ADOLESCENT HEALTH HIGHLIGHT

December 2013

Publication # 2013-6

Contraceptive and Condom Use

By Elizabeth Wildsmith, Ph.D., Megan Barry, B.A., and Jennifer Manlove, Ph.D.

Fast Facts

1. Despite recent declines, teen pregnancy rates remain higher in the United States than in other industrialized countries, partly because of lower contraceptive use among U.S. adolescents.[2,3]

2. Adolescents today are more likely than they were in the 1990s to have used birth control the last time they had sexual intercourse.[2]

3. Adolescent females are using a wider variety of highly effective birth control methods: in 2006-2010, 31 percent used the pill the last time they had sex and 12 percent used other hormonal methods, including an implant, the injection, the patch, the vaginal ring, and emergency contraception.[2]

4. Condoms used by males with every act of sex can greatly reduce the risk of sexually transmitted diseases (STDs); however, many adolescents use condoms inconsistently.[2,6]

5. Open communication between adolescents and their parents, particularly about sex and birth control, is linked to increased condom and contraceptive use.[8]

Almost half of U.S. high school students have had sexual intercourse.[1] For sexually active adolescents, using effective birth control is necessary to avoid unwanted pregnancies, and using condoms can reduce the risk of sexually transmitted diseases (STDs). This *Adolescent Health Highlight* presents key research findings about contraceptive and condom use among adolescents in the United States. Specifically, it reports the prevalence and trends in contraceptive and condom use; describes currently available contraceptive methods; identifies factors that influence contraceptive and condom use; and addresses barriers adolescents face in obtaining and using contraception. It also lists helpful resources.

Contraceptive methods and effectiveness

Two broad types of contraception protect against pregnancy—permanent methods (such as surgical sterilization) and reversible methods (such as condoms and the pill). Most adolescents choose reversible methods of birth control so that they may choose to have children in the future. These methods are described below, along with information on the effectiveness of each method as it is typically used (the number of unintended pregnancies occurring to 100 typical women during their first year using the method).[4] Two of these methods were recently endorsed by The American College of Obstetricians and Gynecologists, which stated that implants and intrauterine devices (IUDs) (both described in more detail below) should be the "first-line" contraceptive method recommendation for all women, including adolescents, because of their "top-tier effectiveness, high rates of satisfaction and continuation, and no need for daily adherence."[5]

Hormonal and other highly effective methods of birth control: These birth control methods are used by women and require a medical prescription. All are highly effective at preventing pregnancy as typically used.[4,7]

With the exception of the diaphragm and cervical cap, all barrier methods of birth control are available without prescription.

- **Intrauterine device** (IUD)—An IUD is a small device that is shaped in the form of a "T," which is placed inside the uterus by a health care provider. There are two types of IUDs: 1) the copper IUD (lasts ten years); and 2) the IUD with progestin (lasts five years), that releases a small amount of the synthetic hormone progestin each day. Both are more than 99 percent effective.[9]
- **Implant**—The contraceptive implant is a single, thin rod that is inserted under the skin of a woman's upper arm and prevents pregnancy for up to three years (more than 99 percent effective).[7]
- **Injection or "shot"**—The woman gets a shot of hormones in the arm or buttocks every three months from her health care provider (94 percent effective).[4,7]
- **Oral contraceptive**—"The pill," as it is often called, is taken at the same time each day. With traditional pills, a woman takes three weeks of active pills followed by one week of placebo pills (those without the active ingredients) during which she has menstrual-like bleeding. Alternatively, several extended-cycle pills are now available that enable a woman to take pills with the active ingredients continuously for the whole year and not experience bleeding; or to take them for three months, allowing for four menstrual-like periods a year (all oral contraceptives are 91 percent effective).[4,7]
- **Patch**—This skin patch is worn on the lower abdomen, buttocks, or upper body (but not on the breasts). A woman puts on a new patch once a week for three weeks and does not wear a patch during the fourth week (91 percent effective).[4,7]
- **Hormonal vaginal contraceptive ring**—The contraceptive ring is inserted inside the vagina. A woman wears it for three weeks, takes it out for a week to enable her to have a period, and then inserts a new ring (91 percent effective).[4,7]

Barrier methods of birth control: With the exception of the diaphragm and cervical cap, all barrier methods are available without prescription.[4,7] All barrier methods must be used with each sexual act to be effective.

