Current and Future Uses of Address Lists for the National Health Interview Survey

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Presentation outline

Overview of the National Health Interview Survey (NHIS)

Recent NHIS sample augmentation

Use of address list for 2013 NHIS sample augmentation

2016 NHIS sample design: new source of sample addresses
The purpose of NHIS

To collect data on the health status and health services utilization of the U.S. civilian non-institutionalized population

To collect data on specific topics of current public health concern

To provide official national health data to the public
NHIS target population

Persons living in the 50 States and D.C. (not Puerto Rico, etc.)

Civilians (not active military)

Persons who live in households or non-institutional group quarters such as college dormitories (not persons living in institutional group quarters such as prisons)
NHIS interview protocol

Personal visit interviewing at sample addresses, using electronic questionnaire

Information is collected about all eligible persons of all ages at the sampled address

One adult and one child (if children present) randomly selected per family for more extensive questions
2011: NHIS began to receive supplemental funding

Supplemental funding provided for new NHIS questions, and for increasing NHIS sample

Focus was to enhance NHIS's ability to monitor the effects of the Patient Protection and Affordable Care Act, enacted in 2010
NHIS sample augmentation

Augmentation in 32 states and the District of Columbia

Purpose of targeted augmentation was to increase sample sizes in less populous states

2011: 13% sample increase

2012: 21% sample increase
NHIS augmentation sources, 2011-2012

Initial augmentation sources: sample cut in previous years, reserve sample assigned for years beyond 2015

Another augmentation source beginning in 2012: "subsampled-out sample" (areas subsampled out in existing primary sampling units (PSU))
We needed to find a new augmentation source for 2013 and beyond

Initial augmentation sources (sample cut in previous years, reserve sample assigned for years beyond 2015) exhausted by the end of 2012

Subsampled-out sample source not enough by itself to meet augmentation targets
Potential new augmentation source for 2013: new PSUs

All previous augmentation occurred in existing PSUs

Some less populous states had a small number of PSUs

Some strata only had one sample PSU selected initially
2013 NHIS sample augmentation using new PSUs

Research that allowed us to expand to new PSUs: see Moriarity and Parsons, 2013 Joint Statistical Meetings proceedings (forthcoming)

We needed to select sample of addresses in the new PSUs
Sample address source within new PSUs:
commercial address list

Changes in Census Bureau survey support systems to 2010 Census geography ruled out traditional NHIS field listing method

Acquired complete commercial address list for areas in new PSUs

Selected a sample of ~1000 blocks
Quality of commercial address list was unknown

We compared address counts from the commercial list by block to 2010 Census counts

We selected a ~50% subsample of initial sample for field listing

Future evaluation planned
Future assessment of commercial address list quality

Evaluation in blocks with both address list and field listing

Comparison of survey outcome in address list areas versus nearby field listing areas: percentage out of scope (non-residential, uninhabitable), etc.
NHIS sample address source, 1985-2015

Sample addresses for the 1985-94, 1995-2005, and current NHIS sample designs have come primarily from field listing.

The Census Bureau can share NHIS sample addresses with NCHS.

NCHS uses the NHIS addresses for other surveys, record linkage, etc.
2016 NHIS sample design: cannot afford previous address source

Other demographic surveys conducted by the Census Bureau moving toward using the Master Address File (MAF) as the main source of sample addresses

NCHS has been sharing costs for NHIS field listing; NCHS cannot afford the full cost of field listing
2016 NHIS sample design address source: address list(s)

NCHS does not want to use MAF addresses for NHIS because MAF addresses are confidential, they cannot be shared

NHIS will use one or more commercial address lists as main sample address source, beginning in 2016
Issues to address when using a commercial address list for NHIS

Accuracy, geocoding quality, coverage of areas like college dormitories, etc.

How to do periodic updates

How to select annual samples that do not overlap with previous ones
2016 NHIS sample design will still include some field listing

Rural route/highway contract route/P.O. Box addresses not suitable for personal visit interviewing

Situations like a large apartment building with a single mail delivery point: listing likely needed at least part of the time
Summary

2013 NHIS sample augmentation led to first use of commercial address list (select areas)

Major change for 2016 NHIS sample design: most sample addresses will come from commercial address list(s)

2016 NHIS sample design will still include some field listing

Many questions remain for 2016