

**Justifications for Sensitive Questions  
in the Self-Administered (ACASI) part of the NSFG**

***All references cited in this attachment are listed at the Supporting Statement Part B.***

**ALPHABETICAL LIST OF ACRONYMS**

ACASI	Audio Computer-Assisted Self Interviewing
BDDD	Birth Defects and Developmental Disabilities
CDC	Centers for Disease Control and Prevention, DHHS
DHAP	Division of HIV/AIDS Prevention (of CDC/NCHHSTP)
DHHS	Department of Health and Human Services
DSTD	Division of STD Prevention (of CDC/NCHHSTP)
NCHHSTP	National Center for HIV/AIDS, Viral Hepatitis, STD, and Tuberculosis Prevention
NCHS	National Center for Health Statistics (of CDC)
NICHD	Eunice Kennedy Shriver National Institute of Child Health and Human Development (of National Institutes of Health, DHHS)
NSFG	National Survey of Family Growth
STD or STI	Sexually Transmitted Disease(s) or Infection(s)

**OVERVIEW**

**This attachment provides detailed information about why topics are included in the NSFG ACASI questionnaire, and explains how the data are used.** Most of these topics have been covered in previous cycles of the NSFG, and this attachment gives particular attention to the justification for questions that are new or refined for the ACASI questionnaire since Year 7 begun in Sept 2017. For further information on the uses and rationale for data collected in the interviewer-administered portion of the NSFG, please see:

- Section 2 in PART A of the main text (“Purpose and Use of Information Collection”)
- Authorizing legislation (Attachments A1-A8)
- Memoranda of support from other government offices (Attachments F1-F14)
- Lists of publications from the 2006-2010 and 2011-2015 NSFG (Attachments E1 and E2)

The questionnaires that have been fielded since September 2017 are largely the same as the ones fielded in 2006-2010 and in 2011-2017. Following some background on the NSFG and brief outlines of the female and male surveys, the remainder of this attachment discusses topics in the ACASI section of the questionnaires, emphasizing their program and policy uses.

**Background of the NSFG and the ACASI Component**

Since its inception in 1973, the mission of the NSFG has been to collect information on pregnancy, childbearing and maternal and reproductive health. In 1973-1995 (Cycles 1-5), the survey interviewed only females, and its focus was primarily on factors related to birth and pregnancy rates, including marriage, divorce, contraception, and infertility. Beginning with the 2002 NSFG (Cycle 6), data were also collected from males to help provide more complete information related to public health concerns about sexually transmitted diseases (STDs), including HIV. Below are brief outlines of the female and male NSFG questionnaires, in order to describe the context in which respondents arrive at the ACASI component (female section J and male section K).

### **Brief Outline of the Female Questionnaire**

- Section A: Background and demographic information, foster care experience
- Section B: Pregnancy history; care of nonbiological children, including adoption
- Section C: Marital and relationship history; first sexual intercourse; recent sexual partners
- Section D: Sterilizing operations and impaired fecundity
- Section E: Contraceptive history, intendedness of pregnancies
- Section F: Family planning and medical services
- Section G: Desires and intentions for future children
- Section H: Infertility services and reproductive health; disability status; cancer experience; HIV testing, HPV vaccine
- Section I: More background including access to health care, more demographic information, & attitude questions
- Section J: ACASI: General health status measures; pregnancy reporting; substance use; STD/HIV-risk behaviors; nonvoluntary intercourse; same-sex sexual experience; sexual identity; income

