

# **Under Lock & Key**

## **Youth Sexuality, Knowledge, and the Federal Abstinence Policy**

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## EXECUTIVE SUMMARY

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Abstinence-only-until-marriage programs have been funded with federal dollars for over two decades and yet there is still no peer-reviewed research that suggests they are efficacious. (Kirby, 2007; Bartels 1994) Currently there is no federal funding stream dedicated to comprehensive sexuality education programs. Since 1982, however, the U.S. government has spent over \$1.5 billion on abstinence-only-until-marriage programs. Of that money, over \$800 million has been spent during the Bush Administration alone.

In spite of the amount of money spent on these programs, the rate of STIs is higher in the United States than most other developed countries. Each year, U.S. teens acquire about four million STIs. The Centers for Disease Control and Prevention (CDC) estimates that over 41,000 adolescents between the ages of 13 and 24 had been diagnosed with AIDS by the end of 2004. Rates for HIV and certain STIs such as HPV (The human papillomavirus) are disproportionately higher among African American and Latino populations. (CDC, 2006; Kirby, 2006)

While U.S. teen pregnancy rates are declining, teenage women in the United States still experience about 800,000 pregnancies each year; 74 to 95 percent of these pregnancies are unintended. These rates are higher than any other developed nation and indeed higher than in many developing nations. (CDC, 2006; Kirby, 2007; Weinstock, 2004; Ventura, 2004)

Education is meant to instruct. Nowhere but in the field of human sexuality do we seem to make it a national policy to go out of our way to lock down potentially life-saving knowledge and even obfuscate the truth.

By surveying the literature on abstinence-only and other sex education programs, conducting a secondary data analysis of the Public Use data set from the National Longitudinal Study of Adolescent Health (ADD Health) Waves I, II and III, performing a meta-analysis of the

content of two US Government reports, and interviewing a set of youth aged 18-26, this report seeks to answer the questions: What is the impact of federal abstinence-only policy on young adult sexuality? Have abstinence-only programs been successful in preventing disease and unwanted pregnancy? Are youth receiving the information they need to become sexually healthy adults?

Respectfully Submitted,  
Nikole Pagan

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## INTRODUCTION

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Adolescents in the late 1980s and early 1990s experienced first-hand the educational and health communities' response to the first decade of the HIV/AIDS pandemic. Students across the nation received some form of safer sex education beginning as early 6<sup>th</sup> grade in the public school systems and continuing through high school. There were discussions of contraception, protection from STIs, issues of sexual orientation. Students were taught where to purchase condoms and how to use them. Abstinence programs existed – indeed, abstinence as the only 100% effective method to prevent STIs and pregnancy was a component of most sex-education programs, including the more comprehensive curricula. The idea that children should be given the tools to keep themselves safe and healthy into adulthood seemed to take precedence over the need to keep them chaste.

Twenty years later, the tide has reversed. Under the leadership of President George W. Bush there has been a continued expansion of investment in Abstinence programs with more than \$175 million allocated in fiscal year 2007 alone. Between 1996 and federal fiscal year 2005, Congress funneled over \$1.1 billion dollars (through both federal and state matching funds) to abstinence-only-until-marriage programs. These programs are prohibited, by law, from discussing contraceptives and safer sex practices except in the context of failure rates.

This report seeks to test the hypothesis that by mandating a narrow curriculum with scientific inaccuracies, the federal Abstinence-Only policy does not prepare youth to become sexually healthy adults and may in fact increase pregnancy and STD rates in certain populations.

Using a cross-sectional design to approximate survey results and synthesize both primary and secondary data, this research will examine the relationships between abstinence education and youth health and knowledge. Methodology will consist of a statistical analysis of data from Wave III of The

National Longitudinal Study of Adolescent Health (Add Health) with a primary Qualitative meta-analysis of content and evaluation of abstinence curricula from two US Government reports.

A review of current literature appears prior to the discussion of research methodology and analysis findings. This literature reviews assesses the field to define Abstinence-Only and Comprehensive Sex Education, delineates the history of the Federal Abstinence policy, examines the global context of abstinence-only and comprehensive sex education, and surveys critiques of abstinence-only programs and popular support for medically accurate sex education . Finally, the paper concludes with a discussion of theories of public policy as they apply to the Federal Abstinence policy and suggestions for further study.

## RISK ELIMINATION VS. RISK REDUCTION: ABSTINENCE-ONLY AND COMPREHENSIVE SEX EDUCATION DEFINED

### *RISK ELIMINATION – THE ABSTINENCE ONLY APPROACH*

The Goal of abstinence-only-until-marriage education is to eliminate risks associated with human sexual behavior. Ultimately, proponents of such education wish to change both behavior and community standards for the good of the nation. Often, Abstinence-only proponents are members of fundamentalist religious groups, Christian evangelicals, and social-conservative political groups. Abstinence-only sex education usually refers to educational curriculum developed for use in schools and other organizations that work with youth and teens, which encourages youth to abstain from sex until they are married. Abstinence-only sex education offers a single message, that the only way to be sexually healthy is to not have sex until you are married. Often, a component of abstinence programs involves adolescents making a formal pledge to refrain from sexual intercourse until marriage.

The “Abstinence Pledge” or “Virginity Pledge” movement began in 1993 when a program called “True Love Waits” was unveiled by LifeWay Christian Resources of the Southern Baptist Convention. Established in 1891, LifeWay Christian Resources is one of the world’s largest providers of Christian

products and services, including Bibles, church literature, books, music, audio and video recordings, church supplies and Internet services through lifeway.com. Abstinence and Virginity pledgers are required to sign a formal document and/or participate in a formal ceremony where they commit to abstinence-until-marriage. Not all pledgers are virgins. Some pledgers re-commit to abstinence after the onset of first intercourse. (Kirby, 2007; SIECUS, 2007)

“As a theory, risk elimination is wonderfully simple and powerful. The problem is that it butts up against human nature itself and indeed the entirety of human history” (SIECUS Special Report, 2007)

### *RISK-REDUCTION: COMPREHENSIVE SEX EDUCATION*

Harm reduction theory is a public health philosophy intended to be a progressive alternative to the prohibition of certain lifestyle choices. The central idea of harm reduction is the recognition that in a society, there will always be some people who will engage in behaviors that carry risks, such as unprotected sex and substance use. Harm reduction policies seek to mitigate the potential harm associated with these behaviors without attempting to prohibit the behaviors. Harm Reduction as social policy gained international recognition in the 1980s as governments, nonprofits, and non-governmental organizations (NGOs) struggled to respond to the AIDS crisis (Tammi, 2004).

In the sexual education literature, harm reduction is often discussed as “risk reduction”, whereas programs promoting the abstinence-only-until-marriage issue are “risk elimination”. Comprehensive Sex Education is a Harm- or Risk-Reduction public health policy approach to issues surrounding teen sexuality. Comprehensive sex education refers to sex education that offers information on abstinence as well as information on contraception and methods providing of protection from unwanted pregnancy and sexually transmitted diseases. Comprehensive sex education also includes teaching communication skills that help youth form their own decisions and negotiate with partners to keep themselves safer in their sexual interactions.

