Zika Reproductive Health and Emergency Response Call-Back Survey (ZRHER) 2018

New Information Collection Request

Supporting Statement B

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1. Respondent Universe and Sampling Methods

Women of reproductive age are disproportionately affected by public health emergencies, and are the focus of the Zika Reproductive Health and Emergency Response (ZRHER) Call-Back Survey.[1,2,3,4,5,6,7,8,9,10,11] CDC's Division of Population Health administers the Behavioral Risk Factor Surveillance System (BRFSS) main survey, which provides the foundation for the ZRHER Call-Back Survey administration and data collection. The ZRHER Call-Back Survey sample will be a subset of BRFSS respondents who are women aged 18-49 years and agree to participate in the call back survey. Because the ZRHER Call-Back Survey will sample among women completing the main BRFSS survey, it will include both cell phone and landline sampling.

The BRFSS landline sample for each jurisdiction is based on a disproportionate stratified sample (DSS) design in which telephone numbers are assigned to two separately sampled strata based on the presumed density of residential (non-business) telephone numbers. The high-density and medium-density strata contain telephone numbers that are expected to belong mostly to households. Whether a telephone number goes into the high-density or medium-density stratum is determined by the number of listed residential numbers in each hundred block, or set of 100 telephone numbers with the same area code, prefix, the first two digits of the suffix and all possible combinations of the last two digits. Numbers that come from hundred blocks with one or more listed household numbers ("1+ blocks," or "banks") are put in either the high-density stratum ("listed 1+ blocks") or medium-density stratum ("unlisted 1 + blocks"). The sampling ratio between listed one-plus block and not-listed one-plus block household density strata in a DSS design is 1.5:1 in which the listed will be sampled at the rate of 1.5 times that of not-listed. Geographic stratification for landline telephones within a state is defined by counties, health districts, cities, zip codes, and/or census tracts.

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1 Meaney-Delman D, Rasmussen SA, Staples JE, et al. Zika Virus and Pregnancy: What obstetric health care providers need to know. Obstetrics and Gynecology. 2016;127(4):642-8: https://www.ncbi.nlm.nih.gov/pubmed/26889662.

2 Centers for Disease C, Prevention. Illness surveillance and rapid needs assessment among Hurricane Katrina evacuees--Colorado, September 1-23, 2005. MMWR Morb Mortal Wkly Rep. 2006;55(9):244-7: https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5509a7.htm.

3 Behrman JA, Weitzman A. Effects of the 2010 Haiti earthquake on women's reproductive health. Stud Fam Plann. 2016;47(1):3-17: https://www.ncbi.nlm.nih.gov/pubmed/27027990.

4 Hapsari ED, Widyawati, Nisman WA, Lusmilasari L, Siswishanto R, Matsuo H. Change in contraceptive methods following the Yogyakarta earthquake and its association with the prevalence of unplanned pregnancy. Contraception. 2009;79(4):316-22: https://www.ncbi.nlm.nih.gov/pubmed/19272502.

5 Kissinger P, Schmidt N, Sanders C, Liddon N. The effect of the hurricane Katrina disaster on sexual behavior and access to reproductive care for young women in New Orleans. Sex Transm Dis. 2007;34(11):883-6: https://www.ncbi.nlm.nih.gov/pubmed/17579338.

6 Leyser-Whalen O, Rahman M, Berenson AB. Natural and social disasters: racial inequality in access to contraceptives after Hurricane Ike. J Womens Health (Larchmt). 2011;20(12):1861-6: https://www.ncbi.nlm.nih.gov/pubmed/21942865.

7 Ellington SR, Kourtis AP, Curtis KM, Tepper N, Gorman S, Jamieson DJ, et al. Contraceptive availability during an emergency response in the United States. J Womens Health (Larchmt). 2013;22(3):189-93: https://www.ncbi.nlm.nih.gov/pubmed/23421580.

