NATIONAL HEALTH INTERVIEW SURVEY QUESTIONNAIRE REDESIGN

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Outline

- Overview of the NHIS
- Redesign goals
- Redesign process
- Proposed structure and content
- Next steps
Background: National Health Interview Survey

- **Purpose**: To monitor the health of the US population through the collection and analysis of data on a broad range of health topics

- **Sample**: Address-based, multi-stage, clustered national sample of housing units from every state, to be representative of the civilian noninstitutionalized US population

- **Mode**: In-person interviews by Census interviewers, with follow-up by telephone if needed

- **Data collection**: Continuous, with quarterly and annual data files

- **Target sample size**: Complete interviews for 35,000+ households

- **Anticipated content redesign**: January 2018
Key Roles for the NHIS

- Provide objective scientific data for DHHS from a well-established, high-quality, in-person survey on topics including health conditions, health behaviors, health insurance, and health care utilization.

- Provide “gold standard” estimates for federal and private surveys to use for benchmarking and for adjusting estimates.

- Maintain a large sample size for quarterly national estimates and for annual estimates among population subgroups.

- Maximize stability over time so that trends are reliable.
Goals of the 2018 Content Redesign

- Improve the relevance of covered health topics, better meeting the needs of the Department of Health and Human Services and other data users
- Focus on leading causes of morbidity/mortality, their known risk and protective factors, and targets of health promotion initiatives
  - e.g., health insurance and health care access
- Harmonize overlapping content with other federal health surveys
- Reduce respondent burden and improve data quality
  - Shorten questionnaire and reduce variation in interview times
  - Eliminate or reduce content better covered by other methods
- Establish a long-term structure of periodic topics
Length of Completed Interviews (in minutes), by Quarter: NHIS, 2006-2015
Distribution of Length of Completed Interviews (in minutes): NHIS, 2015

50\textsuperscript{th} percentile: 92 minutes
75\textsuperscript{th} percentile: 115 minutes
90\textsuperscript{th} percentile: 141 minutes
NHIS Family, Child, and Adult Response Rates, NHIS 1997-2014

- Family module
- Sample Child module
- Sample Adult module

Year: 1997-2014
Percentage: 50-95

Graph showing the response rates for family, child, and adult modules from 1997 to 2014.
The proportion of partial interviews almost tripled between 1997 and 2010.
Why Now?

- Most recent content redesign was 1997
- Necessary sampling frame redesign in 2016 introduced additional complexity
- Final measurements for Healthy People 2020 objectives can be completed in 2016 and 2017
- Long-term planning can help sponsors target content
- Desire to slow the decline in response rates
Criteria for Prioritizing Content

- **Strong link to public health**: Leading causes of morbidity/mortality, known risk or protective factors, priority populations at risk, intermediate outcomes
- **Relevant to HHS agency goals**: Part of HHS strategic plan, HHS initiatives
- **Needed for long-term monitoring**: Leading health indicators
- **High quality measurement**: Content can be measured well in household interviews
- **Consistent with other federal surveys**: Measure is used by others for calibration, does not duplicate detail collected by targeted HHS surveys
- **Can be estimated reliably with one or two years of data**: Less focus on rare conditions or behaviors
Input to Guide Decision Making

- Evaluating uses of NHIS data
  - Literature review
  - Reporting requirements

- Policy and program relevant data for DHHS
  - Annual report to Congress: *Health, United States*
  - Healthy People 2020 monitoring and 2030 planning
  - NHIS is the source for 69 Healthy People 2020 Objectives
Published Research – 2013-2015

- Frequently used survey content
  - Cancer Screening
  - Complementary and Alternative Medicine
  - Health Behaviors (e.g. tobacco/alcohol use)
  - Health Care Utilization
  - Health Disparities
  - Health Conditions
    - Child: Asthma, Mental and Developmental Disorders
    - Adult: Diabetes, Asthma, Cancer, Obesity
More Input to Guide Decision Making

- **Engaging stakeholders**
  - Meetings with CDC centers, agency partners, Healthy People federal interagency working group, professional associations, conference presentations

- **Technical expert consultations**
  - Child health, income, pain, injury
Survey Alignment

- Extensive review of what is currently in the field
  - What major content is being collected by other Federal surveys?
  - What major covariates are being collected by other Federal surveys?
  - Where is there overlap?
  - Where are we the primary source of information or gold standard?
Survey Alignment Across HHS

- Several federal surveys have overlapping content in other health areas:
  - National Health and Nutrition Examination Survey (NHANES)
  - Medical Expenditure Panel Survey (MEPS)
  - National Survey on Drug Use and Health (NSDUH)
  - Behavioral Risk Factor Surveillance System (BRFSS)
  - National Survey of Children’s Health (NSCH)

- Several federal surveys have overlapping covariate content:
  - American Community Survey (ACS)
  - Survey of Income and Program Participation (SIPP)
  - American Housing Survey (AHS)
Proposed Structure and Content
Balance

- How to balance the collection of relevant health content and crucial covariates with respondent burden and funding constraints?

