

Supporting Statement B for Request for Clearance:

NATIONAL SURVEY OF FAMILY GROWTH

OMB No. 0920-0314
(expires May 31, 2018)

April 11, 2018

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SECTION B

Collection of Information Employing Statistical Methods

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(The reference list includes all references cited throughout the NSFG OMB submission, with the exception of Attachment O, which includes a separate reference list.)

List of Attachments (abridged from full listing shown in SS A):

- A. Authorizing Legislation
- B. 60-Day Federal Register Notice and Public Comments
- C. Justifications for Sensitive Questions in the Self-administered (ACASI) part of the Survey
- D. A Review of the Use of Incentives in the NSFG
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- F. Memoranda from other offices and agencies
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- H. Respondent Materials for the NSFG
- I. NSFG Household Screener Questionnaire
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- L. Verification Questionnaires
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- O. Non-Response Bias Analyses for the continuous NSFG
- P. Split Study Preliminary Results

NOTE: The sample design used beginning in 2015 is similar in most respects to the sample design of the 2006-2010 and 2011-2015 surveys. A description of the sample design details for fieldwork from 2011 to 2015 are contained in two sets of web-based documents, one for each of two fieldwork periods and data file releases: 2011-2013 and 2013-2015

(https://www.cdc.gov/nchs/data/nsfg/nsfg_2011_2013_sampledesign.pdf and https://www.cdc.gov/nchs/data/nsfg/NSFG_2013-2015_Sample_Design_Documentation.pdf)

Selected aspects of the design and statistical outcomes are available for the four-year period 2011-2015 as well, on the webpages for the 2013-2015 NSFG.

(https://www.cdc.gov/nchs/nsfg/nsfg_2013_2015_puf.htm, "2011-2015 Data Collection

Summary”

Further details on the sample design that were carried forward to the NSFG for 2011 and beyond are contained in 2 reports on the 2006-2010 NSFG (Lepkowski et al., 2010; Lepkowski et al., 2013).

1. Respondent Universe and Sampling Methods

Summary: The National Survey of Family Growth (NSFG) is based on a national area probability sample. The first stage involves the selection of Primary Sampling Units (PSUs). To control costs, a smaller number of PSUs is selected for inclusion than was the case during periodic interviewing (last conducted in 2002). Across the 8 years of data collection planned (2011-2019), there are a total of 21 “self-representing” (SR) PSUs, defined as PSUs that were automatically included in national probability samples due to their large population, and an additional 192 non-self-representing (NSR) PSUs, defined as PSUs selected into the NSFG sample that represent not only themselves but other non-self-representing PSUs, for a total of 213 PSUs, plus 2 for Alaska and Hawaii. A subset of these 215 PSUs is selected for each 2-year sampling period (35 are selected each year). For example, for the 2-year period 2013-2015, there are 65 PSUs: 17 SR and 48 NSR PSUs.

Each year, about 15,000 households are contacted, in order to yield approximately 5,000 interviews annually. Each year of data is an independent national sample, but the desired sample size and precision for several key estimates and statistics are attained after about 4 years of interviewing (Sept 2011-Sept 2015 already completed; Sept 2015-Sept 2019 underway). In addition, despite each year of fieldwork being designed to yield nationally representative data, sample weights are only constructed for 2 years of data, which is the minimum timespan for NSFG public use file releases that permit statistically reliable estimates to be made.

Target Population: Since September 2015, the target population of the National Survey of Family Growth has been the household population 15-49 years of age. The NSFG sample excludes current residents of military bases and institutions (e.g., long-term hospitals, jails, prisons). College students temporarily away from their homes at college are included by sampling them at their home address; they can be interviewed either at home or at college.