Among U.S. adolescents, contraceptive use at last sexual intercourse was between eight and 16 percentage points lower than among adolescents in Great Britain, France, and Sweden.

- **Diaphragm or cervical cap**—These prescription barrier devices are placed inside the vagina, along with a spermicide, to block sperm by covering the cervix (88 percent effective).[4,7]
- **Male condom**—Made of a range of materials—such as latex (most effective for STD prevention), various non-latex synthetics, and "lambskin"—and worn on the penis, a male condom keeps sperm from getting into a woman's body (all are roughly 82 percent effective).[4,7]
- **Female condom**—Less popular than the male condom, the female condom is a thin pouch that fits into the vagina to help prevent sperm from getting into a woman's body (79 percent effective).[4]

- **Spermicides**—These products—foam, gel, cream, film, suppository, or tablet—are inserted into the vagina and work by killing sperm. Spermicides can be used in addition to a male condom, diaphragm, or cervical cap (72 percent effective when used alone).[4,7]

Other methods of birth control: Withdrawal and natural family planning methods do not require a prescription.[4]

Condoms used by males can greatly reduce, though not eliminate, the risk of STDs.

- **Withdrawal** ("the pull-out method")—The male pulls his penis out of the vagina prior to ejaculation (78 percent effective).[4]
- **Natural family planning methods**—Couples use knowledge of the female's monthly fertility patterns to help plan pregnancy or to avoid getting pregnant (76 percent effective).[4,7]

Comparing contraceptive use by U.S. adolescents with use by adolescents in other parts of the world

Adolescents in the United States are less likely than are adolescents in other industrialized countries to use contraception (birth control), particularly highly-effective birth control methods such as the pill, shot, IUD, or implant. For example, one study found that U.S. adolescents' use of contraception the last time they had sexual intercourse was between eight and 16 percentage points lower than among adolescents in Great Britain, France, and Sweden.[10] Higher contraceptive use among adolescents in these European countries appears to be due, in part, to a greater tolerance of adolescent sexual activity, more freely available contraceptives, and greater knowledge about sexual activity and contraception among adolescents.[10]

Relatively low contraceptive use among U.S adolescents can help explain why teenage pregnancy and birth rates are much higher in the United States than they are in many other industrialized countries,[3,10] as well as why rates of some STDs—such as the human papillomavirus (HPV)—are high among U.S. adolescents, and rates of others—such as Chlamydia—are increasing.[11,12]

The effectiveness of condoms for preventing STDs

Condoms used by males can greatly reduce, though not eliminate, the risk of STDs. When used correctly—with every act of sex, from start to finish—latex condoms are highly effective at reducing the risk of infections that are spread through the exchange of bodily fluids, such as HIV, chlamydia, and gonorrhea. They also help reduce the risk of infections that are spread through contact with skin, such as HPV and herpes, although with a lesser degree of effectiveness.[6] Non-latex synthetic condoms and lambskin condoms are also available. However, lambskin condoms are not recommended for STD prevention, as they are more porous than latex condoms and may not stop the transmission of certain STDs.[4] Female condoms offer some protection against STDs, although there is limited information available about their effectiveness.[4]

Adolescents who use contraception the first time they have sex are more likely to continue to keep using contraception.

