have been under way for only a few years, in part because grants under the two programs that account for the largest portion of federal spending on abstinence education—the State Program and the Community-Based Program—were not awarded until 1998 and 2001, respectively.

Several Factors Limit the Conclusions That Can Be Drawn about the Effectiveness of Abstinence-until-Marriage Education Programs

Most of the efforts of HHS, states, and other researchers to evaluate the effectiveness of abstinence-until-marriage education programs included in our review have not met certain minimum criteria that experts have concluded are necessary in order for assessments of program effectiveness to be scientifically valid. For example, most of the efforts included in our review did not include experimental or quasi-experimental designs, nor did they measure behavioral or biological outcomes. In addition, the results of some assessment efforts that meet the criteria of a scientifically valid assessment have varied, and two key studies that meet these criteria have not yet been completed.

Experts Have Developed Criteria to Evaluate Efforts to Assess Abstinence-until-Marriage Education Programs

In an effort to better assess the merits of the studies that have been conducted on the effectiveness of sexual health programs—including abstinence-until-marriage education programs—scientific experts have developed criteria that can be used to gauge the scientific rigor of these evaluations. For example, in 2001, the National Campaign to Prevent Teen Pregnancy—an organization focused on reducing teen pregnancy—published a report by a panel of scientific experts that assessed the evidence reported on abstinence-until-marriage education programs in peer-reviewed journals and other literature.⁵⁶ The panel developed criteria that an evaluation of a program’s effectiveness must meet in order for the program’s results to be considered scientifically valid. In addition, in 2004, former U.S. Surgeon General David Satcher convened a panel of experts to discuss, among other things, best practices for evaluating the effectiveness of sexual health education programs—including abstinence-until-marriage education programs.⁵⁷ This panel published a report in 2006 that describes similar scientific criteria that assessments of program effectiveness need to meet in order for their results to be scientifically valid. Further, experts we interviewed agreed that these criteria are important for ensuring that the results of a study support valid conclusions. In general, these panels, as well as the experts we interviewed, agreed that scientifically valid studies of a program’s effectiveness should include the following characteristics:

- *An experimental design that randomly assigns individuals or schools to either an intervention group or control group, or a quasi-experimental design that uses nonrandomly assigned but well-matched comparison groups.* According to the panel of scientific experts convened by the National Campaign to Prevent Teen Pregnancy, experimental designs or quasi-experimental designs with well-matched comparison groups have at least three important strengths that are typically not found in other studies, such as those that use aggregated data: they evaluate specific programs with known characteristics, they can clearly distinguish between participants who did and did not receive an intervention, and they control for other factors that may affect study outcomes. Therefore, experimental and quasi-experimental study designs have a greater ability to assess the

⁵⁶See Kirby. This panel included experts from NIH, the Medical Institute for Sexual Health, the Alan Guttmacher Institute, the Institute for Research and Evaluation, and various universities.

⁵⁷See Satcher. This panel included experts from a variety of organizations, including the Medical Institute for Sexual Health, the Alan Guttmacher Institute, and the American Academy of Pediatrics.

Most Efforts to Assess the Effectiveness of Abstinence-until-Marriage Education Programs Have Not Used an Experimental or Quasi-Experimental Design

causal impact of specific programs than other types of studies.⁵⁸ According to scientific experts, studies that include experimental or quasi-experimental designs should also collect follow-up data for a minimum number of months after subjects receive an intervention.⁵⁹ Experts reported that follow-up periods are important in order to identify the effects of a program that are not immediately apparent or to determine whether these effects diminish over time. In addition, experts have reported that studies should have a sample size of at least 100 individuals for study results to be considered scientifically valid.⁶⁰

- *Studies should assess or measure changes in biological outcomes or reported behaviors instead of attitudes or intentions.* According to scientific experts, biological outcomes—such as pregnancy rates, birth rates, and STD rates—and reported behaviors—such as reported initiation and frequency of sexual activity—are better measures of the effectiveness of abstinence-until-marriage programs, because adolescent attitudes and intentions may or may not be indicative of actual behavior. For example, adolescents may report that they intend to abstain from sexual intercourse but may not actually do so.

Many of the efforts by HHS, states, and other researchers that we identified in our review lack at least one of the characteristics of a scientifically valid study of program effectiveness. That is, most of the efforts to assess the effectiveness of these programs have not used experimental or quasi-experimental designs with sufficient follow-up periods and sample sizes to make their conclusions scientifically valid. For

⁵⁸For example, experts have reported that the use of randomly assigned intervention and control groups is particularly important when assessing the effectiveness of abstinence-until-marriage programs because adolescents who voluntarily participate in such programs may be self-selecting—that is, they may be more willing to accept the principles of—and be influenced by—such programs when compared with other adolescents. Mathematica’s interim report on the evaluation of the State Program noted that selection bias can “seriously undermine the credibility” of study results.

⁵⁹For example, one expert reported that studies assessing program effectiveness should obtain information on participants for at least 3 months after the conclusion of a program when they are measuring behaviors that can change quickly, such as frequency of sex. For behaviors or outcomes that change less quickly, such as initiation of sex or pregnancy rates, information on participants should be collected for at least 6 months after the conclusion of a program.

⁶⁰The panel of experts convened by the National Campaign to Prevent Teen Pregnancy agreed that large sample sizes are necessary to determine the magnitude of any discernable program effect and to ensure that results of any study of effectiveness are statistically valid.

example, ACF—and before it, HRSA—used, according to ACF officials, grantee reporting on outcomes in order to monitor grantees’ performance, target training and technical assistance, and help grantees improve service delivery. However, because the outcomes reported by grantees have not been produced through experimentally or quasi-experimentally designed studies, such information cannot be causally attributed to any particular abstinence-until-marriage education program. While ACF requires its fiscal year 2006 grantees of the Community-Based Program to contract with third-party evaluators to select and monitor outcomes for their programs, ACF is not specifically requiring these grantees to use experimental or quasi-experimental designs. Therefore, it is not clear whether these evaluations will include such designs. Similarly, ACF’s use of national data on adolescent behavior and birth rates to assess its State and Community-Based Programs is of limited value because these data do not distinguish between those who participated in abstinence-until-marriage education programs and those who did not. Consequently, these national data sets, which represent state-reported vital statistics and a nationwide survey of high school students, cannot be used to causally link declines in birth rates and adolescent sexual activity to the effects of specific abstinence-until-marriage education programs.⁶¹

