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Curr Opin Obstet Gynecol. 2007 October ; 19(5): 446–452. doi:10.1097/GCO.0b013e3282efdc0b.**Abstinence and abstinence-only education****Mary A. Ott^a** and **John S. Santelli^b**^aAssistant Professor of Pediatrics, Section of Adolescent Medicine, Department of Pediatrics, Indiana University School of Medicine, 410 West 10th Street, HS1001, Indianapolis, IN 46202, USA^bProfessor and Chairman, Heilbrunn Department of Population & Family Health, Mailman School of Public Health, Columbia University, 60 Haven Avenue, New York, N.Y. 10032, USA**Abstract**

Purpose of review—To review recent literature on medical accuracy, program effectiveness, and ethical concerns related to abstinence-only policies for adolescent sexuality education.

Recent findings—The federal government invests over 175 million dollars annually in ‘abstinence-only-until-marriage’ programs. These programs are required to withhold information on contraception and condom use, except for information on failure rates. Abstinence-only curricula have been found to contain scientifically inaccurate information, distorting data on topics such as condom efficacy, and promote gender stereotypes. An independent evaluation of the federal program, several systematic reviews, and cohort data from population-based surveys find little evidence of efficacy and evidence of possible harm. In contrast, comprehensive sexuality education programs have been found to help teens delay initiation of intercourse and reduce sexual risk behaviors. Abstinence-only policies violate the human rights of adolescents because they withhold potentially life-saving information on HIV and other STIs.

Summary—Federal support of abstinence-only as an approach to adolescent sexuality education is of much concern due to medical inaccuracies, lack of effectiveness, and the withholding and distorting of health information.

Keywords

abstinence; human rights; medical accuracy; policy; sex education

Introduction

To review the key issues related to abstinence-only or abstinence-until-marriage education (AOE), we use the term AOE to describe those programs and policies that adhere to federal requirements for abstinence education funding (see Table 1) [1,2].

Sexual behavior, marriage, and pregnancy

Adolescence is a time of transition to adulthood. To understand adolescent sexual behavior, one must first understand adult sexual practices. There is an 8–10 year gap between median age at first intercourse (17 years) and first marriage (25 years for women and 27 years for men) [3,4]. Few American adults abstain from sexual intercourse until marriage, and most initiate sexual intercourse during their adolescent years. A recent analysis of four cycles of the National Survey of Family Growth by Finer [5**] found that, over the past 50 years, almost all Americans of both sexes have premarital sex. By age 20, 77% of respondents reported vaginal intercourse and nearly all had sex before marriage. By age 44, 99% of respondents had sex; 95% had premarital sex; and 85% had married.

Initiation of sexual intercourse puts a teenager at risk for unintended pregnancy and sexually transmitted infection. After declining between 1991 and 2001 (54% to 46%), sexual experience among U.S. high school students has remained at 46–47% from 2001 to 2005 [6]. Over 750 000 U.S. adolescents (aged 15–19) become pregnant each year, and over 28% of these pregnancies end in abortion [7]. Most adolescent pregnancies (82%) are unintended [8]. A recent analysis of the decline in U.S. adolescent pregnancy rates between the 1995 and 2002 National Surveys of Family Growth demonstrated that 86% of the decline was due to improved contraceptive use (less nonuse, increased use of condoms and highly effective hormonal methods, and increased use of dual methods), and only 14% due to declines in sexual behavior [9**]. Although pregnancy rates have declined, the United States still leads the developed world in adolescent (aged 15–19) birth rates, with 42 births per 1000 women in 2004. By comparison, adolescents in the United Kingdom had 27 births per 1000 women; in Italy, seven births per 1000 women; and in the Netherlands, five births per 1000 women [10].

One argument for presenting abstinence to adolescents as their sole option for pregnancy and sexually transmitted infection (STI) prevention is that adolescent sexual behavior is itself harmful. This assertion is supported by data showing that adolescents who initiate sexual behavior earlier are more likely to suffer from depression and engage in other risk-taking behaviors [11]. Early adolescent sexual behavior, however, is confounded by high rates of coercive sex, older partners, and the co-occurrence of other risk behaviors such as substance use. Additionally, the same social deprivation (e.g. poverty, single-parent families, parental drug use, childhood abuse, lack of social support) that leads to early sexual initiation, also contributes to depression and other risk-taking behaviors [12]. Several analyses document the role of preexisting depression in subsequent adolescent sexual risk behavior [13,14]. A recent analysis of Add Health casts doubts on whether early sex causes depression. Sabia [15*] demonstrated that, while the association existed in cross-sectional data, it was not likely due to early initiation itself.