Details of the NSFG Sample Design: The sample is selected in 5 stages:

- (1) The first stage involves selection of Primary Sampling Units (Metropolitan Statistical Areas (MSAs), counties, or groups of adjacent counties) from the 2,149 PSUs on the sampling frame comprised of the 50 United States plus the District of Columbia. PSUs are stratified according to attributes such as Census Division, MSA status, and size, then one or two PSUs are selected from each stratum with the probability of selection proportionate to population size (PPS) —that is, PSUs with large populations have a larger chance of selection than PSUs with smaller populations. The PSUs with the largest populations have a probability of selection equal to 1.0, and are included every year. For more information on this stage of sample design, see National Center for Health Statistics, 2017.
- (2) The second stage involves selection of Secondary Sampling Units (SSUs or segments) within PSUs. These are composed of one or more Census blocks with a minimum measure of size equal to 50 housing units (HUs). SSUs in domains with higher proportions of black and Hispanic persons have relatively higher combined PSU, SSU, and HU selection rates. These weighted measures of size and sampling rates are set such that interviews with black and Hispanic respondents each constitute about 20% of all interviews. Each PSU is assigned one or two University of Michigan’s Institute for Social Research (ISR) interviewers based on its relative size. For each interviewer, 12 SSUs are selected each year with the PPS method. These SSUs are then randomly divided into 4 groups, with one group of 3 SSUs assigned to each calendar quarter.
- (3) Selection of households: For the third stage of selection, interviewers update commercially-available lists (based on the U.S. Postal Service’s Delivery Sequence File (DSF)) of housing units for SSUs where these lists are available or, alternatively, create such a list from scratch where they are not available. Once these lists are updated, a sample of housing units is selected systematically from geographically-sorted lists of housing units, beginning from a random start. Beginning in Quarter 13 (2013), a sample design change was implemented with the goal of increasing the percentage of screened

households that contain an eligible person. This was accomplished by stratifying housing units based on a prediction of whether the unit contained an eligible person. The model was selected and estimated using data from previous quarters where the binary eligibility outcome was measured. Key predictors in this model included commercial data that estimate whether an eligible person is in the household. The predicted probability of there being an eligible person in the household was used to create strata and then oversample the stratum or strata with higher expected eligibility (see [methodology document p.17] for a description of sampling rate adjustment factors within each stratum). As has been done since 2006, after an advance letter is sent to each selected household informing them about the study (**Attachment H1**), the selected units are then contacted by ISR interviewers to determine if any members of the household are eligible (persons age 15-49 at the time of the screening interview). A full household roster is obtained during the screening interview to identify eligible household members.

- (4) Selection of individuals: In households with eligible persons, a fourth stage of selection involves selecting one of the eligible persons. The within-household selection rates are set so that about 20% of all interviews are with teens aged 15-19 and 55% of all interviews are with females. These rates are programmed into an algorithm in the computerized screener instrument, which operates to select a respondent after all household members' information has been collected. The identity of the selected respondent is filled into the screener script so the interviewer can ask about his/her availability. Respondents who agree to complete the main NSFG interview are given a \$40 cash token of appreciation.
- (5) Selection of "nonresponders" for Phase 2: As was done in the NSFG for 2006-2010 and 2011-2015, NSFG continues to use a two-phase sampling approach as a fifth stage of selection. Each quarter, during week 10, a subsample of active, non-responding cases (among both households that have not completed a screener and individuals who have not completed a main interview) is selected for continued follow-up. In weeks 11 and 12, this subsample receives a special mailed advance incentive (\$5 if a household screener and \$40 if a main study respondent) and the interviewers focus their effort on

the fewer cases left in the subsample. These advance incentives are in addition to the \$40 given to respondents in person when agreeing to complete the main interview.

The *rotating* feature of the PSUs permits a cost efficiency of ongoing sampling and data collection operations by using the field interviewing staff and funding in an optimal manner. It further offers at any single year a full national sample for the study, albeit with standard errors of estimates larger than those of the 2- or 4-year cumulative sample.

Group quarters with special living arrangements, such as dormitories, institutions, convents, or institutional group homes (for convicts, the frail elderly, or the developmentally disabled) may be listed but will not be selected for interviewing, because they are outside the scope of a sample of the household population. Dormitory residents who otherwise live with their parents will be sampled at their parents' homes. Members of the active duty military who live in civilian housing (not on military bases) will be eligible for the sample. The NSFG is a personal, in-home survey. Non- face-to-face contacts, including by telephone, e-mail or text, are permitted only to arrange appointments for interviews after the screener has been conducted, and telephone mode is permitted for verification interviews (**Attachment L**) to ensure that the household was screened and, if applicable, the selected household member completed an interview.