8 Zotti ME, Ellington SR, Perez M. CDC Online course: reproductive health in emergency preparedness and response. J Womens Health (Larchmt). 2016;25(9):861-4: https://www.ncbi.nlm.nih.gov/pubmed/27631300.

9 Callaghan WM, Rasmussen SA, Jamieson DJ, Ventura SJ, Farr SL, Sutton PD, et al. Health concerns of women and infants in times of natural disasters: lessons learned from Hurricane Katrina. Matern Child Health J. 2007;11(4):307-11: https://www.ncbi.nlm.nih.gov/pubmed/17253147.

10 Watson AK, Ellington S, Nelson C, Treadwell T, Jamieson DJ, Meaney-Delman DM. Preparing for biological threats: addressing the needs of pregnant women. Birth Defects Res. 2017;109(5):391-8: https://www.ncbi.nlm.nih.gov/pubmed/28398677.

11 Rasmussen SA, Jamieson DJ. 2009 H1N1 influenza and pregnancy--5 years later. N Engl J Med. 2014;371(15):1373-5: https://www.ncbi.nlm.nih.gov/pubmed/25295498.

The BRFSS cellphone sample for each jurisdiction is randomly selected from lists of all working cell phone numbers. Cellular telephone interviews are conducted with respondents who answer the number called and are treated as one-person households. Persons who have moved to other states and who have cell phone numbers with area codes/prefixes from other states are eligible for interview if they have moved to a state that is participating in the ZRHER Call-Back Survey. Data collected from persons who have moved into a participating state with cell phone prefixes from other states will be transferred to the appropriate data file at the end of the calendar year. In order to allow for weighting, the BRFSS has a target of 25 percent of the total number of interviews completed to be conducted with persons who are cell phone only (i.e., those who do not have access to personal landline phones). The geographic stratification for cellular phones is by county/set of counties as defined by rate centers by billing areas.

The BRFSS sampling process is described in more detail in the 2016 BRFSS Overview (https://www.cdc.gov/brfss/annual_data/2016/pdf/overview_2016.pdf)

For the ZRHER Call-Back Survey, women aged 18-49 years who complete the main BRFSS will be read a recruitment message at the end to ask if they are willing to be re-contacted (**Attachment 4**). For the main BRFSS survey, the number of interviews that each state or territory completes each year varies from jurisdiction to jurisdiction – based on the needs, population size and diversity of each jurisdiction. For the ZRHER Call-Back Survey, in each state the target sample size will be 800 women; in each of the two included territories (Guam and the US Virgin Islands), the target sample size will be 400 women. This target sample size for each participating state/territory is sufficient to ensure that for key measures the denominator will be > 50, thereby exceeding the denominator suppression rule for reporting BRFSS data.[12]

Based on prior experience using the BRFSS survey to recruit respondents for a call-back survey,[13] we estimated the percent of respondents we anticipate will agree to be called back, and the percent of those agreeing to be called back who will complete the survey for each participating state and territory. Based on this information, we calculated the anticipated percent of all women aged 18-49 completing the main BRFSS survey who we anticipate will complete the ZRHER Call-Back Survey, and the number of respondents from the main BRFSS survey who will needed to be read the recruitment script to reach our target sample size.

Table B.1-1. Anticipated Response Rates by State/Territory

State/Territory	% Agreeing to participate in ZRHER Call-Back – among women age 18-49 years completing the main BRFSS	% Completing ZRHER Call-Back – among respondents agreeing to be called back	% Completing ZRHER Call-Back – among all women 18-49 years completing the main BRFSS	# Needed to be read the recruitment script to reach target sample
Alabama	78%	52%	40%	1976
Arizona	73%	54%	39%	2058
District of Columbia	69%	47%	32%	2466
Florida	78%	54%	42%	1903

[12] https://www.cdc.gov/mmwr/volumes/66/ss/ss6607a1.htm?s_cid=ss6607a1_w.