### **Brief Outline of the Male Questionnaire**

- Section A: Background and demographic information, foster care experience (same as female A)
- Section B: Sex education, vasectomy & infertility, sexual intercourse, enumeration and relationship with up to 3 recent (or last) sexual partners
- Section C: Current wife or cohabiting partner: key dates of marriage, cohabitation, and sex with her; contraception with her; biological and nonbiological children
- Section D: Recent (or last) sexual partner(s) (up to three in last year): similar information collected as in Section C; 1<sup>st</sup> sexual partner ever
- Section E: Former wives and first cohabiting partner: similar information collected as in Section C, except for contraception
- Section F: Other biological and nonbiological children he has had; other pregnancies that did not end in live birth
- Section G: Fathering: Activities with R's children – using 1 focal child he lives with

	and 1 focal child he doesn't live with
Section H:	Desires and intentions for future children
Section I:	Access to health care, receipt of health services; disability status; cancer experience; HIV testing
Section J:	More background, more demographic information, & attitude questions
Section K:	<u>ACASI</u> : General health status measures; pregnancies fathered; substance use; STD/HIV-risk behaviors; nonvoluntary intercourse; same-sex sexual experience; sexual identity; income

The most sensitive questionnaire content of the NSFG is collected using ACASI, which affords respondents greater privacy when answering the questions. The audio component may also help respondents of lower literacy participate more easily in the survey. NSFG respondents have generally liked ACASI -- in part because it gave them control over the interview. ACASI has been found to improve the reporting of sensitive, private, or potentially stigmatizing behaviors such as abortions, substance use, HIV/STD risk behaviors, and same-sex sexual activity (Fu et al., 1998; Hamilton et al., 2010; Mullany et al., 2013; Turner et al. 1998).

The NCHS reports already prepared based on the ACASI data collected since 2002 (Anderson et al., 2005, 2006; Chandra et al., 2011; 2012a, 2012b; 2012c, Mosher et al., 2005), as well as the range of analyses by other researchers thus far with the NSFG ACASI data, provide a strong demonstration of the value and usefulness of the ACASI data. For example, recently, ACASI data have been used to study confidentiality concerns of sexual and reproductive health services among 15-25 year olds (Copen et al, 2016; Leichter et al, 2017); substance use and reproductive service utilization (Hall et al., 2013), the link between sexual coercion and STD experience (Williams et al., 2013), HIV risk behaviors, such as number of sexual partners (Haderxhanaj et al., 2014a), and associations between sexual identity and indicators such as poverty, health care use and military service (Agénor *et al.*, 2017; Badgett et al, 2013; Hoover *et al.*, 2017; Wheldon et al., 2013).

Self-administered questions on oral, anal, and same-gender sexual activity and other sensitive topics have now been answered by over 45,000 respondents—12,571 in 2002 and 22,682 in 2006-2010 and 10,416 in 2011-13 --and have worked very well when administered in this way. The results were reported, and compared with previous national surveys, in several NCHS reports, as well as a book chapter (Chandra et al., 2011, 2012a-c; Copen et al, 2016; Mosher et al., 2005).

## **JUSTIFICATION OF THE NSFG ACASI QUESTIONS, BY TOPIC**

For the most part, the same questions are asked in ACASI for both male and female respondents, and these are described first. Then we provide justification for the questions asked only for males or only for females.

### **Height and Weight**

All respondents are asked in ACASI for their height and weight, which can be used to define body mass index (BMI) or other summary measures. The public use files include BMI constructed only for men aged 20-44 and non-pregnant women aged 20-44, however researchers are able to construct different measures if they choose. Several studies have been published with NSFG height and weight data to document the prevalence of overweight and obesity among women of childbearing age (Vahratian, 2009), as well as the association of BMI with oral contraceptive failure, unintended pregnancy, sexual behavior, and family planning practices (Boehmer et al., 2007; Brunner & Hogue, 2005; Brunner-Huber & Toth, 2007; Callegaria et al., 2014; Kaneshiro et al., 2008a,b; 2012; Vahratian, 2009; Eisenberg, 2010). Questions also ask about weight screening, whether the respondent was told about his or her weight status, and counseling about diet or exercise during a health care visit in the past year.

### **Housing insecurity**

The NSFG ACASI section includes 2 questions on housing insecurity asked of males and females: whether in the past 12 months they did not have a permanent place to stay and had to stay at least overnight in a shelter, car or someplace outdoors; or similarly, with a friend or relative. Homelessness is important in the context of the NSFG because these experiences may be associated with risk-taking behaviors such as substance use or unprotected sex and may indicate individuals in need of greater intervention.