Similarly, the efforts we identified by states and researchers to assess the effectiveness of abstinence-until-marriage education programs often did not include experimental or quasi-experimental designs. None of the state evaluations we reviewed that have been completed included randomly assigned control groups. For instance, one state evaluation that we reviewed only included students who volunteered to participate in the study. This evaluation report stated that the absence of a randomly assigned control group in the evaluation did not allow the evaluators to determine whether observed changes in participants’ reported sexual behavior—as indicated through surveys administered at the beginning and end of a program—could be attributed to the abstinence-until-marriage education program.⁶² Similarly, some of the journal articles that we reviewed described studies to assess the effectiveness of abstinence-until-

⁶¹In addition, according to ACF and CDC officials, it is difficult to draw conclusions from national data sets about the effectiveness of abstinence-until-marriage education programs because the national survey questions used to produce these data often do not identify the specific type of program or intervention survey respondents may have participated in or received.

⁶²See Goodson et al.

marriage programs that did not include experimental or quasi-experimental designs needed to support scientifically valid conclusions about the programs' effectiveness. In these studies, researchers administered questionnaires to study participants before and after they completed an abstinence-until-marriage education program and assessed the extent to which the responses of participants changed.⁶³ These studies did not compare the responses of study participants with a group that did not participate in an abstinence-until-marriage education program. In addition, some of the studies used insufficient follow-up periods, thereby limiting the conclusions that can be drawn about the effectiveness of the abstinence-until-marriage education programs being studied. For example, two journal articles that we reviewed described studies that measured the effectiveness of abstinence-until-marriage programs in delaying the initiation of sexual activity from 1 to 2 months after completion of the program.⁶⁴ Scientific experts consider this follow-up period too short to assess whether the programs had a valid effect.

According to scientific experts, HHS, states, and other researchers face a number of challenges in designing experimental or quasi-experimental studies of program effectiveness. According to these experts, experimental or quasi-experimental studies can be expensive and time-consuming to carry out, and many grantees of abstinence-until-marriage education programs have insufficient time and funding to support these types of studies. Moreover, it can be difficult for researchers assessing abstinence-until-marriage education programs to convince school districts to participate in randomized intervention and control groups, in part because of sensitivities to surveying attitudes, intentions, and behaviors related to abstinence and sex. For example, in a third-party evaluation of its program, one grantee of the State Program originally planned to administer follow-up surveys 1 year after participants finished their abstinence education program, but the evaluators decided not to conduct this follow-up because of confidentiality concerns and the difficulty of locating students. In addition, the contractors hired to design ASPE's

⁶³See, for example, S. M. Fitzgerald et al., "Effectiveness of the Responsible Social Values Program for 6th Grade Students in One Rural School District," *Psychological Reports*, vol. 91 (2002), and J. E. Barnett and C. S. Hurst, "Abstinence Education for Rural Youth: An Evaluation of the Life's Walk Program," *The Journal of School Health*, vol. 73, no. 7 (2003).

⁶⁴See, for example, D. A. Zanis, "Use of a Sexual Abstinence Only Curriculum with Sexually Active Youths," *Children & Schools*, vol. 27, no. 1 (2005), and G. Denny et al., "An Evaluation of An Abstinence Education Curriculum Series: *Sex Can Wait*," *American Journal of Health Behavior*, vol. 26, no. 5 (2002).

Most Efforts to Assess the Effectiveness of Abstinence-until-Marriage Education Programs Have Not Measured Behavioral or Biological Outcomes

study of the effectiveness of the Community-Based Program have reported difficulties finding school districts that are willing to participate in randomly assigned intervention and control groups receiving either abstinence-until-marriage education or comprehensive sex education. An ASPE official told us that although a “randomized approach” is the best design for assessing the effectiveness of a program, the approach is also the most difficult to conduct.

Another factor that limits the conclusions that can be drawn about the effectiveness of abstinence-until-marriage education programs is the fact that most efforts in our review to study the effectiveness of these programs did not measure changes in behavioral or biological outcomes among participants. Instead, most of the efforts we identify in our review used reported intentions and attitudes in order to assess the effectiveness of abstinence-until-marriage programs. For example, neither ACF’s community-based grantees nor OPA’s AFL grantees are required to report on behavioral or biological outcomes, such as rates of intercourse or pregnancy. Similarly, the journal articles we reviewed were more likely to use reported attitudes and intentions—such as study participants’ reported attitudes about premarital sexual activity or their reported intentions to remain abstinent until marriage—rather than their reported behaviors or biological outcomes to assess the effectiveness of abstinence-until-marriage programs. For example, in one journal article we reviewed, participants were asked to rate the likelihood that they would have sexual intercourse as unmarried teenagers; another journal article described a study in which participants rated the likelihood that they would have sexual intercourse in the next year, before finishing high school, and before marriage.⁶⁵

Experts, as well as state and HHS officials, have reported that it can be difficult to obtain scientifically valid information on biological outcomes and sexual behaviors. Specifically, experts have reported that when measuring an abstinence-until-marriage education program’s affect on biological outcomes—such as reducing pregnancy or birth rates—it is necessary to have large sample sizes in order to determine whether a small change in biological outcomes is the result of the abstinence-until-

⁶⁵See, for example, L. Sather and K. Zinn, “Effects of Abstinence-Only Education on Adolescent Attitudes and Values Concerning Premarital Sexual Intercourse,” *Family and Community Health*, vol. 25, no. 2 (2002), and G. Denny, M. Young, and C. E. Spear, “An Evaluation of the Sex Can Wait Abstinence Education Curriculum Series,” *American Journal of Health Behavior*, vol. 23, no. 2 (1999).

marriage education program. In addition, state and federal officials told us that they have experienced difficulties obtaining information on sexual behaviors because of the sensitive nature of the information they were trying to collect. For example, one state official told us that her state's effort to evaluate abstinence-until-marriage education programs was only able to measure changes in participants' reported attitudes, instead of behaviors, because the evaluators needed to obtain consent from the parents of the program participants in order to ask them about their sexual behavior. The state official explained that the requirement to obtain consent from parents raised issues of self-selection, and therefore state officials decided to ultimately halt the study and only report on the attitudes that they had measured. In another example, ACF's fiscal year 2006 budget justification reports that ACF has had some difficulty in obtaining reliable data from state grantees, in part because questions about teenage sexual behavior are sensitive. OPA officials also acknowledged that many communities will not allow grantees to ask program participants questions about their sexual behavior because the communities believe such questions are too intrusive. One OPA official said that such restrictions affect the agency's ability to measure behavioral outcomes, explaining that OPA cannot measure what it cannot ask about.

