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### Dual Use of Condoms With Other Contraceptive Methods Among Adolescents and Young Women in the United States

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#### ABSTRACT

**Purpose:** To estimate the prevalence of and factors associated with dual method use (i.e., condom with hormonal contraception or an intrauterine device) among adolescents and young women in the United States.

**Methods:** We used 2006–2010 National Survey of Family Growth data from 2,093 unmarried females aged 15–24 years and at risk for unintended pregnancy. Using multivariable logistic regression, we estimated adjusted odds ratios (aORs) and 95% confidence intervals (CIs) to assess the associations between dual method use at last sex and sociodemographic, behavioral, reproductive history, and sexual behavior factors.

**Results:** At last sex, 20.7% of adolescents and young women used dual methods, 34.4% used condoms alone, 29.1% used hormonal contraception or an intrauterine device alone, and 15.8% used another method or no method. Factors associated with decreased odds of dual method use versus dual method nonuse included having a previous pregnancy (aOR = .44, 95% CI .27–.69), not having health insurance coverage over the past 12 months (aOR = .41, 95% CI .19–.91), and having sex prior to age 16 (aOR = .49, 95% CI .30–.78).

**Conclusions:** The prevalence of dual method use is low among adolescents and young women. Adolescents and young women who may have a higher risk of pregnancy and sexually transmitted infections (e.g., those with a previous pregnancy) were less likely to use dual methods at last sex. Interventions are needed to increase the correct and consistent use of dual methods among adolescents and young women who may be at greater risk for unintended pregnancy and sexually transmitted infections.

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# Unintended pregnancies and sexually transmitted infections (STIs) have substantial adverse health, social, and economic impacts [1] and have been associated with early sexual initiation and multiple sexual partners [2]. In the United States,

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adolescents and young women have the highest rates of unintended pregnancy and STIs such as gonorrhea and chlamydia [3–6] and U.S. rates of teen pregnancy and births are higher than rates in other developed countries [7]. The correct and consistent use of contraceptive methods is an important approach to the prevention of STIs and unintended pregnancies [8]. However, contraceptive methods vary in their effectiveness in preventing these interrelated problems [9]. Reversible contraceptives that are most effective at preventing pregnancy under typical use, such as intrauterine devices (IUDs) and hormonal contraception

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## IMPLICATIONS AND CONTRIBUTION

The prevalence of dual method among use adolescents and young women in the U.S. is low. Furthermore, adolescents and young women who may have a higher risk of pregnancy and sexually transmitted infections (e.g., those with a previous pregnancy) are less likely to have used dual methods at last sex.

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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(e.g., injectable contraceptives patch, pill, and ring) provide no protection against STIs; male condoms, if used consistently and correctly, reduce the risk for STIs, but provide only moderate protection against unintended pregnancy under typical use [10–12]. Further, inconsistent and incorrect condom use is common, particularly among adolescents and young adults [13]. One way for adolescents and young women to better protect themselves from both STIs and unintended pregnancy is the use of dual contraceptive methods (e.g., use of a condom with an IUD or hormonal method) [14,15]. However, international comparisons of contraceptive behavior have found that dual method use is lower among U.S. teens than among teens from other developed countries (e.g., the Netherlands) [16].

Scant recent national data exist on factors associated with dual contraceptive method use among adolescents and young women. Adolescents and young women tend to have riskier sexual practices and a higher prevalence of inconsistent contraceptive use compared with older women and may, therefore, be at increased risk for unintended pregnancy and STIs. Few studies on this topic include in-depth information on reproductive history and sexual behaviors, and only three previous studies examined factors associated with dual method use as well as other patterns of contraception, including single method use [17–27]. One of the latter three papers solely focused on African-American adolescents in four cities [26], one only examined a limited number of reproductive characteristics [23], and the other only included high school students [27]. The objectives of this analysis were to use the most recently available national data to determine the prevalence of and factors associated with dual method use versus other patterns of contraceptive use, including nonuse of dual methods, use of condoms alone, use of hormonal methods or IUDs alone, and use of another method or no method among U.S. adolescents and young women.