Adolescent understanding of abstinence

Adolescents demonstrate a complex and sometimes nuanced view of abstinence and sex. While refraining from vaginal intercourse is generally considered ‘abstinence,’ other sexual behaviors may be or may not be included, such as touching, kissing, mutual masturbation,

oral sex, and anal sex [16,17]. Adolescents frequently frame abstinence from a values or religious perspective, using descriptors such as, ‘making a commitment’ or ‘my religion says...’ [18*,19]. Unlike adults, recent data suggest that adolescents do not view abstinence as a binary state (having sex/ not having sex), and demonstrate more developmental perspectives. For example, in a small qualitative study of abstinence among high risk 11–17 year olds, adolescents described abstinence as a natural phase of development, and when ‘ready,’ people would transition to sexual activity [18*].

Public support for abstinence and comprehensive sexuality education

Broad public support exists for comprehensive sexuality education, with abstinence as a key component of that education. Using the nationally representative Annenberg National Health Communication Survey, Bleakley [20*] found that 81% of adults believed that sex education teaching both abstinence and other methods to prevent pregnancy to be effective, while only 39% believed abstinence-only to be effective. The same survey found that 51% of adults opposed abstinence-only, whereas only 10% opposed teaching contraception and condom use. A telephone survey of parents of public school students in grades K-12 in North Carolina found similar results: 91% believed that sex education should be taught in school, with 98% rating transmission and prevention of STIs/HIV important, 91% rating abstinence as important, 93% how to talk with a partner about birth control as important, and 89% effectiveness and failure rates of birth control important [21*]. Most parents and adolescents do not perceive education that stresses abstinence while also providing information about contraception as presenting a mixed message, and the clear majority of adults (73%) and adolescents (56%) wish adolescents were getting more information about both abstinence and contraception rather than either alone [22*].

Federal support for abstinence-only education

For fiscal year 2006, the federal government provided \$178 million for abstinence-only education through Title V, Section 510 of the Social Security Act in 1996 (Section 510), Community-Based Abstinence Education (CBAE) projects, and the Adolescent Family Life Act program. The CBAE program bypasses the state government approval processes and makes grants directly to community- based organizations, including faith-based organizations. Federal guidance requires all programs to adhere to an eight-point definition of abstinence-only education (see Table 1), and prohibits programs from disseminating information on contraceptive services, sexual orientation and gender identity, and other aspects of human sexuality [2,23]. Section 510 specifies that programs must have as their ‘exclusive purpose’ the promotion of abstinence outside of marriage and may not in any way advocate contraceptive use or discuss contraceptive methods or condoms except to emphasize their failure rates. No designated federal funding stream exists for comprehensive sexuality education.

Erosion of comprehensive sexuality education

Lindberg et al. [24**] documents the erosion of comprehensive sexuality education, coincident with the rising emphasis on abstinence as the sole option for adolescents. Her

analyses of 2002 NSFG data reaffirm findings from older and complementary data sets (see, for example, [25]). Adolescent and pediatric gynecology Table 1 Federal 8 Point Definition of Abstinence Education Under Section 510 of Title V of the Social Security Act, abstinence education is defined as an educational or motivational program which: (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 the 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. Lindberg [24**] found that a declining percentage of adolescents reported receiving education about contraception, while larger percentages reported receiving abstinence education. Between 1995 and 2002, instruction about birth control methods declined from 81% to 66% for males, and from 87% to 70% for females. Receipt of any abstinence education increased among males (74% to 83%) and receipt of only abstinence education increased among males (9% to 24%) and females (8% to 21%). In consequence, fewer adolescents reported receiving formal instruction about both abstinence and birth control methods (in males, from 65% to 59%; in females, from 84% to 65%). Among sexually experienced adolescents, 62% of females and 54% of males in 2002 reported receiving instruction about birth control methods prior to first sex.

Abstinence-only approaches have also influenced family planning and HIV prevention programs nationally and internationally. In fiscal year 2004, the Office of Population Affairs announced that program priorities for Title X grantees would include a focus on extramarital abstinence education and counseling, increasing parental involvement in the decisions of minors to seek family planning services, reporting of statutory rape, and working with faith-based organizations [26]. U.S. emphasis on abstinence may have reduced condom availability and access to accurate information on HIV/AIDS in some countries [27]. The Government Accountability Office, which is the investigative arm of U.S. Congress, issued a critique of U.S. foreign policy support for abstinence-only education in April 2006. In-country prevention teams for the President's Emergency Plan for AIDS Relief reported that spending requirements 'limit their efforts to design prevention programs that are integrated and responsive to local prevention needs' [28*].