Results of Some Scientifically Valid Assessment Efforts Have Varied, and Other Key Studies Have Not Been Completed

Among the assessment efforts we identified are some studies that meet the criteria of a scientifically valid effectiveness study. However, results of these studies have varied, and this limits the conclusions that can be drawn about the effectiveness of abstinence-until-marriage education programs. Some researchers have reported that abstinence-until-marriage education programs have resulted in adolescents reporting having less frequent sexual intercourse or fewer sexual partners.⁶⁶ For example, in one study of middle school students, participants in an abstinence-until-marriage education program who had sexual intercourse during the follow-up period were 50 percent less likely to report having two or more sexual partners when compared with their nonparticipant peers.⁶⁷ In contrast, other studies have reported that abstinence-until-marriage education programs did not affect the reported frequency of sexual

⁶⁶See Borawski et al. See also T. L. St. Pierre et al., "A 27-Month Evaluation of a Sexual Activity Prevention Program in Boys & Girls Clubs Across the Nation," *Family Relations*, vol. 44, no. 1 (1995).

⁶⁷See Borawski et al.

intercourse or number of sexual partners.⁶⁸ For example, one study of middle school students found that participants of an abstinence-until-marriage program were not less likely than nonparticipants at the 1 year follow-up to report less frequent sexual intercourse or fewer sexual partners.⁶⁹ In addition to these varied findings, one study found that an abstinence-until-marriage program was effective in delaying the initiation of sexual intercourse in the short term but not long term.⁷⁰ Experts with whom we spoke emphasized that there are still too few scientifically valid studies completed to date that can be used to determine conclusively which, if any, abstinence-until-marriage programs are effective.

Additionally, among the assessment efforts we identified are some studies that experts anticipate will meet the criteria of a scientifically valid effectiveness study but are not yet completed. One of these key studies is the final Mathematica report, contracted by ASPE, on the State Program.⁷¹ The final report was originally slated for publication in 2005, but an ASPE official stated that the final report has been delayed until 2007 so that researchers can extend the follow-up period to improve their response rate and the reliability of the information they collect. Another key study is CDC's research on middle school programs, which is not expected to be completed until 2009.

Experts and federal officials we interviewed stated that they expect the results of these two federally funded studies to add substantively to the body of research on the effectiveness of abstinence-until-marriage education programs. One expert with whom we spoke said that she expects the final Mathematica report on participants' behaviors to provide the groundwork for the field. Another expert we interviewed stated that

⁶⁸See N.G. Harrington et al., "Evaluation of the All Stars Character Education and Problem Behavior Prevention Program: Effects on Mediator and Outcome Variables for Middle School Students," *Health Education & Behavior*, vol. 28, no. 5 (2001). See also Jemmott, Jemmott, and Fong.

⁶⁹See Harrington et al.

⁷⁰See Jemmott, Jemmott, and Fong and J. B. Jemmott III, L. S. Jemmott, and G. T. Fong, reply to letter to editor, *Journal of the American Medical Association*, vol. 281, no. 16 (1999), 1487. This study found that an abstinence-until-marriage program delayed the initiation of sexual intercourse at the 3-month follow-up period but not at 6 and 12 months.

⁷¹According to several scientific experts, Mathematica's study is an important one, in part because of its sound design: the study randomly assigns and compares control groups with groups receiving abstinence-until-marriage education and uses surveys to follow up with program participants for several months after their completion of a program.

the CDC study was very well-designed and she expects the results to contribute to the development of effective abstinence-until-marriage education curricula.

Conclusions

There have been various efforts—by HHS, states, and others—to assess the scientific accuracy of educational materials used in abstinence-until-marriage education programs and the effectiveness of these programs. However, efforts to evaluate both the accuracy and effectiveness of abstinence-until-marriage education programs have been, in various ways, limited. ACF, which administers the two programs that account for the largest portion of federal spending on abstinence-until-marriage education, does not review or require its grantees to review program materials for scientific accuracy. In addition, not all grantees of the State Program have chosen to review their materials. Because of these limitations, ACF cannot be assured that the materials used in its State and Community-Based Programs are accurate. Moreover, OPA, which reviews all grantees' proposed abstinence-until-marriage educational materials, and states that review educational materials have found inaccuracies in some educational materials used by abstinence-until-marriage programs.

Similarly, most of the efforts described in our review to assess the effectiveness of abstinence-until-marriage programs have not met minimum scientific criteria needed to draw valid conclusions about their effectiveness. Specifically, most efforts by agencies, states, and other researchers have not included experimental or quasi-experimental designs that can establish whether changes in behaviors or biological outcomes can be causally linked to specific abstinence-until-marriage education programs. While these types of studies are time-consuming and expensive, experts said that they are the only definitive way to draw valid conclusions about the effectiveness of these programs. In addition, among the assessment efforts we identified are some studies funded by HHS that experts anticipate will meet the criteria of a scientifically valid effectiveness study but are not yet completed. When completed, these HHS-funded studies may add substantively to the body of research on the effectiveness of abstinence-until-marriage education programs.

Recommendation for Executive Action

To address concerns about the scientific accuracy of materials used in abstinence-until-marriage education programs, we recommend that the Secretary of HHS develop procedures to help assure the accuracy of such materials used in the State and Community-Based Programs. To help provide such assurances, the Secretary could consider alternatives such as (1) extending the approach currently used by OPA to review the scientific accuracy of the factual statements included in abstinence-until-marriage education to materials used by grantees of ACF's Community-Based Program and requiring grantees of ACF's State Program to conduct such reviews or (2) requiring grantees of both programs to sign written assurances in their grant applications that the materials they propose using are accurate.