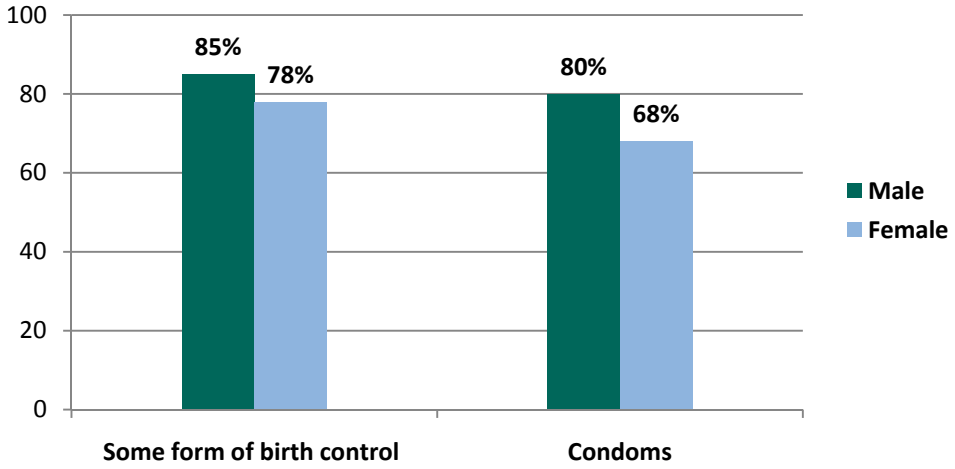
Contraceptive use by the numbers

Birth control use at first sex. Adolescents who use contraception the first time they have sex are more likely to continue to keep using contraception.[13] In 2006-2010, 78 percent of never-married 15- to 19-year-old females who reported ever having sexual intercourse and 85 percent of comparable males reported using any method of birth control the first time they had sex, including using less effective methods such as withdrawal. The condom was the most

commonly reported method—68 percent of females and 80 percent of males reported use of a condom at first sexual intercourse (see Figure 1).[2] The use of any contraception and/or of condoms at first sexual intercourse has increased since the late 1980s.[2]

Contraceptive and condom use at last sexual intercourse have increased for males and females, particularly since the mid-1990s.

FIGURE 1: Percent of 15- to 19-year-olds who used birth control at first sexual intercourse, 2006-2010

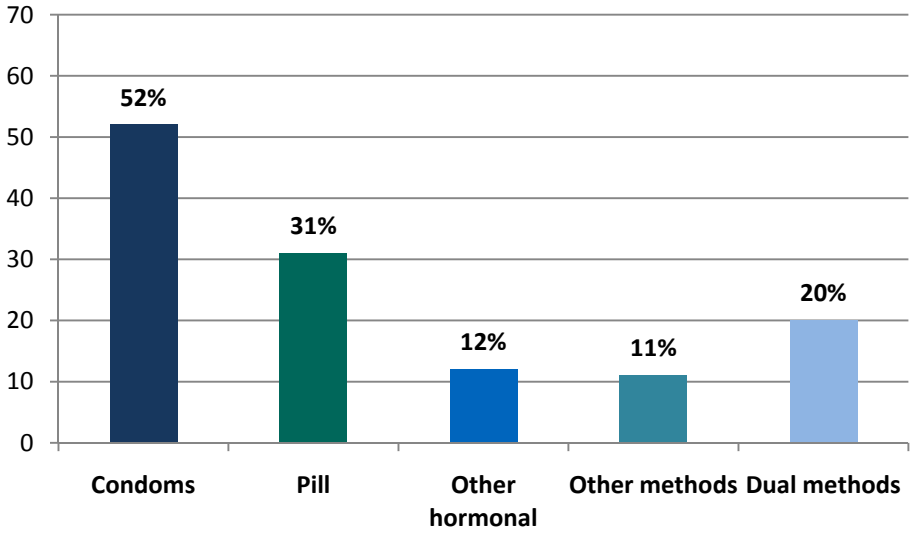


Source: Martinez, G., Copen, C. E., & Abma, J. C. (2011). *Teenagers in the United States: Sexual activity, contraceptive use, and childbearing, 2006-2010 National Survey of Family Growth*: National Center for Health Statistics. Vital Health Stat 23(31).

Birth control use at last sex. Continuing to use contraception is critical for ongoing pregnancy and STD prevention. In 2006-2010, 86 percent of sexually active female adolescents and 93 percent of sexually active male adolescents between the ages of 15 and 19 reported that at least one method of birth control was used the last time they had sex. Among females, 52 percent reported use of a condom; 31 percent, the pill; 12 percent, other hormonal methods; and 11 percent, other methods (including withdrawal, the female condom, the IUD, and others) (see Figure 2). One out of five females reported that dual methods were used–both the condom and the pill (or another hormonal method) at the same time. Among males, 75 percent reported using a condom at last sexual intercourse. Contraceptive and condom use at last sexual intercourse have increased for males and females, particularly since the mid-1990s.[2]

Emergency contraception can be taken by a woman shortly after unprotected sexual intercourse to help prevent pregnancy.

