

National Survey of Family Growth: Planning for the Future

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Presentation to the NCHS Board of Scientific Counselors

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Outline of Presentation

- Background and history of the NSFG at NCHS
- NSFG fieldwork since 2006 when continuous fieldwork design began
- Plans and development work for the upcoming NSFG
 - ❑ Goals for upcoming NSFG
 - ❑ Development work thus far:
 - Expert Work Group (Spring 2018)
 - Request for Information (Summer 2019)
 - Consideration of a baseline survey plan, including questionnaire improvement & streamlining
 - Ideas under consideration beyond baseline plan
- BSC input

Core Purpose of the NSFG

Section 306 of the Public Health Service Act stipulates:

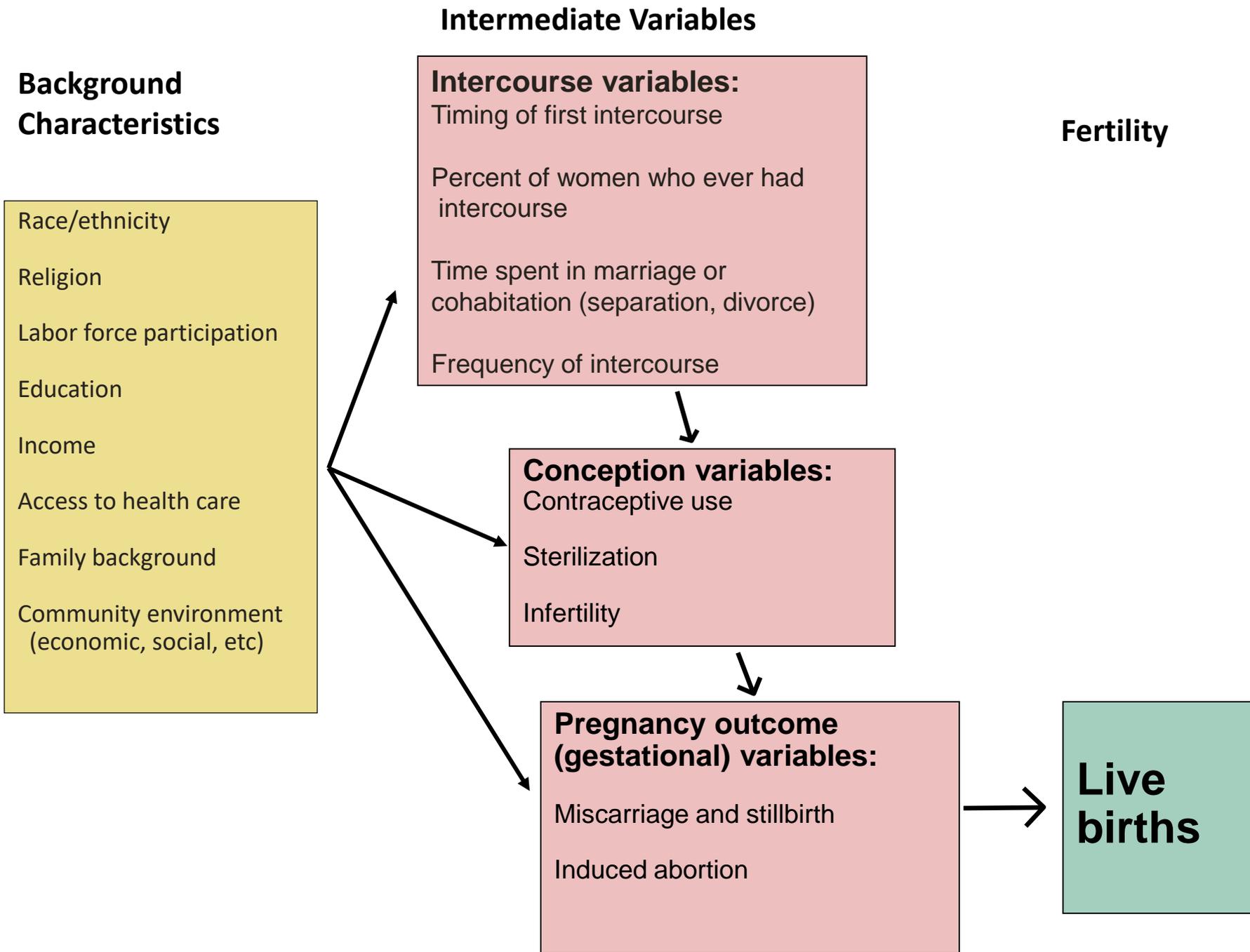
“NCHS shall collect statistics on...family formation, growth, & dissolution.”