Not only is Comprehensive Sex Education different from Abstinence-Only in content, but also in terms of approach. Instead of taking a single position and trying to convince youth that it is the only way to behave, comprehensive sex education offers information in a format that is appropriate for the target population in terms of their age, gender, ethnicity, religion, and other considerations that make the sex education accessible, and therefore useful to the population being targeted

The goals of Comprehensive Sex Education as defined by The Sexuality Information and Education Council of the United States, (SIECUS) are:

- To provide information about human sexuality, including human development, relationships, personal skills, sexual behavior, sexual health, and society and culture.
- To provide an opportunity to question, explore and assess sexual attitudes in order to develop values, increase self-esteem, create insights concerning relationships with members of both genders, and understand obligations and responsibilities to others.
- To help develop interpersonal skills—including communication, decision-making, assertiveness, and peer refusal skills-and help to create satisfying relationships.
- To help create responsibility regarding sexual relationships, including addressing abstinence, resisting pressure to become prematurely involved in sexual intercourse, and encouraging the use of contraception and other sexual health measures. (SIECUS, 2007)

## FEDERAL ABSTINENCE POLICY

### *FEDERAL OVERSIGHT*

Current funding for abstinence-only programs comes through the Federal Government via direct grants to organizations/schools and is funneled indirectly through Federal grants to State agencies (*see Appendix 1 for table of Federal Abstinence Funding from 1982-2006*). The 5 Federal agencies responsible for abstinence-only funding and administration are all housed within the Department of Health and Human Services:

- The Administration of Children and Families (ACF),
- Centers for Disease Control & Prevention (CDC),
- National Institutes of Health (NIH),
- Office of Population Affairs (OPA),
- Assistant Secretary for Planning and Evaluation (ASPE).

## *HISTORY & TIMELINE OF FEDERAL FUNDING FOR ABSTINENCE PROGRAMS*

The sexual revolution of the 1960s and 1970s that saw widespread access to oral birth control pills, caused a backlash among more religious and conservative Americans. Feminism, gay rights, contraception education, abortion and other issues were viewed by some as endangering the American “family.” These social issues prompted many new groups – dubbed the “New Right” – to form and lobby against their implementation (Irvine, 2004, p. 66).

The rise of the “New Right” coincided with a large surge of advocacy groups forming in the 1970s (Berry, 1995). These groups, including Focus on the Family, the National Association for Abstinence Education (NAAE), and many Christian evangelical and Catholic organizations, vehemently advocated for abstinence-only sex education curricula while denouncing more comprehensive curricula that included mention of contraceptives before marriage. The lobbying efforts of these groups helped Title XX to be included in AFLA.

The U.S. Office of Population Affairs began administering the Adolescent Family Life Act (AFLA) in 1981. Popularly known as “The Chastity Act”, Title XX was designed to prevent teen pregnancy by promoting chastity and self-discipline. (Perrin, 2003) Initially, AFLA programs taught abstinence as the only option for teens and often promoted specific religious values. As a result, the American Civil Liberties Union (ACLU) along with a coalition of scientists and ministers filed suit in 1983 charging that AFLA violated the separation of church and state doctrine as defined in the U.S. Constitution. In 1985, a U.S. district judge found AFLA unconstitutional. On appeal in 1988, the U.S. Supreme Court reversed that decision, ruling that the statute was constitutional on its face and remanded the decision to lower court. (Kendrick v. Sullivan Settlement Agreement, 1993).

In January 1993, just a President Clinton took office an out-of-court settlement was reached between the Department of Civil Justice and the Center for Reproductive Law and Policy in the Kendrick v. Sullivan action, stipulating that AFLA-funded sexuality education:

- May not include religious references
- Must be medically accurate
- Must respect the "principle of self-determination" of teenagers regarding contraceptive referrals, and
- Must not allow grantees to use church sanctuaries for their programs or to give presentations in parochial schools during school hours.

In 1996, Congress signed into law The Personal Responsibility and Work Opportunity Reconciliation Act of 1996, also known as "welfare reform". Funds for this program are by the federal Maternal and Child Health Bureau at the Department of Human Services under Title V, Section 510 of the Social Security Act. The Temporary Assistance for Needy Families Act (TANF), Attached was the provision, later set out in Section 510(b) of Title V of the Social Security Act (*see Appendix 2 for Federal Definition of fundable abstinence-only programs*), appropriating \$250 million dollars over five years for state initiatives promoting sexual abstinence outside of marriage as the only acceptable standard of sexual behavior for young people. (Hauser, 2004) This provision was inserted in the bill in the final hours of negotiation during the phase generally reserved for administrative edits, and was signed into law with very little notice and without public debate prior to its passage. (Perrin, 2003; SIECUS, 2001)

The Title V Welfare Reform Act that defined the federal abstinence-only message kicked into effect in 1998, just as the Kendrick settlement provisions expired.

Title V installed abstinence-only education as the sole acceptable form of sexuality education for unmarried people in the United State. Moreover, by mandating \$50 million per year for five years for the states, Title V ensured that abstinence-only education funding would continue as a federal entitlement with secure on-going annual funding. (SIECUS, 2007; Perrin, 2003; Daley, 1997)

In November 1999, proponents of abstinence-only-until-marriage secured more funding through the Special Projects of Regional and National Significance—Community Based Abstinence Education (SPRANS-CBAE) program. In Fiscal year 2003, funding for SPRANS was \$55 million.

These SPRANS-CBAE funds were awarded directly to state and local organizations by the Maternal and Child Health Bureau of the Department of Health and Human Services' (DHHS) Health Resources and Services Administration through a competitive grant process instead of through state block grants as is the case for 510(b) funds. For every \$4 of Federal CBAE funds received, States are required to match with \$3. (Perrin, 2001)

In 2004, the Bush Administration announced that it was transferring administration of the abstinence-only-until-marriage education program from the Department of Health and Human Services' (DHHS) Health Resources and Services Administration's Maternal and Child Health Bureau to its more ideologically driven Administration for Children and Families. Critics and proponents alike believed programmatic changes were likely to follow. (Dailard, 2006) ACF's January 2006 notice of grant availability confirms the validity of that belief. The notice expands the 8-point Title V abstinence definition (*See Appendix 2*) of what constitutes a fundable abstinence program to 13 "themes" (*See Appendix 3 for Grant Opportunity Abstinence Language*) the announcement codifies the administration's hardened approach to premarital abstinence promotion, demonizes the efficacy of contraception, and pushes the one-man-one-woman-as-the-expected-standard-of-human-marriage agenda. (ACF Grant Announcement, 2006; SIECUS, 2007)

In April 2007, Mathematica Policy Research, Inc. released a federally funded report, *Impacts of Four Title V, Section 510 Abstinence Education Programs*. The report studied data from four abstinence education programs over six years and found the programs did not decrease the sexual activity level of teens nor did it decrease contraception use compared to a control group.

Later in 2007, however, Congress still passed a three month extension of Title V funding. Many states have begun to perceive abstinence-only sex education as ineffective and have chosen to decline the Title V funding. Presently, California, Colorado, Connecticut, Maine, Massachusetts, Minnesota, Montana, New Jersey, New York, Rhode Island, Virginia, Washington, Wisconsin, and Wyoming refuse Title V funding. Abstinence-only sex education policy has now come full circle and is currently in the evaluation stage of the policy process. The agenda is also concurrently being set to overhaul federal funding of sex education programs. Likewise, policy formulation is ongoing, with many opponents of abstinence-only education advocating for abstinence education to be supplemented with risk reduction information regarding contraceptives and other healthy behaviors.

## A GLOBAL DEBATE

Conservative estimates suggest more than 100,000 children globally are infected with HIV/AIDS. (Drugger, 2006). The United States is in a unique position to affect sexuality and HIV education on a global scale.

### *US POLICY ABROAD*

In 2003 the US began a concerted campaign within international organizations charged with drug control and AIDS policies – especially those of the United Nations – to advance its domestic HIV/AIDS policy globally. (Drucker, 2005) Sidelineing international institutions like the World Health Organization (WHO) and Global Fund to Fight AIDS, the US has ceased its decades-old international policy to promote widespread condom use. Instead, only so-called high risks populations (prostitutes, drug-users, and heterosexual couples with one HIV-positive partner) receive condom and safe sex education. Organizations providing services for those not in the high-risk segments of the population are required to advance the abstinence before monogamous marriage Federal Title V abstinence provisions. Global AIDS

workers worry that this untested response to the pandemic will further tax an already hard-hit population. (Gill, 2004)

### *NOTABLE INTERNATIONAL EXAMPLES OF COMPREHENSIVE SEX EDUCATION*

Since 1998, Advocates for Youth, an organization that champions efforts to help young people make informed and responsible decisions about their reproductive and sexual health, along with University of North Carolina at Charlotte have conducted annual tours of France, Germany and the Netherlands to explore why the sexuality education offered to youth appears to produce better outcomes than US programs. Better outcomes are measured by fewer cases of STIs per capita and lower rates of teen pregnancy. In terms of pregnancy alone, the US rate is 4 times that of France (with rates of 79.8 per 1,000 and 20.4 per 1,000, respectively), 5 times that of Germany (16.1 per 1,000) and nearly 9 times that of the Netherlands (8.7 per 1,000). (Feijoo, 2001).