[13] https://www.cdc.gov/brfss/acbs/2014/pdf/ACBS_DataQualReport_14_REVISEDAp112017CLEARED.pdf. Percentages are based on the adult landline and cell phone sample, unless only the adult landline sample was available, given the similar proportions of individual agreeing to be called back for the two samples. For states and territories without data on callback completion rates, the average for the remaining states and territories, respectively, was used.

Georgia	81%	60%	49%	1638
Louisiana	71%	48%	34%	2353
Maryland	75%	40%	30%	2669
Mississippi	75%	54%	40%	1985
New Mexico	72%	42%	30%	2636
New York	75%	52%	39%	2052
Texas	74%	58%	43%	1864
Guam	88%	62%	54%	737
US Virgin Islands	88%	62%	54%	737

2. Procedures for the Collection of Information

For those who have consented and can be re-contacted, the first three questions of the ZRHER Call-Back Survey will serve as screening questions (**Attachment 5**). These questions determine that the number dialed is correct, if the interviewer is speaking to the correct person, and to confirm that she would still like to participate. If the answer to any of these questions is no, the interview will be terminated.

ZRHER Call-Back Survey data collection will follow all standard BRFSS data collection protocols (such as call attempts, assigning dispositions to cases, etc.). Data collection for the ZRHER Call-Back Survey must meet guidelines and data quality criteria established for the annual jurisdiction-wide survey.

The following is a summary of ZRHER Call-Back Survey steps, roles, and responsibilities:

1. CDC Divisions of Reproductive Health and Population Health within the National Center for Chronic Disease Prevention and Health Promotion, in consultation with the state BRFSS programs, designed ZRHER Call-Back Survey questionnaire.
2. Information collection will be conducted by telephone interview. CDC provides Computer-Assisted Telephone Interviewing (CATI) programming to the state BRFSS programs for their use. The BRFSS programs may opt to use their own CATI programming software.
3. The participating state BRFSS programs are responsible for field operations and determining how their data will be collected within the BRFSS guidelines. The data collectors for the main BRFSS survey are the same as for the ZRHER Call-Back Survey. Data collectors must develop and maintain procedures to ensure respondents' privacy, assure and document the quality of the interviewing process, and supervise and monitor the interviewers. Files containing phone numbers must be maintained separately from any files containing responses.
4. The state BRFSS programs submit de-identified data files to CDC on a monthly or quarterly basis for cleaning and weighting. CDC returns clean, weighted data files to the state BRFSS programs for their use.

ZRHER Call-Back Survey Call/Interview Guidelines:

All standard BRFSS data collection protocols (such as call attempts, assigning dispositions to cases, etc.) are followed among the sample of women responding 'yes' to the recruitment script (**Attachment 4**). Data collection for the ZRHER Call-Back Survey will begin in 2018 after OMB approval. The

ZRHER Call-Back Survey should be conducted within two weeks of the BRFSS interview completion date ZRHER Call-Back Survey. If the respondent is willing to participate immediately after completing the main BRFSS survey, the ZRHER Call-Back Survey interview can be conducted at that time. Only one ZRHER Call-Back Survey will be conducted per landline household.

Procedures to Promote Data Quality and Comparability:

The ZRHER Call-Back Survey follows BRFSS procedures to promote data quality and comparability, with minor revisions. The following items are included in the ZRHER Call-Back Survey protocol:

1. The ZRHER Call-Back Survey questions must be asked without modification. Interviewers may not offer information to respondents on the meaning of questions, words or phrases beyond the interviewer instructions provided by CDC and/or the BRFSS coordinators.
2. Interviewers should be trained specifically for the ZRHER Call-Back Survey.

General calling rules, listed below, are established by the BRFSS, and the state BRFSS programs are encouraged to adhere to them whenever possible.