NSFG’s core purpose has therefore been to explain variations in birth rates using the intermediate or “proximate” determinants of fertility:

- Intercourse variables
- Conception variables
- Pregnancy outcome variables

Early surveys (beginning with “Cycle 1” in 1973)

- Focused on ever-married women 15-44
- Collected data primarily on these proximate determinants of fertility



NSFG History in Brief

Survey Year(s)	Scope	N	Oversamples	Response Rates	Incentive	Contractor	OMB Approved Interview Length
1973	Ever-Married Women 15-44	9,797	Black women	90.2%	None	NORC	60 min
1976	Ever-Married Women 15-44	8,611	Black women	82.7%	None	Westat	60 min
1982	All Women 15-44	7,969	Black women & teens	79.4%	None	Westat	60 min
1988	All Women 15-44	8,450	Black women	82.5%	None	Westat	70 min
1995	All Women 15-44	10,847	Black & Hispanic women	78.7%	\$20	RTI	100 min
2002	All Women & Men 15-44	12,571 W = 7,643 M = 4,928	Blacks, Hispanics, & teens	All - 79% W – 80% M – 78%	\$40	U of Michigan (ISR) (2000-2010)	W – 85 min M – 60 min
2006-2010	All Women & Men 15-44	22,682 W=12,279 M=10,403	Blacks, Hispanics, & teens	All - 77% W – 78% M – 75%	\$40		W – 85 min M – 60 min
2011-2013	All Women & Men 15-44	10,416 W=5,601 M=5,815	Blacks, Hispanics, & teens	All – 72.8% W – 73.4% M – 72.1%	\$40	U of Michigan (ISR) (2010-2020)	W – 80 min M – 60 min
2013-2015	All Women & Men 15-44	10,205 W=5,699 M=4,506	Blacks, Hispanics, & teens	All – 69.3% W – 71.2% M – 67.1%	\$40		W – 80 min M – 60 min
2015-2017	All Women & Men 15-49	10,094 W=5,554 M=4,540	Blacks, Hispanics, & teens	All-65.3% W=66.7% M=63.6%	\$40		W=80 min M=60 min

More NSFG History

- Each survey provides nationally representative, cross-sectional snapshot of US household “reproductive-age” population
- Key changes since “Cycle 1” in 1973:
 - 1982 – Inclusion of never-married women
 - 1988 & 1995 - linked to NHIS sampling frame from several years prior
 - 1995 – Conversion to CAPI and ACASI and 1st use of incentives
 - 2002 – Inclusion of men (independent sample) & expansion of ACASI
 - 2006 – Transition to continuous fieldwork design
 - 2015 – Expansion of age range from 15-44 to 15-49
- Public-use files have been released with every periodic survey 1973-2002 (Cycles 1-6) and roughly every 2 years since 2006 (under continuous fieldwork design)

Current NSFG Cosponsors (almost all staying on)

- National Center for Health Statistics (NCHS)
- Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)
- Office of Population Affairs (OPA)
- Administration for Children & Families (ACF)/ Children's Bureau
- Administration for Children & Families (ACF)/ Office of Planning, Research, & Evaluation (OPRE)
- Office on Women's Health
- CDC/NCHHSTP/Division of HIV/AIDS Prevention
- CDC/NCHHSTP/Division of STD Prevention
- CDC/NCHHSTP/Division of Adolescent & School Health
- CDC/NCCDPHP/Division of Reproductive Health
- CDC/NCCDPHP/Division Cancer Prevention & Control
- CDC/NCCDPHP/Division of Nutrition, Physical Activity, & Obesity
- CDC/National Center for Birth Defects and Developmental Disabilities

