Justifications for Sensitive Questions in the National Survey of Family Growth (NSFG)

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

ALPHABETICAL LIST OF ACRONYMS

ACASI	Audio Computer-Assisted Self Interviewing
CASI	Computer-Assisted Self-Interview
CAWI	Computer-Assisted Web Interview
CDC	Centers for Disease Control and Prevention, DHHS
DHP	Division of HIV Prevention (of CDC/NCHHSTP)
DHHS	Department of Health and Human Services
DSTDP	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)
NCIPC	National Center for Injury Prevention and Control
NICHD	Eunice Kennedy Shriver National Institute of Child Health and Human Development (of National Institutes of Health, DHHS

OVERVIEW

This attachment provides justification for the sensitive topics included primarily in the final section of the NSFG questionnaire (female section J and male section K) and explains how the data are used. For those completing the NSFG survey online using computer-assisted web interview (CAWI), there will be no change in mode when they arrive at this final questionnaire section, but for those interviewed in person by an NSFG field interviewer, this final section will be self-administered using computer-assisted self-interview (CASI). Most of these topics have been covered in previous NSFG surveys, and this attachment gives particular attention to the justification for questions that are new or refined in female section J and male section K for data collection beginning in January 2022. For further information on the uses and rationale for data collected in earlier sections of the NSFG, please see:

- Section 2 in Supporting Statement A ("Purpose and Use of Information Collection")
- Authorizing legislation (Attachments A1-A11)
- Memoranda of support from other government offices (Attachments E1-E13)
- Bibliographies of publications using NSFG data

The questionnaires that are to be fielded beginning in January 2024 are relatively unchanged to those used in 2022-2023, and also similar in content to those fielded in 2017-2019, however some topics have been streamlined or restructured to reduce complexity and respondent burden. In addition, due to the use of both face-to-face interviewing and online

surveys in the NSFG data collection, the final section of interview will not involve a mode change for some respondents. Following some background on the NSFG self-administered component and brief outlines of the female and male surveys, the remainder of this attachment discusses sensitive topics included primarily in the final section (female J; male K) of the questionnaires, emphasizing their program and policy uses.

BACKGROUND OF THE NSFG AND THE ACASI (SELF-ADMINISTERED) 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 the proximate determinant of fertility, including sexual activity, contraception, marriage, cohabitation, and infertility. Beginning with the 2002 NSFG (Cycle 6), data were also collected from males to help provide more complete information related to fertility and family formation in the United States, as well as public health concerns related to 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 final section of the questionnaire with more sensitive content (female J and male 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, including information on current same-sex spouse or cohabiting partner; first sexual intercourse with a male; recent male sexual partners (up to 3 in last 12 months)
Section D:	Sterilization and impaired fecundity
Section E:	Contraceptive history and intendedness of pregnancies
Section F:	Family planning and related medical services
Section G:	Desires and intentions for future children
Section H:	Infertility services and reproductive health; disability; cancer experience; HIV testing, HPV vaccine
Section I:	More background including access to health care, demographic information and attitude questions
Section J:	General health status measures; substance use; STD/HIV risk behaviors; nonvoluntary intercourse; same-sex sexual experience; sexual identity; adverse childhood events; income

Brief Outline of the Male Questionnaire

Section A:	Background and demographic information, foster care experience (largely 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 spouse or cohabiting partner: key dates and characteristics for this spouse; if a wife of female cohabiting partner, further information on sexual intercourse, contraceptive use, and current pregnancy
Section D:	Up to 3 female sexual partners in last 12 months (or last female partner ever): similar information collected as in Section C
Section E:	First former wife and first female cohabiting partner: similar information collected as in Section C, except for contraception; series on first female sexual partner ever
Section F:	Biological children he has fathered; nonbiological children he currently parents; any other pregnancies that did not end in live birth
Section G:	Fathering activities – 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; cancer experience; HPV vaccine; infertility services; HIV testing
Section J:	More background, more demographic information and attitude questions
Section K:	General health status measures; substance use; STD/HIV risk behaviors; nonvoluntary intercourse; same-sex sexual experience; sexual identity; adverse childhood events; income

While other NSFG survey content may be seen as sensitive by some respondents, the final section of the survey contains questions that would likely be seen as the most sensitive in the survey. For the respondents who are interviewed in person and for all online mode respondents, this final section is self-administered, which affords respondents greater privacy when answering the questions. The self-administered survey mode, with or without an audio component, 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).