1. All cellular telephone numbers must be hand-dialed.
2. The BRFSS program should maximize calling attempts as outlined in BRFSS. The maximum number of attempts (15 for landline telephone and 8 for cellular telephone) may be exceeded if formal appointments are made with potential respondents.
3. Calling attempts should allow for a minimum of 6 rings and up to 10 rings if not answered or diverted to answering devices.

Statistical Methods and Estimation Procedures:

The ZRHER Call-Back Survey will assess several important questions specific to women of reproductive age (18-49 years). For key questions, prevalence estimates and 95% confidence intervals will be calculated using SAS-callable SUDAAN to analyze complex survey data. Relative standard error (RSE) will be calculated by dividing the standard error by the estimated prevalence and multiplying by 100. Prevalence estimates based on sample sizes with a denominator < 50 respondents or with a RSE >30% will not be reported. Prevalence estimates will be flagged as unstable if the RSE is 20%–30%. The target sample size for each participating state/territory is sufficient to ensure that for key measures the denominator will be > 50.

3. Methods to Maximize Response Rates and Deal with Nonresponse

The ZRHER Call-Back Survey will use a number of techniques to deal with response rates and nonresponse. These include providing the interview in English and Spanish, creating a number of call back protocols designed to convert refusals, and alternating times and days of calling attempts. Interviewers get permission from BRFSS respondents to call them back during the main BRFSS survey.

Experienced interviewers are used for callbacks when respondents provide a soft refusal to take part in the survey. Hard refusals are not called back.

The state BRFSS programs must maintain training for all interviewers involved in the ZRHER Call-Back Survey. Issues related to response rates are discussed in large annual meetings of the data collectors. Data collectors also participate in monthly conference calls organized by the CDC to discuss best practices, and share experiences.

4. Tests of Procedures or Methods to be Undertaken

CDC has collaborated internally across the agency with experts in reproductive health, Zika virus, and emergency response preparedness. Feedback has been incorporated into the survey from:

- The National Center for Emerging and Zoonotic Infections Diseases;
- The National Center for Chronic Disease Prevention and Health Promotion;
  - Division of Population Health (for BRFSS);
  - Division of Reproductive Health (for contraceptive use measurement and emergency response preparedness among women of reproductive age);
- The Office of Public Health Preparedness and Response (OPHPR); and
- The National Center for Health Statistics, Reproductive Statistics Branch (for the National Survey of Family Growth, NSFG).

These consultations have included suggestions on adapting the wording of similar questions from existing surveys to provide state-specific estimates among women of reproductive age (**Attachment 3**).

Additionally, CDC has consulted with the BRFSS coordinators for each of the participating jurisdictions to ensure that content of the survey will meet their information needs (see section 5, below).

Upon OMB approval, a field test will be conducted by a single state with oversight of the CDC. The field test will conduct the survey among 100 respondents. The field test sample is not designed to be representative, but will be used to test the questionnaire, related software, and to identify problems with question wording or response sets. Following the field test, the survey will be revised if indicated based upon feedback from the interviewers and the data collected. A change request will then be submitted and the final survey implemented upon approval by OMB.

BRFSS will carry out all steps necessary following the completion of data collection to prepare the data files for analysis, including final cleaning, weighting, and readying the data for analysis.

5. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data

Following preparation of the assessment's data files, data analysis will be conducted by staff from CDC's National Center for Chronic Disease Prevention and Health Promotion, Divisions of Reproductive Health, and the National Center on Birth Defects and Developmental Disabilities, Division

of Congenital and Developmental Disorders. While data collection is taking place, data analysis will be planned. CDC staff will define a set of tabulations to be performed for the assessment and create table shells for the tabulations. It is expected that the principle tabulations will take about two weeks to perform. Those initial tabulations will provide information to answer all of the key questions the assessment is to address. Any additional analysis that may shed further light on important Zika prevention behaviors among women of reproductive age may be performed following the principle tabulations.

Subject matter experts consulted for questionnaire development and analysis plans include:

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