### **School Suspension and Expulsion**

The NSFG ACASI section includes two questions on school suspension and expulsion asked of males and females 15-24 years of age. Suspension or expulsion from school is an adverse experience that may indicate academic and social problems. Unlike some measures of educational attainment, it is a measure appropriate for young people who have not finished school. It is well-documented that school performance and educational attainment have important associations with a host of outcomes measured by the NSFG: age at first sexual intercourse, the likelihood of using contraception (particularly at first intercourse), age at first birth, the occurrence of unwanted pregnancies, the use of reproductive health services, and risk of contracting STIs (Bankole et al., 1999; Brown et al., 2003; Ford et al., 2005; Gibson-Davis et al., 2014; Magnusson *et al.*, 2011; Santelli et al., 2000). Suspension or expulsion may be accompanied by other risk-taking behaviors including substance use among individuals in need of greater intervention.

**Cigarette Smoking:** Tobacco use has been the leading preventable cause of premature death in the United States, accounting for over 400,000 deaths each year (U.S DHHS, 2014). For women, smoking is a risk factor for infertility, PID, cervical cancer, and other health problems (ACOG, 2011), particularly when combined with use of hormonal birth control (Hatcher et al., 2011). Smoking in pregnancy significantly increases the likelihood of low birthweight, miscarriage, and pregnancy complications. In the context of adolescence, tobacco is also considered a “gateway” drug to use of potentially more dangerous, more addictive and illegal

substances (Kandel et al., 2015).

For females (since 2002) and males (since 2015), questions on cigarette smoking are asked in the context of a series on substance use in the ACASI, including a question on age at first cigarette smoking. Respondents are asked if they have ever smoked at least 100 cigarettes in their lifetime, and if so, they are asked their age when they first began smoking fairly regularly, and the number of cigarettes they currently smoke per day on average. Respondents are also asked whether a medical care provider provided them with counseling or support to stop smoking or using other forms of tobacco. Questions about cigarette smoking *during pregnancy* have been in the NSFG's pregnancy history in some form since 1982, and they will continue to be asked for all recent pregnancies (i.e., those within the last 5 years). Data on smoking during pregnancy and smoking among reproductive-aged women using data from prior surveys have been published in several articles and reports (Chandra, 1995; Chandra et al., 2005; Gillum & Sullins, 2008; Melbostad et al 2017; Page et al., 2009).

### **Alcohol and Other Substance Use**

The focus of the series on substance use is frequency of use within the last 12 months, as this has been shown to be most closely correlated with other risk behaviors and adverse outcomes. Respondents are asked about alcohol, including questions on binge drinking. At the request of our funding partners in CDC/BDDD, since 2011, our questions on alcohol consumption have been made more comparable to the CDC's Behavioral Risk Factor Surveillance System (BRFSS), including items focused on drinking during the past 30 days, to allow better measurement of the female population potentially at risk of an alcohol-exposed pregnancy.

All respondents are then asked about use of marijuana, cocaine, crack, crystal meth (methamphetamines), and illegal injected drugs, with a focus on use during the past 12 months. Studies with the NSFG as well as other data sources have illustrated associations between use of alcohol and other substances and behavioral risk for STDs including HIV (Adimora et al., 2011; Anderson et al., 2005, 2006; Bryant-Genevier et al., 2014; Fryer et al., 2007; Lansky et al., 2014; vanGelder et al., 2011; Van Handel *et al.*, 2015).

### **Ages of Sexual Partners for Teen Respondents 15-17 Years of Age (Minors)**

Sexual intercourse between minors and non-minors is of concern to the research and public policy community because of well-documented associations with negative outcomes for the younger participant (Ryan et al, 2008; Manlove et al., 2006; Masho *et al.*, 2017; Volpe et al., 2013). In addition, the Department of Justice and other data consumers are concerned with the prevalence of, and circumstances surrounding statutory rape (with the exact ages and age differences varying from state to state). In order to reliably collect this sensitive information while addressing concerns about the potential reportability of such age differences, the ages of the first sexual partner for female respondents, as well as the ages of any current sexual partners for female and male respondents 15-17 years of age, are asked only in ACASI.

