

**BRFSS 2000: National**

<http://www.cdc.gov/BRFSS/>

Folic Acid Surveillance Surveys  
National - BRFSS (2000)

Title	Behavioral Risk Factor Surveillance System (BRFSS)
Geographic Area Covered	<p>Various states* (depends on which states paid for interviews using the folic acid module questions);  <b>1997:</b> AZ, CT, KY, NM, OH, OR, RI, SD, VA, Puerto Rico  <b>1998:</b> AZ, CO, MI, PA, SD, Puerto Rico  <b>1999:</b> AZ, CT, GA, IN, KY, MO, NY, NC, ND, OH, SC, TN, UT  *<b>Note:</b> Some additional states used their own "state-added questions" regarding folic acid on the BRFSS</p> <p>&gt;State-specific information:</p> <ul style="list-style-type: none"> <li>• <a href="#">Colorado</a></li> <li>• <a href="#">Michigan</a></li> <li>• <a href="#">Puerto Rico</a></li> <li>• <a href="#">Tennessee</a></li> <li>• <a href="#">Texas</a></li> <li>• <a href="#">Utah</a></li> </ul>
Contact Information (name, mailing address, phone, and e-mail address)	<p><b>Regarding data collection and adding folic acid module:</b>  Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion  Mail Stop K-47 4770 Buford Highway NE  Atlanta, GA 30341-371  Phone: (770) 488-2455  E-mail: <a href="mailto:cdcinfo@cdc.gov">cdcinfo@cdc.gov</a></p> <p><b>CDC data analysis:</b>  Joe Mulinare, MD, MSPH  Centers for Disease Control and Prevention  National Center for Environmental Health  4770 Buford Highway, MS-45  Atlanta, GA 30341-3724  E-mail: <a href="mailto:Flo@cdc.gov">Flo@cdc.gov</a></p>
Sample Size	<p>Depends on the state;  Combined states for <b>1997:</b> n=6,705  Combined states for <b>1998:</b> n=4,086</p>
General Description (target population, frequency of administration, years covered, data collection methods, reason for data collection)	<p>The BRFSS is a state-administered population-based surveillance system containing data collected from men and women (over the age of 18) to monitor health behaviors and knowledge regarding key health issues such as tobacco use, physical inactivity, utilization of health services, poor diet, violence, drug and alcohol abuse, and risky sexual behaviors. The BRFSS contains core questions to assess most risks, but also offers optional questions to assess other health indicators. The folic acid questions are part of an optional module. The module assesses folic acid awareness, how the folic acid message was communicated, knowledge of folic acid benefits, and consumption of multi-vitamins containing folic acid. The questions are offered only to women of childbearing age. All states administer BRFSS, but only certain states have chosen to add the folic acid module, and some states have added their own "state-added" folic acid questions.</p> <p>The BRFSS is administered by states, but is collected on behalf of the Centers for Disease Control and Prevention (CDC). State health departments manage field operations and state-specific data analysis. CDC manages data editing, processing, weighting and overall analysis. Data collection methods include random telephone sampling.</p> <p>Implementation of the folic acid module began in 1997 with <b>10</b> states/territories. Since then there were <b>6</b> states/territories in 1998, and <b>13</b> states/territories in 1999.</p>
Cost	<p>Variable, depending on sample size and BRFSS interview charges in each state. CDC's Birth Defects &amp; Pediatric Genetics Branch pays BRFSS an annual fee for the privilege of having a module in their package of sanctioned modules.</p>
Questions Included (most current, changes over time, state specific changes)	<p>Questions currently assess awareness of folic acid and the prevention of birth defects; the source of the folic acid information; and consumption of multivitamins.</p> <p>In <b>1997</b> there were 3 questions.  In <b>1998</b> there were 5 questions.  In <b>1999</b> there were 7 questions.</p>
Uses of Data	<ol style="list-style-type: none"> <li>1. Strategic planning by local folic acid coalitions</li> <li>2. Evaluation of folic acid campaigns</li> <li>3. Obtain federal funding for surveillance programs</li> <li>4. Obtain other funding for folic acid initiatives</li> </ol>
Results/Summary (including published articles)	<p>Available on state-by-state basis. Contact state coordinators as listed on website below. Abstract presented at the December 1999 Maternal, Infant and Child Health Epidemiology Workshop by Broome et al presented aggregate results from several states which showed:</p> <ul style="list-style-type: none"> <li>• Knowledge &amp; usage highest among: whites, married, educated, and more affluent</li> <li>• Knowledge highest among 25-34 years</li> <li>• Usage increases with age, income &amp; education</li> <li>• Changes in knowledge &amp; usage were minimal from 1997 to 1998, but interpretation is limited because different states participated each year</li> <li>• Among the 3 states that repeated the survey in 1997 &amp; 1998, there were slight, but significant increases in knowledge &amp; usage</li> </ul>
Web site address (if available)	<p><a href="http://www.cdc.gov/brfss">http://www.cdc.gov/brfss</a></p>
Comments (limitations, lessons learned)	<p>Interpretation of changes over time in aggregate state data is limited because different states participated each year. Repeating the survey (even if not every year) in same states allows for better assessment of changes over time.</p>

