

Supporting Statement B:

NATIONAL SURVEY OF FAMILY GROWTH

OMB No. 0920-0314
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Reinstatement with Change

Contact Information:

Anjani Chandra, Ph.D.
Principal Investigator and Team Lead
National Survey of Family Growth Team
Division of Vital Statistics/Reproductive Statistics Branch
CDC/National Center for Health Statistics
3311 Toledo Road, Room 5414
Hyattsville, MD. 20782
301-458-4138
301-458-4034 (fax)
achandra@cdc.gov

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**Supporting Statement B for Reinstatement Request:
NATIONAL SURVEY OF FAMILY GROWTH**

Collection of Information Employing Statistical Methods

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NOTE: *The sample design to be used beginning in 2022 is based on the same principles as the sample design of the NSFG surveys conducted in 2006-2010 and 2011-2019. It is based on a responsive and adaptive survey design (Groves and Heeringa, 2006; Schouten, Peytchev, and Wagner, 2017), to proactively monitor costs and response rates during data collection and to make adjustments as needed. Several features depart from the specifics of the former design and will be discussed in this section. A description of the former design can be found in the following link, which is the most recent such description, corresponding to the last public-use release from the 2011-2019 fieldwork:*

<https://www.cdc.gov/nchs/data/nsfg/NSFG-2017-2019-Sample-Design-Documentation-508.pdf>

*Experiments during the data collection period 2011-2019 were conducted that informed ongoing fieldwork operations and also inform some aspects of experiments being planned or considered in this current data collection effort. These 2011-2019 experiments include a mailed household screener vs face-to-face screening (**Attachment D2**), and a modification to the timing during a data collection quarter of the start of an enhanced protocol for obtaining nonrespondents' cooperation (**Attachment D3**).*

*The sampling methods and data collection steps described below reflect an experiment that compares "multimode" – online interviews with face-to-face follow-up -- with face-to-face-only mode (comparable to prior NSFGs). This experiment will take place during quarters 1 and 2, then multimode will be in place thereafter. The sections on sampling stages and the data collection steps below will include experimental features such as online mode, but the experimental comparison details and evaluation can be found in **section 4**, "Tests of Procedures or Methods to be Undertaken."*

1. Respondent Universe and Sampling Methods

Summary

The National Survey of Family Growth (NSFG), for the 8-year data collection period of January 2022 through December 2029, is based on a national area multi-stage probability sample. The first stage involves the selection of Primary Sampling Units (PSUs). Across the 8 years of data collection planned (2022-2029), there will be a total of 22 "self-representing" (SR), or "certainty" PSUs, defined as PSUs that will automatically be included in the national probability samples due to their large population. There will be an additional 198 non-self-representing (NSR), or "non-certainty" PSUs, defined as PSUs selected into the NSFG sample that represent not only themselves but other non-self-representing PSUs, for a total of 222 PSUs, including Alaska and Hawaii. A subset of these 222 PSUs is randomly allocated to each data collection year (40 allocated to each of years 1 through 4 and 41 allocated to each of years 5 through 8). This plan increases the number of PSUs and the year-to-year overlap of PSUs compared to the 2011-2019 design. This should result in increased precision of point estimates and less interviewer turnover and training required.

Each year, about 19,000 households are sampled, and about 17,000 households are contacted, in order to yield approximately 5,000 completed main surveys annually. Each year of data is nationally representative, and one-year sample weights will be constructed. However, user guidance in the documentation will encourage the use of a minimum of two years of data, the timespan of NSFG public-use file releases, to permit statistically reliable estimates to be made. Further, the desired sample size and precision for several key estimates and statistics for domains of interest are attained only after about 4 years of interviewing (for example, combining the 2022 to 2023 data with the 2024 to 2025 data).

Target Population

The target population for the NSFG is men and women aged 15–49 at first survey contact whose primary residence is in one of the 50 United States or the District of Columbia. Men and women in the military but who live off-base are included, but individuals living in group quarters are excluded, with the exception of those living in college housing - dormitories or fraternity or sorority housing - who are eligible to be sampled via their parents' household. This is consistent with the target population from the 2015-2019 fieldwork, and consistent with that of the 2011-2015 fieldwork with the exception of the age range: prior to 2015, age-eligibility was 15-44.

Details of the NSFG Sample Selection

The sample is selected in 5 stages:

- (1) The first stage involves selection of Primary Sampling Units (PSUs) (Metropolitan Statistical Areas (MSAs), counties, or groups of adjacent counties) from a sampling frame of 2,044 PSUs. The largest 22 Metropolitan Statistical Areas (MSAs), those estimated to contain one million or more occupied HUs based on the most recently available data from the American Community Survey (ACS), will be treated as certainty selections, meaning they are guaranteed to be included in one or more years of the 8-year data collection period. The remaining set of PSUs is constructed from individual counties or groupings of sparsely populated contiguous counties in the lower 48 states using a customized algorithm to minimize the spatial size of the PSU while simultaneously maintaining minimum numbers of SSUs and HUs. A weighted measure of size (MOS) will be developed such that, all else equal, larger PSUs and PSUs with higher concentrations of Black individuals will be selected more frequently, at a rate of approximately 2.6 to 1.
- (2) The second stage involves selection of Secondary Sampling Units (SSUs or segments) within PSUs. These are defined as Census Block Groups (CBGs), which are aggregations of contiguous Census Blocks generally defined to have between 600 and 3,000 people and usually covering a contiguous area. Twelve SSUs will be released from each PSU each year, with three SSUs held in reserve. Each SSU in the frame will be required to contain at least 200 estimated occupied housing units (HUs). Each PSU is guaranteed to contain a minimum of 15 SSUs and a minimum of $200 \times 15 = 3,000$ estimated HUs. To achieve an oversample of Black individuals so they comprise 20% of completed interviews, the chance of selection of CBGs where ACS data indicate a high percentage of Black individuals in the target population ($\geq 10\%$) will be increased relative to all other CBGs. Unlike prior NSFG designs, this design will not oversample Hispanic individuals, because the proportion of Hispanics in the target population has grown such that they will comprise 20% of completed interviews without oversampling.
- (3) Selection of households: For the third stage of selection, a frame of HUs is built within each sampled SSU, using the contractor's in-house enhanced address-based sampling (ABS) frame. The frame is based on the U.S. Postal Service (USPS) Computerized Delivery Sequence (CDS) File, updated monthly. For SSUs where the estimated ABS coverage rate is below 85%, field enumeration (listing) will be used.

For HU listings derived from the ABS frame, a model will be used to predict the likelihood the given HU contains one or more age-eligible individuals. HUs will be grouped into two strata within the SSU – high and low likelihood – with differential sampling rates applied to increase the yield rate. The predictive power of this model will become increasingly strong with the accumulation of empirical data. The step before the fourth step, “Selection of Individuals,” below, involves determining if any eligible individuals live in the selected HUs and proceeds as follows. A lead letter (**Attachment G1**), Question-and-Answer (Q&A) brochure (**Attachment G4**), and \$2 prepaid incentive are mailed to sampled HUs. Sampled housing units selected for the multimode experiment receive in their lead letter instructions for online completion of a screener survey, containing a household roster, which determines if any household members are eligible (age 15-49 at the time of the screener). Sampled housing units selected for face-to-face (FTF)-only are told in their letter that an interviewer will visit their address. The FTF-only HUs are then contacted by RTI interviewers and the screener survey is administered to

determine if any members of the household are eligible. The multimode HUs will be followed up in person if they do not complete the roster by web. They will still have the option to complete the screener by web.

- (3) 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 screener process is then tailored to the identity of the selected respondent (screener informant, other adult in the HU, or teen) and for FTF mode, the interviewer asks about his/her availability. In online mode, when a household member is chosen as the respondent, the survey website will allow the individual to immediately proceed with steps toward the main survey (if the screener informant is the chosen respondent) or send a URL for the main survey within a day, if the chosen R is not the screener informant. Respondents who agree to complete the main NSFG interview are given a \$40 token of appreciation - in cash for FTF mode and either a check to be mailed or a digital gift card for online mode.
- (5) Selection of "nonrespondents" for a different protocol phase: As was done in the NSFG for 2006-2010 and 2011-2019, NSFG will continue to conduct nonresponse follow-up (NRFU) in a less costly and more efficient manner than that used in the 1995 and earlier NSFGs. Unlike in the 2002, 2006-2010, and 2011-2019 NSFG fieldwork periods, where a two-phase approach was in place, NSFG data collection for 2022-2029 will use a three-phase data collection design (a fourth phase will be used in the first two quarters for measuring nonresponse and nonresponse bias), and this third phase will constitute a fifth stage of selection. Data collection is divided into 16-week sample-release quarters each year. Each quarter, a 50% subsample of active, nonresponding 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 person with more directed effort and increased incentives. In weeks 13 through 16, this subsample of nonrespondents receives an additional 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. The additional \$5 screening incentive is mailed at the start of this phase in data collection. The additional \$40 main interview incentive is offered to the respondent in advance of agreeing to the main survey; the respondent still receives the \$40 offered after agreeing to complete the main survey. For FTF-only mode, one of the 2 experimental conditions during quarters 1 and 2, this protocol departure (subsample of nonrespondents and increased incentive) will also occur at week 13 but the main protocol will have begun at week 5, thus lasting 8 weeks before the nonresponse follow-up protocol takes effect.

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. Residents in college quarters (dormitories, fraternities, or sororities) who otherwise live with their parents will be eligible to be sampled by way of rostering 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 has been an FTF-only survey through 2019. Under the new design, FTF-only mode, as part of the mode experiment during quarters 1 and 2, will proceed as in prior NSFGs: non-FTF 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 K**) to ensure that the household was screened and, if applicable, the selected household member completed an interview. For contact procedures for cases eligible for multimode, (online survey with FTF follow-up), see #3 in “Main steps in NSFG data collection.”

Study Design

The 2022-2029 study design will include a multimode data collection, preceding FTF data collection with web screener and main survey data collection. The 2011-2019 design included two phases: FTF followed by FTF with additional tokens of appreciation for a subsample of nonrespondents. The 2022-2029 design has three phases: web (Phase 1), followed by FTF and web (Phase 2), followed by FTF with additional tokens of appreciation for a subsample of nonrespondents (Phase 3). A fourth phase (Phase 4) will be included in Quarters 1 and 2 of 2022 to evaluate nonresponse bias.