NCHS staff have authored a number of descriptive reports based on the NSFG ACASI data collected from 2002 through 2017-2019 (e.g., Anderson et al., 2005, 2006; Chandra et al., 2011; 2012a, 2012b, 2012c; Heslin et al., 2022; Mosher et al., 2005). These reports, along with the wide range of analyses by NCHS and other researchers thus far with the NSFG ACASI data, provide a strong demonstration of the value and usefulness of these data. For example, ACASI data have been used to study confidentiality concerns of sexual and reproductive health services among 15-25 year olds (Copen et al, 2016; Leichliter et al, 2017); substance use and reproductive service utilization (Hall et al., 2013), the link between sexual coercion and STD experience or other health outcomes (Hawks et al., 2019; 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).

JUSTIFICATION OF SENSITIVE TOPICS, PRIMARILY IN FEMALE J AND MALE K

Unless otherwise indicated, all topics below are covered in the final section of the survey for both male and female respondents, and the same questions are asked for males and females.

Height and Weight

All respondents are asked for their height and weight, which can be used to define body mass index (BMI) or other summary measures. The public-use files released through 2017-2019 NSFG 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, by accessing the original, restricted-use variables in the NCHS Research Data Center (RDC). 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, infertility, and family planning practices (Al-Lamai et al., 2021; 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). Respondents are also asked follow-up questions about health care provider interactions related to their weight.

Housing insecurity

All respondents are asked two questions on housing insecurity: 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. Housing insecurity is important in the context of the NSFG because these experiences may be associated with behaviors that place individuals at risk of unintended pregnancy and sexually transmitted infection, as well as reducing their access to preventive health services.

School Suspension and Expulsion

All respondents aged 15-24 are asked two questions on school suspension and expulsion. 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 high 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 (Brown et al., 2003; Ford et al., 2005; Gibson-Davis et al., 2014; Magnusson et al., 2011; Martinez, et al., 2018; Santelli et al., 2000). Suspension or expulsion may be accompanied by other risk-taking behaviors including substance use.

Jail or Prison Experience

In addition to housing insecurity and school suspension questions asked of both male and female respondents, male respondents are asked about time spent in jail, prison, or detention center (in last 12 months and in lifetime). If he has spent any time in a jail, prison or detention center, he is 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). This information on prison/jail experience is asked of men as a key life event that may greatly change a person's social network or environment or may constitute a stressful life event that affects attitudes or behaviors.

Cigarette Smoking

Tobacco use has been the leading preventable cause of premature death in the United States, accounting for over 480,000 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., 2018). 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 have been asked in the context of a series on substance use, 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. Questions about cigarette smoking *during pregnancy* have been in the NSFG's pregnancy history (female B) for women 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; Hartnett, et al., 2021; Melbostad et al 2017; Page et al., 2009). Beginning in 2024, we include a question on vaping and electronic cigarettes, given the widespread use of e-cigarettes as another vehicle for nicotine delivery and the associations between smoking and reproductive health consequences previously mentioned.

Alcohol and Other Substance Use

The focus of the series on alcohol and other 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.

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. Beginning in 2022, the series includes a question on the use of opioids without a prescription. 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; Paschen et al., 2019; 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 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 others engaged in child protection and public health 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 for respondents who were interviewed in person, 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 the self-administered section for respondents interviewed in person.

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 intercourse is non-voluntary or unwanted. For example, 10% of females and 3.3% of males aged 18-24 reported their first intercourse was unwanted, according to data from the 2017-2019 NSFG (Key Statistics NSFG, 2020) For females, it remains strongly related to young age at first sexual intercourse (Martinez et al, 2011; Abma et al., 1998, 2004), older age of the male partner (Manlove et al., 2006; Moore et al. 1989), and sexual minority status (Liu et al., 2021). 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, Hawks, et al., 2019). 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). According to NSFG data from 2017-2019, 21.2% of women aged 18-49 had ever been forced by a male to have sexual intercourse at some time; 5.1% of males had ever been forced by a female; and 2.1% had ever been forced by a male to have sex at some time (Key Statistics NSFG, 2020) A study that included this measure found that 25% of U.S. women had experienced forced intercourse at some point by age 40-44 (Axinn et al., 2018). Given its relatively high prevalence, it remains important to monitor this basic history of forced intercourse, and to document its associations with subsequent adverse outcomes.