Evolving NSFG Purposes Over Time

- Assessing factors that affect the timing and consequences of sexual activity & pregnancy
 - Pregnancy intendedness
 - Contraceptive method choice & use-effectiveness
 - Non-voluntary sexual intercourse
- Describing relationships and families
 - Cohabitation and other sexual relationships outside of marriage
 - Adoption and other non-biologic parenting
 - Fathers' activities with their children
- Measuring receipt of family planning and other medical services
 - Pap and pelvic exams and other health services, at Title X Clinics & other provider types
 - Infertility services (medical help to have a baby)
- Monitoring risk of HIV and sexually transmitted infections
 - HIV and other STI testing; Sexual and drug-related risk behaviors for HIV/STI
 - Other types of sexual activity with opposite-sex & same-sex partners

NSFG Fieldwork Since 2006 (continuous fieldwork design)

- Face-to-Face screening interview for each sample household where 1 person aged 15-49 (15-44 before 2015) is selected per household for main (also FTF) CAPI interview
- Roughly ¼ portion self-administered using Audio Computer-Assisted Self-Interview (ACASI)
- Within each year, fieldwork was organized into 4 quarters of 12 weeks each:
 - Phase 1, weeks 1-10:
 - All sample lines worked
 - \$40 incentive for main interview; no incentive for screener
 - Phase 2, weeks 11-12, have:
 - One-third subsample selected of non-responders for screener or main
 - Increased incentive -- \$5 prepaid for screener; \$40 pre-paid at start of main, \$40 at end
- **Responsive fieldwork design using paradata in real time** (combined with this two-phase design) allowed for reasonable cost control while optimizing sample yields and response rates, and attempting to minimize nonresponse bias.
- More detail on all the above: https://www.cdc.gov/nchs/nsfg/nsfg_2015_2017_puf.htm#design

Recent & Upcoming Releases under Current NSFG Contract

- Public-use files for 2015-2017 (PUF3) released in Dec 2018
https://www.cdc.gov/nchs/nsfg/nsfg_2015_2017_puf.htm
 - ❑ 1st PUF with expanded age range of 15-49, accompanied by [Data Brief on current contraceptive status](#)
 - ❑ More data (mostly CM date variables) now accessible only through Research Data Center (RDC) due to disclosure risk concerns
 - ❑ Nov 2019 - [Key Statistics](#) pages updated with 2015-2017 data

- Public-use & RDC-only files for 2017-2019 (PUF4) to be released in Fall 2020

- Paradata & Interviewer Observations Data for 2015-2019 in RDC soon after PUF release

NSFG Webpage

- Key Statistics based on commonly used NSFG indicators
- NSFG-based NCHS reports (in PDFs) (e.g., Data Briefs, NHSRs)
- Bibliographies of NSFG-based reports, including journal articles

For users who wish to conduct their own analyses:

- Public-use data files and program statements
- Documentation
 - Questionnaires (full “CRQs” and “CAPI-lites”)
 - User’s Guides
 - Webdoc (online codebook documentation)
 - Weighting and variance estimation guidance
 - Methodology documents covering survey design and operation
- Restricted-use data access procedures

Plans and Development Work for the Upcoming NSFG

Goals for the Upcoming NSFG

As part of the U.S. federal statistical system, NSFG must:

- Fulfill Section 306 of the Public Health Service Act, stipulating that “NCHS shall collect statistics on...family formation, growth, and dissolution.”
- Produce reliable, nationally representative data on key measures of fertility, family formation, and sexual/reproductive health for the US household population of reproductive age
- Provide public-use data files and documentation that protect the confidentiality of our survey respondents while still enabling statistical studies of NSFG topics by our federal partners and the broader research community.