FIGURE 2: Percent of 15- to 19-year-old females who used birth control at last sexual intercourse, by method type, 2006-2010



Source: Martinez, G., Copen, C. E., & Abma, J. C. (2011). *Teenagers in the United States: Sexual activity, contraceptive use, and childbearing, 2006-2010 National Survey of Family Growth*: National Center for Health Statistics. Vital Health Stat 23(31).

Use of the birth control pill at last sexual intercourse was higher among sexually-active 12th graders than it was among sexually-active 9th graders.

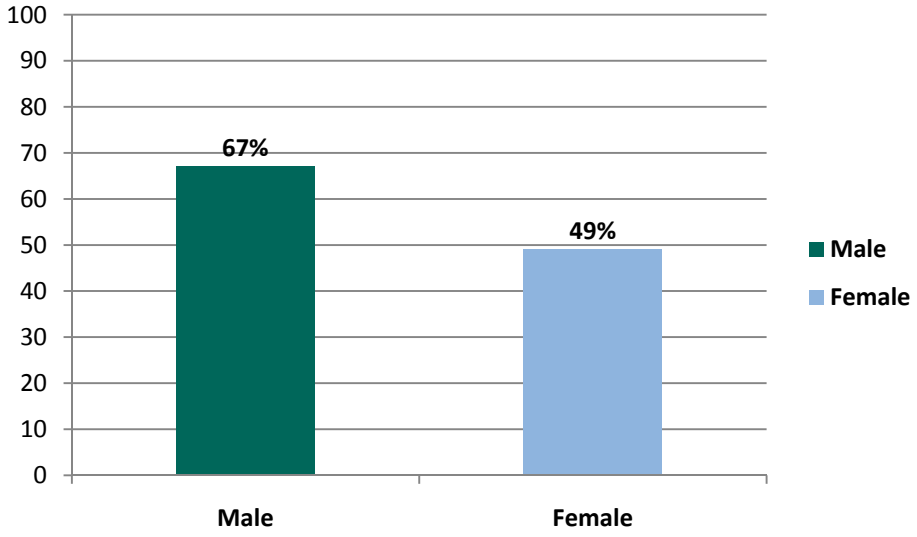
Consistency of condom use. In 2006-2010, among adolescents ages 15-19 who had sexual intercourse in the past four weeks, just under half of adolescent females (49 percent) and two-thirds of adolescent males (67 percent) reported that a condom was used every time they had sex (see Figure 3).[2]

Emergency contraception

Contraceptive and condom use vary by race/ethnicity. Black adolescent males report more consistent condom use than white males, who are more consistent users than Hispanic males.

In 2006-2010, roughly 14 percent of adolescent females between the ages of 15 and 19 who have had sexual intercourse reported that they had ever used emergency contraception.[2] Sometimes called the "morning- after pill," emergency contraception refers to a range of treatments used to prevent pregnancy *after* unprotected sexual intercourse or when a birth control method fails, such as if a condom breaks. These include hormonal emergency contraceptive pills (Plan B, Plan B One Step, Next Choice), a non-hormonal pill (ella), and the IUD, which is inserted vaginally. Although quite effective at preventing pregnancy when taken shortly after unprotected intercourse, emergency contraception is not intended to be used as a regular method of birth control. The Food and Drug Administration recently approved over-the-counter use of Plan B One-Step for all men and women; however, other similar forms of emergency contraception still remain behind the counter and/or require a prescription for individuals under 17.[14,15] It is important to remember that states continue to take different approaches to the provision of emergency contraception,[16] and rules and regulations may change in the coming years.

FIGURE 3: Percent of sexually-active adolescents, ages 15-19, who used condoms consistently, 2006-2010



Source: Martinez, G., Copen, C. E., & Abma, J. C. (2011). *Teenagers in the United States: Sexual activity, contraceptive use, and childbearing, 2006-2010 National Survey of Family Growth*: National Center for Health Statistics. Vital Health Stat 23(31).

Open communication between adolescents and their parents, particularly about sex and birth control, is linked to increased condom and contraceptive use.

What factors can influence contraceptive and condom use?