## Nonvoluntary Sexual Intercourse

In addition to knowing at what ages sexual intercourse is initiated, it is important to understand the circumstances surrounding the initiation of sexual intercourse. Starting in 1995, the NSFG has included questions to assess whether first intercourse was nonvoluntary and/or unwanted at the time it occurred. An analogous series was included in the male questionnaire when males began to be interviewed in 2002. Thus this time series has allowed monitoring of the prevalence of nonvoluntary or unwanted first intercourse for females and males. These series have shown that a nontrivial proportion of first sexual experiences are non-voluntary or unwanted. For example, 10% of females and 6% of males aged 18-24 reported their first intercourse was unwanted, according to data from the 2011-2015 NSFG (Key Statistics NSFG, 2016). For females, it remains strongly related to young age at first sex (Martinez et al, 2011; Abma et al., 1998, 2004), and older age of the male partner (Manlove et al., 2006; Moore et al. 1989). Nonvoluntary sexual intercourse increases the risk of adolescent pregnancy and the acquisition of STIs, including HIV (Kirby, 2005; Boyer & Fine, 1992; Stockman et al., 2010; Williams et al., 2014). Women who have experienced nonvoluntary intercourse are also at greater risk of marital dissolution (Bramlett & Mosher, 2002) and unintended first birth (Williams et al., 2009).

A related measure, which augments the information on first intercourse, is whether the respondent has ever been forced to have sexual intercourse by a member of the opposite sex (females and males) or a member of the same sex (males). Given its high prevalence (Child Trends, 2014), it remains important to monitor this basic history of forced intercourse, and to document its associations with subsequent adverse outcomes.

Experts were consulted to help develop these series for the 1995 NSFG and again to make improvements for the 2002 NSFG. In addition to asking whether the first intercourse was voluntary or not (females only), to what degree it was wanted (males and females), and whether the respondent has ever been forced to have intercourse, the series asks for the age at the first forced intercourse and includes items asking about the type of force used, if any. The sensitive nature of these series warrants their placement in ACASI. Preceding the fieldwork for the 2002 NSFG, the NSFG staff obtained legal advice from the CDC Office of General Counsel about these series. To avoid any concerns about the reporting of these events to state authorities, the General Counsel recommended that we limit all of the questions on nonvoluntary sexual intercourse to respondents 18 years and older, and we have done so ever since.

## Sexually Transmitted Disease (STDs)

There are about 20 million new sexually transmitted infections in the United States each year. Prevalence estimates suggest that young people aged 15-24 years acquire half of all new STDs and that 1 in 4 sexually active adolescent females have an STD, such as chlamydia or human papillomavirus (HPV) (Satterwhite et al., 2013). In addition to increasing the risk of HIV

infection and AIDS, the most serious complications of STDs are PID, sterility or impaired fecundity, ectopic pregnancy, blindness, and cancer associated with human papilloma virus (e.g., cervical cancer). STDs are also related to fetal and infant death, birth defects, blindness, and mental retardation in babies born to infected mothers. For new cases of STDs occurring among 15-24 year olds alone in 2000, the total estimated burden was \$6.5 billion (Chesson et al., 2004); the total for all age groups was \$15.6 billion (Owusu-Edusei et al., 2013). The health and economic consequences of STDs continue to be a major concern (Eng & Butler, 1997).