- **Options to consider:**
  - Matrix sampling
  - Administrative or alternative data
  - Alternate modes
  - Rotating content
Rotating Content

- Some questions will appear with fixed periodicity but not annually

- **Pros:**
  - Less time intensive than asking all questions every year
  - Can still monitor changes in trends with periodic data

- **Cons:**
  - Data will not be available annually for all topics
The Quilt

- **Annual core**
  - Key measures
  - Sociodemographics

- **Rotating core**
  - Newer topic areas
  - Expanded detail
  - Varying periodicity

- **Sponsored supplements**
  - “Sustaining” sponsors
  - 1- or 2-year modules
  - 5 min or less
1997-2017 NHIS Structure: Core Modules

**Family Core**
- General information on all family members
- Family data
- Allows proxy respondents
- Fielded each year

**Sample Adult Core**
- Self-response (unless unable)
- Fielded each year

**Sample Child Core**
- Knowledgeable adult responds for child
- Fielded each year

Demographic, family relationships, and family income; proxy general health data and health insurance

Utilization, conditions, behaviors, and additional demographic data
2018 NHIS Structure: Proposed Core Modules

Sample Adult Core
- Self-response (unless unable)
- Relevant family-level data
- Fielded with fixed periodicity

Sample Child Core
- Knowledgeable adult responds for child
- Relevant family-level data
- Fielded with fixed periodicity

Demographics, some family relationships, and family income; Health insurance, utilization, conditions, and behaviors
Proposed Changes: Structure

- Shifting content from collection in family module to collection in sample adult and/or sample child modules

- Changes in:
  - Salience: *Gets to the health questions quickly*
  - Basic demographics: *Collected on all household members*
  - Demographic detail: *Collected for sample adult and sample child*
  - Respondent for adult health status and disability: *From proxy to self*
  - Respondent for demographics and insurance: *From family respondent to sample adult*
Key Content Areas for the NHIS

- Functioning and disability
- Health status and conditions
- Health insurance coverage
- Health care access and utilization
- Health risk behaviors
- Demographics
- Social and economic determinants
Child Health Technical Expert Panels

- Major points of consideration:
  - Increase emphasis on social determinants of health
  - Expand coverage on children’s mental health
  - Use functioning as the framework for measurement of disability
  - Decrease focus on rare health conditions
  - Address the gap created by limited collection of family relationships
  - Focus on key measures for which benchmarks and long-term trends are needed, as well as identification of priority populations at elevated risk of poorer health or receiving poorer health care
Other Technical Expert Panel Points of Consideration

- **Income TEP:**
  - Retain but condense “source of income” questions
  - Ensure a clear definition of family prior to collecting data on family income

- **Pain TEP:**
  - Focus questions on the impact of chronic pain

- **Injury TEP:**
  - Assess utility of poisoning questions
  - Closely examine the current requirement for injury ICD-10 coding
Common Themes from Public Comment

- October 2015: First call for public comment
  - Need for maintaining health insurance and utilization measures
  - Importance of broad disability measures
    - Restructured from ADLs/IADLs to Washington Group international standards

- February 2016: Second call for public comment
  - Importance of family structure and context
    - Proposed new questions on housing security and stability, neighborhood safety, food insufficiency, stressful life events
  - Improvements needed for mental health status and care measures
    - Restructured from serious psychological distress to depression/anxiety screening
    - Expanded from short to complete Strengths and Difficulties Questionnaire
    - Proposed new questions on receipt of non-medication treatment/counseling
The Quilt

- **Annual core**
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Adult Annual Core

- General Health Status - Functioning and Disability - Health Insurance
- Hypertension - High Cholesterol - Cardiovascular Conditions
- Asthma - Cancer - Diabetes - Other Chronic Conditions - Height and Weight
- Usual Place for Care - Most Recent Preventive Visit
- Health Care Utilization - Unmet Health Care Needs
- Dental Care - Vision Care - Mental Health Care - Therapies
- Prescription Medication - Immunizations
- Smoking - Physical Activity
- Demographics - Nativity - Housing - Employment - Income
- Financial Burden of Medical Care - Program Participation
Child Annual Core

- General Health Status - Functioning and Disability - Health Insurance
- Asthma - Developmental and Learning Disabilities
- Usual Place for Care - Most Recent Preventive Visit
- Health Care Utilization - Unmet Health Care Needs
- Dental Care - Vision Care - Mental Health Care - Therapies
- Prescription Medication - Flu Vaccination
- Schooling
- Demographics - Nativity - Housing - Income
- Financial Burden of Medical Care - Program Participation
Adult Rotating Core

- Anxiety and Depression
- Injuries
- Alcohol - Smoking History - Walking - Sleep
- Preventive Services
- Chronic Pain
- Selected Providers and Conditions

Child Rotating Core

- Mental Health and Stressful Life Events
- Injuries
- Physical activity - Sleep
- Selected Providers and Conditions
Impact of the Structure and Content Changes

- Shorter interviews, improved data quality
- Updated focus
- Possible break in trends
- Less family context information
- Increased person-level information
- Less information on rare events/conditions
- Consistency in long-term planning
Next Steps

- June 2016
  - Third call for public comment (1st release of child content draft)
  - Development of initial draft of questionnaire text
- Summer 2016
  - Review of public comments
  - Federal register notice (1st release of draft questionnaire text)
Next Steps

- Fall – Winter 2016:
  - Continue to review quality of existing NHIS questions
  - Continue to revise content and questionnaire text
  - Harmonize content with other surveys where appropriate
  - Examine programming and editing procedures to increase automation and efficiency
  - Work with Census to standardize and improve Spanish translation

- 2017: Program survey instrument and test new procedures
For More Information

Or contact us at: healthsurveys@cdc.gov