Contraceptive and condom use vary across many factors, including age, age at first sex, and race/ethnicity:

- Contraceptive use tends to increase with age. For example, more sexually-active 12th graders reported use of the birth control pill at last sexual intercourse than did 9th graders.[1] Similarly, adolescents who were older when they first had sex were more likely to have used contraception during that sex act than younger adolescents.[2]
- Contraceptive use also varies by race/ethnicity. For example, black adolescent males reported higher use of a condom ever, and more-consistent use of condoms than white males. White adolescent males, in turn, were more likely than Hispanic adolescent males to report using condoms consistently.[17] Among females, white adolescents were much more likely to report having ever used the pill or dual methods than were their black or Hispanic counterparts.[2]

Many adolescents feel too embarrassed to buy condoms or to talk about condom use with their sexual partners.

Other characteristics of adolescents' lives are also linked to contraceptive use:

- Adolescents who do well in school have higher levels of condom and contraception use. Adolescents with a history of sexual or alcohol abuse have been found to have lower levels of condom and contraceptive use.[8]
- Adolescents who have attended a sex education course—specifically one that offers instructions on contraception—report more condom and contraceptive use than do other adolescents.[8]

Adolescents' family environments are also important:

- Adolescents are more likely to use condoms and other hormonal contraceptive methods if they live with two biological/adoptive parents; if their parents have higher levels of education; and if they have higher-quality interactions with their parents.[8]
- Open communication between adolescents and their parents, particularly about sex and birth control, is linked to increased condom and contraceptive use.[8] In fact, almost nine in 10 adolescents say that it would be much easier for adolescents to avoid teen pregnancy if they were able to have more open, honest conversations about sex with their parents.[18] And, just over six in 10 adolescents agree that the primary reason adolescents do not use contraception is fear that their parents will find out that they are sexually active.[19]

Under the Affordable Care Act, women's preventive health care, including contraceptive methods use and counseling, are covered with no cost sharing for new health plans.

Finally, characteristics of adolescents' romantic relationships matter:

- Condom use is common in short-term relationships but tends to decline in longer-term relationships, as adolescents move to hormonal methods, such as the pill.[20]
- A large age difference between sexual partners is linked to decreased contraception and condom use.[21,22]
- Discussing contraception or STD prevention with a sexual partner is associated with increased method use among adolescents.[8]

Barriers to contraceptive use

Condoms are sold at pharmacies and drug stores and are often available at family planning clinics. However, many adolescents feel too embarrassed to buy them or to talk about condom use with their sexual partners.[23] Additionally, many adolescents think that sex without a condom is "not a big deal" or that condoms are only necessary if you have a lot of sexual partners.[23]

Prescription hormonal and highly effective contraceptive methods—such as the pill, the injection, the patch, the ring, and the IUD—require a visit to a health care provider. Adolescents face some unique barriers to receiving these services. While most adolescents had insurance coverage in 2011—either private (through their families) or public (through program such as the State Children's Health Insurance Program or Medicaid)—just over one in 10 did not.[24] Even for adolescents with coverage, however, the necessary co-payments for services may be unaffordable. Concerns about the confidentiality of health care services and uncertainty about the need for parental consent to receive services also limit use. Moreover, adolescents' use of reproductive health care services can be hindered by difficulty in learning about and getting to health care clinics or doctors' offices, as well as discomfort or embarrassment in health care settings.[25]

Resources

The Child Trends DataBank includes brief summaries on well-being indicators, including several that relate to contraceptive and condom use:

- Birth control pill use: http://www.childtrends.org/?indicators=birth-control-pill-use
- Condom use: http://www.childtrends.org/?indicators=condom-use
- Sexually transmitted infections: http://www.childtrends.org/?indicators=sexually-transmitted-infections-stis
- Teen births: http://www.childtrends.org/?indicators=teen-births
- Teen pregnancy: http://www.childtrends.org/?indicators=teen-pregnancy
- Teen abortions: http://www.childtrends.org/?indicators=teen-abortions
- Unintended births: http://www.childtrends.org/?indicators=unintended-births
- Sexually active teens: http://www.childtrends.org/?indicators=sexually-active-teens
- Sexually experienced teens: : http://www.childtrends.org/?indicators=sexually-experienced-teens

The Childs Trends LINKS (Lifecourse Interventions to Nurture Kids Successfully) database summarizes evaluations of out-of-school time programs that work (or not) to enhance children's development. The LINKS Database is user-friendly and directed especially to policy makers, program providers, and funders.