At the request of CDC's STD Division and NICHD, questions were included in the 1988 and 1995 NSFG on whether the woman had ever been told by a doctor that she had gonorrhea, chlamydia, genital herpes, or syphilis. These items have been further refined since then and included in the ACASI section for males and females. Despite the probable under-reporting of STDs in self-reported surveys, reporting of these infections has been found to be significantly associated with a number of important variables measured in the NSFG, including:

- Pelvic inflammatory disease (PID) and infertility (Andersen et al., 2005; Aral et al., 1991; Cates et al., 1990, 1994; Hillis et al., 1997 ; Leichter et al, 2013; Petersen et al., 1991);
- Health screening (Hewitt et al., 2002; Wilcox & Mosher, 1993);
- Testing for HIV and STD (Anderson et al., 2005; Chandra et al, 2012a; Haderxhanaj et al, 2014; Mosher et al., 2005; Jeffries, 2010; Nearn et al, 2009; Tao et al, 2007); and,
- HIV/STD risk behaviors (Anderson et al., 2006; CDC, 2011; Chandra et al, 2011; Chandra et al., 2012b; 2012c; Leichter et al, 2013; Miller et al., 1999; Mosher et al., 2005)

These questions are asked in ACASI to enhance privacy for the respondents. In keeping with the focus in ACASI on behaviors within a recent period, these questions on STDs are generally limited to the last 12 months. For female respondents, a question on testing for chlamydia in the past year is asked in order to track progress towards a national health objective that all sexually active women be tested annually. Chlamydia is often asymptomatic, but linked to reproductive health problems, including PID and infertility (Tao et al., 2007). All respondents, male and female, are asked whether they were treated or received medication for an STD such as gonorrhea, chlamydia, herpes or syphilis in the past 12 months. Then they are asked separate questions about diagnosis in the last 12 months of gonorrhea or chlamydia. Due to the chronic nature of genital herpes, genital warts, and syphilis, all respondents are asked separate questions about ever being diagnosed with these STDs.

### **STD/HIV Risk-related Behavior**

DHHS programs, including the co-sponsors of the NSFG, need timely information on the number and characteristics of people who are potentially exposed to the risk of HIV infection because of their sexual behavior or drug use (Anderson et al., 2006; Chandra et al., 2011, 2012a; 2012b; 2012c; Mosher et al., 2005; The White House Office of National AIDS Policy, 2010; 2015. In 2015, the diagnosed infections attributed to male-male sexual contact (70%) and those attributed to male-female sexual contact (24%) accounted for approximately 94% of diagnosed HIV infections in the United States (CDC, 2015).

**HIV Testing and Risk-related Behavior:** Since the 1988 NSFG, questions on specific sexual and drug-related behaviors that affect the risk of contracting HIV were asked at the request of the NICHD and the CDC's Divisions of STD and HIV Prevention. Questions on HIV testing were included for the first time in the 1990 Telephone Re-interview, and retained in the main interviewer-administered portion of the survey since 1995. These data on HIV testing in relation to HIV risk behavior have been published in several reports (Abma et al., 1997; Anderson et al., 1996, 2000, 2005, 2006; Chandra et al., 2005; Chandra et al., 2011; Chandra et al, 2012a; 2012b; 2012c; Copen et al, 2015; Leichliter & Aral, 2009; Mosher et al., 2005; Mosher & Pratt, 1993; Wilson, 1993). The series of questions on HIV testing include questions on the main reason for never having had an HIV test, as well as a question on the reasons for not obtaining the test result if the respondent reported not receiving the test result after being tested. These questions improve the precision and usefulness of the behavioral risk data, thereby addressing the evolving data needs of the CDC, NCHS, and NICHD. The NSFG also includes questions about whether the respondent reported having a non-monogamous, opposite-sex sexual partner in the last 12 months. Each respondent who answered yes to this question about non-monogamous partners was first asked how many non-monogamous partners they had within the past 12 months, and then, to the best of their knowledge, how many other sexual partners their partners had around the same time as they were having sex with the respondent. These data strengthen the NSFG's ability to obtain a more current measure of HIV and STI risk in the general population, as well as the risk of acquisition and spread of STI due to one's partners' sexual behaviors (Adimora et al., 2007, 2011; 2014; Aholou et al, 2017; Aral & Leichliter, 2010; Darroch et al., 1999; Finer et al., 1999; Leichliter et al., 2010; 2013).

