

The National Survey of Family Growth  
A Report to the NCHS  
Board of Scientific Counselors

September, 2009  
NCHS, Hyattsville, MD.  
William D. Mosher



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# Overview

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1. Purpose & History
2. How the data are collected; budget
3. Data products & Impact
4. A challenging survey environment  
& the NSFG's response
5. Other Challenges & Opportunities
6. Summary thoughts

# National Survey of Family Growth (NSFG) Team at NCHS

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# Purpose and History of the NSFG

# Purpose of the NSFG

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- Section 306 of the Public Health Service Act:
  - “NCHS...shall collect statistics on family formation, growth, and dissolution.”
  
- Extends the NCHS birth registration system by providing data on behaviors that explain birth rates---
  - sexual activity, contraceptive use, infertility, etc.

## Social factors

## Intermediate variables

## Fertility

Race/ethnicity  
Religion  
Labor force participation  
Education  
Income  
Access to health care  
Family background  
Community environment  
(economic, social, etc)

### Intercourse variables:

Timing of first intercourse  
Percent of women who ever had intercourse  
Time spent in marriage  
(separation, divorce)  
Frequency of intercourse

### Conception variables:

Contraceptive use  
Sterilization  
Infertility

### Pregnancy outcome (gestational) variables:

Miscarriage and stillbirth  
Induced abortion

**Live  
births**



# Purpose of the NSFG-2

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- Serves data needs of programs that help to pay for it—e.g, data on:
  - HIV & STD risk behavior  
(male-male sex, drug use, etc)
  - Roles of fathers in raising kids
  - marriage, divorce, cohabitation,
  - Adoption.

# NSFG History in brief

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- 1973 & 1976: fairly simple fertility survey of ever-married women
- 1982 & 1988: all women, including never married teens and adults, included.
- 1995: Event histories, CAPI, & incentives.
  
- 2002: included men: fatherhood, expanded HIV content (in ACASI)
- Continuous: more frequent data, larger sample sizes.



# NSFG history in brief

Cycle	Year	Scope	n	Over-Samples	Average Length	Contractor
1	1973	Ever-Married Women 15-44	9,797	Black Women	60 Min	NORC
2	1976	Ever-Married Women 15-44	8,611	Black Women	60 Min	Westat
3	1982	All Women 15-44	7,969	Black Women Teens	60 Min	Westat
4	1988	Women 15-44	8,450	Black Women	70 Min	Westat
5	1995	Women 15-44	10,847	Black Women Hispanic Women	100 Minutes	RTI
6	2002	Women 15-44 Men 15-44	12,571 W = 7,643 M = 4,928	Blacks Hispanics Ages 15-19	W= 85 M= 60 in	U of Michigan
7	Continuous	Women 15-44 Men 15-44	5,000 per year	Blacks Hispanics Ages 15-19	W=80 M=60 min	U of Michigan

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How are the  
data collected?

# How the NSFG data are collected-1

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- Data collection is done by a contractor—now, U of Michigan Institute for Social Research
- National sample represents the 125 Million men & women 15-44 in the US
- In-person interviews only
- Female interviewers
- Over-samples of blacks, Hispanics, 15-19

# How the data are collected-2

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- Signed informed consent for both minors & adults
- signed parental consent for minors 15-17.
- Interviews in English & Spanish (since 1973)
  - 6% of all interviews in Spanish
  - (1/3 of Hispanics)
- \$40 incentive (“token of appreciation”)

# Brief Outline of NSFG content

*\*more detailed for women than for men.*

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## Interviewer-administered (CAPI)

- ❑ Pregnancy history (women); fatherhood history (men);
- ❑ Marriage & cohabitation history, \* sexual partner history
- ❑ Contraceptive history; \* Wanted & unwanted births\*
- ❑ Use of health care for birth control, \* infertility, HIV tests
- ❑ Attitudes about marriage, parenthood, children

## Self-administered (in ACASI):

- ❑ Sexual behavior, sexual orientation & attraction, drug use, forced sex, income.

# NSFG Funders (All in Dept of HHS)

**NCHS**

**NICHD, NIH**

**OPA: Office of Population Affairs**

CDC's Division of HIV-AIDS Prevention

CDC's Division of STD Prevention

CDC's Division of Reproductive Health

ASPE: Ofc of the Asst Sec. for Planning & Eval.

ACF's Children's Bureau

# The Budget

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- Current contract budget:  
about \$3.6 million/year
- NCHS: \$1.0 million
- Others: \$2.6 million

Our challenge: increase the number of interviews & the frequency of data files without compromising quality or increasing the cost of the survey.

