Improvement by Innovation: Planned Changes for the 2017 National Survey of Children's Health

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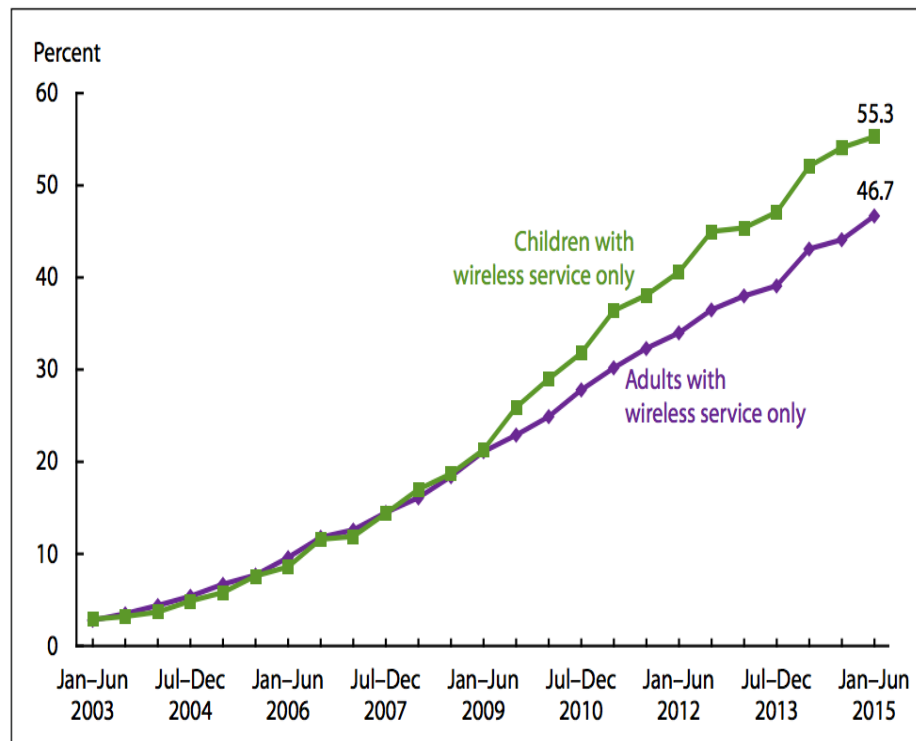
Outline

National Survey of Children's Health (NSCH)

- Brief History

- 2016 Survey Redesign

- 2016 Lessons Learned

- Innovation for 2017

  - Administrative Data

  - Sampling Frame

  - Contact Strategies

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NSCH History

- Historically directed and funded by Health Resources and Services Administration's Maternal and Child Health Bureau (HRSA MCHB)

- Previously fielded biennially as two separate RDD telephone surveys in alternating years

  - NSCH (2003, 2007, 2011-12) produced national and state based estimates of the health and well-being of children 0-17 years, their families, and their communities

  - NS-CSHCN (2001, 2005-6, 2009-10) assessed the prevalence and impact of special health care needs among children ages 0-17 years in the U.S., and evaluated change over time

2016 Survey Redesign

Figure. Percentages of adults and children living in households with only wireless telephone service: United States, 2003–2015

Percent

- Children with wireless service only — 55.3
- Adults with wireless service only — 46.7

X-axis: Jan–Jun 2003, Jul–Dec 2004, Jan–Jun 2006, Jul–Dec 2007, Jan–Jun 2009, Jul–Dec 2010, Jan–Jun 2012, Jul–Dec 2013, Jan–Jun 2015

NOTE: Adults are aged 18 and over; children are under age 18.
DATA SOURCE: CDC/NCHS, National Health Interview Survey.

The initial redesign of the survey focused on the following:

- A shift of the survey's sampling frame from landline and cell phone numbers to household addresses
- A shift of the mode of administration from an interviewer-administered survey via telephone to a self-administered survey via web and paper
- Combined NSCH and NS-CSHCN into a single survey
- To provide more timely data

2016 Survey Redesign

Key Decisions:

- The newly combined NSCH will be fielded annually

- Will retain a two-phase administration:
  - "Screener" to determine child demographics and SHCN status
  - "Topical" age-specific follow-on questions about health, health care, family structure, neighborhood, etc.