To allow sufficient time to work the quarterly samples, and to provide continuous work to interviewers, the data collection for Phase 1 and Phase 3 is allowed to overlap between quarters, i.e., Phase 3 of Quarter 1 (FTF with increased tokens of appreciation) is conducted at the same time as Phase 1 of Quarter 2 (web). Similarly, Phase 4 (1-page mail survey; **Attachment N3**) is conducted when FTF data collection has started for the following quarter. These phases and their overlap are shown in Figure 1, for the first two quarters of data collection.

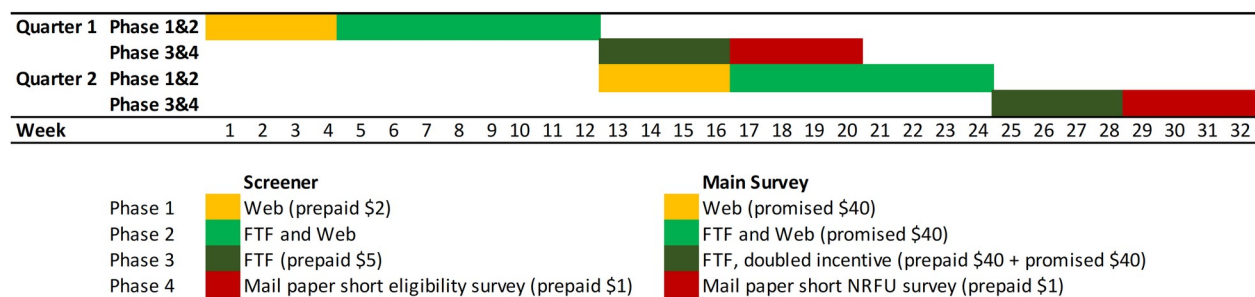


Figure 1. Multimode Design in Quarters 1 and 2 of 2022 in the Continuous 2022-2029 design.

In addition, an experiment comparing multi-mode to FTF-only will be conducted in Quarters 1 and 2 (see Section 4). Beginning in Quarter 3, the data collection will proceed with the multimode design, informed by the experimental results.

2. Procedures for the Collection of Information

The sample size targets for the first 4 years of NSFG data collection for 2022-2029, along with sample sizes from the prior two 4-year fieldwork periods are as follows:

Sample Size Targets for first 4 years of NSFG 2022-2029, with 2006-10, 2011-15 and 2015-2019 sample sizes shown for comparison

Previous 4-year periods of NSFG fieldwork			Expected sample size for first 4 years*
2006-2010	2011-2015	2015-2019	2022-2025

TOTAL	22,682	20,621	21,441	20,000
15-19	4,662	4,134	3,812	4000
20-49**	18,020	16,487	17,629	16000
Male	10,403	9,321	9,746	9000
Female	12,279	11,300	11,695	11000
Hispanic	5,132	4,753	5,281	4,000
Black	4,389	4,260	4,206	4,000
White & other	13,161	11,608	11,952	12,000

**Subject to change based on available funding and field conditions*

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

The current contractor for the NSFG is RTI International (Andy Peytchev, Principal Investigator for RTI; Susan Kinsey, Project Director). Under NCHS oversight and monitoring, RTI recruits and trains the interviewers for the NSFG and carries out the data collection. The main steps in the data collection are described below.

Main steps in NSFG data collection

All advance letters, informed consent/assent forms, informational materials and token of appreciation selection form used with NSFG households and respondents are shown in **Attachments G1-G9**. The Household Screener questionnaire (CAPI-lite) corresponding to some of these steps is in **Attachment H**.

1. A lead letter (**Attachment G1**) with a \$2 prepaid incentive and a Question-and-Answer (Q&A) brochure (**Attachment G4**) are mailed to sampled housing units. Sampled housing units selected for the multimode experiment receive in their lead letter instructions for completing their household screening survey online, including how to log on to the survey website, using the login credentials. Sampled housing units selected for face-to-face (FTF) only are told in their letter that an interviewer will visit their address; they are not presented with an online completion option in their letter.
2. After the lead letters are sent, a screener survey pressure-sealed reminder card is sent to nonresponding multimode-eligible households. This is followed in succession as needed by a reminder letter sent via USPS, a reminder postcard, and a reminder letter sent via UPS. Five weeks after sending the lead letter, nonresponding multimode-eligible sample housing units are assigned for FTF contact. The online completion option remains open after FTF assignment.
3. Interviewers will visit FTF-only housing units and multimode-eligible households that have been assigned for FTF follow-up at varying times of day and days of the week until an adult member of the household can be contacted. If no one is at home, the interviewer can leave a "Sorry I Missed You" card that gives a contact number for the interviewer.

When an adult household member is contacted in person, the interviewer will introduce herself and show her NSFG identification badge and letter of authorization (**Attachment G7**), helping establish legitimacy of her purpose in approaching the selected household or

respondent. She will reference the lead letter, providing an additional copy if necessary, and answer any questions or concerns the household member has about the study. NCHS staff and NSFG-trained personnel at RTI 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, the interviewer has other materials to help explain the survey and gain cooperation:

- NCHS Confidentiality Brochure (**Attachment G5**) to explain the laws and other procedures in place to protect confidentiality of all NSFG households and respondents
 - NSFG Family Fact Sheet (**Attachment G6**) to illustrate selected uses of the survey data and reiterate that data are in aggregate form for statistical purposes only.
4. To address COVID-19 and other infectious disease-related concerns, interviewers are provided with masks, gloves, hand sanitizer, and sanitizing wipes for use during fieldwork.
 5. The interviewer administers the FTF screener survey (**Attachment H**) on the tablet computer and determines if anyone in the household is eligible for the main NSFG survey. The selection algorithm will select one household member if more than one is eligible. If no one is eligible, the interviewer will thank the household member and leave.

