

The ORM Research and Development Survey (RANDS)

The ORM Research and Development Surveys (RANDS) are a set of planned web panel surveys, designed to help ORM's mission of improving NCHS' survey methodologies. RANDS will address two major areas of methodological research:

1. **Web Panel Survey Methodology:** Can estimates from commercial web panels be used to supplement the estimates from representative surveys (such as the NHIS)?
2. **New Question Evaluation Methods:** Are there new ways to evaluate survey questions using mixed methodology that quantify and describe survey response error, and is it feasible to use web panels to implement these methods?

Web Panel Survey Methodology: The motivation for this research can be described as a “push and pull”: declining response rates from standard surveys; the ease speed and reduced expense of web surveys

- But all sorts of worries about web surveys, primarily problems of coverage, attitude, and representativeness that often have been found to lead to biased estimates, as judged by comparing them to results from standard randomized surveys. This has been found to be the case even when adjustments to estimates based on calibration or propensity scores are used. Standard SES variables often seem insufficient to correct for biases.
- Proposed possibly viable future strategy: to divide questions into two groups: (i) simple, readily answered questions and (ii) more detailed questions on the same subject. (See example below). Future sampling would (if our research shows justifiable) take the form of limiting the traditional standard sample to asking the simple questions AND asking both the simple and complex questions on the web survey. The idea would be to bias-adjust the answers to the complex questions by using the standard survey to calibrate (or use propensity scoring) based on a combination of SES results AND the answers to the simple questions.
- In order to know whether and under what circumstances this will work we need to see whether the relation between the simple and complex questions that holds on the standard survey – we shall use the NHIS – also holds on the web surveys. This will be the primary focus of the RANDS in evaluating web panel surveys. Several sets of NHIS questions, each set comprising core and detailed questions, will be asked on contemporaneous surveys administered through selected commercial Panels, and the analyses of the relations between responses to core and detailed compared to those derived from the NHIS.

New Question Evaluation Methods: The motivation behind this area of research is to move the field of question evaluation into the integration of qualitative/quantitative mixed methodologies.

- There are clearly established methods for evaluating questions both qualitatively and quantitatively, including cognitive interviewing, behavior coding, item response theory, and latent class analysis. However, there is a growing awareness that the use and integration of these varying question design methodologies is necessary for the advancement of question evaluation research, particularly to improve understanding of the relationship between question response and survey error.
- In recent years, specific question evaluation studies conducted at NCHS have utilized the combination of cognitive interview findings and analysis of survey data. For these studies, analysis of survey data involved examination of non-response and ‘missing’ data, the use of

'probe questions' specifically included to determine the constructs captured and response consistency across questions, as well as the use of existing questions to examine response consistency.

- We plan on using the RANDS survey to both develop this mixed method approach to question evaluation and to explore whether or not web panels may be a potential tool to field this new approach.

Example of a Potential Question Set: The RANDS will contain both NHIS questions, as well as questions that will be developed during cognitive testing. There will be three classes of questions: core NHIS questions, detailed NHIS questions, and probe questions designed by the QDRL to capture the constructs the respondents are considering when answering either the core or detailed NHIS questions.

We might, for example, use a set of questions about access to healthcare (NHIS Questions FAU.180 through FAU.200):

Core Question

FAU.180: DURING THE LAST 2 WEEKS, did you see a doctor or other health care professional at a doctor's OFFICE, a clinic, an emergency room, or some other place?

Detailed Questions

FAU.190: How many times did you visit a doctor or other health care professional DURING THE LAST 2 WEEKS?

FAU.200: DURING THE PAST 12 MONTHS, did you receive care from doctors or other health care professionals 10 or more times? Do not include telephone calls.

Probe Questions (for Question FAU.180)

Please note, both the form and the content of the probe questions will be designed based on the data that emerge from the cognitive interviews of the core and detailed NHIS questions. The following are just examples made up for this presentation

Probe 1: Did you consider your dentist when answering this question?

Probe 2: Did you consider your primary care physician when answering this question?

Probe 3: Did you consider any surgeons when answering this question?

Probe 4: Did you consider any acupuncturists when answering this question?

Probe 5: Did you consider any chiropractors when answering this question?