Agency Comments and Our Evaluation

HHS provided written comments on a draft of this report. (See app. III.)

In its written comments, HHS stated that it will consider requiring grantees of both ACF programs to sign written assurances in grant applications that the materials they use are accurate. Regarding accuracy, HHS's written comments also noted that all applicants for federal assistance attest on the application form—Standard Form 424—that all data in their applications are “true and correct,” and that in the view of HHS, this applies to information presented in curricula funded by federal grants. However, as we stated in the draft report, grantees of the State Program are not required to submit curricula as a part of their applications; therefore, the attestation in Standard Form 424 would not apply to curricula used by those grantees. In addition, as stated in the draft report, some states have reviewed materials used in abstinence-until-marriage education programs, but these reviews occurred after they received funding from ACF. Further, while grantees of the Community-Based Program were required to submit copies of their curricula and a Standard Form 424 in fiscal year 2006 as part of their applications, none of the materials specifically require an assurance of scientific accuracy. Further, OPA and states have found inaccuracies in educational materials used by abstinence-until-marriage programs.

HHS's written comments also stated that ACF requires that curricula conform to HHS's standards grounded in scientific literature. HHS's comments refer to the curriculum standards for this program that detail what types of information must be included in abstinence-until-marriage curricula, and the comments stated that the curricula must provide supporting references for this information. Further, HHS's comments stated that ACF staff review the curricula to ensure compliance with these standards. The draft report stated this. However, a requirement that

curricula include certain types of information does not necessarily ensure the accuracy of the scientific facts included in the abstinence-until-marriage materials. For example, while education materials may include information on failure rates associated with contraceptives or STD infections, this information may be outdated or otherwise inaccurate or incomplete. HHS's written comments also stated that if it finds inaccurate statements during the review process or at any time during the grant period, ACF works with grantees to take corrective action. To ensure completeness, we have added this statement to the report. Further, HHS stated that 2 inaccuracies cited in the draft report had been corrected before our work began. We believe HHS is referring to inaccuracies identified by OPA during its review of materials for scientific accuracy and this reinforces the need for review of materials used by ACF's grantees.

As HHS noted in its written comments, we did not define the term scientific accuracy. HHS stated that it disagreed with certain findings of the report because it was difficult to precisely determine the criteria we employed in making the recommendation as to scientific accuracy. As we stated in the scope and methodology section of the draft report, the objective of our work was to focus on efforts by HHS and states to review the accuracy of scientific facts included in abstinence-until-marriage education materials. Performing an independent assessment of the criteria used by these entities to determine the scientific accuracy of education materials or the quality of the reviews was beyond the scope of the work.

Regarding effectiveness, HHS's written comments also described a number of actions it is taking to determine program effectiveness and improve the quality of programs and research. Specifically, HHS's comments described (1) studies undertaken or funded by ASPE, CDC, and NIH; (2) technical assistance provided by OPA and ACF; (3) grantee evaluation requirements; and (4) ACF and OPA requirements for the amount of grant funds to be spent on evaluations. All of this information was included in our draft report. HHS's comments also described a new effort funded by ACF and ASPE that is designed to build capacity for quality research in the field of abstinence education. We added information on this effort to the report. HHS's written comments also describe evaluations that resulted from an Abstinence Education Evaluation Conference sponsored by ACF and OPA. While this conference was described in the draft report, we added more detail regarding the content of the conference. HHS's written comments also describe OPA's efforts to assess the effectiveness of the AFL Program. We had included this information in the draft report.

HHS's written comments stated that it may be too soon to draw conclusions about the effectiveness of ACF's and OPA's programs, in part, because key studies have not been completed. We agree and discussed this in the draft report. As we noted in the draft report, key studies funded by HHS that experts anticipate will meet the criteria of a scientifically valid effectiveness study are not yet completed, but when completed these HHS funded studies may add substantively to the body of research on the effectiveness of abstinence-until-marriage education programs.

In addition, the comments stated that having an inadequate amount of scientifically valid and conclusive evaluation studies is not unique to abstinence-until-marriage education programs, and a recent ASPE review of comprehensive sex education programs found mixed results on their effectiveness. However, the scope of our report was focused on abstinence-until-marriage education programs, and we did not review comprehensive sex education programs or make any comparisons between the two types of programs.

HHS also provided technical comments, which we incorporated into the report as appropriate.

As agreed with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after its date. We will then send copies of this report to the Secretary of HHS and to other interested parties. In addition, this report is available at no charge on GAO's Web site at <http://www.gao.gov>. We will also make copies available to others upon request.

If you or your staff have any questions about this report, please call me at (202) 512-3407 or crossem@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix IV.



Marcia Crosse
Director, Health Care

List of Requesters

The Honorable Henry A. Waxman
Ranking Minority Member
Committee on Government Reform
House of Representatives

The Honorable Pete Stark
Ranking Minority Member
Subcommittee on Health
Committee on Ways and Means
House of Representatives

The Honorable Sherrod Brown
Ranking Minority Member
Subcommittee on Health
Committee on Energy and Commerce
House of Representatives

The Honorable Barbara Boxer
The Honorable Maria Cantwell
The Honorable Richard J. Durbin
The Honorable Russell D. Feingold
The Honorable Dianne Feinstein
The Honorable Tom Harkin
The Honorable James M. Jeffords
The Honorable Edward M. Kennedy
The Honorable Frank R. Lautenberg
The Honorable Patrick Leahy
The Honorable Patty Murray
United States Senate

The Honorable Howard L. Berman
The Honorable Lois Capps
The Honorable Jay Inslee
The Honorable Barbara Lee
The Honorable Nita M. Lowey
The Honorable Betty McCollum
House of Representatives

Appendix I: HRSA's Technical Assistance Contract for Abstinence Education

The Health Resources and Services Administration (HRSA) awarded a contract to the National Abstinence Clearinghouse (NAC) in 2002 to provide assistance with its Community-Based Abstinence Education Program (Community-Based Program) and Abstinence Education Program (State Program).¹ NAC is a nonprofit educational organization whose mission is to promote the appreciation for and practice of sexual abstinence until marriage through the distribution of age appropriate, factual, and medically referenced materials. The purpose of the contract was (1) to develop national criteria for the review of abstinence-until-marriage educational materials and to create a directory of approved materials; (2) to provide medical accuracy training to grantees; and (3) to provide technical support to grantees, such as assistance with program evaluation.²

We are reporting on the steps that HRSA took to award the contract to NAC in response to concerns that have been raised by a congressional requester. In general, these concerns centered on the extent to which the selection process was competitive and whether HRSA identified the potential for an organizational conflict of interest.