In multimode-eligible households, an adult can log on to the survey website, using the login credentials in the lead letter, to complete the screener for their household. The screener respondent will be presented with a screen requiring them to attest to being a member of the household and to being 18 years of age or over. If they are not one of those, the survey website will request that only a household member of the age of 18 or older complete the screening survey. The survey website will notify the screener respondent whether he/she or a member of the household was selected for the main NSFG survey.

6. If an adult is selected for the FTF NSFG survey, the interviewer will provide a copy of the respondent letter (**Attachment G2**), explain the NSFG survey to the eligible person, provide a copy of the informed consent form, and then attempt to gain the respondent's consent to participate in the survey. If the adult respondent agrees to participate, the interviewer will offer the respondent a \$40 token of appreciation in advance of completing the interview and ask the respondent to electronically sign an acknowledgment of token receipt. If the sampled person is willing to participate but cannot do so immediately, the interviewer will schedule a time to return to complete the interview. If the eligible person is not at home or unavailable for scheduling, the interviewer will enter information about the best times and days to find the person at home.

In multimode-eligible households where an adult is sampled from the completed online screener survey, if the screener respondent is the chosen main survey respondent, the survey website will allow him/her to immediately proceed to the steps to completing the main survey. If the screener respondent is not the chosen main survey respondent, but another adult in the household is chosen, the screener respondent is asked to provide the chosen adult respondent's email address and/or phone number for texting. The chosen adult respondent will be sent an email and/or text invitation with the main survey link and login credentials within one day. The Advance Respondent Letter will also be sent, regardless of whether or not the email or phone number was obtained. The respondent letter contains instructions on how to log on to the survey website, using the login credentials.

Once the chosen main survey respondent has accessed the survey website, he/she will be

presented with a screen requiring him/her to attest to being a member of the household and to being 18 years of age or over. The main survey respondent will then review the informed consent form (**Attachment G3**). After acknowledging that they consent via clicking through the consent screen, which displays the adult informed consent form, the adult respondent can proceed with their NSFG survey. Adult respondents will have the option of choosing to receive their \$40 token of appreciation via mailed check or digital gift card. The process for choosing the form of the token of appreciation and providing the mailing or email address for sending, is detailed in **Attachment G8**. The respondent is asked to confirm their first and last name and confirm either the mailing address to receive a check or provide the email address to which the instructions for redeeming the digital gift card should be emailed.

7. If a minor¹ is selected as the eligible FTF sample member, the interviewer will ask the minor's parent or legal guardian for signed parental permission (**Attachment G3**) prior to approaching the minor. Once parental permission is obtained, the interviewer will provide the selected minor with a copy of the respondent letter explaining their selection for the NSFG survey. The interviewer will then provide the minor with a copy of the minor assent form (**Attachment G3**) and then ask the minor for their signed acknowledgement of assent. Minors who assent are offered a \$40 token of appreciation before completing the NSFG survey. The parent is asked to be present in the home for the duration of the NSFG survey (although not in the same room).

For multimode-eligible households, if a minor is selected as the eligible sample member upon completion of the online screener and if the screener respondent is identified as the parent of the minor, the survey website will present at the end of the screener the parental consent form and ask for signed parental permission via the parent keying in their name to acknowledge consent. If the screener respondent is not the minor's parent, the screener informant will be asked for the identity of the parent, and the contact information for the parent. The parent will be contacted and presented with a screen to attest to being the parent of the selected minor, then presented with the parental permission form. Once parental permission has been obtained, the minor is asked before completing their NSFG survey for signed assent by keying their name. Minor respondents will have the option of choosing to receive their \$40 token of appreciation via mailed check or digital gift card. As with adult online survey respondents, minors are asked to confirm the address for the mailed check or email address for the digital gift card redemption instructions.

8. Once consent or parental permission and minor assent has been obtained for a FTF NSFG survey, the interviewer will ask for a private location to conduct the interview. During the FTF NSFG survey (**Attachments I2 and J2**), the interviewer will use a showcard booklet for all respondents, and, for female respondents, a paper life history calendar. The interviewer will read questions to the respondent and enter the responses into the tablet computer. To address infectious disease-related concerns, the interviewer will clean the tablet and the laminated showcard booklet with the sanitizing wipes prior to use by the respondent. The interviewer will perform this cleaning in the presence of the respondent. The tablet and showcard booklet are also wiped down after each interview.

Prior to beginning the respondent self-administered section, the final section of the

¹ *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.*

NSFG survey, the interviewer will lead the respondent through a brief computer tutorial to make sure that the respondent is comfortable using the tablet computer. The interviewer will then move away from the tablet to give the respondent privacy so he/she can complete the self-administered section of the questionnaire. During the self-administered section, the interviewer will complete the interviewer observations (**Attachment L**) on paper. At the end of the self-administered section, there is a password screen so that the questionnaire program will lock, preventing the interviewer from going back to the self-administered section to review answers.