France, Germany & The Netherlands are known proponents of harm- or risk-reduction social policies. In this trio of countries, research is the basis of public health policy and political and religious groups have little influence. Youth in these countries have access to contraception and consistent and medically accurate sexuality education. Additionally, each of these countries has widespread public education campaigns that are far more direct and humorous than in the U.S. and focus on safety and pleasure. National health insurance policies support access to free or low-cost contraception. Sexuality education is often integrated across school subjects and at all grade levels. Families support the role of educators and health care providers in making sexual health information and services available for teens. (Berne, et al., 1999)

## CRITIQUE OF ABSTINENCE PROGRAMS

By nature and design abstinence-only-until-marriage programs exclude gay and lesbian youth who cannot legally marry in this country. Unlike their heterosexual and bisexual peers who may someday marry,

gay and lesbian teens are essentially told that their sexual feelings are contrary to the expected norm of society and that sexual relations for them are not socially acceptable. Programs often ignore sexual orientation completely and/or seem to suggest that gay and lesbian individuals are simply vectors of disease. Gay and lesbian students, especially young men who have sex with men, are at increased risk for STIs, including HIV; yet abstinence-only-until-marriage programs fail to provide these students with any realistic strategies for protecting themselves from these risks. (GAO, 2006; Waxman, 2004)

In 2004 Rep. Henry Waxman of California released a report that found that 11 of the 13 most commonly used abstinence-only programs contain significant factual errors. The report found that abstinence-only curricula contain false information about the effectiveness of contraceptives and the risks of abortion. Additionally, abstinence curricula contain significant scientific errors, blur religion and science and treat stereotypes about boys and girls as fact.

In October, 2006 the US Office of Government Accountability (GAO) sent a letter to Michael O. Leavitt, Secretary of Health & Human Services advising that abstinence-only funding may be in violation of federal law by failing to enforce Section 317P(c)(1) of the Public Health Service Act. Section 317P(c)(1) requires federally funded grantees working to address the prevention of sexually transmitted diseases, including abstinence-only-until-marriage programs, to provide medically accurate information about the effectiveness of condoms. (GAO, 2006)

## SUPPORT FOR MEDICALLY ACCURATE, COMPREHENSIVE SEX EDUCATION

In spite of the Federal Government's push toward abstinence-only education, public support for medically accurate, age appropriate comprehensive sex education remains high. A 1999 study sponsored by the Sexuality Information & Education Council of the U.S. (SIECUS) and Advocates For Youth polled 1,050 adults nationwide about their attitudes toward sexuality education for young people. The study determined that 89% of Americans believe young people should be taught medically accurate, age

appropriate sex education in schools. 93% of those polled supported sex education being taught to high school aged children 15-18, while 84% supported sex education for students at the junior high/middle school level, 12 –14. (SIECUS, 1999).

5 years after the SEICUS study, with the Federal programs favoring abstinence-only education, one might expect public opinion to mirror that of the current Administration. In fact, the opposite seems to be true. In 2004 NPR, the Kaiser Family Foundation, and Harvard's Kennedy School of Government released a study entitled “Sex Education in America; General Public/Parents Survey” that found only 7 percent of Americans say sex education should *not* be taught in schools. 1,759 adults over the age of 18 completed the survey, with an additional over-sample of 1,000 parents of children in grades 7 – 12. 93% of those polled believed sex education in schools is very important (72%) or somewhat important (21%) for students in grades 7 and 8. 43% of the parents in this study said their child’s school did not offer sex education. 85% agreed instructions on how to use and where to purchase contraceptives is appropriate for high schools students aged 9-12, and 88% said it was appropriate for students in grades 7-8. (Kaiser Family Foundation, 2004)

## THEORETICAL MODELS OF THE POLICY PROCESS

The abstinence-only policy debate is interesting in that it illustrates aspects of a number of theories, yet no one theory completely explains the life of this policy. However, while this assessment does not advocate for any one dominant theoretical model, the briefing does find much evidence that major aspects of this policy process are rooted in Paul Sabatier’s explanation of belief systems within his Advocacy Coalition Framework (1993). Of key importance is the pro-abstinence coalition’s symbolic use of language and it helped gain support for abstinence-only sex education by tapping into the core beliefs of a broad coalition of supporters (Jenkins-Smith & Sabatier, 1993; Edelman, 1964).

There are clear elements of Group Theory throughout the cycle of this policy issue. The model of issue networks helps explain the alignment of key players in the legislative and executive branches with pro-abstinence interest groups through an emotional commitment to the issue (Hecklo, 1995). This seems to flow into J.W. Kingdon's explanation of "visible clusters" (formal policy players) setting the agenda while "hidden clusters" (informal policy players) control the alternatives and put pressure on the agenda setters (1984). Kingdon's policy streams metaphor is also applicable, as a chance confluence of the problem stream, political stream, and policy stream could be said to have made federal funding for abstinence-only sex education in the Welfare Reform Bill a reality (1984).

While the constitutionality of AFLA was being litigated throughout the 1980s, the beginnings of the HIV/AIDS epidemic forced the scientific and medical communities to advocate an offensive response to the disease, making sex education an issue of public health and therefore within the jurisdiction of government. In the late 1980s, Surgeon General C. Everett Coop released a statement calling for comprehensive education about the disease and methods of prevention, at as early an age as possible. For a time, the Christian lobby organizations seemed to have lost in terms of abstinence policy implementation. The swing of Congress to Republican dominance in 1994 opened the window for policy reformulation and adoption of abstinence-only funding. The first blow was the forced resignation of Surgeon General Jocelyn Elders for suggesting publicly that masturbation was an acceptable and safe alternative to intercourse. The second blow was the passage of Welfare Reform.

J.W. Kingdon suggests that open windows present opportunities for the complete linkage of problems, proposals, and politics, and these opportunities move the three joined elements up on decision-making agendas. (Kingdon, 1995) Far more than a sex education policy, Welfare Reform was a major part of the platform that swept Republicans into congress during the 1994 election. With a conservative shift in congress in 1994, the successful campaign of the Christian Right to frame the sex education agenda in terms of morality and Family Values in the public debate and the rather simple idea that no sex means no

pregnancy or STIs, the Problems, Political and Solutions streams coincided at a point in time that created a window for the passage of Welfare Reform. The abstinence language was not initially part of the bill, inserted after all debate during the editorial stage of the bill. The authors of section 510(b) understood that lack of line-item veto power coupled with public pressure for some kind of welfare reform meant Clinton would not veto the bill at this phase and the Title V, Section 510 (b) language was adopted along with the rest of the bill. With the New Right's simple solution at the ready, congressional abstinence proponents grabbed on to the policy window and slid on through. (Kingdon 1984; 1995)

Through steady media and lobby campaigns in the 1980s Christian groups tapped into fears of many parents by using language in a symbolically effective manner. In their studies of the history of the sex education wars in the U.S., sociologists Kristin Luker and Janice Irvine focus much of their arguments on the rhetoric used by the Christian Right and other members of pro-abstinence coalitions, in which children are turned into victims of sexuality, sex education is called "mental and emotional molestation," and sex itself is blamed for the perceived decline in American morality (Irvine, 2002; Luker, 2006). This seems consistent with Edelman's discussion of the political use of symbols (1964; 1995).