HRSA awarded the contract to address three concerns it had with the Community-Based Program during 2001, the first year of its implementation. First, HRSA officials needed guidance to determine whether abstinence-until-marriage education materials conformed to the

¹The administration of this contract was transferred from HRSA to the Administration of Children and Families (ACF) in May 2005.

²The contract resulted in the development of criteria for reviewing abstinence-until-marriage educational materials, and ACF included these criteria in the fiscal year 2006 program announcement for the Community-Based Program. According to the announcement, ACF will evaluate grant applicants' proposed educational materials to ensure compliance with the criteria. Medical accuracy training and technical support were provided to grantees as a result of the contract. According to an ACF official, a directory of approved abstinence-until-marriage educational materials was not completed.

definitional requirements of the Social Security Act.³ Second, many grantees lacked the medical background and training to ensure that they would provide medically accurate, science-based information in their programs. Third, grantees also lacked experience with the technical management of federal grants, including how to conduct evaluations of their programs.

HRSA Used Full and Open Competition Procedures to Award the Contract to NAC

HRSA used full and open competition procedures to award the contract to NAC. In doing so, HRSA (1) publicly solicited proposals from potential contractors; (2) conducted technical evaluations of both the original proposals and the revised proposals for those considered to be in the competitive range; and (3) determined that NAC's proposal represented the best overall value to the government. This process, which took place from May 2002 through September 2002, resulted in HRSA awarding NAC the contract with a potential value of nearly \$2.7 million.

HRSA issued a notice on May 20, 2002, on the FedBizOpps Web site, the government point of entry for notifying potential contractors of federal contract opportunities, indicating its intent to publicly request proposals from prospective contractors in June 2002.⁴ On June 20, 2002, HRSA posted the solicitation on the FedBizOpps Web site indicating that the abstinence contract would be awarded using full and open competition procedures, that is, all responsible prospective contractors would be

³Section 510(b)(2) of the Social Security Act defines abstinence education as an educational or motivational program that: A. has as its exclusive purpose, teaching the social, psychological, and health gains to be realized by abstaining from sexual activity; B. teaches abstinence from sexual activity outside marriage as the expected standard for all school age children; C. teaches 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. teaches that a mutually faithful monogamous relationship in context of marriage is the expected standard of human sexual activity; E. teaches that sexual activity outside of the context of marriage is likely to have harmful psychological and physical effects; F. teaches that bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society; G. teaches young people how to reject sexual advances and how alcohol and drug use increases vulnerability to sexual advances; and H. teaches the importance of attaining self-sufficiency before engaging in sexual activity.

⁴The current FedBizOpps Web site address is <http://www.fbo.gov/>. Prior to October 1, 2005, the Web site address was <http://www.eps.gov/>. The solicitation number was 240-MCHB-012(02)-abg.

provided the opportunity to compete.⁵ The solicitation, which was a Request for Proposals (RFP), described the contract objectives, which included (1) the development of national criteria for the review of abstinence-until-marriage educational materials and the development of a directory of approved materials; (2) the provision of medical accuracy training to grantees; and (3) the provision of technical support to grantees, such as assistance with program evaluation. The RFP stated that HRSA intended to award a cost-reimbursement contract with fixed fee for a 1-year base period and 2 option years.⁶ This was a best value procurement; that is, HRSA reserved the right in the RFP to select for award the proposal that HRSA determined offered the best value to the government, even if it did not offer the lowest cost. Further, the RFP stated that the technical evaluation of the prospective contractors' proposals would receive paramount consideration in the selection of the contractor. According to the RFP, this evaluation would include an assessment of the prospective contractor's technical approach, the organizational experience and expertise of the prospective contractor, the plans for personnel and management of the work, and the prospective contractor's statement and understanding of the project purpose. Other factors, such as the estimated cost, past performance under other contracts for similar services, and the subcontracting plan would also be considered in the selection process. Five prospective contractors submitted proposals to HRSA by July 31, 2002, when proposals were due.

HRSA established a review committee to conduct the technical evaluation of the five proposals. This committee included three voting members and a nonvoting chairperson. The Director of HRSA's Community-Based and State Programs and two analysts from other programs within the Department of Health and Human Services (HHS) served as the voting members, and the chairperson of the review committee was a project officer of HRSA's Community-Based Program. The committee members conducted the technical evaluation of the proposals, according to the

⁵The Federal Acquisition Regulation (FAR) requires the contracting officer to ensure that prospective contractors are responsible. FAR § 9.103. A responsible source refers to a prospective contractor that has, among other things, adequate financial resources, the necessary experience and technical skills to perform the work of the contract, a satisfactory performance record, and the ability to meet the delivery schedule. FAR § 9.104-1.

⁶Cost-reimbursement contracts are used only when uncertainties involved in contract performance do not permit costs to be estimated with sufficient accuracy to use any type of fixed-price contract. FAR § 16.301-2.

criteria in the RFP, as described above. Three proposals with the highest technical scores were determined to be in the competitive range,⁷ with NAC's proposal receiving the highest technical score. HRSA requested in writing that the competitive range offerors address certain technical and cost issues and submit revised proposals to HRSA by September 17, 2002.⁸ For example, HRSA requested that one of the prospective contractors other than NAC clearly describe its proposed management of day-to-day tasks of the contract and provide justification for several labor and travel expenditures. HRSA did not have oral discussions with the competitive range offerors. HRSA's review committee evaluated the revised proposals and again gave NAC's revised proposal the highest technical score.