- An Addressed-Based Sampling (ABS) frame will be utilized to improve response rates and support non-response bias analyses

- The majority of interviews will be conducted via a self-directed response mode (Web or paper)

- Content added on a variety of topics, including aspects of being "Healthy and Ready to Learn", food sufficiency, and behavioral treatment for ADHD, etc.

2016 Lessons Learned

- Response rate was lower than expected, but similar to ACS mail and internet response

- The sampling frame inefficiencies
  - 39% of the sample was selected from addresses not expected to have children based on administrative data
    - 7% of households had children and represented a small proportion of the returned data

- Higher than anticipated reliance on paper responses delaying completion of data collection
  - "High-web" and "Low-web" demarcation for 2016 did not operate as expected
  - Data collection plan didn't account for heavier reliance on paper returns, i.e., waited too long to send paper instruments out

Administrative Data

- Oversampling of households likely to have children based on linkages of children to families and addresses through multiple sources of administrative data connections

Reason: Improved sampling efficiency and reduction of survey costs

Information sources:

Numident - a list of Social Security Number applicants

CARRA Kidlink file: a prototype linkage between children and parents based on Census and administrative records

Master Address File Auxiliary Reference File (MAF-ARF): a file that links person identifiers with the latest location updates from a variety of administrative data

Method: Utilize the Title 13 Census Master Address File (MAF) as a sampling foundation and leverage administrative records to indicate the presence of children at a MAF-ID

2017 Sampling Frame

- Nationwide sample of 156,054 mailable addresses

- Differential sampling strategies by geography (and state) based on 2016 returns
  - Sample and weight based on propensity to respond and likelihood of households with children

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2017 Sampling Frame

In 2016:

Stratum	% of Sample	% of all HHs w/ children
1: Flagged HHs w/ children	61%	71%
2: HHs not flagged w/ children	39%	29%

In 2017:

Stratum	% of Sample	% of all HHs w/ children
1: Flagged HHs w/ children	64%	78%
2a: HHs not flagged w/ <u>high</u> likelihood of children	36%	17%
2b: HHs not flagged w/ <u>low</u> likelihood of children	-	5%

- For 2017, improve targeting of non-flagged households by splitting Stratum 2 into households more likely and less likely to have children
- This will improve efficiency by spending resources on households with children

Contact Strategies

- Tailoring data collection mode preference (web vs. paper) based on small-area geographic characteristics

Reason: Reduce survey costs and burden

Information Source: 2016 ACS response mode choices summarized at the block group & other tract-level characteristics to obtain a "low-Internet-accessibility flag"

Method: 30% of households with the highest paper-only response probabilities will be flagged as "High Paper", while the remaining 70% will be flagged as "Low Paper"

Contact Strategies

- Unconditional cash incentives ($2 bill) will be sent with the initial mailing (for 90% of the sample)
  - Response rates from 2016 were 33.7% for respondents with no incentives, compared with 36.5% for those with a $2 incentive
  - Reduces nonresponse bias in self-administered survey data collection

- Infographic experiment
  - Included with the initial mailing for 50% of the sample, split evenly among those receiving a $2 incentive and those addresses not receiving an incentive
  - Single page color insert highlighting questionnaire content and importance of the data being collected

- Pressure-sealed postcard
  - Sent 5 days after the initial mailing as the first non-response follow-up
  - Since the postcard is pressure-sealed, ability to include the web login information

2017 NSCH Project Schedule and Deliverables List

July 2017	Initial mailout of all treatment group survey invites (High & Low Paper)
	Pressure-sealed postcard reminder (containing Web login information)
August 2017	Low paper first follow-up mailing (Web invite only)
	High paper first follow-up mailing (Web invite & paper questionnaire)
September 2017	Low paper second follow-up mailing (Web invite & paper questionnaire)
October 2017	High paper second follow-up mailing (Web invite & paper questionnaire)
	Low paper third follow-up mailing (Web invite & paper questionnaire)
November 2017	High paper third follow-up mailing (Web invite & paper questionnaire)
September 2017 – January 2018	Paper topical questionnaire mailings (only applicable to households who responded by mail with an eligible paper screener)
January 2018	Survey closeout – data collection ends
Late Spring – Early Summer 2018	Delivery of fully documented public use data sets (topical and screener level files) and any other preliminary data files requested by HRSA MCHB

*Note – Data processing will be ongoing from initial mailout through the delivery of the fully documented public use data sets.

Thank you!
Questions?

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