In multimode-eligible households that choose to complete the NSFG survey online, once consent or parental permission and minor assent has been obtained, the selected respondent will read all the questions to themselves and enter responses into the online survey application.

9. Upon leaving the respondent's home after the FTF interview, the interviewer will enter the information she recorded on the paper interviewer observations form into her tablet. This will allow the information to be transmitted to RTI with the respondent's main survey data. The interviewer will then shred the hardcopy form. When the interviewer returns home, she will transmit the completed case (along with any record of actions) back to RTI.
10. As part of follow-up, FTF-only households or selected FTF-only household members who, before the screener or before the main survey, express a specific concern about participating in the study are mailed a letter that addresses their concern. An interviewer will re-visit the household after sufficient time has elapsed for the letter to arrive.

Multimode-eligible selected household members who do not immediately complete their online NSFG main survey after completion of the brief online household screening survey and who have consented to receiving email and/or text communications (or for whom email and/or cell number has been provided by a screener respondent) are sent an electronic reminder via email and/or text depending on available information (**Attachment G9**). A mailed reminder letter is sent to the selected adult on the same day as the electronic reminder. Nonresponding selected household members are sent a second electronic and mailed reminder, as necessary. Selected household members who do not complete their online NSFG survey after the second reminder are sent a third and final electronic reminder. Two weeks after selection for the NSFG survey, but not before week 5 of the quarter, selected household members who have not completed their online NSFG main survey and have received the three main survey reminders are assigned to an interviewer for FTF contact following the above steps starting at Step 3. The online NSFG main survey completion option remains open for the respondent, even after assignment to an interviewer.

11. After the reminders and letters described above have been sent, if there has been no response to the screener or to the main survey by the 13th week of the quarter, a 50% subsample of FTF-only and multimode-selected households and respondents who do not respond to repeated contact attempts are offered a higher token of appreciation amount and receive targeted contact attempts. This "Phase 3" protocol was described earlier in "Details of NSFG Sample Selection," stage 5. For households who have not responded to the screener, an additional "Phase 3" lead letter (**Attachment G1**) is sent, with an advance \$5 incentive. For sample persons who have been chosen for the main interview and not yet responded, an additional "Phase 3" lead letter (**Attachment G2**) is sent. Then, FTF contact attempts are made mirroring the above steps starting at Step 3, but with an increased incentive amount: those who are selected for the

main survey are offered an additional \$40 in advance of agreeing to the main survey. This \$40 is in addition to the \$40 the selected household member will be given when he/she agrees to take part in the main survey.

12. In Year 1, Quarters 1 and 2, a subsample, referred to as Phase 4, of remaining nonrespondents after Step 11 has been in place for 4 weeks will be mailed a short survey with a \$1 TOA included (**See Attachment N**). This procedure is described in more detail below within “Nonresponse Bias Analysis” and “Mode Experiment with the household screener and main interview.” For nonrespondents to the household screener, the survey will be used to determine eligibility, by asking whether any household members are ages 15-49. For nonrespondents to the main interview, the survey will be used to collect limited information from main interview nonrespondents for nonresponse bias analyses, such as number of live births/biological children, ever smoked 100 cigarettes, and health coverage in the past 12 months. The questions will be limited to what will fit in a one-page questionnaire (**Attachment N3**).

Quality control

Quality control for NSFG data collection in 2022-2029 is achieved in several ways.

- (a) The use of computer-assisted survey administration (whether in person or online) improves data quality and consistency by ensuring correct routing through the instrument and allowing resolution of inconsistencies directly with the respondent.
- (b) For interviewer-administered interviews, the instrument permits the entry of interviewer comments that are routinely reviewed by survey staff to assess the need for any data edits or improvements to the survey instrument.
- (c) The contractor employs a “Workflow and Control System” which allows the monitoring of the flow of data from the start of data collection through the creation of data files for analysis and delivery. This allows tracking and managing events relating to advanced mailings, reminders, map generation, incentives, progress of interviews in the field, QA/QC outcomes, verification follow-up, and other information that will aid in smoothly controlling data collection operations. Organization of the many detailed and parallel processes is essential for quality control of operations and ultimately the data files.
- (d) The “Verification” interview (**Attachment K**) will be employed as a quality control procedure for FTF interviews. The main purpose of verification interviews is to reduce the risk of—and identify—interview falsification and, to a lesser extent, to ascertain if the interviewer inadvertently contacted the wrong HU. Both reasons are related to interviewer error, whether deliberate or accidental. Therefore, verification interviews as described below will be conducted for FTF screeners and main interviews, but not conducted for web screeners and web main surveys.

Verification procedures will involve a random sample of 10% of both screened households and interviewed respondents, to be contacted by telephone after the interview to verify that the interview was conducted. If no phone number was provided, additional verification methods will include timing data reviews and keystroke audits, and a GPS coordinates history. Verification of households confirms eligibility status (no household members aged 15-49 years of age, if coded ineligible; someone in the household was 15-49

years of age if coded eligible). Verification of respondents confirms that the person was interviewed and all procedures were followed: signed a consent form, if applicable; token of appreciation received; entered responses him- or herself in Computer Assisted Self-Interview (CASI).