Although NAC's estimated cost was not the lowest among the proposals in the competitive range, HRSA determined that NAC had proposed a realistic cost estimate for the contract. Accordingly, and in light of the NAC proposal's high technical rating and the RFP's evaluation criteria giving paramount consideration to the technical evaluation, HRSA determined that NAC's proposal represented the best value to the government. HRSA awarded a contract to NAC on September 27, 2002. The contract had a 1-year base period of performance with an estimated value of \$854,681, and included 2 option years for a total potential value of \$2,673,784. According to a HRSA official, this cost-reimbursement contract did not include a fee. All of the prospective contractors were made aware that a debriefing to explain the selection decision and contract award would be provided at their request. One prospective contractor requested and received a debriefing from HRSA. No protests were filed with the agency challenging the award of the contract to NAC. There were no bid protests filed with GAO.⁹

HRSA Identified No Actual or Potential Organizational Conflicts of Interest

HRSA officials told us that they did not identify any actual or potential organizational conflicts of interest during the acquisition process. As defined in the Federal Acquisition Regulation (FAR), an organizational conflict of interest arises where

⁷Based on the ratings of each proposal against all evaluation criteria, the contracting officer establishes a competitive range consisting of all of the most highly rated proposals. FAR § 15.306(e)(1).

⁸HRSA officials, including an auditor, reviewed the cost proposals in the competitive range.

⁹GAO's Office of General Counsel resolves disputes concerning awards of federal contracts, which are known as bid protests.

- because of other activities or relationships, a person is unable or potentially unable to provide impartial assistance or advice to the government; or
- the person's objectivity in performing the contract work is or might be otherwise impaired; or
- a person has an unfair competitive advantage.¹⁰

An organizational conflict of interest may result when factors create an actual or potential conflict of interest during performance of a contract, or when the nature of the work to be performed under one contract creates an actual or potential conflict of interest involving a future acquisition.¹¹ Under the FAR, contracting officers are required to analyze planned acquisitions to identify and evaluate potential organizational conflicts of interest as early in the acquisition process as possible, and to take steps to avoid, neutralize, or mitigate significant potential conflicts of interest before a contract is awarded.¹²

According to HRSA's contracting officer, HRSA did not identify any actual or potential organizational conflicts of interest. In reaching this conclusion, the contracting officer told us that he reviewed the statement of work, including the background and objectives of the proposed contract, the stated purpose of the contract, the criteria established to evaluate the proposals, the past performance of the competitors, and NAC's proposal. HRSA's contracting officer also told us that he did not formally document his assessment of organizational conflict of interest.¹³

¹⁰FAR § 2.101.

¹¹FAR § 9.502(c).

¹²The FAR requires contracting officers to exercise common sense, good judgment, and sound discretion in determining whether a significant potential conflict of interest exists. FAR § 9.505.

¹³The FAR requires HRSA's contracting officers to formally document their assessment only when a substantive issue concerning a potential organizational conflict of interest exists. FAR § 9.504(d). HHS acquisition regulations do not explicitly address the assessment of organizational conflict of interest. Therefore, FAR subpart 9.5 is the controlling regulation when HHS encounters an issue related to an organizational conflict of interest.

Appendix II: Methodology for Identifying and Reviewing Research Studies

To identify research studies that examine the effectiveness of abstinence-until-marriage education programs among adolescents and young adults, we searched two reference database systems, PubMed and ProQuest. We used the following keywords to search for research studies that were published from January 1, 1998, through May 22, 2006: “virginity,” “abstinence education,” “abstinence and curriculum,” “abstinence only,” “teen pregnancy and prevention,” and “abstinence until marriage.”¹ We reviewed the research article titles that were generated from the PubMed and ProQuest searches and identified articles that appeared to focus on the evaluation of the effectiveness of abstinence-until-marriage education programs. In cases where we could not determine, based on the title, whether a study appeared to focus on an abstinence-until-marriage education program evaluation, we reviewed a summary of the article to obtain more information about the research study. We also examined previous summaries of the literature to identify additional research studies.

We then selected research studies for inclusion in our literature review if they met three criteria. First, the study evaluated a group-based, abstinence-until-marriage education program. We did not select studies that evaluated one-on-one interactions, such as education programs focused exclusively on parent-child interactions, or that evaluated media campaigns. We reviewed the description of each education program and curriculum, as described in the study, to determine whether an abstinence-until-marriage education program was being evaluated. Education programs that were described as including detailed contraceptive information in their curricula, for example, were not classified as abstinence-until-marriage programs. Second, the study targeted adolescents and young adults in the United States, for example, by indicating that participants in the evaluation were high school or middle school students. Third, the study was a quantitative rather than a qualitative evaluation of an abstinence-until-marriage education program. We selected 13 research studies for inclusion in our literature review.

¹ACF first awarded grants under the State Program in fiscal year 1998.

We reviewed the selected research studies to obtain detailed information about their methodologies and outcome variables. For example, we determined whether each study used an experimental or quasi-experimental design and whether the outcome measures included attitudes, behavioral intentions, behaviors such as initiation of sexual intercourse, or a combination of these.

Appendix III: Comments from the Department of Health and Human Services



DEPARTMENT OF HEALTH & HUMAN SERVICES

Office of the Assistant Secretary
for Legislation

Washington, D.C. 20201

SEP 22 2006

Ms. Marcia Crosse
Director, Health Care
U.S. Government Accountability Office
Washington, DC 20548


Dear Ms. Crosse:

Enclosed are the Department's comments on the U.S. Government Accountability Office's (GAO) draft report entitled, "ABSTINENCE EDUCATION: Efforts to Assess the Accuracy and Effectiveness of Federally Funded Programs" (GAO-06-984), before its publication.

The Department provided several technical comments directly to your staff.

These comments represent the tentative position of the Department and are subject to reevaluation when the final version of this report is received.