2. Procedures for the Collection of Information

The sample size targets for the NSFG are as follows:

**Sample Size Targets for NSFG Continuous Interviewing 2011-2019
with 2002 (Cycle 6) and 2006-10 sample sizes shown for comparison**

	<u>Cycle 6</u>	<u>4-year Continuous</u>	<u>4-year Continuous</u>	<u>4-year Continuous</u>
	<u>2002</u>	<u>2006-2010</u>	<u>2011-2015</u>	<u>2015-2019*</u>
TOTAL	12,571	22,682	20,621	20,000
15-19	2,271	4,662	4,134	4,000
20-49**	10,300	18,020	16,487	16,000
Male	4,928	10,403	9,321	9,000
Female	7,643	12,279	11,300	11,000
Hispanic	2,712	5,132	4,753	4,000
Black	2,460	4,389	4,260	4,000
White & other	7,399	13,161	11,608	12,000

*Subject to change based on available funding and fieldwork conditions

**The NSFG age range was expanded to 15-49 beginning in September 2015.

The current contractor for the NSFG is the University of Michigan's Institute for Social Research (ISR; Mick Couper, Project Director, and Heidi Guyer, Field Director). Under the supervision and monitoring of NCHS, ISR recruits and trains the interviewers for the NSFG and carries out the fieldwork. The main steps in the fieldwork are described below.

Main steps in NSFG fieldwork: All advance letters, informed consent/assent forms, and informational materials used with NSFG households and respondents are shown in **Attachments H1-H7**. For the advance letters shown in attachments H1 and H2, separate versions are used for Phase 1 and Phase 2 of each fieldwork quarter. As described above, the 1st 10 weeks of each 12-week fieldwork quarter involve full effort on all sample lines selected for the survey, while the last 2 weeks (weeks 11-12) involve more focused effort on a subsample of the households and respondents who did not respond during phase 1. In Phase 1, the only cash incentive is \$40 given to respondents in person after they agree to participate in the main interview. In Phase 2, an advance \$5 incentive is mailed to selected households

who have not yet completed the household screener, and an advance \$40 is mailed to selected individuals who have not yet completed the main interview. This \$40 is in addition to the \$40 she or he will be given in person when agreeing to the main interview. Only adults 18-49 can be selected for Phase 2. Apart from this difference in incentive structure for Phases 1 and 2, there are no other differences in the process of contacting NSFG households and respondents and gaining cooperation.

- (1) Before contacting any sampled households, the contractor sends an advance household letter signed by the NCHS Director (**Attachment H1**) and an informational question-and-answer brochure (**Attachment H4**) to each sampled household. These materials, in English and Spanish, explain who is sponsoring the NSFG, who is conducting the interviews, why the survey is being done, and the voluntary and confidential nature of the survey. NCHS staff and NSFG-trained personnel at the University of Michigan are available by phone through 800 numbers to answer any questions householders who receive the advance materials may have. In addition to the respondent Q&A brochure shown in **Attachment H4**, the interviewer has other materials to help explain the survey and gain cooperation:
 - NCHS Confidentiality Brochure (**Attachment H5**) to explain the laws and other procedures in place to protect confidentiality of all NSFG households and respondents
 - NSFG Family Fact Sheet (**Attachment H6**) to illustrate selected uses of the survey data, and reiterate that data are in aggregate form for statistical purposes only
 - Interviewer's Letter of Authorization (**Attachment H7**), which along with the interviewer's official University of Michigan badge, helps establish the legitimacy of her purpose in approaching the selected household or respondent.
- (2) Approximately 1 week after the advance materials are mailed, interviewers go to the sampled households. When the housing unit is found to be occupied and there is a person (18 or older) at home, the screener interview (**Attachment I**) is conducted. The purpose of the screener is to enumerate/list the persons living in the household and

their ages, and if one or more are 15-49 years of age, to select one. Age, race, and Hispanic origin are collected in the screener because teenagers, Blacks, and Hispanics are selected at somewhat higher rates than other persons. Advance respondent letters (**Attachment H2**) are shared in person with the selected respondent prior to seeking their consent for the main interview.

- (3) **Attachment H3** shows all consent and assent forms used for the NSFG, regardless of the phase of the fieldwork quarter.