3. Methods to Maximize Response Rates and Deal with Nonresponse

In the most recent four years of NSFG fieldwork for which public-use data have been released (September 2015 through September 2019), 20,441 interviews have been conducted based on a national sample of individuals aged 15-49 – 9,746 males and 11,695 females. The response rates for this survey period were 64.3% overall, 65.9% for females, and 62.4% for males. 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 for NSFG to maximize response rates and avert refusals. These strategies are consistent with those in place since the 2002 NSFG but modernized and also adapted for online interviews. These strategies include detailed advance letters and informational materials, a user-friendly [survey webpage](#), highly trained interviewers, toll-free numbers at both RTI and at NCHS, multi-phase data collection protocols, and active survey management (also known as “responsive design”). Responsive survey design uses daily paradata, which includes data about the fieldwork, to allocate interviewer effort most cost-effectively. This principle, as well as the multi-phase model involving selecting a subset of nonrespondents for follow-up, has been documented in a number of published reports that guided NSFG designs from 2002 through 2011-2019 and continue to guide the current design (Schouten, Peytchev and Wagner, 2017; 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).

Several measures will be taken to reach the response rate goals stated in the contract of no less than 60% overall and within subgroups defined by age, sex, and Hispanic origin and race:

- a) RTI will actively monitor paradata such as record of calls to ensure that contact attempts have been made at various times of day and days of the week, to strategize further actions and to reallocate resources, if necessary, to target subgroups where response rates are insufficient.
- b) RTI will focus effort on male sample members, given that higher nonresponse rates among males is not unique to the NSFG and has been documented in other large national FTF face surveys in the US (Wright et al, 2005). We will increase response rates for males by actively managing their cases throughout data collection—monitoring rates on a daily basis, directing interviewing effort, and including design features that aim at increasing response rates, particularly for men.
- c) A portion of PSUs will have two FIs, making it feasible to reassign refusal cases for follow-up by an experienced interviewer. Another advantage of this staffing model is that each FI can increase her contact attempts during the most productive time periods (e.g., evenings and weekends), while reducing visits during unproductive times.
- d) The construction and implementation of the phased design is key to achieving the desired response rate. For phase 3, nonrespondents are subsampled so that higher incentives and more focused

effort on fewer sample cases can be implemented to achieve a substantial increase in weighted response rates.

- e) RTI will use customized procedures for dealing with controlled access areas in sample PSUs. Controlled access (such as apartment buildings or communities where the FI cannot readily access the doors of selected dwelling units) are becoming more common, as are doorbell cameras, which people can use to screen visitors without actually coming to the door. Protocols that have been successful on other similar surveys (such as the National Study of Drug Use and Health) will be adapted to the NSFG, such as early identification (to maximize the amount of time for efforts to gain access and cooperation), and having FSs communicate directly with municipal areas, housing directors, HOAs, or landlords to arrange for access and providing them more detailed information about the study. Design features, such as the addition of the web mode, are expected to further help gain participation in controlled access situations.
- f) Interviewers will go through a rigorous training program that includes strategies for refusal aversion and addressing respondent concerns. In addition, letters will be used that are tailored to the concern raised by reluctant household members, and interviewers will have copies of these letters for refusal aversion.

Incentives

Over the past several decades, the challenges facing household-based surveys have only grown. Incentives have been approved for use with the NSFG since 1995, and the same incentive structure was used throughout NSFG's continuous fieldwork in 2006-2010 and 2011-2019. It is well-documented 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 in 2006-2010 and 2011-2019 has also proven to be generally cost-effective and efficient in helping to slow the pace of overall response rate declines over the past two decades. The 2022-2029 design will include the same incentives, in amount and structure, as used in NSFG data collection for 2011-2019 (for Phase 1, \$40 upon agreeing to do the interview; for Phase 3, \$5 prepaid incentive for the screener, \$40 at the start of the interview and an additional \$40 upon completion) (see "Main steps in NSFG data collection" above). However, it will also include a \$2 prepaid incentive in the introductory letter before the screener survey, which is the first contact attempt for sample households. For online respondents, the choice of a mailed check or an electronic gift card will be offered. The Phase 4 NRFU mailed survey requests will include a \$1 prepaid incentive.

Nonresponse Bias Analysis

The overall strategy for evaluating nonresponse bias can be categorized into three types of analysis. The first will be to examine descriptive statistics of nonresponse rates, as a prerequisite for the potential for nonresponse bias. The second and third will be investigations into *ignorable* and *nonignorable* nonresponse bias, respectively (Little and Rubin, 2019). The former is evidenced by observable differences in demographic characteristics and key survey outcomes that are corrected for in the NSFG estimates. Analysis of ignorable nonresponse bias also offers the opportunity to assess the overall efficacy of each phase of data collection, since meaningful mitigation of nonresponse bias can be gauged by whether or not the data collected in each phase results in *differences* in estimates on key survey outcomes, compared to a prior phase. In other words, to be of value, the protocol in the NRFU phase should result in gaining the cooperation of sample members who differ on key outcomes from those already interviewed.

Nonignorable nonresponse bias is of greatest interest and generally requires special designs to measure. Our Phase 4 NRFU data collection is designed with this goal in mind. As described earlier in “Main steps in data collection,” #12, nonresponse follow-up will be conducted in Quarters 1 and 2 of 2022 for screener nonrespondents and for main survey nonrespondents using short, mailed instruments to provide information on NSFG nonrespondents (**Attachment N3**).