Sexually Transmitted Disease (STDs)

Due to the more common usage in the general population, NSFG questions refer to STDs, but this justification will refer more precisely to sexually transmitted infections (STIs). There are about 20 million new STI cases 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 STI, such as chlamydia or human papillomavirus (HPV) (Satterwhite et al., 2013; Centers for Disease Control and Prevention, 2016). In addition to increasing the risk of HIV infection and AIDS, the most serious complications of STIs are PID, sterility or impaired fecundity, ectopic pregnancy, blindness, and cancer associated with human papilloma virus (e.g., cervical cancer). STIs are also related to fetal and infant death, birth defects, blindness, and mental retardation in babies born to infected mothers. For new cases of STIs 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 nearly $16 billion (CDC, 2016). The health and economic consequences of STDs continue to be a major concern (Eng & Butler, 1997).

At the request of CDC's DSTDP 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 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 ; Leichliter et al, 2013; Petersen et al., 1991);
- Health screening (Hewitt et al., 2002; Wilcox & Mosher, 1993);
- Testing for HIV and STI (Anderson et al., 2005; Chandra et al, 2012a; Haderxhanaj et al, 2014; Mosher et al., 2005; Jeffries, 2010; Nearns et al, 2009; Tao et al, 2007); and,
- HIV/STI risk behaviors (Anderson et al., 2006; Brookmeyer et al., 2019; CDC, 2011; Chandra et al, 2011; Chandra et al., 2012b; 2012c; Leichliter et al, 2013; Miller et al., 1999; Mosher et al., 2005)

In keeping with the focus 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 STIs.

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 through their sexual behavior or drug use (Anderson et al., 2006; Chandra et al., 2011, 2012a; 2012b; 2012c; Leichliter et al., 2019; Mosher et al., 2005; 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 HIV infection 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 NSFG also includes questions about whether the respondent reported having a non-monogamous, opposite-sex sexual partner in the last 12 months. Men who have had sex with men are also asked about nonmonogamous male partners in the last 12 months. 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; Copen et al., 2019; Darroch et al., 1999; Finer et al., 1999; Leichliter et al., 2010; 2013).

At the request of CDC/DSTDP, a question was added in 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 NSFG.

Oral and Anal Sex: Previous research, with the NSFG and other data sources (Abdallah et al., 2020; Anderson et al., 2006; Baggaley et al., 2013; Baggaley et al., 2008; Benson et al, 2015; D'Souza et al, 2014; Kumar et al., 2020; 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 individuals identifying as heterosexual. Since the 2002 NSFG, the survey has included questions 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, including gonorrhea, chlamydia, chancroid, human papillomavirus (HPV), syphilis, and herpes, can be transmitted through noncoital sexual activity such as oral and anal sex (ACOG, 2013; Baggaley et al, 2013; Cherpes, 2005; Edwards & Carne, 1998; Hawkins, 2001). Some groups may also be at elevated risk of HIV transmission, including men who have sex with men and intravenous drug users (Brewer et al., 2007; Brookmeyer et al., 2019; Freeman et al., 2011; German et al, 2015; Rothenberg et al., 1998; Xu et al., 2010).

Given the variability of STI risk and STI-preventive behaviors (such as condom use) in connection with different sexual behaviors and with different sexual partners, the NSFG includes, upon request from CDC's DHP and DSTDP, separate questions 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.

In response to educational campaigns that encourage teenagers to delay sexual activity, some young people engage in oral or anal sex, which they may view as a means of retaining their virginity or 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 their exposure to the risk of pregnancy through vaginal intercourse (Copen et al., 2012).

Sexual Risk Assessment and Other Aspects of Health Care

At CDC/DSTDP request, two questions were added in 2013 to assess confidentiality concerns for teenagers and young adults aged 15-25 years. One question 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. The second asked 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, four 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 biases and possible discrimination (Perez et al., 2021), as well as information shared regarding risk for unintended pregnancy and HIV/STD (Copen 2018).

Sexual Attraction and Sexual Orientation/Identity

Questions on sexual attraction and sexual orientation or identity are placed after all other female J/male K questions 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; Porsch et al., 2019; Silva, 2022; 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 identity and behavior in the general population. 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 15-49 years of age (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, Paschen-Wolff et al., 2019).
- Second, they are asked as a correlate or explanatory factor for the sexual and reproductive health behavior data collected in the rest of the questionnaire (Agénor et al., 2021; Institute of Medicine, 2011; Jeffries, 2007, 2009, 2011; Jeffries & Dodge, 2007; Kumnick et al., 2022; Tao, 2008).
- Third, they are asked to provide data that will help to assess the adequacy of HIV testing, STI testing and treatment, HPV vaccination, health insurance coverage, reproductive health care counseling, and other factors (Agénor et al., 2019; Anderson et al., 2005; Chandra et al., 2005; Chandra et al., 2012a; Copen et al, 2015; Everett et al., 2019; Heslin et al., 2022; Martinez et al., 2006; Mosher et al, 2005; Porsch et al., 2019; Reich et al., 2020). 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).