When a person 18-49 years of age is selected for the main interview:

The interviewer gives the selected person an Adult Consent Form. No signature is requested or required to provide their consent, however a signature is requested on the receipt for the \$40 cash incentive offered to the respondent.

When a minor 15-17 years of age is selected from the main interview:

The interviewer first seeks signed parental consent before approaching the teenager to introduce the survey. In selected states in the U.S. (3 as of this writing), the age of majority differs from age 18, and NSFG follows these state rules for use of the parental consent process. The parental consent form is used to explain the survey to the minor's mother, father, or legal guardian, and ask for their signed/written consent. If the parent gives written consent, only then does the interviewer speak to the minor and obtain his or her written assent, using the "Minor Assent" form, before proceeding with the main interview. If either the parent does not give written consent for the minor to participate, or the minor does not assent to be interviewed, the case is treated as a refusal.

Emancipated minors - 15-17 year-olds who are married, cohabiting, or living away from their parents for other reasons are rare in a sample of this size. Emancipated minors have been excluded from the continuous NSFG because the number of emancipated minors selected for the NSFG is so small that excluding this group is unlikely to have any noticeable impact on estimates. Using current IRB rules, however, including them would require special procedures that are too complex and too costly for the NSFG.

- (4) Once the respondent agrees to be interviewed, the interviewer gives him or her \$40

cash incentive as a token of appreciation. The respondent can keep this incentive even if he or she does not finish the interview. (Break-offs are rare in this survey—less than 1 percent.) As noted above, the respondent is asked to sign a receipt to acknowledge this payment.

- (5) Then the interview is conducted using the female or male questionnaires shown in **Attachments J and K**, using a laptop computer. The interview is divided into two parts, totaling 80 minutes on average for females and 60 minutes on average for males. The interviewer administers the first part of the interview, which typically comprises 2/3 to ¾ of the overall interview length. This use of the computer-assisted personal interviewing (CAPI), since 1995 NSFG, makes the interviewer's job easier and reduces interviewer errors because she does not need to determine question wording or routing herself by reading a paper questionnaire. In addition to producing higher quality interview data, the use of CAPI also helps to protect respondent confidentiality because the laptop screen can be blanked with a single key stroke or the laptop cover can be closed if another person enters the area where the interview is being collected.
- (6) Finally, at the end of the interviewer-administered interview, the interviewer gives the respondent a set of headphones and the computer, and shows the respondent how to make simple entries on the computer. The respondent then completes a 15-20 minute ACASI section (female section J in **Attachment J**, and male section K in **Attachment K**). The interviewer cannot see or hear what questions the respondent is being asked over the headphones, nor can she see or hear the answers that the respondent enters into the computer. Moreover, no one in the household can hear or see either the questions or the answers. This increased privacy has been found to increase the reporting of sensitive behaviors.

While the respondent is filling out the ACASI part of the interview, the interviewer completes the Interview Observation Form (**Attachment M**). This formalizes the field notes that have been collected in less structured form since the 1973 NSFG, on the location where the interview was done, documenting whether there were interruptions during the interview, and the interviewer's assessment of the quality of

the data. (The Interview Observation Form is filled out only by the interviewer; no questions are asked of the respondent; therefore, there isn't any public respondent burden related to this activity.)

- (7) At the end of the ACASI section, the respondent "locks" the computer and returns it to the interviewer. The interviewer then turns off the computer, thanks the respondent, and leaves. Once the respondent locks the interview, the interviewer cannot back up and see the respondent's answers to the ACASI portion, nor any answers to the questions that came before ACASI.