As described in Section 4 of Supporting Statement A, comparable estimates to benchmark NSFG key outcomes against are difficult to identify, either because of population coverage incompatibilities or scope (e.g., pregnancies resulting in a live birth vs. all pregnancies). However, we can still make use of benchmark estimates for comparisons of change over time that should be less susceptible to measurement differences across surveys. Examples of the planned analyses within the three domains—nonresponse rates, ignorable nonresponse bias, and nonignorable bias—are presented in the table below.

Three Types of Nonresponse Bias Analyses to be Conducted for NSFG 2022 - 2029.

Analysis Type	Examples
1. Descriptive Statistics on Response Rates	<ul style="list-style-type: none"> • Tables of response rates by data collection phase, pertinent sampling frame variables, paradata, and demographics • Plots of trends in response rates over quarterly sample releases
2. Investigations into Ignorable Nonresponse Bias	<ul style="list-style-type: none"> • Tables comparing base-weighted demographic distributions of respondents against target population figures derived from the American Community Survey • Presentation and interpretation of parameters of the response propensity model(s) utilized to adjust for unit nonresponse • Tables comparing base-weighted key outcomes of respondents from Phases 1 and 2 against respondents from Phase 3 • Tables comparing base-weighted key outcomes using respondents from Phases 1 and 2 against base-weighted key outcomes using respondents from Phases 1, 2, and 3
3. Investigations into Nonignorable Nonresponse Bias	<ul style="list-style-type: none"> • Tables comparing distributions of key outcomes and demographics derived from the Phase 4 NRFU one-page questionnaire versus distributions observed for respondents in (1) Phase 3 only and (2) Phases 1, 2, and 3 combined • Compare trends in estimates to estimates of change in other surveys (e.g., from the National Health Interview Survey)

For more details on the NSFG’s plan for nonresponse bias analyses, see **Attachment N**.

These efforts build upon the same principles guiding nonresponse bias analyses conducted in the prior NSFGs, in 2006-2010 and 2011-2019, which are described in greater detail on the NSFG webpage.

4. Tests of Procedures or Methods to be Undertaken

Mode experiment with the household screener and main interview

This experiment involves implementing a multimode design that adds a web screener and a web main survey to the in-person data collection and will be evaluated as to how this new design impacts response rates, cost, demographic composition, and survey estimates.

The mode experiment will test an integrated web and in-person design for the screener and main survey in Quarters 1 and 2 of 2022, with implementation to the full sample starting in Quarter 3. The mode experiment also provides the basis for the electronic life history calendar (LHC), discussed in this section. Sample cases assigned to the multimode design that complete by web will be administered the electronic LHC. The multimode data collection design includes three phases. Screener and main survey data are collected by web during Phase 1, in the first four weeks of data collection. In-person data collection is Phase 2, which starts in week 5, and lasts eight weeks. Phase 3 (similar to “Phase 2” of the 2011-2019 NSFG) focuses on nonresponse follow-up. It starts in week 13 for a subsample of screener and main survey nonrespondents, using in-person data collection focused on the selected nonrespondents, and increased incentives (as described above under “Incentives.” Screener and main survey data collection concludes at the end of week 16. Related to this experiment, design changes may be considered to optimize the performance of the experimental features, including: adjustments to proportion of subsample for phase 3 protocol; duration of phases (number of days/weeks). The nature and magnitude of changes, if needed, is not predictable in advance of data collection. The data collection design for the first year by mode condition, quarter, and phase, is presented in Figure 2.

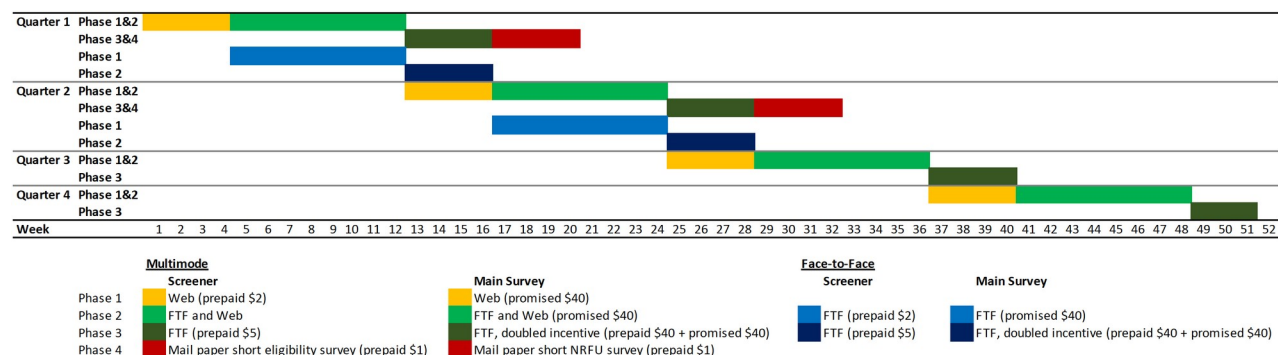


Figure 2. Multimode and FTF Mode Split-Sample Design in Quarter 1 and 2 of 2022, and Multimode Continuation in Quarter 3 and 4.