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# Data products & Impact



# What does the NSFG Produce?

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- Reports on the findings of the survey
  - NSFG team has written 26 reports & articles from 2002 NSFG.
- Public use Data files
  - Main public use file (CD-ROM & website).
  - ACASI data file (free on request).
- Contextual Data files
  - Thru NCHS Research Data Center for a fee
- Web site (2,400 hits/month, or 29,000/yr),
  - “Key Statistics” (half of web site visits)

# Key Statistics from the NSFG (A to Z)

NSFG - Listing A B C - NCHS - Windows Internet Explorer

http://www.cdc.gov/nchs/about/major/nsfg/abclist.htm

File Edit View Favorites Tools Help

http://www.cdc.gov/nchs/da... NSFG - Listing A B C - N...

- [Emergency contraception](#) - See also [Contraception](#)

## F

- [Family planning services](#)
- [Fathers/Fatherhood](#) - See also [Births \(fathers\)](#)
  - [Fatherhood](#)
  - [Father involvement](#)
- [Fertility](#) - See [Births \(mothers\)](#) and [Births \(fathers\)](#)
- [Forced intercourse](#)

## H

- [HIV risk](#) - See [STD/HIV risk](#)
- [HIV testing](#) - See [STD treatment/HIV testing](#)
- [Hysterectomy](#) - See also [Sterilization \(female\)](#)

## I

- [Impaired fecundity](#)
- [Implant contraceptives](#)
- [Infertility](#)
- [Infertility services](#)
- [Injectable contraceptives \(Depo-Provera™ and Lunelle™\)](#) - See also [Contraception](#)

Trusted sites 100%

start K. N N 8:40 AM

# 145 Reports & articles

published from the 2002 NSFG so far.

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- 2 large multi-topic reports (100+ tables each)
- Fertility: 14 reports & articles
- Cohabitation, marriage, divorce, adoption: 15
- Contraceptive use & sterilization: 16
- Unintended pregnancy: 13
- Sexual behavior, HIV/STD risk, HIV tests: 23
- Infertility, health, health services: 20
- NSFG methodology: 9
- Teenagers: sex, contraception, etc: 33

# Examples of impact -1

All of these are undercounts. The real numbers are higher.

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- 657 reports & articles in academic journals:
  - 145 so far from 2002 NSFG
  - 512 from previous Cycles
- 1,060 downloads of the 2002 data file from NCHS web site in last 9 months
- 1,200 downloads of NSFG data files from ICPSR web site in 2002-2006
  - (4,000 downloads of documentation)
- U of Michigan (Smock et al) Fertility survey Harmonization project— released 2009-2012

# Indicators of impact-2

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- Healthy People 2010 & 2020 objectives:
  - NSFG is the data source for nearly all of the objectives on Family Planning, & for some objectives on HIV, STD, MCH.
- National Campaign to Prevent Teen & Unplanned Pregnancy (NC) uses NSFG in almost all of its publications. In 2003-2006:
  - 147,000 downloads of NC reports that use only NSFG data.
  - 700,000 downloads of NC Reports using NSFG and other data.

# Interaction with the Research Community

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- In 2003-2009, NSFG staff gave 100 presentations to professional associations & government agencies.
- NSFG Research Conferences at NCHS in 2006 & 2008. 40 papers presented & discussed.
- In Nov 2008, informal NSFG advisory group (questionnaire, survey design, & data dissemination.)
- In Spring 2009, a meeting on how to collect data on reproductive Health Services for men & women.

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# A Challenging Environment for Surveys, & the NSFG's Response

# Response Rates are declining & survey costs are rising

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“For a handful of years, it has seemed to all of us in survey research that response rates pose a substantial challenge to our work. A series of factors have made it more difficult to contact potential respondents, driving up costs. During the same time period, respondents’ willingness to participate in surveys has declined slightly. Taken together, these shifts have led to lower response rates than those of 20 years ago.”

--Jon A. Krosnick, AAPOR News 31 (2), Summer 2003



# Continuous Interviewing as a response

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- ❑ The NSFG's funders discussed these issues in 2001-2003, and in 2004 we decided to make the next NSFG a "*continuous interviewing*" design, with *paradata-driven survey management*.
- ❑ Smaller number of interviewers.
- ❑ Collect data ("paradata") on what is happening with each individual case.
- ❑ Analyze the data every day, & use it to manage the survey.

# Goals of continuous interviewing:

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- Collect more interviews than in 2002 without increasing cost.
- Release data more frequently.
- Put more of our money into interviews & less into other costs. (CAPI, pretesting, etc)
- Get data out faster (without reducing the quality of the documentation).
- Respond faster to new data needs.

# Continuous interviewing: The Big Picture-1 of 2

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- In 2006, continuous interviewing began.
  
- We are interviewing about 5,000 each year with a 75% response rate.
  
- Fieldwork is going very well:
  - larger N, lower cost per case
  - good response rates, and
  - NO COST OVER-RUNS on fieldwork.