Quality control: Computer-assisted interviewing (both CAPI and ACASI) improves data quality in several ways:

- (a) Interviewer errors are reduced because interviewers do not have to follow complex routing instructions; the computer does it for them. Interviewer errors in following skip patterns were a principal cause of missing data in paper and pencil interviewing.
- (b) Respondent errors are also reduced with CAPI interviewing. The NSFG contract requires that selected consistency checks be programmed into the questionnaire so that inconsistent answers can be corrected or explained while the interview is still in progress. We continue to work on identifying and resolving logical inconsistencies earlier and more efficiently than in the past, to improve data quality and expedite data release.
- (c) Coding and coding errors are also reduced using CAPI interviewing, and this makes it possible to prepare the data for analysis faster and more accurately. In Continuous Interviewing, earlier cases (e.g., year 1) are being used to discover and correct errors before they affect later cases (e.g., year 2).
- (d) The "Verification" interview is a quality control procedure in which a random sample of 10% of both screened households and interviewed respondents are contacted (usually by telephone) after the interview to verify that the interview was conducted. Verification of households confirms there was no one in the household 15-49 years of age; verification of respondents confirms that the person was interviewed and all procedures (signed a consent form (if applicable), token of appreciation received,

entered responses his- or herself in ACASI) were followed. **(Attachment L)**

(e) Editing -- Completed interviews and associated comments entered by interviewers (called F2s because the interviewer uses the F2 function key) are reviewed by Contractor staff. Discrepancies in the data or F2 comments about data issues are shared with NCHS staff to determine the proper course of action. If the case warrants changing, editing of the data is performed by the Contractor. NCHS also performs regular and thorough checks of the quality of monthly data files, as it has in past NSFG survey years.

(f) Imputation -- Approximately 600 of the most frequently used and central variables (called "Recodes") are imputed when they have missing values because the respondent refused to answer, did not know the answer, or otherwise did not give a valid response. Income had the largest percentage of missing data, with 9.6% of cases with missing values. For no other recodes did the percent of values imputed exceed 2% of all cases. For information on the imputation procedure used by the NSFG since 2002, see Lepkowski et al., 2006 and Lepkowski et al., 2013).

Two basic types of imputation were used for these variables (out of about 6,000 variables on the data file):

- regression model-based imputation (used for most variables)
- logical imputation (for a few variables with only a handful of missing cases).

The large majority of imputations is being done by multiple regression imputation using the University of Michigan's Imputation and Variance Estimation software, which is called "IVEWARE." As in previous cycles, the public use data files have imputation "flags"—variables that show that a value was imputed--so that data users can assess for themselves whether imputation affects the estimates. Imputation rarely affects estimates in the NSFG because, as noted above, the levels of missing data are generally very low.

(g) Estimation -- Estimation refers to the process of producing weighted numbers and percentages for the population from sample data. For each case, a weight is generated which estimates the number of persons in the population that each sampled person represents. For example, if a woman represents 5,000 women in the US household

population, her sample weight is 5,000. The weight for each respondent is created in 4 basic steps:

- inflation by the reciprocal of the probability of selection,
- adjustment for sampling nonresponse based on the probability of completing a screener and the probability that a completed screener results in a completed interview
- post-stratification to independent control totals within age, race/Hispanic origin, and sex categories, provided by the Census Bureau, and
- trimming of a small number of extreme weights.

Probabilities of selection vary because black, Hispanic, and teenage respondents are slightly oversampled, and because selected respondents who have not completed a main interview are sub-sampled for Phase 2 of data collection). Adjustments for non-response are made by multivariate (logistic regression) methods. The main interviewing unit nonresponse adjustment is conditional on having completed a screener interview. These estimated screener and main response propensities were used to create nonresponse weighting adjustments. For more information, see National Center for Health Statistics, 2017, pp. 29-33. Post-stratification to control totals is done within cells defined by race and Hispanic origin, age, and sex.

Variances are estimated using a Taylor Series linearization approach similar to that used in the 2002 and 2006-2010 NSFGs, as described by Lepkowski et al., 2013. Codes were generated that allow data users to compute variances using Taylor Series linearization, Balanced Half-Sample Replication, or Jackknife replication methods (Lepkowski et al., 2010; Rust, 1985). A similar procedure continues to be used to produce the data files for 2017 onward.

3. Methods to Maximize Response Rates and Deal with Non-response

In the most recent four years of NSFG fieldwork for which public use data have been released (September 2011 through September 2015), 20,621 interviews have been collected from a national sample of individuals aged 15-44 – 9,321 males and 11,300 females. The overall response rate for this survey period was 71%, 70% for males and 72% for females. This reflects a longer-term pattern of declining response rates, as also experienced by all household-based surveys conducted in the public and private sectors.