Figure 2 also shows the split-sample design that will be used in Quarters 1 and 2 of 2022 to evaluate differences attributable to the change in modes, assigning 4,818 sampled addresses to the multimode design and 4,818 to the FTF-only design. This allocation is expected to allow detection of a 2.5 percentage point difference in screener response rates and a 3.5 percentage point difference in main survey response rates, at an error rate of .05 and power of .80. For key survey estimates, the median percentage point detectable difference for unweighted estimates is 4.8 for females and 5.3 for males. The weighted percentage point detectable differences are 7.9 for females and 7.2 for males.

Another experimental element within this experiment involves a short, mailed survey to nonrespondents after week 16 (**Attachment N3**), in order to evaluate the feasibility and utility of using a follow-up to ascertain eligibility and some limited information on nonrespondents. This “Phase 4” will be implemented on a test basis in Quarters 1 and 2. This test is mentioned in the section on nonresponse bias analysis. Evaluation of the experiment will include comparison between modes of response rates, costs, and key survey estimates.

From Quarter 3 of 2022, the data collection will proceed with the multimode design, informed by the results of the experimental comparisons.

Experiment with electronic life history calendar

The introduction of a web mode of data collection requires a mode change to the current paper life history calendar, mentioned in #9 of the “Main Steps in data collection.” This calendar is in paper form in FTF interviews and is a recall aid for respondents to write on to help remember details of past events asked about in the survey. The calendar will be converted to electronic form and retain features of the paper calendar, adapting the display for devices including smart phones. Development of the electronic calendar will involve small-scale lab tests before fieldwork launch. Evaluation after data collection begins will involve respondent debriefing questions (**Attachment I3**), and comparisons of online versus FTF modes for how often the calendar was used, key estimates derived from the calendar and logical inconsistencies in the data. Interviewers will be asked questions about the respondent’s calendar usage as part of the interviewer observations (Attachment L) that are filled out while the respondent is completing CASI portion of the survey.

Experiment with incentive amounts

Incentive use has been accompanied by related experiments conducted since the 1995 NSFG (**Attachment D1**). It is likely that the magnitude of the effect of incentives will have changed since the last experiment conducted in 2014, and it would be prudent to re-evaluate. Experiments could be conducted, for example, on increases to current incentive amounts and/or modifying points in the design at which they are offered.

Experiments with mailed materials: invitations to participate and reminder mailings

The goal of introductory and reminder materials is to facilitate efforts to gain cooperation, reduce FI contacting and travel costs, and enhance response rates. Toward this end, experiments will be considered to develop more targeted introductory materials, including those tailored for controlled access settings. The contractor’s experience with tailoring materials on other major national surveys such as NCHS’s NHANES will inform any proposed re-designs of these materials.

Experiments with measuring and correcting for nonresponse

Nonresponse provides the potential for bias in survey estimates. Experiments will be considered that are related to the collection of auxiliary information that can be used to measure nonresponse bias, to inform data collection effort, and to improve nonresponse adjustments. For example, the screener and main survey two-stage design provides an opportunity to collect information on selected sample members and the household, including those who do not complete the main survey. The Phase 4 nonresponse questionnaires (**Attachment N3**) will be used for measuring—and potential for adjustment

for—nonresponse.

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

The NCHS statistical consultant on NSFG sample design, variance estimation, and statistical methods is:

Hee-Choon Shin, Ph.D.
Mathematical Statistician
Collaboration Center for Statistical Research and Survey Design
NCHS Division of Research and Methodology
3311 Toledo Road
Hyattsville, MD 20782
301-458-4307 wmi7@cdc.gov

The NCHS individual responsible for NSFG-RTI contract management including modifications, receipt/approval of contract deliverables, and all other contract actions is:

Joyce C. Abma, Ph.D.
Contracting Officer Representative, NSFG
Senior Social Scientist
NCHS Division of Vital Statistics/Reproductive Statistics Branch
3311 Toledo Road
Hyattsville, MD 20782
301-458-4058 jabma@cdc.gov

The NCHS individual responsible for analysis of the survey, obtaining all survey clearances, and supervision of the work of the NCHS/NSFG team is:

Anjani Chandra, Ph.D.
Principal Investigator for NSFG at NCHS
NSFG Team Lead and Senior Health Scientist
NCHS Division of Vital Statistics/Reproductive Statistics Branch
3311 Toledo Road
Hyattsville, MD 20782
301-458-4138 achandra@cdc.gov

In addition to Drs. Chandra and Abma, the NSFG team at NCHS includes four other individuals who significantly contribute to the management, conduct, and dissemination of the NSFG, including preparation of this OMB clearance package: Gladys Martinez, Ph.D., Kimberly Daniels, Ph.D., Colleen Nugent, Ph.D., and Jennifer Sayers, M.S.

The NCHS security steward for the NSFG data systems is:

Dawn McCammon
IT Specialist
Research Triangle Park Stirrup Creek
Durham, NC 27703

919-541-5102 dok1@cdc.gov

The contractor staff supervising NSFG sample selection, data collection, and production of contract deliverables are:

Andy Peytchev, Ph.D.
Principal Investigator for NSFG at RTI
RTI International
3040 E. Cornwallis Rd
Research Triangle Park, NC 27709
984-242-9366 apeytchev@rti.org

Susan Kinsey
Project Director for NSFG at RTI
RTI International
3040 E. Cornwallis Rd
Research Triangle Park, NC 27709
919-417-1814 shk@rti.org

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