

North Dakota Behavioral Risk Factor Surveillance System (BRFSS)

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Melissa Parsons

Senior Epidemiologist

Program Director, BRFSS

mparsons@nd.gov

701.328.2787



NORTH DAKOTA
DEPARTMENT *of* HEALTH

Community Health Epidemiologist

- Epidemiological subject leader
 - Data resources, data management, data analysis and interpretation, science-based health interventions, program outcome evaluation
- Data and epidemiology trainings
- Quality management standards
- Data release policies

BRFSS

- Behavioral Risk Factor Surveillance System
 - Conducted annually by NDDoH and CDC
 - Telephone survey
 - Clearwater Research Inc.
 - Strict scientific protocols
 - Statistically accurate results
 - Randomly selected respondents 18 years and older

Purpose of BRFSS

- The data collected in North Dakota is used to develop health policy, design and evaluate public health programs, monitor the health risks and health status of North Dakota residents, determine the attitudes and beliefs of North Dakotans about important health issues, and meet data needs for researchers both in the state and nationwide.

BRFSS Methodology

- Disproportionate Stratified Random Sampling methodology (protocol provided by CDC)
 - Sets of 100 numbers with same area code, prefix, and first two digits of suffix and all possible combinations of last two digits of suffix into two strata based on the likelihood that the number represents an actual household
 - Different strata are sampled at different rates to improve calling efficiency

More about survey sampling

- Anonymous data collections
 - Names not collected
 - All responses anonymous
- Computer dials phone number
 - Approx. the same number of people is called each month
 - Three calling periods (daytime, evening, and weekends)
 - 15 attempts before number is replaced
- Interviews from every county
 - Number proportionate to population
- Length varies (age, sex, responses)
 - Approximately 20 minutes

Data Weighting

- Process by which the survey data are adjusted to account for unequal selection probability and response bias and to represent more accurately the population from which the sample was drawn.
 - Responses of each person are assigned a weight that accounts for the density stratum, # of telephone numbers in the household, number of adults in the household and the demographic distribution of the sample
 - New method beginning 2010 – “Raking”

Data Reliability

- Telephone interviewing has been demonstrated to be a reliable method for collecting behavioral risk data
 - Cost less than other methods
- Current methodology has been utilized and evaluated by CDC and participating states since 1984
 - Thorough evaluation of survey questions, questionnaire design, data collection procedures, surveying techniques and editing procedures conducted to maintain overall data quality and to lessen potential bias within the population sample

Data Limitations

■ Sampling

- Results are an estimate of true answer for entire population
 - More people interviewed, the greater the precision of the estimate will be
 - When data are subdivided estimates are less precise and may become too uncertain to be of value
- Households with no telephone are not reached
 - Phone ownership related to income
 - Phone ownership high in ND (greater than 95%)
 - Some racial or ethnic subgroups have lower phone ownership

BRFSS Limitations Cont.

- Sampling cont.
 - Telephone technology changing
 - Potential for bias
 - Increasing number of cellular-telephone-only homes with no traditional land line in the home
 - Studies regarding impact on survey response and the feasibility of various methods (i.e., multi-mode survey) for data collection to complement current methods are ongoing
 - Questionnaire design and administration
 - Question wording and preceding question can influence response
 - Not all questions have been pre-tested to ensure the intended meaning is understood

BRFSS Limitations Cont.

- Sampling cont.
 - Interviewer bias possible through tone of voice or administration technique
 - Trained to read questions verbatim in neutral voice without comment
 - Coding errors
 - Interviewer types in wrong response
 - Respondent may alter response to the most socially acceptable answer

BRFSS Limitations Cont.

- Sampling cont.

- CASRO response rate

- Based on the number of interviews completed, the number of households reached and the number of households with unknown eligibility status (i.e., those called 15 times where no one was reached)

- ND CASRO rate ~60%

- Bias from non-response cannot be removed; not possible to know if those who refused to answer would have responded similarly to those who answered the questions

BRFSS Limitations Cont.

- Sampling cont.
 - Confounding and causation
 - Personal characteristics of survey response are univariate
 - However the complexity of health associations are not fully represented by examining single relationships
 - Causes of the health effects examined are not explained/addressed with this survey
 - Responses are a “snapshot” of disease, risk factors and population characteristics for adult residents of ND at a point in time

Survey Content

- CDC Core Questions
- CDC Optional Modules
- State Added Questions
 - Rotating years for several modules
 - Proposals from workgroup
 - Ex: 2008 - General health status, access to health care, sleep, physical activity, disability, diabetes, oral health, cardiovascular disease prevalence, asthma, immunization, tobacco use, alcohol use, falls, seatbelt use, drinking and driving, women's health, prostate cancer screening, colorectal cancer screening, HIV, emotional support and life satisfaction, anxiety and depression, suicide, sexual and intimate partner violence, emergency preparedness, sexual preference, use of fireworks...

BRFSS Workgroup

- Typically meet 1-2 times/year in late June or early July
 - For 2008 awaiting draft questionnaire from CDC
- Proposals for state added questions introduced and discussed in 1-2 meetings
 - Written proposal and list of questions required but no specific format or protocol
 - Programs accommodated to the extent possible with consideration survey space, funding and need for and use of proposed data
 - Program contribution on currently required
 - Program director has final voice in selection for survey and works with the submitter as needed on question design and development

BRFSS Workgroup

- Upcoming Changes beginning 2009
 - Quarterly meetings – charter development?
 - Protocol for submitting proposals for state added questions under development and will be introduced at meeting in early July
 - Will include specific format and forms to be submitted
 - Program contribution will be requested
 - If a program does not have funding available, the proposal will still be considered and accommodated to the extent possible with consideration need for and use of proposed data, survey space and funding
 - Program director will continue to have final voice in selection for survey and work with the submitter as needed on question design and development

Survey Results

- <http://ndhealth.gov/brfss/>
- Survey Description
- Survey Questions
- Data Results
- County Level Summaries
- Publications

Accessing Data

- Protected Health Information (PHI) collected and maintained NDDoH is subject to compliance with federal and state laws regarding use and disclosure
 - Includes any data derived from files containing PHI
 - NDDoH Privacy Officer will assist you in complying with the federal requirement so that you can legally receive the data
 - Requires a limited use data agreement

Accessing Data

- Public Use data
 - Aggregate or record level data with no identifiers
 - Ages over 85 are collapsed into 85+ age group
- Limited release data
 - No personal identifiers but includes geographic or other identifiers
 - Limited Use Data Agreement required (binding confidentiality agreements to use data only as specified in the agreement) through Privacy Officer

Accessing Data

- Confidential Data Release
 - Institutional Review Board approval required
 - Privacy Officer is required to ensure that only the minimum data necessary to achieve the purpose of the study is released
 - Limited Use Data Agreement required

Accessing Data

- Assistant Privacy Officer

Bridget Weidner

North Dakota Department of Health

Division of Health Facilities

600 East Boulevard Avenue, Dept. 301

Bismarck, ND 58505-0200

bweidner@nd.gov

Any Questions?

- Contact Information:

Melissa Parsons

Senior Epidemiologist

Program Director, BRFSS

North Dakota Department of Health

Community Health Section

600 East Boulevard Avenue Dept. 301

Bismarck, ND 58505-0200

Phone 701-328-2787

Fax 701-328-1412

mparsons@nd.gov