As discussed throughout these supporting statements, several strategies have been put in place to maximize response rates and avert refusals – including detailed advance letters and informational materials, a user-friendly webpage, highly trained interviewers, toll-free numbers at both the University of Michigan and at NCHS, and active survey management (also known as “responsive design”). Responsive survey design uses daily paradata, which is data about the fieldwork, to allocate interviewer effort most cost-effectively. Our principal guidance in dealing with non-response is our experience in the 2002, 2006-2010, and 2011-2015 NSFGs, which has been documented in a number of published reports (Groves et al., 2005; Groves and Heeringa, 2006; Groves et al., 2009; Lepkowski et al., 2010; Lepkowski et al., 2013; National Center for Health Statistics, 2016, 2017).

Procedures are listed separately for non-contacts, and for refusals. For non-contacts, the following procedures are used:

- (a) interviewers, when listing or confirming housing units within sample segments, document units that have access impediments (e.g., locked apartment buildings, or security guards at a community entrance gate). Interviewers will schedule calls on such cases earlier in the field period than others,
- (b) observations are made by the interviewer regarding best times to reach the sampled household, and
- (c) multiple calls are made to the sampled household, at different times of the day and different days of the week.

For refusals, interviewers are trained to avert refusals by understanding and learning to respond specifically to the concerns that potential respondents may express. Interviewers are

in ongoing contact with their supervisors, allowing interviewers to seek guidance on individual problems they encounter. Throughout this process, interviewers are explicitly instructed to treat the sample person's concerns as legitimate questions that deserve thoughtful answers. In some cases, letters addressing specific respondent concerns are mailed to an individual's household with the intent of allaying these concerns. The NSFG approach is to answer respondents' questions and to respect the decisions they ultimately make about participating in the survey. Emphatic or "hard" refusals are accepted as final.

Guidance to interviewers in the continuous interviewing design is based on the research and experience cited above, and on extensive paradata collected and recorded by interviewers and other field staff. These data are summarized using logistic regression equations into a total propensity to respond for an entire segment. These data (and case-specific observations entered into the contractor's sample management system) can be used to guide further actions on individual cases (Lepkowski et al, 2013).

Incentives: Over the past several decades, the challenges facing household based surveys have only grown, and even with the good survey practices described above, NSFG is unlikely to attain an 80% response rate, particularly within our budget constraints. Incentives have been approved for use with the NSFG since 1995, and the current incentive structure has been in place since the transition to continuous fieldwork in 2006. **Attachment D** provides a summary of incentive use and related experiments conducted since the 1995 (Cycle 5) NSFG. In brief, previous research (Singer E, 2002; Kulka R, 2002; Groves RM, Couper MP, Presser S, et al.; 2006; Davern M, Rockwood TH, Sherrod R, and Campbell S, 2003) suggests that, for long, sensitive, in-person surveys, incentives do help raise response rates and help to control fieldwork costs when standard good survey practice is not enough.

The 2-phase fieldwork and incentive structure used by NSFG since 2006 has also proven to be generally cost-effective and efficient in helping to slow the pace of overall response rate declines over the past decade, as well as increasing the participation from higher-income, married, or college-educated respondents. However, in recent years, the efficiency of the Phase 1 protocol used in the 1st 10 weeks of each fieldwork quarter has diminished. Despite the consistency of Phase 2 response rates, the higher incentives and focused fieldwork effort of

Phase 2 have been unable to compensate for the declining Phase 1 response rates. One response to this survey management challenge, described further in **Attachment D**, was an experiment testing a higher incentive amount in Phase 1 - \$60 instead of \$40. However, this experiment did not show evidence that the increased incentive led to significantly increased overall response rates or decreased nonresponse bias. Thus, there was not sufficient evidence to justify changing protocol to an increased incentive.