Sincerely,

for 
Vincent J. Ventimiglia
Assistant Secretary for Legislation

**COMMENTS OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES ON
THE GOVERNMENT ACCOUNTABILITY OFFICE'S DRAFT REPORT ENTITLED,
"ABSTINENCE EDUCATION: EFFORTS TO ASSESS THE ACCURACY AND
EFFECTIVENESS OF FEDERALLY FUNDED PROGRAMS" (GAO-06-984)**

GAO Recommendations

GAO recommends that to address concerns about the scientific accuracy of materials used in abstinence-until-marriage education programs, the Secretary of HHS develop procedures to help assure the accuracy of such materials used in the State and Community-based Programs. GAO further recommends that to help provide such assurances, the Secretary could consider alternatives such as (1) extending the approach currently used by OPA to review the scientific accuracy of the factual statements included in abstinence-until-marriage education materials used by grantees of ACF's Community-based Programs and requiring grantees of ACF's State Program to conduct such reviews, or (2) requiring grantees of both programs to sign written assurances in their grant applications that the materials they propose using are accurate.

HHS Comments

HHS will consider requiring grantees of both ACF programs to sign written assurances in grant applications that the materials they use are accurate. However, as described below, ACF already requires applicants to submit curricula that conform to standards grounded in scientific data with their applications; and applicants for Federal grant assistance already assure the government that all data in their application, which includes data in curricula funded by a Federal grant, are true and correct.

The report is divided into two main categories – scientific accuracy and effectiveness of abstinence-until-marriage programs. Comments are provided in that format.

Scientific Accuracy

Although GAO was requested to "assess the scientific accuracy of materials used in abstinence-until-marriage programs..." (page 3), GAO never defines the term "scientific accuracy" in the report. In fact, the report specifically recognizes (page 3) that it does not attempt to define or clarify the term. As such, it is difficult to precisely determine the criteria employed by GAO in making the recommendations as to scientific accuracy.

In part due to the lack of precision in the report's use of the term "scientific accuracy," but also due to the report's incomplete depiction of how such materials are developed and reviewed, HHS does not agree with key claims of the report. One of the main claims of the report, for example, involves the often-repeated claim "ACF... does not review its grantees education materials for scientific accuracy, and does not require grantees...to review their own materials for scientific accuracy..." (pages 5, 14, 39). HHS disagrees for the following reasons:

First, all applicants for Federal assistance attest in their applications that "all data in their applications are true and correct" (Standard Form 424, <http://www.acf.hhs.gov/programs/ofs/forms.htm>). In the view of HHS, this applies to information presented in curricula funded by Federal grant funds.

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Second, ACF requires its abstinence-education grantees to submit educational curricula that conform to, and are thoroughly grounded in, scientific literature. Indeed, the Fiscal Year 2006 Program Announcement for the Community-Based Abstinence Education Program, the largest of the three Federally funded abstinence programs, required that successful applicants' curricula conform to very specific, detailed curriculum standards (pages 5 through 13 of the program announcement, <http://www.acf.hhs.gov/grants/open/HHS-2006-ACF-ACYF-AE-0099.html>). Each of these standards has robust backing in scientific literature. Additionally, at least two of these standards discussed specific requirements by which successful applicants' curricula would adhere to scientific accuracy. Namely, the guidance specifies that the curricula teach "the published failure rates associated with contraceptives relative to pregnancy prevention, including 'real use' versus trial or 'laboratory use,' human error, product defect, teen use and possible side effects of contraceptives" (Theme C1). Furthermore, the guidance for successful applicants' curricula required that applicants' curricula teach "the epidemiology of sexually transmitted diseases (STDs) in the U.S., e.g., infection rates, modes of transmission, existence of incurable and potentially fatal STDs" (Theme C2). Curricula must provide supporting references for this information. Upon submission, ACF staff reviews the application, including the curricula, to ensure compliance with these scientifically valid standards. Should we find inaccurate statements during the review process, or at any time during the grant project period, ACF works with the grantees to take corrective action, as they would do with any other ACF grantee.

Increased grantee awareness of the scientific and medical facts relative to their delivery of abstinence education has been, and continues to be, an important area of focus for ACF. For this reason, ACF offers numerous training and technical assistance (T/TA) opportunities to all of its grantees on a number of program-related areas. In addition, as is the case with ACF's grantees in other program areas, when ACF finds inaccuracies in a grantee's information or when an inaccuracy is brought to the attention of ACF, whether during the review process or at any time during the project period, ACF requires and works with the grantee to have the inaccuracy corrected as soon as possible. In the few cases of which ACF is aware of inaccuracies found to exist in abstinence materials, corrections were made once the grantee became aware of those inaccuracies. For example, the two inaccuracies cited in the GAO report were corrected before GAO even began working on the report.

The GAO report presents an adequate assessment of OPA's review of materials used in Adolescent Family Life (AFL) Abstinence Education Programs. There are, however, a few points about this review process that should be both clarified and highlighted. First, when OPA does find inaccuracies in education materials proposed for use in an AFL demonstration project, the grantee is notified and must make the specified correction(s) before OPA approves their use. Similarly, OPA grants include the condition, in each Notice of Grant Award issued for AFL demonstration projects, that all educational materials must be submitted to OPA for review and approval before they can be used in AFL projects.

Aspects of the CDC review of materials for accuracy also warrant additional clarification. Specifically, all materials developed and/or used by national, State and local grantees are reviewed and approved by the grantees' materials review panel. The review panel is a requirement of the CDC cooperative agreement.

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Effectiveness

HHS is taking extensive action to determine program effectiveness and improve the quality of programs and research. Work is being done through the program offices, research agencies and through Congressionally mandated studies. These efforts include the following:

- ASPE is overseeing a Congressionally mandated experimental evaluation of abstinence education programs that will examine behavioral outcomes over an extended period of time, and is in the process of designing another large-scale longitudinal study that will also include an experimental design and measure behavioral outcomes.
- A new effort that is not included in the report is the development of a Center for Research and Evaluation on Abstinence Education. This is a multi-year project funded by ACF and ASPE in FY 2006. It is designed to build capacity for quality research in the field of abstinence education. The main activities include a) conducting a needs assessment to identify gaps in abstinence-education evaluation and technical assistance needs; b) developing materials on abstinence-education evaluation; c) delivering technical assistance and capacity-building activities related to program evaluation; and d) developing several research reports related to abstinence education. The goal is to stimulate greater collaboration and quality implementation and outcome-evaluation research of abstinence education programs.
- CDC is undertaking a study to evaluate the effectiveness of two middle school curricula. The study will examine the relative effectiveness of programs on behavioral outcomes.
- NIH is currently funding several studies related to the effectiveness of abstinence education, which are underway.
- The two program offices (OPA and ACF) provide technical assistance and fund research activities related to evaluation. In addition, two of the grant programs (the AFL program and the Community-based Program) currently have evaluation requirements of grantees – OPA allows up to 25 percent of grant funds awarded to be spent on evaluation and ACF is now requiring that a minimum of 15 percent of funds awarded to be spent on evaluation.