This persistent burying of scientific evidence in favor of ideology can be rationalized within Sabatier's Advocacy Coalition Framework. Sabatier posits that coalitions form around policy areas and shift depending on how deeply held are the beliefs used to rationalize allegiance to a given coalition (1993). For Sabatier, there are some areas of belief that are so deeply held they are immune to shifting policy allegiances. Luker and Irvine both illustrate that core beliefs are at work on both sides of the abstinence debate as members of pro-abstinence groups have a deep emotional and often spiritual connection to the value of abstinence until marriage while proponents of comprehensive sex education have a deeply held intellectual belief that curricula should be based on scientific and medically accurate information, regardless of particular groups' value systems (Irvine, 2002; Luker, 2006).

Contextualizing abstinence-only education within the Advocacy Coalition Framework provides an explanation for the lack of rationalism that has characterized the New Right's position throughout the life of this policy. Learning within a coalition, functionally similar to Hecló's issue networks, is easy, but learning across coalitions is difficult and rare at the level of core beliefs. (Kingdon, 1984; Hecló 1995) In spite of program evaluations, longitudinal studies decrying the efficacy of Abstinence education, GAO legal recommendations, and the opposition of broad coalitions of legal groups, youth advocates, medical professionals and scientists, abstinence-only proponents maintain that abstinence curricula is effective and worthy of continued funding.

## RESEARCH QUESTIONS & HYPOTHESES

### RESEARCH QUESTIONS

- Q1: Is there a difference between outcomes between groups of adolescents who are known to have received abstinence-only education and those who have not?
- Q2: Are abstinence-only curricula accurate and efficacious?

### HYPOTHESES

- H1: There is a statistically significant difference between adolescents who are known to have received abstinence-only education and those who have not.
- H2: Abstinence-only curricula promote ideology over accuracy and efficacy.

## RESEARCH METHODOLOGY

The methodology used to test these hypotheses will be cross-sectional, combining secondary data analysis with primary qualitative analysis. The National Longitudinal Study of Adolescent Health (Add Health) Waves I, II, and III will function as my quantitative data set, allowing me to explore the relationship between sex education, virginity pledges and youth outcomes (Chlamydia, knowledge of safer sex practices) of more than 4,882 American youth. Additionally, I will conduct a qualitative analysis of content

of abstinence-only curricula by conducting a meta-analysis designed to synthesize data from a U.S. Government Accountability Office (GAO) on efforts to assess the accuracy and effectiveness of Federally Funded abstinence programs (2006) with the earlier US House Committee on Government Reform's content evaluation of federally funded Abstinence Programs.

### *UNITS OF ANALYSES*

For the quantitative portion of this study, the unit of analysis is the individual ADD Health respondents. For the qualitative data set, the unit of analysis will be abstinence curricula.

### *VARIABLES*

#### QUANTITATIVE

Independent Variable – Participation in an abstinence-only program or class

Dependent Variable I – Frequency of Condom Use in the last 12 months

Dependent Variable II – Use of Birth Control at last Vaginal Intercourse

Dependent Variable III – Pap Smear test at last Gynecological Exam

Dependent Variable IV - Chlamydia Biospecimen Test Results

#### QUALITATIVE

Independent Variable – Abstinence Curricula

Dependent Variables – Accuracy, Efficacy & Evaluation

### *Human Subjects Protocol*

In order to ensure the confidentiality and anonymity of ADD Health research subjects, the researcher complied with the Sociometric Data Corporation agreement signed in order to receive the public use data set. The data was restricted to the researcher and academic professor as needed. User-Guides and Codebooks were also restricted to the use of the researcher and professor.

### *LIMITATIONS TO RESEARCH*

Internal and external validity problems may exist with combining data from and use of more than one unit of analysis. The ADD Health data study did not specifically measure content of sex education classes, and so content must be operationalized by responses to knowledge questions in the ADD Health

surveys. Without access to sample identifying information, it is impossible to locate ADD Health respondents for this study.

## RESEARCH FINDINGS

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### *OUTLINE OF ANALYSIS*

The following presents a statistical analysis of quantitative data along with a meta-analysis of qualitative data.

#### QUANTITATIVE

The statistical analysis will test the hypothesis that there is a significant difference in outcomes between adolescents who received abstinence-only education and adolescents who did not receive abstinence-only education. 4 dependent variables outcomes will be measured in 3 categories: birth control use, having a pap smear at most recent gynecological exam (females only) and results of the ADD Health Wave III Chlamydia Biospecimen results.

Frequency distributions will be used to describe the independent and each of the dependent variables. Measures of central tendency will be discussed primarily in terms of mode (most common response) for each of the five variables (4 nominal, 1 ordinal).

Crosstabs and Chi-Square tests are appropriate because of the difference in population sizes between the bi-variate responses to the independent variable, abstinence-only education. Cross tabular analysis will be conducted to examine frequency differences between the population of students who received abstinence-only education and those who did not across each of the 4 dependent variables.

Two-variable Chi-Square ( $X^2$ ) tests will be used to examine the relationships between abstinence-only education and each of the dependent variables. Chi-Square ( $X^2$ ) measures the association between variables and allows us to determine if variables co-vary or if they are independent. The null hypothesis claims that the independent variable (abstinence-only education) and the dependent variables (condom

use, birth control use, pap smear testing and Chlamydia results) have no association and are therefore independent. The alternate, or research, hypothesis is simply that the Null is not true.

H<sub>0</sub>: Abstinence-Only Education and Adolescent Outcomes are independent

H<sub>A</sub>: H<sub>0</sub> is false

#### QUALITATIVE

A discussion of the outcomes associated with abstinence-only curricula would be incomplete without an examination of the content of the curricula. If we are concerned about the affect such education has on the lives of youth, we must ask “what are they being taught”? In 2004 and 2006 two congressional reports seeking an answer to this question were released. The results are staggering in light of the \$1.5 billion dollars the federal government has spent on abstinence-only funding since the Federal Abstinence policy entered the implementation phase in 1998.

For an analysis of content of abstinence curricula, a matrix was constructed to synthesize data from the 2004 Waxman Report and the 2006 GAO Evaluation and Effectiveness study Waxman requested in light of his findings. Each report was coded for statements about abstinence curricula content in three categories: Accuracy, Efficacy & Evaluation.

### *CONSTRUCTION & OPERATIONALIZATION OF VARIABLES*

#### INDEPENDENT VARIABLE

At no Wave of the National Longitudinal Study of Adolescent Health was the question “What form of sex education, if any, did you have in school or elsewhere?”, nor any iteration of such. Wave III did not include the pre-test (Waves I & II) questions about school taught information about HIV/AIDS and abstinence. The most commonly used abstinence-curricula include signing an abstinence pledge or participating in a ceremony promising abstinence as the intended outcome goal for students in the programs. Accordingly, Wave III question “Have you ever signed a pledge to abstain from sex until marriage?” (variable label H3MN19) was used to approximate participation in an abstinence program.

There is a possibility of error in that some respondents may not have offered truthful responses, but this is a concern with all self-reported survey questions. Of more concern is the possibility that some respondents participated in an abstinence program and did not sign such a pledge. Still, if abstinence education has some effect on adolescent knowledge, behaviors and other outcomes, we expect to see some difference across the dependent variables between the population of students who are known to have participated in an abstinence program (pledge signers) and those assumed to have not.

#### DEPENDENT VARIABLES

Dependent variables are designed to measure purported outcomes and behaviors associated with abstinence-only education. Proponents of abstinence-only education claim that the programs affect teen outcomes in terms of disease prevention. Note that question H3SE1 “Have you ever had vaginal intercourse?” is not being used as a dependent variable because the Wave III sampling of 18-26 year olds were largely married at the time of the 3<sup>rd</sup> survey.