At the request of DSTDP, a question was added beginning in September 2017 to ask female and male respondents about whether they had sex with anyone (male or female) they first met using a dating or "hookup" website or mobile app. The addition of this question was added to replace the question that only asked men if they had sex with other male partners they met online. The purpose of this question is to obtain the overall prevalence of dating via the web in the general population which may be associated with other HIV and STI-related behaviors measured in the ACASI section.

**Oral and Anal Sex:** Previous research, with the NSFG and other data sources (Anderson et al., 2006; Baggaley et al., 2013; Baggaley et al., 2008; Benson et al, 2015; D'Souza et al, 2014; Leichliter et al. 2007; Lindberg et al, 2008), indicates that sexual activity other than vaginal intercourse is an important component of risk for STI, including HIV, among heterosexuals. Since the 2002 NSFG, the survey has included questions in ACASI to monitor the prevalence of oral and anal sex with opposite-sex partners. The relatively high prevalence of these behaviors and their association with STI acquisition suggest that it is important to know not just lifetime prevalence but recent experience.

Sexually transmitted infections can be transmitted through noncoital sexual activity such as oral and anal sex, including gonorrhea, chlamydia, chancroid, human papillomavirus (HPV),



syphilis, and herpes (ACOG, 2013; Baggaley et al, 2013; Cherpes, 2005; Edwards & Carne, 1998; Hawkins, 2001), and some groups may also be at elevated risk of HIV transmission , including men who have sex with men and certain drug users (Brewer et al., 2007; Freeman et al., 2011; German et al, 2015; Rothenberg et al., 1998; Xu et al., 2010).

Given the variability of STI-preventive behaviors (such as condom use) in connection with different sexual behaviors and with different sexual partners, the NSFG includes, upon request from DHAP and DSTDP within CDC, separate questions in ACASI to ask the number of opposite-sex partners in the last 12 months, by type of sexual contact – specifically, the numbers with whom the respondent has engaged in vaginal, oral, or anal sex in the last 12 months.

Educational campaigns in recent years have encouraged teenagers to delay sexual activity, and some concern has been raised that teenagers may be responding to this message by engaging in oral or anal sex, which they may view as a means of retaining their virginity and preventing pregnancy. NSFG data have been used to examine these issues (Brewster & Tillman, 2008; Child Trends, 2005; Halpern-Felsher et al., 2005; Mosher et al., 2005; Remez, 2000; Reese et al., 2013; Sanders & Reinisch, 1999; Schuster et al., 1996). In particular, an NSFG question on the timing of first oral sex relative to first vaginal intercourse for 15-24 year olds helps gauge potential exposure to STIs prior to first sexual intercourse and exposure to the risk of pregnancy (Copen et al., 2012).

### **Sexual Risk Assessment and Other Aspects of Health Care**

At DSTDP request, 2 questions were added in 2013 to assess confidentiality concerns for teenagers and young adults aged 15-25 years, one question which asked all 15-17 year olds and 18-25 on their parents insurance whether they would ever not go for sexual or reproductive health care because their parents might find out and for 15-17 year olds, whether they had time alone with a doctor or other health care provider without a parent or guardian in the room in the past year. Also in ACASI, 4 questions were added (in 2011 for males and in 2013 for females) about specific topics that a doctor or other medical care provider may have asked the respondent about during a visit in the past 12 months:

- sexual orientation or sex of his/her partners
- number of sexual partners
- condom use
- types of sex they have (whether vaginal, oral or anal).

These questions may provide useful information about the provider-patient relationship in terms of information shared regarding risk for unintended pregnancy and HIV/STD.

### **Sexual Attraction and Sexual Orientation/Identity**

Questions on sexual attraction and sexual orientation or identity are placed after all other ACASI questions are asked about specific sexual behaviors. Previous research by Laumann, Michael, and others (1994; see also Bauer & Jairam, 2008; Bauer et al., 2010; Chandra et al., 2011; Chandra et al., 2012c; Gates, 2010; Jeffries, 2011; Lindberg & Jerman, 2016; Mosher et al, 2005; Turner et al., 2005) suggests that sexual orientation, attraction, and behavior are correlated but not perfectly correlated dimensions, and that it is valuable in surveys to collect all three to get accurate measures of sexual behavior and their related risk groups.