In the pursuit of these goals, we must continue to achieve:

- ✓ Accurate, unbiased estimates, as frequently as possible
- ✓ Cost-efficiency in fieldwork and public-use file production
- ✓ Responsiveness to data needs from our diverse set of funding partners

Development Work for the Upcoming NSFG

- **Consultations with cosponsors (ongoing)**
- **Other consultation (ongoing)** –with subject-matter and survey methodology experts within and outside NCHS, including BSC
- **Expert Work Group** with survey methodologists in Spring 2018, supported by OPA & facilitated by Atlas Research
- **Request for Information (RFI)** in Spring 2019 - gained insights to incorporate into plans for future NSFG design
- **Streamlining and updating NSFG questionnaires** in collaboration with cosponsors; testing selected items in collaboration with NCHS/CCQDER

Expert Work Group held on April 30-May 1, 2018

“The Next NSFG: Integrating a Household Survey with New Approaches for Data Collection”

“NSFG of the future will (likely) continue to be a household-based survey using in-person interviewing as the primary mode of data collection. However, to address challenges for response rates and data quality, we convened this work group to explore new data collection approaches to complement the HH-based survey:

1. Use of other survey modes (including internet)
2. Use of follow-up surveys for selected topics or subsamples
3. Inclusion of supplements or modules that may be administered once or periodically”

Request for Information (RFI)

Vendors were asked to discuss the following topics for consideration in the upcoming survey:

- **Use of other survey modes** (also addressed by the Expert Work Group)
- **Administrative data linkages** to reduce respondent burden and to improve analytic potential of NSFG data
- **Collection of biomarkers** to complement core content and enhance utility
- **Disclosure risk reduction** strategies to permit public release of data while protecting respondent confidentiality
 - Received 6 responses by the 4/30/19 deadline
 - Invited 4 vendors to present at NCHS

Current Thinking on a Baseline Design for the Upcoming NSFG

Consideration is being given to continuing with a **household-based, in-person survey design as the foundation, which would enable us to build on other survey design enhancements** (including active cost management strategies) to maximize response rates and reduce bias.

Rationale: The core, mission-central content of NSFG is fairly sensitive and cognitively challenging, and our household-based design:

- Leverages the advantages of in-person interviewing, including rapport with the interviewer herself and the various interview aids (e.g., Life History Calendar), to maintain data quality and consistency.
- Incorporates self-administered mode for the most sensitive items to enhance privacy.

Baseline Design Under Consideration for Upcoming Survey

Basic Survey Plan:

- Household-based sample of men and women age 15-49
- Oversamples of Hispanics, Blacks, teens (or changes TBD if appropriate)
- Primarily in-person CAPI interviews (with ACASI component) ***but streamlined & improved content from 2017-2019 questionnaires***
- Continuous fieldwork, with responsive design features to be considered/evaluated as appropriate:
 - Continue to interview 1 person per household
 - Continue to employ only female interviewers
 - Calendar-year data collection hopefully starting by January 2022
- Aiming for minimum 2-year file release plan (e.g., 2022-23, etc)

Baseline Design Under Consideration for Upcoming Survey (cont'd)

Building in pilot tests and experiments:

- Supplementing in-person interviewing with alternative modes – for example:
 - Conducting screeners using most effective method(s) – mail, online, phone, in-person, mixed-mode/sequential
 - Supplementing main interviews with other modes (e.g., web-based) to optimize outcomes

- Other issues related to response rates, data quality, and data dissemination under consideration – for example:
 - Innovations to reach selected respondents and gain cooperation (including use of incentives)
 - Assessment of continuity/comparability of estimates across modes
 - Assessment of effects of screener and main interview modes/methods on costs, response rates, coverage, variances, nonresponse bias
 - Evaluation of new methods for disclosure risk reduction and data dissemination strategies that meet NCHS standards for confidentiality protection

Improvements to Questionnaires for the Upcoming NSFG

- **Cognitive testing** work with NCHS/CCQDER
 - Improving utility of Life History Calendar
 - Reviewing efficacy and comprehension of sex ed series, religion series, and other items of concern identified in collaboration with our funders.