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Although GAO does acknowledge that "ACF has made efforts to assess the effectiveness of abstinence-until-marriage education programs..." (page 20), GAO fails to mention two key elements of these efforts. First, while GAO mentions the new evaluation requirement on Community-Based Abstinence Education (CBAE) grantees, there is no mention in the report that grantees are now required to spend at least 15 percent of their Federal funding on evaluation activities. Depending on the amount of the project, this amount could be up to \$450,000 over five years for each grant awarded. Never before have CBAE grantees been required to comply with such a significant commitment to evaluation and research activity. HHS believes that this requirement will dramatically improve its grantees' ability to determine the effectiveness of the programs. The improvements made to this year's guidance caused one peer-reviewed scientific medical journal to claim that "...a rigorous evaluation of project impact may now be possible."¹ Second, the report omits any mention of the abstinence-education evaluations from the first Abstinence Education Evaluation Conference sponsored by ACF and OPA.² The evaluations contained in this publication were peer-reviewed for presentation at the conference and conform to many of the standards published in the report (pages 31 through 33). ACF recommends that GAO insert language in the report reflecting these significant commitments to assessing program effectiveness.

While GAO also generally acknowledges that "OPA has also made efforts to assess the effectiveness of the AFL Program" it would be helpful to specify what those efforts are since they, too, already conform to many of the standards published in the report. In particular, OPA has developed performance measures and requires projects to develop outcome objectives, conduct independent evaluations and use core evaluation instruments.

Further, in response to the Office of Management and Budget's (OMB) Program Assessment Review Tool (PART), OPA has developed performance measures for their AFL program. Two of these performance measures apply to AFL prevention demonstrations. AFL Prevention Core Evaluation Instrument data, aggregated across prevention projects, will be used to track them (Only the AFL projects, funded in fiscal year 2004 and later, are required to use the core instruments, and thus, it will require a few more funding cycles before tracking data are available for all projects.)

Each AFL prevention-demonstration project is expected to develop specific and measurable outcome objectives, two of which should address the performance measures developed by OPA for prevention projects. While these objectives are intended more as a way to focus the individual project than as a way to evaluate it, projects are expected to tie their independent evaluations to their outcome objectives.

¹ Michael Young & Tina Penhollow, "The Impact of Abstinence Education: What Does the Research Say?" *Journal of Health Education* 37, no. 4 (July 1, 2006).

² *Evaluating Abstinence Education Programs: Improving Implementation and Assessing Impact*. Compiled manuscripts from "Strengthening Abstinence Education Programs through Scientific Evaluation," November 3-4, 2005.

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All AFL demonstration projects are required, by statute, to conduct an independent evaluation of their project. The GAO report covers the many difficulties these evaluations face and OPA has taken steps, in the past few years, to improve the quality of its AFL evaluations. The limit of five percent of project funds for evaluation has been waived, pursuant to statutory authority, and beginning in fiscal year 2004, new projects can request up to 25 percent of project funds for evaluation. Proposals considered for funding are held to commensurately more rigorous criteria with respect to their evaluation plan. Core evaluation instruments have been developed; all demonstration projects are encouraged to use them and, beginning in fiscal year 2004, all new demonstration projects funded by AFL were required to use them. The AFL program also provides, through expert consultants, evaluation technical assistance to all projects that require it.

OPA has developed two sets of core evaluation instruments for the AFL program baseline and follow-up for both prevention and care demonstrations to ensure that data, reflecting AFL legislative requirements, are captured in the independent evaluations. The instruments are intended as core only and additional instrumentation, addressing specific and unique components of AFL demonstrations, can also be used in the individual independent evaluations.

We note that because evaluation is a new requirement for ACF's Abstinence Education Program and only recently intensified for OPA's Abstinence Education Program, it may be too soon to be drawing conclusions about their effectiveness. It would also be important to note that because youth are typically 9-14 years of age in OPA's Abstinence Education Program and 12-18 years of age in ACF's Abstinence Education Program, following youth in both programs takes time. That these large evaluations of the State and Community-based Programs are still underway suggests that the conclusions drawn in the GAO report may be premature or speculative and may change significantly as new information becomes available.

We agree with the report when it states that there are still too few scientifically valid studies which have been completed, to date, and which have been able to be used to determine conclusively which, if any, abstinence-until-marriage programs have been effective. We would point out, however, that having an inadequate amount of scientifically valid and conclusive evaluation studies as of yet is not unique to abstinence until marriage education programs. A recent ASPE review of comprehensive sex education programs show that while some have a positive impact on some outcome measures, some have no impact and some have a negative impact.

We believe that the answer to this challenge is not only a greater emphasis on evaluation among grantees, but also the conducting of a greater number of experimental programs generally. HHS would appreciate greater mention of both of these efforts.

As HHS funds numerous abstinence demonstration projects across the country, and as we do so with an emphasis on evaluation, we believe that the field will mature to show the level of effectiveness and impact of these programs. Furthermore, HHS eagerly awaits the results of the first experimental trial referred to in the report, which will undoubtedly strengthen service delivery within the abstinence-education field, and benefit the youth who are choosing to remain abstinent in ever-increasing numbers.

Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

Marcia Crosse, (202) 512-7119 or crossem@gao.gov

Acknowledgments

In addition to the contact named above, Kristi Peterson, Assistant Director; Kelly DeMots; Pam Dooley; Krister Friday; Julian Klazkin; and Amy Shefrin made key contributions to this report.

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