- Thus, these questions on sexual attraction and identity are asked, in conjunction with sexual behavior, for several reasons: First, to provide national estimates of populations (15-44 years of age, in prior NSFG years) that are at increased risk of STI (including HIV) (Anderson et al., 2006; Chandra, 2011; Chandra et al., 2012c; Copen et al, 2016).
- Second, they are asked as a correlate or explanatory factor for the sexual behavior data collected in the rest of the questionnaire (Institute of Medicine, 2011; Jeffries, 2007, 2009, 2011; Jeffries & Dodge, 2007; Tao, 2008).
- Third, they are asked to provide data that will help to assess the adequacy of HIV testing, STI testing, health insurance coverage, and other factors (Anderson et al., 2005; Chandra et al., 2005; Chandra et al., 2012a; Copen et al, 2015; Martinez et al., 2006; Mosher et al, 2005,). For example, a number of Healthy People 2020 objectives have been specified for groups based on sexual orientation, and these measures could also respond to some of those data needs.

Detailed reports on sexual behavior, sexual orientation/identity, and sexual attraction, based on the 2002, 2006-2010 and 2011-2013 NSFG have been published (Mosher et al, 2005; Chandra et al., 2011; Chandra et al., 2012c; Copen et al, 2016). At the request of several funding partners inside and outside of CDC, for respondents who had ever had a same-sex sexual experience, the NSFG obtains information about the context of that experience, including how old the respondent was at the first same-sex experience and the type of relationship they had with their first same-sex sexual partner. In addition to providing analogous descriptors for same-sex relationships, these questions provide additional context for same-sex sexual experience that may relate to potential exposure to HIV/STD risk.

## **Income**

Income (expressed as a percentage of the poverty level) is one of the most important socio-economic characteristics collected in the NSFG. It is critical to all co-sponsors of the NSFG, as well as from a policy and program point of view, to be able to classify respondents by their household income level because it relates to a number of behaviors and outcomes measured in the survey. For example, income has been used as a socio-demographic indicator to examine these topics: infertility and infertility service use (Chandra et al., 2013, 2014); women and men's use of reproductive health services (Chabot et al., 2011; Martinez et al., 2013); contraceptive choice (Mosher and Jones, 2010); HIV and other STI risk, testing, and

treatment (Anderson et al., 2005; Chandra et al., 2012a, 2012b; Ford, 2011; Haderxhanaj et al., 2015); patterns of marriage and cohabitation (Bramlett & Mosher, 2002; Goodwin et al., 2010); and fertility and family formation (Chandra et al., 2005; Martinez et al., 2012; Martinez et al., 2006) as well as others. Because of the sensitive nature of the income questions, they have been in ACASI since the 2002 NSFG. Moving the income questions to ACASI in 2002 reduced the level of missing data among female respondents by one-third, indicating greater respondent comfort with this mode. While the questions are asked in ACASI since 2002, the income items are included as part of the main public use files.

Questions on the respondent's own earnings (to complement information on family income) are included, as had been done in most previous cycles. These questions on earnings and income were adapted from the Current Population Survey's series of questions on income and public assistance. Updates have been made in consultation with the National Health Interview Survey to maintain comparability between the NSFG and the NHIS.

### **ACASI Questions Asked Only for Females**

**Pregnancy Reporting:** Under-reporting of abortion has long been a challenge facing fertility surveys such as the NSFG (Fu et al., 1998; Jagannathan, 2001; Jones & Forrest, 1992; Jones & Kost, 2007). In addition, women may be reluctant to report to an interviewer that she placed a child for adoption.