## Continuous interviewing: The Big Picture- 2 of 2

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- First data file: released in January 2010, with about 13,500 interviews collected June 2006-Dec 2008.
- Users will analyze the first data file the same way they have always analyzed the NSFG.

# Public use files

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- Before continuous interviewing, the NSFG was producing a new data file about once every 6-7 years.
- Under continuous interviewing, we will produce data files every 2-4 years (as soon as we get enough cases for a data set).

# How does Continuous Interviewing Work?

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- ❑ In Four 12-week periods a year, we:
- ❑ Set a budget in terms of interviewer hours.
- ❑ Interviewers record data about fieldwork (hours worked, outcomes for each case).
- ❑ Report it electronically every night.
- ❑ Use the paradata to ration hours & allocate effort.
- ❑ Work the cases for 10 weeks.

# How does Continuous Interviewing Work?

Continued

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At week 11:

- ❑ take a (1/3) sample of remaining non-respondents;
- ❑ use different procedures, and work the cases for 2 more weeks.
  
- ❑ When budgeted hours are gone, stop.
- ❑ Use what we learned to do better next time.

Paradata can help us monitor factors like these, so we can respond to them:

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- ❑ Occupancy rate (% occupied)
- ❑ Eligibility rate (% of HH's with someone 15-44)
- ❑ Locked building rate (% of sampled addresses in a locked building, gated community, etc)
- ❑ Sub-group response rates (Age, gender, race)
- ❑ Screeners vs. main interviews



Sample sizes in 2002 & 2006-8 NSFG data files,  
& *projected* sample size in the 2006-2010 data file  
assuming fieldwork ends in June 2010 (no ARRA funds)

	2002	2006-8	<i>2006-10</i>
<b>TOTAL N</b>	<b>12,571</b>	<b>13,495</b>	<b><i>22,000</i></b>
Male	4,928	6,139	<i>9,900</i>
Female	7,643	7,356	<i>12,100</i>
15-19	2,271	2,785	<i>4,400</i>
Black	2,460	2,451	<i>3,900</i>
Hispanic	2,712	2,874	<i>4,600</i>

Work on the 2006-8 data file is ongoing

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**RECODES**

600 most-used variables

**DOCUMENTATION**

Codebook, both paper-style  
& web-based

**USER'S GUIDE**

Text that explains codebook

**IMPUTATION**

Only recodes are imputed

**DISCLOSURE REVIEW**

By NCHS Disclosure Review Bd

**WEIGHTS**

Coming soon

**VARIANCE ESTIMATION**

Coming soon

**RELEASE**

**January, 2010**

**SERIES 1 REPORT**

Planning, fieldwork procedures

**SERIES 2 REPORT**

Weighting, imputation, variances

# Interviewing continues

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- ❑ We have completed over 4,000 more interviews since Jan 1, 2009.
- ❑ The 2<sup>nd</sup> file will be released in 2011, with about 22,000 interviews conducted in June 2006 -June 2010.
- ❑ The 2<sup>nd</sup> file could contain another 2,500 interviews if we can get ARRA funding.

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# Other Challenges and Opportunities

# Challenges

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1. Controlling costs while keeping response rates acceptably high.
2. Controlling costs while keeping the content of the survey responsive to the data needs of funders and users.
3. Allowing for options to expand and enhance the survey if more resources become available.

# Options that were written into the present contract but not implemented-1

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1. Biomarkers (e.g. STD tests)
2. Military sample
3. Jail/prison sample
4. Short-term (6 months) follow-up to get weekly data on factors related to consistency of contraceptive use.

All of these were deemed scientifically interesting and potentially useful, but lower priority than increasing sample size and getting data files out more often.

## Options written into the present contract-2

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### 5. Increase sample size & expand the age range to 15-49 or 15-54

Would improve data on things that occur more often after age 35 or 40: e.g.

adoption, infertility, use of infertility services, father involvement, divorce.

For example,

“How many marriages end in divorce?”  
(by age 44? Age 49? Age 54?)

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# Summary Thoughts



# Summary Thoughts-1

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1. NSFG's expansion to men in 2002 expanded its uses for both public health & social science research, but there were trade-offs:
  - Complex field procedures (harder job for interviewers)
  - More complex data file (harder to get out quickly)
  - A need for larger sample sizes to produce reliable statistics for both men and women.

# Summary thoughts-2

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2. In 2004, NSFG's funders decided to move to continuous interviewing to generate larger N's and more frequent data.
3. So far, continuous interviewing has been a success: larger n's at lower cost per interview:  
13,500 released in January.  
4,000 more already interviewed.

# Summary thoughts-3

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4. Given the success of continuous interviewing, the usefulness, and the prominence, of the NSFG is about to increase.
5. My thanks to the NSFG teams at NCHS and at the University of Michigan for making these accomplishments possible.