##### I) Frequency of Condom Use in the last 12 months

Proper consistent and proper condom use is known to be 98% effective in the prevention of pregnancy, reduce the risk of HIV/AIDS and other STDs. ADD Wave III Question “How often have you used a condom during intercourse in the last 12 months” (label H3SE8) The responses to this question were None, Some, Half, Most, All. A comparison between the two groups of respondents to H3MN19 will be made.

##### II) Birth Control at last intercourse

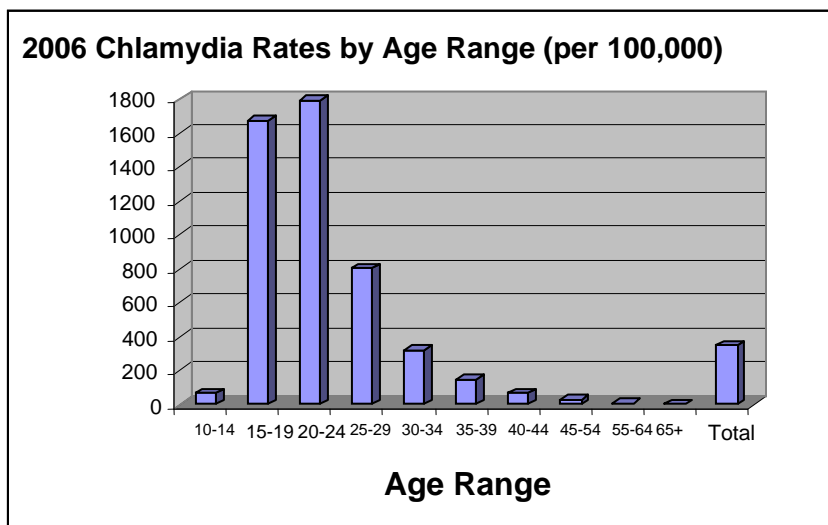
Many of the common abstinence-curricula contain information about birth control ranging from misleading to medically or scientifically inaccurate. Respondents were asked to respond ‘yes’ or ‘no’ to the question, other than condoms, “Did you use form of birth control at last vaginal intercourse” (label H3SE9) Of interest is the response comparative to response to the virginity pledge question.

### III) Pap Smear

An annual pap smear is an important test for women as part of a regular gynecological exam in that it tests for a number of diseases of consequence, including the forms of the human papillomavirus Virus (HPV) that are known to cause cervical in women. Recently, HPV has been linked to prostate cancer in men. Of interest are the numbers of women in the sample who have had a gynecological exam in the preceding year, and the percentage of women for whom that included a pap smear (label H3HS18). Subsequently, a comparison of the two populations of respondents to H3MN19 will be made.

### IV) Chlamydia

The 2006 CDC Chlamydia supplement studies show that the rates of the highest rates per 100,000 were in the 15 - 19 and 20 - 24 age groups. Wave III of the ADD Health was the first study of its size to attempt to gather biospecimen data of adolescents and young adults to test for STD status. Prior status was determined by respondent self-reporting, vulnerable to two types of false response: those who have contracted an STD but have never been tested, and those unwilling to give a positive response. The sample contained biospecimen results for 4,414 respondents. (label CH)



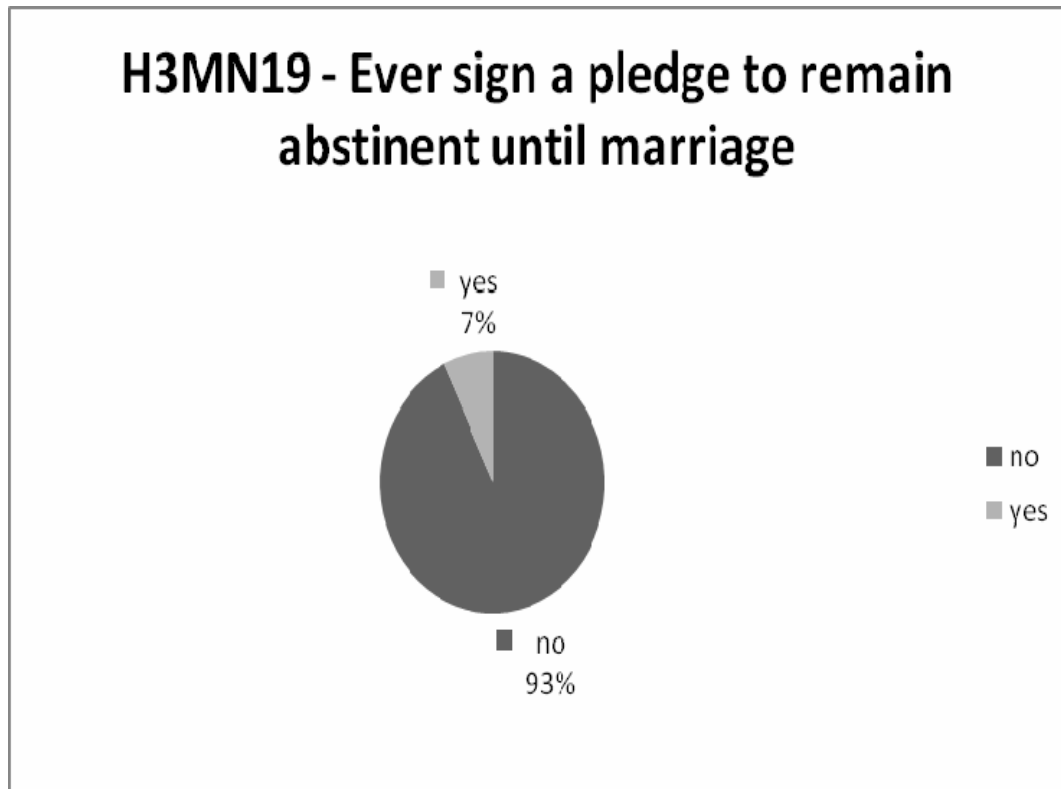
## QUANTITATIVE ANALYSIS

### UNIVARIATE STATISTICS - FREQUENCIES

The frequency tables for each of the variables being studied appear below, along with pie graph illustrations of the table contents.

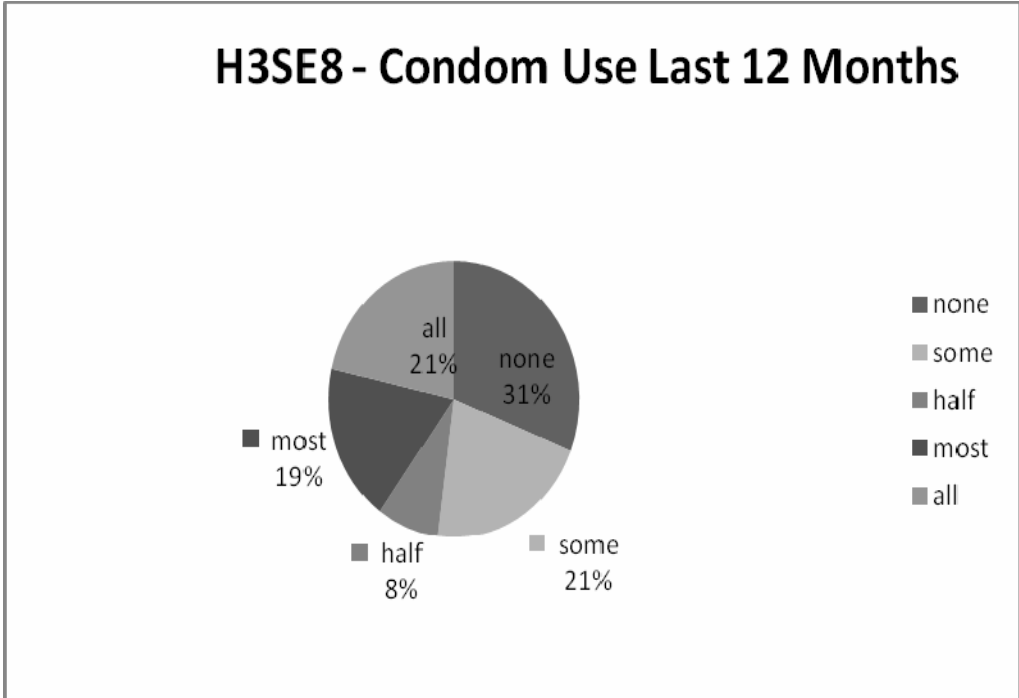
#### H3MN19 Ever sign pledge to abstain from sex until marriage