- **Streamlining** the male & female questionnaires to reduce burden on respondents and make room for other content (*see guiding principles on next slide*)
 - Team sent proposals to cosponsors in Dec 2019, for feedback by mid Jan 2020
 - Will review & discuss further with cosponsors

- **Advisory Workshop** being planned for Spring 2020 to discuss ideas from above efforts, as well as other ideas from subject-matter experts nominated by cosponsors

- **Revised “CRQs”** will then be developed for instrument programming & testing

Guiding principles for streamlining the NSFG questionnaires

Identifying key NSFG indicators/outcomes that should be monitored over time

- Mission-central items for which NSFG is the “go to” data source
- Measures from NSFG used by other surveys for benchmarking or understanding long-term trends
- Policy/programmatic/research issues that can uniquely be informed by NSFG data (even if some overlap with other data sources)
- **We aim for balancing importance to the core mission of NSFG and to funders when considering relative questionnaire time invested in measuring these indicators or constructs.**

Bearing in mind these factors:

- 1) Retaining the key independent variables (IVs) needed to differentiate important population subgroups**
- 2) Reducing respondent burden while preserving the essence of the measure or construct (*i.e., what is the minimum detail needed to measure and track over time, including IVs*)**
- 3) Continuing to make data available for the research community, while balancing privacy and disclosure concerns**

Under Consideration*** for the Upcoming NSFG Beyond the Baseline Plan

- Interviewing 2 people per household
- Increasing sample sizes overall or for key population subgroups
- Allowing for individual record linkage
- Collecting biomarkers in the household

*** *Would require additional funding*

Under Consideration: Interviewing 2 People per Household

Benefits

- Potentially cost-effective way to bolster sample size by getting 2 interviews with 1 HH screener
- Allows for analyses of couples or parent/child dyads (though almost certainly in RDC)

Challenges

- Increased risk of disclosure because HH members will know their spouse/partner/child/parent/etc was also interviewed (but in theory, the content of interview does not have to be the same for both respondents)
- Investigation needed to minimize possible changes to sample properties (*e.g., diminished precision of estimates because of homogeneity within the household resulting in larger standard errors.*)

Under Consideration: Increasing Sample Size Overall or for Key Population Subgroups

Benefits

- Increased sample sizes and statistical power for:
 - Population subgroup analyses
 - Experiments on mode, incentive, survey content or other design features
- May permit more frequent release of data for public use

Challenges

- Cost of conducting more fieldwork, which is most expensive component of survey budget
- Increased sample sizes may come at cost of increased clustering, higher sample variances, and lower response rates

Under Consideration: Allowing for Individual Record Linkage

Benefits

- Could add to geographic linkage capacity already in place through RDC
- Potentially allows leveraging NSFG survey content for individual-level analysis with other data systems such as Medicaid utilization
- NCHS Data Linkage Branch can possibly implement linkages at lower cost

Challenges

- Possible consent bias based on those who consent for linkage or are willing to provide last 4 digits of SSN as required for some linkage
- Possible negative impact on main response rates (lessened if asked after main interview is completed)
- Timing of availability of linked data relative to NSFG survey period
- Cost to researchers for use in the RDC

Under Consideration: Collection of Biomarkers in Household

Benefits

- Analytic utility in conjunction with other NSFG self-reported data – for example:
 - Biomarkers of STIs or fecundity
 - Nutritional status (e.g., folate status) or stress markers (e.g., cortisol levels)
- Possible replacement of NSFG questions with direct measures

Challenges

- Possible consent bias based on those who agree to biomarker collection
- Possible negative impact on main response rates
- Reporting requirements for some test results
- Increased OMB & ERB clearance requirements due to increased legal/ethical concerns, data security concerns, & disclosure risk, particularly for genetic data
- Increased survey costs associated with staff training, sample storage/transfer, lab analyses, and other logistical issues
- Cost to researchers for use in the RDC

BSC Input

- Questions and comments on the plans being considered for the upcoming NSFG

- Future involvement for BSC
 - Suggestions for Advisory Workshop
 - Suggestions for other consultations or approaches
 - Interest in further updates or review

Thank you!