Since 2006-2010, the NSFG has included a series of questions that ask about the respondent's number of pregnancies in a recent period (last 5 years), by each type of pregnancy outcome:

- live birth
- spontaneous pregnancy loss (miscarriage, stillbirth, ectopic pregnancy)
- induced abortion

The series is designed to give each respondent an opportunity, in a non-punitive and private manner, to report other pregnancies she may not have reported to the interviewer, particularly abortions and births that may have been placed for adoption. The choice of a recent timeframe for these questions is intended to a) minimize recall errors, and b) facilitate comparison with annual benchmark data on births and abortions. Lessons learned from earlier cycles of the NSFG, as well as advice from key users of these data, have been incorporated with the expectation of improving reporting of abortions in particular.

**Sexual Activity with Same-Sex (Female) Partners:** While there is less direct risk of STI associated with same-sex activity among women, the NSFG does include questions on sexual activity between female partners. Analyses of 2002 and 2006-2010 NSFG data show that same-sex activity among women is correlated with having multiple male partners (Chandra et al., 2012c; 2011; Mosher et al., 2005). Questions on same-sex activity are asked in order to better characterize same-sex exclusivity as well as experience with male partners, which may impact overall risk of disease and unintended pregnancy. Women are asked whether they have given

or received oral sex with a female partner, or engaged in any other sexual activity with a female.

### **ACASI Questions Asked Only for Males**

**Pregnancies Fathered:** Male respondents are re-asked in ACASI about the total number of pregnancies they have fathered, including those that ended in induced abortion. Each respondent younger than 25 years is also asked if he was ever told that he made a female pregnant and what happened the last time that occurred.

**Significant Life Events:** Male respondents are asked in ACASI about a few key life events that may greatly change a person's social network or environment or may constitute a stressful life event that affects attitudes or behaviors. In addition to housing insecurity (asked of male and female respondents), males are asked about spending time in jail, prison, or detention center (in last 12 months and in lifetime). If he had spent any time in a jail, prison or detention center, he was asked the frequency of incarceration (1 time or more than 1 time) and the length of time in a jail, prison or detention center (the last time).

Also, these questions, along with questions on military service from the main interviewer-administered portion of the survey, will help to provide a rough estimate of the percentage of men who may be missed in a household-based sample of males aged 15-49. In the 2006-2010 NSFG sample, 2% of men reported being homeless in the past 12 months, and 27% of men reported spending time in a jail, prison, or detention center at some point in their lives.

**Sexual Activity, Nonvoluntary Sexual Intercourse, and STD/HIV Risk Behaviors with Males (same-sex partners):** Because of the greater disease risks associated with male-male sexual behavior, and because exclusive male-male sexual activity may influence fertility rates and heterosexual family formation patterns, men are asked in ACASI about same-sex sexual experience in greater detail than are women. Similar to the series about sex with females, men are asked whether they have engaged in oral or anal sex with another male, whether they have engaged in any other sexual experience with a male partner (other than oral or anal sex) and whether they used a condom the last time they had oral or anal sex with a male. These questions were asked separately for insertive and receptive anal sex due to differences the associated disease risk. For men ever reporting a same-sex partner, questions are asked about the most recent partner's age (relative to the respondent) and race/ethnicity

Also similar to the series about sex with females, men are asked whether they had ever experienced nonvoluntary sexual activity with a male and whether various types of force, if any, were used. All men who reported any sexual activity with a male partner are asked their age when this first occurred, the age and race/ethnicity of their most recent male partner and the type of relationship they had with their first male sexual partner.

For men reporting any same-sex activity within the last 12 months, several additional

questions are included at DSTDP request in order to better characterize the HIV/STD risk status of this subgroup of the population. Questions are asked about non-monogamous recent sexual relationships; choosing sexual partners based on HIV status; recent rectal douching; pharyngeal or rectal STD testing in the past year. Several reports have been published on male same-sex sexual activity and related behaviors and health experiences based on the 2002 and 2006-2010 NSFG data (Adimora et al., 2007; Chandra et al., 2011; Haderxhanaj et al., 2014a; 2014b; Jeffries, 2007, 2009, 2010, 2011; Jeffries & Dodge, 2007, McCabe et al., 2011).