		Frequency	Percent
valid	no	4465	92.9%
	yes	341	7.1%
	total	4,806	100.0%
mode		0 (no)	



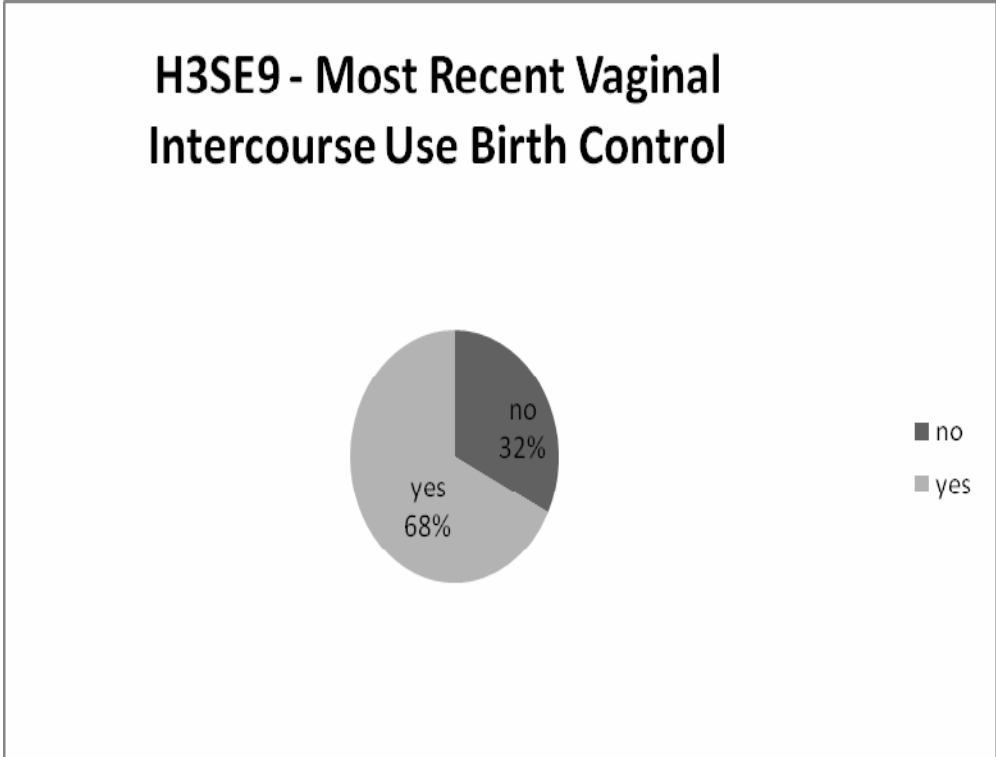
### H3SE8 Condom at vaginal intercourse past 12 mos

		Frequency	Percent
valid	none	1157	31.0%
	some	786	21.1%
	half	297	8.0%
	most	690	18.5%
	all	799	21.4%
	total	3729	100.0%
	mode	0 (none)	



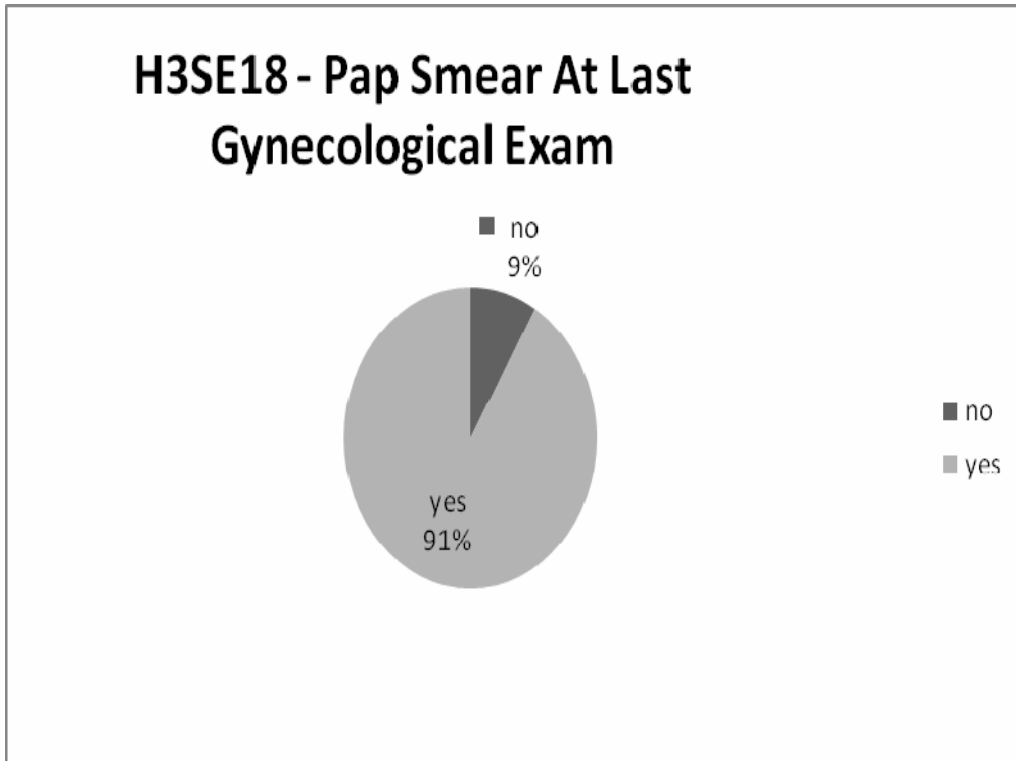
**H3SE9 Most recent vaginal intercourse use birth control**

		Frequency	Percent
valid	no	1198	32.2%
	yes	2517	67.8%
	total	3,715	100.0%
	mode	1 (yes)	



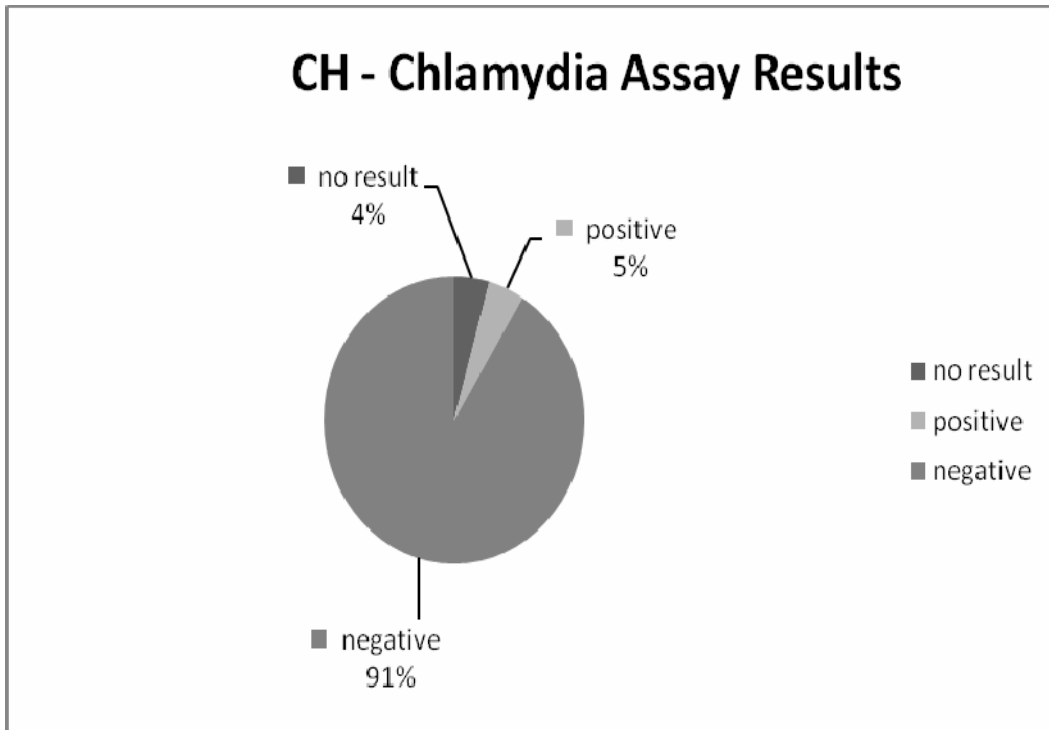
**H3HS18 Have Pap smear last gynecological/pelvic exam**