- Programs related to condom use and contraception can be found by selecting the condom use and contraception box under Reproductive Health.
- Evaluations of programs proven to work (or not) in condom use for STD and/or pregnancy prevention, use of contraception, and reducing pregnancies and births are summarized in the fact sheet What works for adolescent reproductive health: Lessons from experimental evaluations of programs and interventions.

Other selected resources:

- Federally-funded Title X family planning clinics offer low-cost contraceptive services for qualifying patients. Adolescents and others can find a Title X-funded clinic near their homes (http://www.hhs.gov/opa/title-x-family-planning/).
- A full list of FDA-approved contraceptive methods, how they work, and their effectiveness (http://www.cdc.gov/reproductivehealth/UnintendedPregnancy/Contraception.htm)
- Helpful information on contraception, sexually transmitted diseases, and reproductive health more generally (http://www.hhs.gov/opa/reproductive-health/).
- More information specifically about condoms and STD prevention (http://www.cdc.gov/condomeffectiveness/docs/Condoms_and_STDS.pdf).
- A series of brochures published by the Centers for Disease Control and Prevention (CDC) that provide facts about various STDs (http://www.cdc.gov/std/healthcomm/the-facts.htm).
- Further information specifically about HIV/AIDS (http://www.cdc.gov/hiv/resources/factsheets/PDF/youth.pdf).

Additionally, under the Affordable Care Act, women's preventive health care, including contraceptive methods use and counseling, are covered with no cost sharing for new health plans. For more information, please see: http://www.hrsa.gov/womensguidelines/.

Acknowledgements

The authors would like to thank Brigitte Vaughn and Lina Guzman at Child Trends for their careful review of and helpful comments on this brief.

Editor: Harriet J. Scarupa

References

[1] Centers for Disease Control and Prevention. (2012). Youth risk behavior surveillance-United States, 2011. *Morbidity and Mortality Weekly Report, 61*(4). Retrieved September 6, 2013, from http://www.cdc.gov/mmwr/pdf/ss/ss6104.pdf

[2] Martinez, G., Copen, C. E., & Abma, J. C. (2011). *Teenagers in the United States: sexual activity, contraceptive use, and childbearing, 2006-2010 National Survey of Family Growth*: National Center for Health Statistics. Vital Health Stat 23(31). Retrieved September 6, 2013, from http://www.cdc.gov/nchs/data/series/sr_23/sr23_031.pdf

[3] United Nations Statistics Division. (2011). *Demographic Yearbook 2009-2010*. New York, NY: United Nations. Retrieved September 6, 2013, from http://unstats.un.org/unsd/demographic/products/dyb/dyb2009-2010.htm

[4] Hatcher, R., Trussell, J., Nelson, A., Cates Jr., W., Policar, M., & Kowal, D. (2011). *Contraceptive Technology.* 20th Rev. ed. New York: Ardent Media, Inc.

[5] The American College of Obstetricians and Gynecologists. (2012). *Committee opinion number 539. Adolescents and long-acting reversible contraception: implants and intrauterine devices*. Retrieved September 6, 2013, from http://www.acog.org/Resources_And_Publications/Committee_Opinions/Committee_on_Adolescent_Health_Care/Adolescents_and_Long-Acting_Reversible_Contraception

[6] Centers for Disease Control and Prevention. (2013). *Condoms and STDs: fact sheet for public health personnel*. Washington, DC: Centers for Disease Control and Prevention. Retrieved September 6, 2013, from http://www.cdc.gov/condomeffectiveness/latex.htm

[7] Centers for Disease Control and Prevention. (2013). *Contraception*. Retrieved September 6, 2013, from http://www.cdc.gov/reproductivehealth/UnintendedPregnancy/Contraception.htm

[8] Kirby, D., & Lepore, G. (2007). *Sexual risk and protective factors: factors affecting teen sexual behavior, pregnancy, childbearing and sexually transmitted disease*. Washington, DC: ETR Associates and The National Campaign to Prevent Teen and Unplanned Pregnancy. Retrieved September 6, 2013, from http://www.thenationalcampaign.org/ea2007/protective_factors_SUM.pdf

[9] Hatcher, R., Trussell, J., Nelson, A., Cates Jr., W., Stewart, F., & Kowal, D. (2009). *Contraceptive technology 19th revised edition.* New York: Ardent Media, Inc.