Same-Sex Sexual Activity

For Male Respondents: All male respondents are asked about their sexual experience with male partners. Because of the greater risk of STIs associated with male-male sexual behavior, men are asked about same-sex sexual behavior in greater detail than are women. Similar to the series asked of men in section K 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 are asked separately for insertive and receptive anal sex due to differences in the associated disease risk. For men reporting ever having a male sexual partner, questions are asked about the most recent partner's age (relative to the respondent) and their race/ethnicity. Men are also asked their age at first sex ever with a male partner, the partner's age, and the type of relationship they had with this partner at first sex.

Also similar to the series asked of men in section K about sex with females, adult men (18-49) are asked to what degree their first sex with a male partner was wanted, and whether they had ever experienced forced sexual activity with a male. Those who reported ever being forced by a male are asked whether various types of force were used, similar to the questions asked if ever forced by a female.

For men reporting any male sexual partners within the last 12 months, several additional questions are asked to better characterize the HIV/STD risk 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; and 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 NSFG data since 2002 (Adimora et al., 2007; Chandra et al., 2011; Haderxhanaj et al., 2014a; 2014b; Jeffries, 2007, 2009, 2010, 2011; Jeffries & Dodge, 2007, Leichliter et al., 2019; McCabe et al., 2011).

For Female Respondents: While there is less direct risk of STI associated with same-sex sexual 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 relationship experience 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.

They are also asked questions about their first female sexual partner, including age and the type of relationship they had at time of first sex.

Same-Sex Sexual Relationships

As noted in **Section 2** of Supporting Statement A, we have revised the entire male and female instrument for 2022 to be more inclusive of same-sex spouses and cohabiting partners, particularly those with whom the respondent currently lives and may be raising children. Furthermore, for all respondents who have ever had same-sex sexual experience, starting in 2022 the NSFG will obtain additional information in the last section of the survey (female J; male K) beyond what is described above for **same-sex sexual activity**. Men and women with same-sex sexual experience will be asked about marriage and cohabitation with same-sex partners, as well as their legal marital status with respect to same-sex spouses. In addition to providing analogous descriptors for same-sex relationships as obtained for opposite-sex relationships that can be used for analyses of fertility and family formation, these questions provide additional context for same-sex sexual experience that may relate to potential exposure to HIV/STD risk.

Adverse Childhood Events, Suicide Ideation, and Positive Childhood Experience

At the request of the Division of Violence Prevention within CDC's NCIPC, all respondents starting in 2022 will answer a series of questions on adverse childhood experiences (ACEs), positive childhood experiences that may mitigate the effect of ACEs, and one question on suicide ideation. It is a strategic priority for NCIPC to better understand late adolescent and adult respondent's experiences of adverse childhood experiences (ACEs) and their connection to a host of important reproductive and physical, mental, and behavioral health outcomes (including the newly added suicide ideation and prescription opioid misuse questions). One of NCIPC's strategic goals with respect to ACEs is to improve nationally representative surveillance of ACEs, particularly among late adolescents and adults. Currently, states that have implemented the ACEs module in the Behavioral Risk Factor Surveillance Surveys (BRFSS) represent the only national-level source of ACEs data among adults, and the National Survey of Children's Health provides parent reports of children's experiences of some, but not all, ACEs. Asking ACEs questions within the NSFG will improve surveillance among late adolescents and adults of reproductive age, as well as permit examination of the association between ACEs and a number of later-life outcomes of interest, including those that are cross-cutting strategic priorities for NCIPC (i.e., suicide ideation, substance misuse).

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; Martinez, et al., 2019); contraceptive non-use and contraceptive choice (Mosher and Jones, 2010; Mosher et al., 2015; Daniels, et al 2015); 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; Nugent and Daugherty 2018); and fertility and family formation (Chandra et al., 2005; Martinez et al., 2012; Martinez et al., 2006, 2018; Martinez et al., 2023) as well as others. Because of the sensitive nature of the income questions, they have been in the self-administered final section 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.

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.