## Folic Acid Surveillance Surveys

Colorado (Updated 04/2004)

<b>Title</b>	Colorado BRFSS
<b>Geographic Area Covered</b>	Statewide
<b>Contact Information</b> (name, mailing address, phone, and e-mail address)	Margaret F Schonbeck Program Manager, Environmental Health Studies/Colorado Responds to Children with Special Needs (CRCNS) Colorado Department of Public Health and Environment Phone: (303) 692-2636 Fax: (303) 782-0904 E-mail: <a href="mailto:margaret.schonbeck@state.co.us">margaret.schonbeck@state.co.us</a>
<b>Sample Size</b>	1996: 531 women aged 18-44 years 1998: 524 women aged 18-44 years
<b>General Description</b> (target population, frequency of administration, years covered, data collection methods, reason for data collection)	Standard BRFSS questions and methodology used. Administered every other year, beginning with 1996.
<b>Cost</b>	\$5000-\$6000 per year
<b>Questions Included</b> (most current, changes over time, state specific changes)	1996: Standard module 1998: Standard module 2000: Standard module
<b>Uses of Data</b>	Used to educate, and to evaluate effect of folic acid education projects and fortification.
<b>Results/Summary</b> (including published articles)	1996 daily folic acid use: 44% 1998 daily folic acid use: 45% Colorado Responds to Children with Special Needs NTD Fact Sheet and HSVR "Brief" (see web sites below)
<b>Web site address (if available)</b>	<a href="http://www.cdphe.state.co.us/dc/crcns/crcns_fact_sheets.html">http://www.cdphe.state.co.us/dc/crcns/crcns_fact_sheets.html</a> <a href="http://www.cdphe.state.co.us/dc/crcns/publications.html">http://www.cdphe.state.co.us/dc/crcns/publications.html</a>

## Folic Acid Surveillance Surveys

Michigan (Updated 04/2004)

<b>Title</b>	1998 Behavioral Risk Factor Surveillance System (BRFSS)
<b>Geographic Area Covered</b>	Michigan Statewide
<b>Contact Information</b> (name, mailing address, phone, and e-mail address)	Michelle Cook Michigan Department of Community Health Bureau of Epidemiology 3423 Martin Luther King, Jr. Boulevard Lansing, MI 48909 E-mail: <a href="mailto:cookm1@michigan.gov">cookm1@michigan.gov</a>
<b>Sample Size</b>	For MMWR article mentioned below, sample size = 739 women of reproductive age 18-44 years.
<b>General Description</b> (target population, frequency of administration, years covered, data collection methods, reason for data collection)	BRFSS target population: MI residents aged 18 and older who live in a private residence and have a phone.  Data collection method: Telephone interviews of a disproportionate stratified random sample of the population. Folic acid questions asked of females aged 18-44 years.  Reason for data collection: Surveillance of the health risk behaviors, preventive health practices and conditions associated with the leading causes of death.
<b>Cost</b>	~ \$125,000/year to conduct BRFSS
<b>Questions Included</b> (most current, changes over time, state specific changes)	Folic acid questions asked in 1998: <ul style="list-style-type: none"> <li>• Do you currently take any vitamin pills or supplements?</li> <li>• Are any of these a multivitamin?</li> <li>• Do any of the vitamin pills or supplements you take contain folic acid?</li> <li>• How often do you take this vitamin pill or supplement?</li> <li>• Some health experts recommend that women take 400 micrograms of the B vitamin folic acid. Which one of the following do you think is the most important reason why women should take folic acid? Would you say: <ul style="list-style-type: none"> <li>to make strong bones</li> <li>to prevent birth defects</li> <li>to prevent high blood pressure</li> <li>some other reason</li> <li>all of them</li> <li>don't know/refused</li> </ul> </li> </ul>
<b>Uses of Data</b>	Only source of state-specific estimates for folic acid use/knowledge; used for monitoring prevalence over time and comparing MI with other states.
<b>Results/Summary</b> (including published articles)	Reeves M, Rafferty A, Simmeron JC, Bach J. 1998. Knowledge and use of folic acid among women of reproductive age in Michigan. MMWR Weekly. 50(10):185-9.  Article highlights: <ul style="list-style-type: none"> <li>• 42% of women reported taking a multivitamin regularly</li> <li>• 30% of women thought that birth defect prevention was the most important reason for women to consume folic acid</li> </ul>
<b>Web site address (if available)</b>	<a href="http://www.michigan.gov/mdch">http://www.michigan.gov/mdch</a>