		Frequency	Percent
valid	no	203	8.6%
	yes	2166	91.4%
total		2369	
mode		1 (yes)	



## CH Chlamydia assay results

		Frequency	Percent
valid	no result	193	4.4%
	positive	195	4.4%
	negative	4026	91.2%
	total	4414	100.0%
mode		3 (negative)	



## TESTING HYPOTHESES - CROSS TABULAR ANALYSIS & CHI-SQUARE MEASURES OF ASSOCIATION

H<sub>0</sub>: Abstinence-Only Education and Adolescent Outcomes are independent

H<sub>A</sub>: H<sub>0</sub> is false

The following tables represent the cross tabular analyses of the independent variable with each of the 4 dependent variables. Following each table of cross tabs appears the Chi-Square test for association of variables along with the descriptive equation for Chi-Square output. The .05 significance level was chosen for each Chi-Square test.

**Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
H3SE8 Condom at vaginal intercourse past 12 mos * H3MN19 Ever sign pledge to abstain from sex until marriage	3729	57.3%	2775	42.7%	6504	100.0%

**H3SE8 Condom at vaginal intercourse past 12 mos \* H3MN19 Ever sign pledge to abstain from sex until marriage Crosstabulation**

			H3MN19 Ever sign pledge to abstain from sex until marriage		Total
			no	yes	
H3SE8 Condom at vaginal intercourse past 12 mos	none	Count % within H3MN19 Ever sign pledge to abstain from sex until marriage	1102 31.2%	55 28.5%	1157 31.0%
	some	Count % within H3MN19 Ever sign pledge to abstain from sex until marriage	746 21.1%	40 20.7%	786 21.1%
	half	Count % within H3MN19 Ever sign pledge to abstain from sex until marriage	278 7.9%	19 9.8%	297 8.0%
	most	Count % within H3MN19 Ever sign pledge to abstain from sex until marriage	646 18.3%	44 22.8%	690 18.5%
	all	Count % within H3MN19 Ever sign pledge to abstain from sex until marriage	764 21.6%	35 18.1%	799 21.4%
Total		Count % within H3MN19 Ever sign pledge to abstain from sex until marriage	3536 100.0%	193 100.0%	3729 100.0%

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.393 <sup>a</sup>	4	.355
Likelihood Ratio	4.265	4	.371
Linear-by-Linear Association	.081	1	.776
N of Valid Cases	3729		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 15.37.

- $X^2(4, n=3,729)=4.393, p > .05$
- $p=.355$

### Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
H3SE9 Most recent vaginal intercourse use birth control * H3MN19 Ever sign pledge to abstain from sex until marriage	3715	57.1%	2789	42.9%	6504	100.0%

### H3SE9 Most recent vaginal intercourse use birth control \* H3MN19 Ever sign pledge to abstain from sex until marriage Crosstabulation

			H3MN19 Ever sign pledge to abstain from sex until marriage		Total
			no	yes	
H3SE9 Most recent vaginal intercourse use birth control	no	Count % within H3MN19 Ever sign pledge to abstain from sex until marriage	1129 32.0%	69 35.9%	1198 32.2%
	yes	Count % within H3MN19 Ever sign pledge to abstain from sex until marriage	2394 68.0%	123 64.1%	2517 67.8%
Total		Count % within H3MN19 Ever sign pledge to abstain from sex until marriage	3523 100.0%	192 100.0%	3715 100.0%

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.262 <sup>b</sup>	1	.261		
Continuity Correction <sup>a</sup>	1.090	1	.297		
Likelihood Ratio	1.240	1	.266		
Fisher's Exact Test				.268	.148
Linear-by-Linear Association	1.261	1	.261		
N of Valid Cases	3715				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 61.92.

- $X^2(1, n=3,715)=1.262, p < .05$

- $p=.261$

### Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
H3HS18 Have Pap smear last gynecological/pelvic exam * H3MN19 Ever sign pledge to abstain from sex until marriage	2333	35.9%	4171	64.1%	6504	100.0%

### H3HS18 Have Pap smear last gynecological/pelvic exam \* H3MN19 Ever sign pledge to abstain from sex until marriage Crosstabulation

			H3MN19 Ever sign pledge to abstain from sex until marriage		Total
			no	yes	
H3HS18 Have Pap smear last gynecological/pelvic exam	no	Count	177	21	198
		% within H3MN19 Ever sign pledge to abstain from sex until marriage	8.2%	11.5%	8.5%
	yes	Count	1973	162	2135
		% within H3MN19 Ever sign pledge to abstain from sex until marriage	91.8%	88.5%	91.5%
Total		Count	2150	183	2333
		% within H3MN19 Ever sign pledge to abstain from sex until marriage	100.0%	100.0%	100.0%

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.283 <sup>b</sup>	1	.131		
Continuity Correction <sup>a</sup>	1.885	1	.170		
Likelihood Ratio	2.094	1	.148		
Fisher's Exact Test				.130	.089
Linear-by-Linear Association	2.282	1	.131		
N of Valid Cases	2333				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 15.53.

- $X^2(1, n=2,333)=2.283, p < .05$
- $p=.131$

### Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
CH Chlamydia assay results * H3MN19 Ever sign pledge to abstain from sex until marriage	4414	67.9%	2090	32.1%	6504	100.0%

### CH Chlamydia assay results \* H3MN19 Ever sign pledge to abstain from sex until marriage Crosstabulation

			H3MN19 Ever sign pledge to abstain from sex until marriage		Total
			no	yes	
CH Chlamydia assay results	no results	Count	182	11	193
		% within H3MN19 Ever sign pledge to abstain from sex until marriage	4.4%	3.5%	4.4%
	positive	Count	187	8	195
		% within H3MN19 Ever sign pledge to abstain from sex until marriage	4.6%	2.5%	4.4%
	negative	Count	3729	297	4026
		% within H3MN19 Ever sign pledge to abstain from sex until marriage	91.0%	94.0%	91.2%
Total		Count	4098	316	4414
		% within H3MN19 Ever sign pledge to abstain from sex until marriage	100.0%	100.0%	100.0%

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.647 <sup>a</sup>	2	.161
Likelihood Ratio	4.153	2	.125
Linear-by-Linear Association	2.271	1	.132
N of Valid Cases	4414		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 13.82.

- $X^2(2, n=4,414)=3.647, p < .05$
- $p=.161$

Pointing an analytical lens at the results of the cross tabular analysis of independent and dependent variables, it appears as though there is not a large variance between H3MN19 “yes” and “no” respondents apparent. Each cell reveals frequencies that differ from 1% to 4% depending upon the variable.

While not a test of the Ho Null Hypothesis, these results seem to indicate no basic difference in outcomes between abstinence-only educated adolescents and the no-abstinence education group.