#### Methods

#### Data

Data were from the 2006–2010 National Survey of Family Growth (NSFG). Nationally representative data from the NSFG are obtained using a multistage area probability sample. Trained female interviewers conducted in-home interviews of men and women aged 15-44 years in order to obtain information on topics such as fertility, sexual activity, and contraceptive use. Although much of the NSFG data were collected by computerassisted personal interviewing, in which the questionnaire was stored on a laptop and administered by a trained interviewer, more sensitive data for this analysis were collected using audio computer assisted interviewing (ACASI). ACASI has been shown to improve the reporting of sensitive questions because it allows the respondent to listen to questions through headphones and enter their response directly into the computer, as opposed to answering questions with an interviewer [28,29]. More detailed information on the methods and procedures of the NSFG have been published elsewhere [30].

#### Analytic sample

The analytic sample was restricted to unmarried female adolescents and young women aged 15–24 years who had sex with a male in the past 12 months and who were at risk for unintended pregnancy during the interview month. At risk for

unintended pregnancy was defined as those who were not sterile or who did not have a partner who was sterile for contraceptive or noncontraceptive reasons (n = 67), and who were not currently pregnant or trying to get pregnant (n = 213). Our final sample included 2,093 adolescents and young women.

#### Definition of outcome

Our main outcome of interest was dual contraceptive method use at last sex during the past 12 months, measured using two questions. Respondents were first asked "The last time you had intercourse, did you or he use any method?" Those who answered yes were then asked "Which method or methods did you or he use?" (up to four methods could be listed). Respondents were classified into one of four groups based on their responses to these questions: (1) dual method use (use of an IUD or a hormonal contraceptive method [i.e., pill, vaginal ring, contraceptive patch, implant, injectable] and a male condom); (2) use of a condom alone (i.e., without an IUD or hormonal method); (3) use of an IUD or hormonal method alone; or, (4) use of another method (e.g., withdrawal) or no method. Those using another method and no method were originally examined as separate groups, but results were similar so they were combined into one category for analysis, namely, "another method/no method."

#### Variables of interest

Variables of interest included sociodemographic and behavioral factors, reproductive history, and sexual behaviors. Sociodemographic variables included race/ethnicity (non-Hispanic white, non-Hispanic black, Hispanic, other); age (15–19 years, 20–24 years); education ( $\leq$ 12th grade, high school graduate or GED, some college or college degree); receipt of state or county welfare assistance during the past 12 months (yes or no); insurance coverage during the past 12 months (yes or no); and binge drinking of five or more alcoholic beverages in an hour during the past 12 months (none, several times per year, >1 time per month). Reproductive history and sexual behaviors included relationship status (cohabitating or noncohabitating); age at first sexual intercourse ( $\leq$ 15 years, 16–17 years,  $\geq$ 18 years); number of sexual partners during the past 12 months (1 partner, 2 partners,  $\geq$ 3 partners); previous pregnancy (yes or no); sex with a male during the past 12 months who the respondent thought had other sexual partners (i.e., nonmonogamous male) (yes or no); and treatment or receipt of medication for chlamydia, gonorrhea, herpes, or syphilis during the past 12 months (yes or no). Although most variables were from the computer-assisted personal interviewing portion of the NSFG, the following were ACASI variables: STD treatment, sex with a nonmonogamous male, and binge drinking.

#### Statistical analysis

The Rao-Scott *Chi*-square test was used to determine whether the pattern of contraceptive use differed by each variable of interest. We assessed for multicollinearity between variables that were associated with contraceptive use in multivariable models. We constructed a multivariable logistic regression model that compared dual method use to dual method nonuse (i.e., all other contraceptive groups, combined). Separate multivariable logistic regression models were also run to determine Download English Version:

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