

**GenIC Submitted Under
Cognitive Testing and Pilot Testing for the National Center for Chronic Disease Prevention
and Health Promotion
OMB Control Number: 0920-1291 Expiration 3/31/3023**

1. **Date:** 12/21/2020
2. **Name, CIO/Program:** Carol Pierannunzi, NCCDPHP/DPH/PHSB
3. **Title of Study:** Electronic Health Records and Address- Based Sampling Pilots
4. **Study Type:** Pilot Testing

5. Purpose of Study:

The purpose of this pilot is to test two methods of data collection that may be used to supplement data from The Behavioral Risk Factor Surveillance System (BRFSS). The purpose of the first project which uses electronic health record (EHR) and survey data from the same respondents will be to assess the quality of data from self-reports and determine the feasibility of merging two datasets together to provide more accurate health information at (sub)state-level jurisdictions. The second project will examine data collection methods other than telephone interviews to collect general health information. The purpose of the second project is to assess the feasibility of the use of an address-based sample (ABS) to administer the BRFSS, which has traditionally relied on a sample of working telephone numbers. These projects will be limited in scope in that they will include relatively smaller numbers of respondents and each will be conducted in only one state.

Although these two projects examine different data collection methods and may provide different information for protocols used with BRFSS data collection and post data collection adjustments, they are both proposed to develop plans to ensure high quality data at the state and substate level.

The EHR project will be conducted in Minnesota in collaboration with the Mayo Clinic and other contractors. The Mayo Clinic maintains a large-scale Electronic Health Records (EHR) system which effectively covers the residents of that state. From a sample of 2,500 randomly selected participants from the primary care providers within the Mayo Clinic EHR, the project anticipates interviewing 900 eligible respondents using information available in health records and which is also collected by self-reports during BRFSS interviews. Interviews will be conducted by phone using contact information from persons in the EHR who sought primary care within the past three years. Details on the EHR project are provided in Attachment 1. We will use a subset of the BRFSS for this project. It will take approximately two years to complete, although data collection will take place over a period of a few months.

The information from the EHR study will be used to:

1. Determine the quality of self-reported data and differences in self-reported and electronic health record data on the same/similar question.
2. Determine whether and how adjustment weights could be applied to survey data to compensate for errors in self-reporting.
3. Evaluate differences among persons within the study site who do/do not have primary care providers and examine the bias inherent in using electronic health information to assess population health.
4. Produce methodological paradata reports including (but not limited to) selection bias and weighting to populations.
5. Determine whether data collected by surveys of EHR participants can be incorporated into the BRFSS dataset and whether statistical adjustment calculations for mode of response are necessary.

The ABS study will be conducted in the state of Texas. Texas was selected because of the diversity of its population, the large number of counties within the state and the variance among communities in terms of urban/rural population densities. The sample size will be 14,000 addresses in the state of Texas based on a goal of roughly 2,500 completed surveys under conservative response projections.

Respondents will be offered small incentives to complete the survey online. Up to 5 contacts will be made with each address. The first three contacts will include invitation letters and/or postcard reminders. The last two contacts will include mailings of paper and pencil version of the survey which respondents may complete and return. Attachment 2 includes all recruitment materials. Attachment 3 provides the questionnaire to be used.

The information from the ABS study will be used to:

1. Assess the feasibility of the use of address-based rather than random digit dialing (RDD) telephone samples to conduct (portions of) the BRFSS.
2. Assess whether data from an ABS sample could supplement data from respondents using an RDD sample.
3. Review paradata on costs per complete, response rates, timely response and other administrative data to determine efficiencies and data quality.

No data from these studies will be used for population prevalence estimation or rigorous analysis of health data.

Overall results will be used to assess methods for improved data quality and efficiency in the BRFSS data collection process. The practice of testing modes for data collection is standard for all large-scale data collection systems such as the BRFSS and other data collection systems housed within the NCCDPHP.

Respondent Characteristics:

Respondents must be U.S. residents, 18 years of age or older and living in a private residence, within of the states (MN for the Electronic Health Record project and Texas for the ABS project) included the pilot study.

6. Study Methods:

The data will be collected via telephone interview for the EHR project and web-based survey with mailed questionnaire follow-up for the ABS project. Data will then be compared to ongoing surveillance using identical questions.

7. Recruitment and Incentives:

For the Electronic Health Record project, participants will be recruited from persons who have sought primary health care within the past three years through the Mayo Clinic system in the state of Minnesota. Participants will be invited to participate and provided with opportunities for refusal during the screening process. Participation is voluntary. Introductory statements from the BRFSS will be used. No incentives are offered to the respondents in this study.

Participants for the ABS study will be recruited through a random selection of household addresses within the state of Texas. A \$2 incentive will be offered to a split sample of addresses. An additional \$5 incentive will be provided once respondents have completed the online survey. In some cases as much as \$10 may be offered to respondents who complete the online survey after the 5th request. Respondents will be selected from within multiple adult households using the next birthday method. See Attachment 2 for examples of all recruitment materials.

8. Personally Identifiable Information (PII):

General demographic characteristics of respondents will be collected and associated with paradata on questions posed to participants and question responses. RDD sample files will include phone numbers. Respondents will not disclose their names or addresses as part of the question process. ABS sample files will include household addresses. CDC will not retain any PII and will not maintain sample files of phone numbers or addresses. Respondents' phone numbers, addresses and other sample information will be kept in files separate from response files and will not be connected to responses. After completion

Report Writing												
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Electronic Health Records Project												
Item	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	21-22	23-24
Questionnaire development												
CATI Programming												
Interviewer training												
Data Collection and Monitoring												
Data Cleaning												
Analysis												
Report Writing												

12. Burden Table.

Estimates of Annualized Hour and Cost Burden

Type of Respondents	Stage of Survey Administration	Number of respondents	Number of responses per respondent	Average burden per response (in hours)	Total burden in hours
General Texas Adult Population	Online survey response	2,000	1	.5	1000
	Paper and pencil survey response	500	1	.5	250
	Total ABS	2,500			1250
Minnesota adult residents enrolled in the Mayo EHR who received primary care in past 3 years	CATI Screening for RDD Survey	2,500	1	.1	250
	Telephone Interview	900	1	.5	450
	Total EHR				700
Total					1950

Table 12B Estimated Annual Cost Burden			
Stage of Survey Administration	Single Administration Burden Hours	Average Hourly Rate*	Total Single Administration Cost Burden
ABS Online survey response	1000	\$25.72	\$25,720
ABS Paper and pencil survey response	250	\$25.72	\$6,430
CATI Screening for EHR respondents	250	\$25.72	\$6,430
Surveying HER respondents	450	\$25.72	\$11,574
Total			\$50,154

*Based upon the average hourly earnings from the Bureau of Labor Statistics May 2019 National Occupational Employment and Wage Estimates (available at https://www.bls.gov/oes/current/oes_nat.htm).