[10] Darroch, J. E., Frost, J. J., & Singh, S. (2001). Differences in teenage pregnancy rates among five developed countries: the roles of sexual activity and contraceptive use. *Family Planning Perspectives, 33*(6), 244-250.

[11] Centers for Disease Control and Prevention. (2012). *Sexually transmitted disease surveillance 2011*. Atlanta, GA: U.S. Department of Health and Human Services. Retrieved September 6, 2013, from http://www.cdc.gov/std/stats11/Surv2011.pdf

[12] Forhan, S. E., Gottlieb, S. L., Sternberg, M. R., Xu, F., Datta, S. D., McQuillan, G. M., et al. (2009). Prevalence of sexually transmitted infections among female adolescents aged 14 to 19 in the United States. *Pediatrics, 124*(6), 1505-1512.

[13] Manlove, J., Ryan, S., & Franzetta, K. (2004). Contraceptive use and consistency in U.S. teenagers' most recent sexual relationships. *Perspectives on Sexual and Reproductive Health, 36*(6), 265-275.

[14] Office of Population Research and Association of Reproductive Health Professionals. (2013). *The emergency contraception website*. Retrieved September 6, 2013, from http://ec.princeton.edu/emergency-contraception.html

[15] Food and Drug Administration. (June 20, 2013). *FDA approves Plan B One-Step emergency contraceptive for use without a prescription for all women of child-bearing potential*. Retrieved September 6, 2013, from http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm358082.htm

[16] Guttmacher Institute. (2013). *State policies in brief: Emergency contraception*. New York, NY: Guttmacher Institute. Retrieved September 6, 2013, from http://www.guttmacher.org/statecenter/spibs/spib_EC.pdf

[17] Manlove, J., Ikramullah, E., & Terry-Humen, E. (2008). Condom use and consistency among U.S. teen males. *Journal of Adolescent Health, 43*(4), 325.

[18] Albert, B. (2012). *With one voice, 2012: America's adults and teens sound off about teen pregnancy*. Washington, DC: The National Campaign to Prevent Teen and Unplanned Pregnancy. Retrieved April 12, 2013, from http://www.thenationalcampaign.org/resources/pdf/pubs/WOV_2012.pdf

[19] Albert, B. (2010). *With one voice, 2010: America's adults and teens sound off about teen pregnancy*. Washington, DC: The National Campaign to Prevent Teen and Unplanned Pregnancy. Retrieved September 6, 2013, from http://www.thenationalcampaign.org/resources/pdf/pubs/wov_2010.pdf

[20] Noar, S. M., Zimmerman, R. S., & Atwood, K. A. (2004). Safer sex and sexually transmitted infections from a relationship perspective. In J. H. Harvey, A. Wenzel, & S. Sprecher (Eds.), *The handbook of sexuality in close relationships* (pp. 519-544). Mahwah, NJ: Lawrence Erlbaum.

[21] Manlove, J., Ryan, S., & Franzetta, K. (2003). Patterns of contraceptive use within teenagers' first sexual relationships. *Perspectives on Sexual and Reproductive Health, 35*(6), 246-255.

[22] Manlove, J., Welti, K., Barry, M., Peterson, K., Schelar, E., & Wildsmith, E. (2011). Relationship characteristics and contraceptive use among young adults. *Perspectives on Sexual and Reproductive Health, 43*(2), 119-128.

[23] Kaiser Family Foundation. (2003). *Adolescents and young adults: sexual health, knowledge, attitudes and experiences*. Washington DC: Kaiser Family Foundation. Retrieved September 6, 2013, from http://kaiserfamilyfoundation.files.wordpress.com/2013/01/national-survey-of-adolescents-and-young-adults-sexual-health-knowledge-attitudes-and-experiences-summary-of-findings.pdf

[24] U.S. Census Bureau. (2012). *Age and sex composition in the United States: 2011. Table 29.* Retrieved September 6, 2013, from http://www.census.gov/population/age/data/2011comp.html

[25] Oberg, C., Hogan, M., Bertrand, J., & Juve, C. (2002). Health care access, sexually transmitted diseases, and adolescents: identifying barriers and creating solutions. *Current Problems in Pediatric and Adolescent Health Care, 32*(9), 320-339.