The X2 results would be significant at the .05 level, but the calculated significance levels .355 (condom use) and .261 (birth control) far exceed the .05 level. The Null Hypothesis cannot be rejected, indicating no statistically significant association between the two groups of respondents in the pregnancy/disease prevention category.

The X2 results for Pap Smear tests and Chlamydia similarly revealed calculated significance levels greater than the .05 chosen for the test, but were closer to approaching significant at the .131 (pap smear) and .161 (Chlamydia) levels.

No statistically significant association was discovered; therefore measures of degree of association are not discussed.

### *QUALITATIVE ANALYSIS*

The Waxman Report suffers the bias of being written by a group of people opposed to abstinence-only education and arguably partisan agenda. There are many qualitative statements about abstinence education that are filtered through this lens. However, the analyses of content based on direct quotation highlights many obvious inaccuracies.

The GAO Report was requested by a number of members of both the house and senate (Edward Kennedy, Barbara Boxer, Tom Leahy) but was primarily prompted by a letter written to the

GAO by Waxman upon completion of the study and report bearing his name. While their focus can be directed according to partisan agenda, the GAO is well-regarded for its partisan-free approach to analysis of policy and other government accountability.

#### ACCURACY

Between the two studies, there are hundreds of statements about inaccuracies in the most commonly used abstinence-only curricula.

The Waxman Report found that 11 out of the nation's 13 most popular abstinence-only education used in 25 states by 69 grantees, including state health departments, school districts, and hospitals, as well as religious organizations and pro-life organizations were riddled with inaccuracies, skewed statistics, and scientifically unfounded data. There were over 100 statements in the Waxman Report about scientific inaccuracies. The research found cases where lessons claimed

- HIV/AIDS could be transmitted through sweat and tears;
- that condoms failed to protect against HIV transmission as much as thirty-one percent of the time;
- that a 43-day-old fetus is a "thinking person";
- that touching a person's genitals could result in pregnancy;
- that 24 chromosomes come from the mother and 24 for the father
- that premature birth, a major "*cause of mental retardation*", is increased following the abortion of the 1st pregnancy.

The GAO report found:

- that abstinence-curricula claimed that HIV can pass through condoms because latex is pourous;
- the Office of Population Affairs (OPA) reviewed a grantee's application materials found a pamphlet with incomplete or inaccurate statements about STD prevention and HIV transmission;
- Another grantee failed to provide information about vaccinations for Hepatitis B;

- Another grantee had incorrect True/False question on a quiz given to students.

#### EFFICACY

According to the GAO report, and ACF official told GAO researchers that ACF decided not to use national data as a measure of program effectiveness because “the goal of reducing STD rates is not as central to the State & Community-Based programs as reducing sexual activity” among teens. (GAO, 2006, p. 27) Another official called STD reduction merely “an important by-product” of abstinence-only programs.

The GAO report and Waxman Reports state that the studies that find abstinence-only education to be efficacious do not meet the “minimum requirements that experts deem necessary for program assessments to be scientifically valid”, in part because of research design (failure to use experimental or quasi-experimental models with control groups) or because they attempt to measure changes in attitudes and/or intentions, rather than changes in behavior or biological outcomes. (GAO, 2006; Waxman Report, 2004)

#### EVALUATION

The GAO report found that there are limited efforts to review the scientific accuracy of materials used in abstinence-only education. The ACF, CDC, NIH do not review materials before or after granting funds, while OPA does review materials of grantees only, as part of a settlement of the 1993 Kendrick settlement. There have been some spotty state efforts. 5 out of 11 states reviewed in the study had some mechanism in place to review materials for scientific accuracy. Some evaluations were conducted by the program providers – many of these were measures of intention to abstain from sex.

According to the GAO report, only 5 of the 11 states found inaccuracies while conducting evaluations. This doesn't mean the remaining 6 states had accurate materials. On the contrary,

many of them used the same materials found to be inaccurate in the states whose evaluations revealed scientifically and medically inaccurate statements.

The Waxman Report cites several studies of abstinence-only education that have found that abstinence only education does not appear to decrease teen pregnancy or the risk of STDs. "Few rigorous studies of abstinence-only curricula have been completed to date and do not show any overall effect on sexual behavior or contraceptive use" The Waxman Report cites the Douglas Kirby article; *Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy*

## CONCLUSION

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This report began with a review of the literature that defined Abstinence-Only and Comprehensive Sex Education, delineated the history of the Federal Abstinence policy, examines the global context of abstinence-only and comprehensive sex education, surveyed critiques of abstinence-only programs and highlighted popular support for medically accurate sex education. Finally, the review of the literature concluded with a discussion of theories of public policy as they apply to the Federal Abstinence policy and suggestions for further study.

Unable to reject the Null Hypothesis at the .05 significance level, this research leads to the conclusion that there is no statistically significant difference in outcomes between the Pledge and Non-pledge groups. The quantitative research hypothesis that there is a difference between groups of adolescents who are known to have received abstinence-only education (virginity pledgers) and those who have not was not borne out. A cross tabular analysis of the independent variable Abstinence-Only Education/Virginity Pledge with the dependent variables Condom Use, Birth Control Use, Pap Smear at last gynecological exam, and Chlamydia results showed that positive and negative outcome rates differed between the pledge group and non-pledge groups by only 1% – 4% depending on the variable. Chi-Square measures of association revealed no statistically significant

association between the variables. These findings, however, are consistent with the recent Mathematica report that found no difference in outcomes between students randomly assigned to abstinence-only education classes and students randomly assigned to a control group that received no sex education.

The meta-analysis of abstinence curricula conducted for the qualitative portion of this study did bear out the research hypothesis that Abstinence-only curricula ideology over accuracy and efficacy. The lack of focus on evaluation by the Federal agencies who administer abstinence-only programs seems to be rooted in expediency. Since the passage of welfare reform in the 1990s, few scientifically rigorous and comprehensive studies of abstinence-only sex education have been conducted. There is a growing amount of scientific evidence that abstinence curricula do not affect sexual behavior, but proponents of abstinence education often ignore these while pointing to less rigorous studies that seem to indicate abstinence curricula are efficacious.

## IMPLICATIONS FOR POLICY

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Ten years after the passage of Title V Section 510(b), Federal funding for abstinence-only sex education is finally entered the evaluation stage of the policy cycle. New scientifically rigorous studies continue to be completed and commissioned evaluating both the content of abstinence-only curricula and the effectiveness of curricula in terms of adolescent outcomes. The studies that meet the minimum requirements deemed necessary by the scientific community indicate that a) many abstinence-only programs include medically inaccurate information and b) abstinence-only programs have no statistically significant effect on the sexual behaviors of the students, it seems likely that this policy issue is about to enter a new phase of agenda-setting.

With these findings and a congress now controlled by a slim democratic margin it seems likely that abstinence-only funding will be scaled back. Fourteen states, some traditionally

Republican oriented, have already rejected this funding, many due to the recent negative evaluations. While most signs point to the election of a Democrat as president in 2008, even the current field of Republican candidates for president would likely be less beholden to the New Right than the current Bush administration.

## SUGGESTIONS FOR FUTURE RESEARCH

Abstinence-plus refers to curricula that start with abstinence as the only 100% effective method to avoid pregnancy and STIs, but then, in recognition that many students will not abide by this method for long, imparts risk-reduction strategies such as condom use and other birth control methods in addition to safer alternative forms of sexual activity to intercourse. Comprehensive-sex education includes the abstinence message as one of many choices for human sexual behavior. To date, both of these types of sex education have been studied less rigorously even than abstinence-only education. Thus far, no research has attempted to compare the three types of sex education, Abstinence-Only, Abstinence-Plus, & Comprehensive by randomly assigning participants to each of the types of program with a control group receiving no education. Future research should seek to undertake a comparison between the 3 types of sex education to determine which, if any, have better outcomes.

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