Professional consensus statements and position papers

Mainstream medical professional organizations, including the American College of Obstetricians and Gynecologists (ACOG), the Society for Adolescent Medicine (SAM), the American Academy of Pediatrics (AAP), the American Medicine Association (AMA), and the American Public Health Association (APHA), oppose abstinence-only education and endorse comprehensive sexuality education that includes both abstinence and accurate

information about contraception, human sexuality and STIs [29**,30– 36]. The most comprehensive of these position papers is the Society for Adolescent Medicine position paper and accompanying review article [29**,37**] which describe the importance of scientific rigor as the cornerstone for policy and programmatic decisions, as well as the troublesome ethical issues raised by deliberately withholding or distorting potentially life-saving information about contraception and STI prevention.

Program effectiveness

A federally funded evaluation of Title V programs conducted by an independent research organization [38**], a new systematic review [39**], and analyses of nationally representative longitudinal surveys of health behavior [40] demonstrate that abstinence-only programs are ineffective and may cause harm. The most important single report is Mathematica Policy Research, Inc.'s final report on the impact of four Title V, Section 510 abstinence education programs [38**]. Authorized by the U.S. Congress, and using a rigorous randomized controlled trial study design, investigators examined the impact on sexual behaviors among 2057 adolescents four years after participation in one of four carefully chosen and implemented Title V abstinence-only programs or a community-standard control. The report describes no differences in sexual abstinence or condom use between abstinence-only program group and control group. One significant finding was concerning: youth in the program group were significantly less likely to report that condoms were effective in preventing HIV and other STIs. This finding is consistent with the emphasis in AOE curricula on teaching about the failure rates for condoms, as required by federal program guidance [2].

A recent peer-reviewed systematic review examined the evidence supporting both abstinence-only programs and comprehensive sexuality education programs designed to promote abstinence from sexual intercourse [39**]. This review employed similar scientific criteria to prior systematic reviews of sexuality education programs [41,42] in selecting program evaluations, including use of experimental or quasi-experimental design and sexual behavior outcomes to demonstrate efficacy. Also similar to prior systematic reviews, this review concluded that many comprehensive sexuality education programs demonstrate efficacy in delaying initiation of intercourse, in addition to promoting other protective behaviors such as condom use. In contrast, this review found no evidence that abstinence-only programs demonstrate efficacy in delaying initiation of sexual intercourse.

The findings in the above randomized trial and systematic review are supported by a longitudinal analysis of adolescents taking virginity pledges in Add Health [40,43]. A follow-up, six years later showed 88% of young adults who reported taking virginity pledges as adolescents had initiated vaginal intercourse before marriage, and the prevalence of STIs (chlamydia, gonorrhea, and trichomoniasis) was similar among those who pledged and non-pledgers [40]. Moreover, when pledgers did initiate intercourse, many failed to protect themselves by using condoms, and were less likely to be tested for STIs. This data suggests that, while abstinence is theoretically 100% effective, in typical use, the effectiveness of abstinence may approach zero [37**].

Medical accuracy

Fueled by recent congressional and GAO reports, concerns about medical accuracy of AOE have come to the forefront. From a scientific and public health standpoint, the accuracy of the information provided through sexual and reproductive health education should be essential. Calls for medical accuracy represent one response to concerns about misinformation provided by abstinence only education. Medical accuracy can be defined as:

Information relevant to informed decision-making based on the weight of scientific evidence, consistent with generally recognized scientific theory, conducted under accepted scientific methods, published in peer-reviewed journals, and recognized as accurate, objective, and complete by mainstream professional organizations such as AMA, ACOG, APHA and AAP, government agencies such as the Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA) and the National Institutes of Health (NIH), and scientific advisory groups such as the Institute of Medicine and the Advisory Committee on Immunization Practices. The deliberate withholding of information that is needed to protect life and health (and therefore relevant to informed decision-making) should be considered medically inaccurate [44].