## Folic Acid Surveillance Surveys

### Puerto Rico

<b>Title</b>	Puerto Rico BRFFS
<b>Geographic Area Covered</b>	Island wide
<b>Contact Information</b> (name, mailing address, phone, and e-mail address)	Diana Valencia BDSS Department of Health PO Box 70184 San Juan PR 00936-8184 Telephone: 787 274 5671 E-mail: <a href="mailto:dvalencia@salud.gov.pr">dvalencia@salud.gov.pr</a>
<b>Sample Size</b>	1997: 586 non pregnant women aged 18-44 years 1998: 677 non pregnant women aged 18-44 years 2000: 995 non pregnant women aged 18-44 years 2002: 1086 non pregnant women aged 18-44 years 2003: 1030 non pregnant women aged 18-44 years 2004: 977 non pregnant women aged 18-44 years
<b>General Description</b> (target population, frequency of administration, years covered, data collection methods, reason for data collection)	The PR BRFFS random household sampling is an ongoing island wide survey. The data collection method is telephone interviews. The five folic acid questions included in this survey have been queried since 1997.
<b>Cost</b>	\$15,000 per year (\$3,000 per question)
<b>Questions Included</b> (most current, changes over time, state specific changes)	Behavioral Risk Factor Surveillance System 2003 Folic Acid Module – Puerto Rico:  <ol style="list-style-type: none"> <li>1. Do you currently take any vitamin pills or supplements?</li> <li>2. Are any of these a multivitamin?</li> <li>3. Do any of the vitamin pills or supplements you take contain folic acid?</li> <li>4. How often do you take this vitamin pill or supplement?</li> </ol> <p>Some health experts recommend that women take 400 micrograms of the B vitamin folic acid for which of the following reasons...</p>
<b>Uses of Data</b>	Education of general public and health professionals      Evaluation of folic acid campaign
<b>Results/Summary</b> (including published articles)	We analyzed the BRFFS folic acid module for non pregnant women aged 18-44 years in Puerto Rico. From 1997 to 2003, folic acid use has been increasing (22% to 29%). In 2004 we saw a reduction but it was not statistically significant ( $p>0.05$ ). Folic acid knowledge increased drastically from 1997 to 2003 from 23% to 70%, but for 2004 we observed a significant reduction ( $p<0.05$ ) in the folic acid knowledge from 70% to 59%
<b>Web site address (if available)</b>	<a href="http://www.salud.gov.pr">www.salud.gov.pr</a>

## Folic Acid Surveillance Surveys

Tennessee (Updated 04/2004)

<b>Title</b>	BRFSS, Folic Acid Module
<b>Geographic Area Covered</b>	Tennessee
<b>Contact Information</b> (name, mailing address, phone, and e-mail address)	David L Ridings, BRFSS Director/Coordinator Tennessee Department of Health Cordell Hull Building, 4th Floor Nashville, TN 37247 Phone: (615) 741-5246  E-mail: <a href="mailto:dridings@mail.state.tn.us">dridings@mail.state.tn.us</a>
<b>Sample Size</b>	n=3000
<b>General Description</b> (target population, frequency of administration, years covered, data collection methods, reason for data collection)	Adult residents of Tennessee Survey year 2001 Disproportionately stratified random telephone survey (DSS) BRFSS selected module...requested by departmental program
<b>Cost</b>	\$3000
<b>Questions Included</b> (most current, changes over time, state specific changes)	5 questions BRFSS Folic Acid Module (2001)
<b>Uses of Data</b>	Family Planning Division, TN Department of Health
<b>Results/Summary</b> (including published articles)	Not available
<b>Web site address (if available)</b>	Not available