Nonresponse Bias Analysis: **Attachment O** describes our approach to measuring and managing nonresponse bias in the NSFG. Procedures to measure and reduce nonresponse bias are built into the daily paradata monitoring of the study. NSFG has the following data resources to warn us of possible nonresponse bias and allow us to act to reduce it during each quarter of fieldwork:

- 1) The NSFG's paradata include observations from interviewers. Their observations include information such as whether the building is locked or access is blocked by other barriers, and assessments of whether the household includes children, whether the respondent is in a sexual relationship, and other characteristics that are correlated with non-response on NSFG outcome variables.
- 2) Key statistics (percent married, percent who have had a child, etc.) are tracked to see if they change when calling effort is increased.
- 3) The response rates of 12 age-race-gender groups that are strongly correlated with many NSFG estimates (e.g., Hispanic males 20-44; black females 15-19) are monitored daily. If response rates are unequal, that inequality could cause biased estimates. By monitoring response rates daily, effort can then be increased on groups with lagging response rates so that by the end of the quarter, variation in response rates across groups is minimized.
- 4) A two-phase sampling scheme is used. At the end of 10 weeks of fieldwork, a probability sample of non-respondents is selected. Incentives are increased for the selected cases, and different fieldwork techniques are used. Response rates and sample composition can be compared before and after "phase two" of fieldwork.
- 5) Alternative post-survey adjustments for nonresponse can be compared.

These efforts build upon the 2006-2010 and 2011-2015 NSFG, using essentially the same design, but with continuous improvements in monitoring as more information about field work is obtained to further minimize nonresponse error. A more complete description of these activities appears in **Attachment O**.

4. Tests of Procedures or Methods to be Undertaken

In light of response rate and cost management challenges faced in the field by NSFG, and other household based surveys as well, we propose to conduct two small-scale methodological studies described below. We also provide a preliminary summary and an updated timeline for evaluating our randomized 50-50 study of two questions asking about sexual orientation.

Experiment to test the use of a mailed, paper Household Screener: An experiment, to test the use of a mailed, paper screener questionnaire for a subset of NSFG sample households instead of a face-to-face visit to conduct the screener interview is proposed. The experiment is designed to assess whether the use of mailed screeners decreases fieldwork costs while maintaining accurate coverage of the eligible population. A second experimental treatment shares the same mailed screener protocol but adds an incentive of \$2. Segments with likely age-ineligible households were identified for the experiment, with 150 housing units assigned to each experimental treatment, for a total of 300 housing units in the experiment. We will provide a summary of this experiment and its results in 2019.

Feasibility pilot test of a shift of Phase 2 protocol to begin 1 week earlier: Another potential design enhancement will test the feasibility of shifting the Phase 2 fieldwork protocol 1 week earlier (to week 10 instead of week 11. Specifically, this pilot test will assess the 1-week shift for a subset of the sample (5 PSUs) for 1 field work quarter, based on findings from other studies (Montaquila et al, 2013). All other aspects of fieldwork, including the incentive plan and consent/assent process remain as previously described for the phase boundary at week 11. The rationale for the test of this phase boundary change is based on observing trends in response rates for the two phases, over the course of NSFG fieldwork beginning in 2011. Phase 1 has become less effective over time as evidenced by declining response rates, while phase 2

response rates have remained steady. This test will be evaluated for adverse effects on response rates or costs. If there are no adverse effects, an experiment will be proposed, with the ultimate goal of testing for effects of the phase boundary shift on response rates, yield, and efficiency of operations. We will provide a more complete summary of this feasibility pilot test and its results in 2019.

50-50 split/study of sexual orientation question from NSFG and NHIS: As described in our prior clearance requests, beginning in September 2015 the NSFG ACASI section has included a 50-50 randomized study of the NSFG and NHIS questions on sexual orientation. The goal of this study was to assess the distributions based on these two question approaches, when placed in the identical location and survey context with NSFG ACASI. The preliminary results of this study based on unweighted data from September 2015 through March 2017 are summarized in Attachment P. The NSFG does not produce sample weights for single years of data, therefore a final evaluation of this 50-50 study cannot be completed until the 2-year sample weights for 2015-2017 become available in early 2018. By Spring 2018, we will submit a complete report of the sexual orientation question study using fully weighted data from September 2015 through September 2017, along with a recommendation, based on consultation within NCHS, as to how we believe the NSFG should proceed in its approach to asking about sexual orientation.

5. Individuals Consulted on Statistical Aspects and Individual Collecting and/or Analyzing Data

The statistical consultants (on NSFG sample design, variance estimation, and statistical methods) for NCHS are:

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(these pertain to both A&B supporting statements and all attachments, including ACASI justification)

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