Many AOE curricula and even the federal guidelines for AOE have been identified as containing serious inaccuracies. A content review of abstinence-only curricula conducted by the minority staff of the Committee on Government Reform of the U.S. House of Representatives found that 11 of the 13 commonly-used curricula contained false, misleading or distorted information about reproductive health including inaccurate information about condom and other contraceptive effectiveness, the risks of sexual activity and the risks of abortion, as well as other scientific errors [45]. In the fall of 2006, the Government Accountability Office (GAO) issued two reports on the federal programs that promote abstinence, both of which faulted the programs on the issue of medical accuracy [46*,47*]. In the first report, the GAO found that ACF does not review abstinence grantees' educational materials for scientific accuracy and does not require either CBAE or Title V programs to review their own materials for scientific accuracy [47*]. The second report concluded that the federal statutory requirement (section 317P(c)(2) of the Public Health Service Act) to include medically accurate information on condom effectiveness would apply to abstinence education materials prepared and used by federal grant recipients, and that guidelines for AOE requiring programs to emphasize failure rates were potentially out of compliance [46*]. The American Civil Liberties Union and other advocacy groups have recently publicly questioned the federal government's support for abstinence education, on the grounds that such studies are contrary to federal regulations requiring medically accurate information about condoms [48]. A review of condom and STI information in three curricula commonly used by federal abstinence funding grantees demonstrated that these curricula did not represent complete, current, and accurate medical knowledge about condom effectiveness [49]. Instead, these curricula both explicitly and implicitly conveyed the message that condoms fail to provide protection against STIs. Misrepresentations included the use of data from poorly designed studies and the exclusion or distortion of data from better-designed studies; routinely presenting information out of context; selectively reporting

data; and drawing unsupported conclusions that go beyond the scope of the medical literature.

Ethical concerns

The current U.S. government approach focusing on AOE raises serious ethical and human rights concerns. While abstinence is often presented as the moral choice for adolescents, many have questioned AOE which withholds life-saving information from adolescents [27,29**,30]. Access to complete and accurate HIV/AIDS and sexual health information has been recognized as a basic human right, as complete and accurate health information is essential to realizing the highest attainable standard of health [50,51]. Such human rights thinking suggests that governments have an obligation to provide accurate information to their citizens and avoid the provision of misinformation. Such obligations extend to government funded health education and healthcare services.

A variety of international treaties and human rights statements support the rights of all people to seek and receive accurate sexual health information, including the 1994 International Conference on Population and Development Program of Action, Cairo, 1994 [52] and the 2003 report of the U.N. Committee on the Rights of the Child [53]. The latter emphasized that ‘children should have the right to access adequate information related to HIV/ AIDS prevention and care, through formal channels (e.g. through educational opportunities and child-targeted media) as well as informal channels,’ and that, ‘effective HIV/AIDS prevention requires States to refrain from censoring, withholding, or intentionally misrepresenting health-related information, including sexual education and information ... State parties must ensure that children have the ability to acquire the knowledge and skills to protect themselves and others as they begin to express their sexuality’ [54].

Likewise, health educators and healthcare professionals have an ethical obligation to provide accurate and complete health information in their work. As defined by U.S. government funding regulations, abstinence-only programs are required to withhold information on contraception and other aspects of human sexuality except to emphasize their failure rates [55], and to promote scientifically questionable positions [29**,37**]. The current U.S. approach emphasizing abstinence challenges a key ethical principle of medical research and practice known as ‘respect for persons’ [56]. Healthcare providers may not withhold information from a patient in order to influence their healthcare choices. We believe that it is unethical to provide misinformation or withhold information from adolescents about sexual health, including ways for sexually active teens to protect themselves from STIs and pregnancy. Withholding information on contraception to induce adolescents to be abstinent is inherently coercive (and ineffective, as documented above). It violates the principle of beneficence (to do good and avoid harm) as it may cause an adolescent to use ineffective (or no) protection against pregnancy and STIs. Thus, current U.S. policies that promote abstinence-only education are ethically problematic, as they exclude accurate information about contraception, misinform by overemphasizing or misstating the risks of contraception, and fail to require the use of scientifically accurate information while promoting approaches of questionable value.

State refusals of federal funding

Related to the above concerns about a lack of efficacy, medical inaccuracy and the ethically untenable position of withholding potentially life-saving information, a number of states have refused or are planning to refuse federal Title V, Section 510 abstinence-only funding. These include California, Maine, New Jersey, Pennsylvania, Wisconsin, Ohio, Montana, and Massachusetts [57]. At the time we were preparing this manuscript (June 2007), Congressional leaders were debating reauthorization of Title V and funding levels of the CBAE programs.

Conclusion

Federal support of AOE as an approach to improve adolescent sexual health is deeply troubling because of medical inaccuracies, programs that are not efficacious and may harm adolescents, and the unethical practice of withholding and distorting health information. We encourage all healthcare providers involved in reproductive health to advocate for medically accurate comprehensive sexuality education for adolescents in their professional organizations, local healthcare system, schools, and communities. Professionals in the field of obstetrics and gynecology are well positioned to reframe the ‘moral’ debate so that providing comprehensive, effective and accurate reproductive health information to adolescents is the right choice.

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Table 1

Federal 8 Point Definition of Abstinence Education

Under Section 510 of Title V of the Social Security Act, abstinence education is defined as an educational or motivational program which:	
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 the 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.

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