## Folic Acid Surveillance Surveys

## Texas Survey 2 - BRFSS (Updated 04/2004)

Title	Texas BRFSS
Geographic Area Covered	Texas
Contact Information (name, mailing address, phone, and e-mail address)	Amy Case, MAHS Texas Birth Defects Monitoring Division 1100 W 49th Street Austin, TX 78756 Phone: 512-458-7232  E-mail <a href="mailto:amy.case@tdh.state.tx.us">amy.case@tdh.state.tx.us</a>
Sample Size	1500 (annually)
General Description (target population, frequency of administration, years covered, data collection methods, reason for data collection)	<p>Texas BRFSS is an on-going monthly state-based health surveys, established in 1987, targeting adult Texans. The system uses Computer Assisted Telephone Interviewing (CATI) System for respondent interviewing.</p> <p>Information regarding health risk behaviors, clinical preventive health practices, health-care access, and chronic diseases and injury is obtained from the representative sample. The folic acid module has been included in the Texas survey since 1999. Folic acid module responses of 6920 women of childbearing age are included in the 1999-2003 data set.</p> <p>The data is being collected for research on lifestyle risk factors contributing to the leading causes of death and chronic diseases.</p>
Cost	\$33,833 (2000-2004)
Questions Included (most current, changes over time, state specific changes)	<p>Questions include BRFSS core (asked by all states) and module (asked by some states) on demographics, health status, health care and access, exercises, fruits and vegetable consumption, asthma, diabetes, oral health, immunization, tobacco use, alcohol use, seatbelts, family planning, women health, cancer screening, HIV/AIDS, firearms, healthy days, weight control and folic acid.</p> <p>In addition Texas included questions on state tobacco, quality of life, children health insurance and adult childhood experiences. Furthermore, Texas asks the following additional questions for multivitamins use:</p> <ul style="list-style-type: none"> <li>• "Has a doctor or nurse ever advised you to take multivitamins or supplements?"</li> <li>• "What would you say is the main reason that you do not take any vitamin pills or supplements?"</li> </ul>
Uses of Data	<ul style="list-style-type: none"> <li>• Support for March of Dimes funding for Texas Folic Acid Council and on-going assessment of folic acid campaign.</li> <li>• Design and assessment of future folic acid initiatives.</li> <li>• Assessment of risk factors causing deaths and chronic diseases.</li> </ul>
Results/Summary (including published articles)	Texas Birth Defects Monitor Vol 6-1 June 2000
Web site address (if available)	<a href="http://www.dshs.state.tx.us/chs/brfss/">http://www.dshs.state.tx.us/chs/brfss/</a>
Comments (limitations, lessons learned)	<ul style="list-style-type: none"> <li>• Potential responses supplied to the interviewers for the question "What would you say is the main reason that you do not take any vitamin pills or supplements?" did not capture the majority of responses given by women when they supplied their own answer.</li> <li>• Limitations inherent in phone surveys</li> <li>• Still analyzing</li> </ul>

## Folic Acid Surveillance Surveys

### Utah Survey 2 - BRFSS (2000)

Title	Folic Acid Educational Campaign – BRFSS Folic Acid Questionnaire
Geographic Area Covered	Statewide random household sampling
Contact Information (name, mailing address, phone, and e-mail address)	Marcia Feldkamp Utah Birth Defects Network 44 N Medical Drive PO Box 144697 Salt Lake City, Utah 84114-4697 Phone: (801) 584-8443 E-mail: <a href="mailto:mfeldkam@doh.state.ut.us">mfeldkam@doh.state.ut.us</a>
Sample Size	In 1999: all women 18-65+, n=1,823 women 18-44, n=1,265
General Description (target population, frequency of administration, years covered, data collection methods, reason for data collection)	The BRFSS random household sampling is an ongoing statewide survey. The folic acid questions included in this survey have been queried since July 1998. Prior to July 1, 1998, we had only 3 questions asked to women for one month each year, November 1995-1997.
Cost	\$500 per question x 7 questions for folic acid = \$3,500 per year
Questions Included (most current, changes over time, state specific changes)	Behavioral Risk Factor Surveillance System 1999 Folic Acid Module – Utah: <ol style="list-style-type: none"> <li>1. Do you currently take any vitamin pills or supplements?</li> <li>2. Are any of these a multivitamin?</li> <li>3. Do any of the vitamin pills or supplements you take contain folic acid?</li> <li>4. How often do you take this vitamin pill or supplement?</li> <li>5. Some health experts recommend that women take 400 micrograms of the B vitamin folic acid for which of the following reasons...</li> <li>6. Have you ever heard of the B vitamin folic acid? Y, N or DK</li> <li>7. Where did you hear or read about it? List of options given.</li> </ol>
Uses of Data	The Folic Acid Educational Campaign Committee utilizes this information to assess knowledge gaps in awareness in women of childbearing years. Additionally, other healthy or unhealthy behaviors of women can be compared to whether they consume a MV/FA to determine how to better education women in Utah about birth defects prevention.
Results/Summary (including published articles)	The awareness in Utah is higher than national figures – approximately 44.5% and 67.9% consume a multivitamin or supplement. 1999 data will be finalized in July of 2000 so the FAEC Committee will determine how to plan additional educational efforts.
Web site address (if available)	WIP
Comments (limitations, lessons learned)	This is a great data set to utilize for knowledge and behaviors of women of childbearing years. In August 2000 we will have more information examining different age groups of women, urban vs. rural differences and other healthy or unhealthy behaviors as they pertain to knowledge and awareness.