



# MICHIGAN BRFSS SURVEILLANCE BRIEF

A NEWSLETTER FROM THE CHRONIC DISEASE EPIDEMIOLOGY SECTION, MDCH

## Piggy-Backing onto the Michigan Behavioral Risk Factor Survey: An Example from the Thumb Region

### MiBRFS: The Piggy-Back Option

The Office for Survey Research (OSR) at Michigan State University's Institute for Public Policy and Social Research has conducted the annual Michigan Behavioral Risk Factor Survey (MiBRFS) since 1996. Since 1999, OSR, in cooperation with the Michigan Department of Community Health (MDCH), has offered local public health jurisdictions that plan to conduct a local-level BRFSS the option to piggy-back onto the MiBRFS. This option reduces costs for the local survey by utilizing the already-programmed MiBRFS instrument and interviewers who are already trained in the BRFSS protocol. In addition, by special arrangement with MDCH, MiBRFS interviews conducted with residents of the local jurisdiction of interest are made available for inclusion in the local survey data set at no charge. Local BRFSS are expected to use the majority of the MiBRFS core questionnaire but have the option to drop state-added questions and add others to address local data needs.

### The Thumb BRFSS

The most recent local BRFSS to be completed that piggy-backed onto the MiBRFS was conducted in Huron, Sanilac, and Tuscola Counties in 2008 by the Thumb Rural Health Network (TRHN), which had also previously contracted with OSR to conduct a similar BRFSS in 2003 (Table 1).

**Methods.** The 2008 Thumb BRFSS questionnaire was based primarily on the 2008 MiBRFS instrument. In addition to BRFSS core questions and optional modules, the 2008 Thumb BRFSS questionnaire included questions on second-hand smoke, medication compliance, and alcohol problems. OSR conducted the interviews, calculated the weighting factors, and analyzed the data for the 2008 Thumb BRFSS.

**Results.** Of the 9,438 completed interviews from the 2008 MiBRFS, 141 of them were conducted with residents of Huron, Sanilac, or Tuscola counties and were thus available to be combined with the Thumb BRFSS sample for a total sample size of 383 in Huron, 378 in Sanilac, and 382 in Tuscola Counties (Figure 1). The final (weighted) sample for the combined Thumb BRFSS was 20.7% aged ≥ 65 years, almost exclusively Caucasian (97.9%), 16.6% college graduates, 39.2% employed for wages, and 44.2% low income (household incomes < \$35,000). The county-specific profiles differed notably in several characteristics (Figure 2). The population of Huron County was older than that of Sanilac and Tuscola Counties with 26.1% being aged ≥ 65 years compared with 19.7% and 18.3% for Sanilac and Tuscola Counties, respectively. The proportion employed for wages was higher in Tuscola County (45.9%), and the proportion living in low income households was correspondingly lower, compared with the other 2 counties.

Table 1. Counties That Have Participated in MiBRFS Piggy-Back Option

County	Years Participated
Berrien	2002 & 2008
Calhoun	2005 & 2009
Huron, Sanilac & Tuscola	2003 & 2008
Ingham, Eaton & Clinton	2000
Kalamazoo	2005 & 2009
Kent	2003
Livingston	2005 & 2009
Macomb	1999
Midland (City & County)	2003 & 2006
Washtenaw	2006

Figure 1. Sample Size from Thumb BRFSS and MiBRFS, 2008

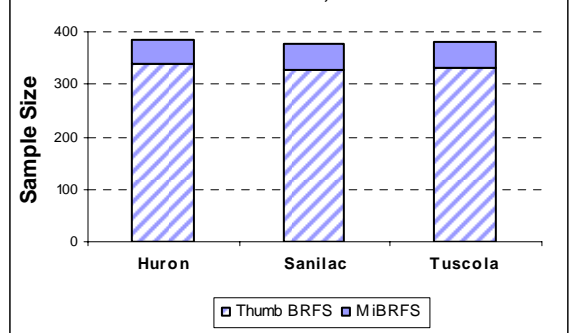
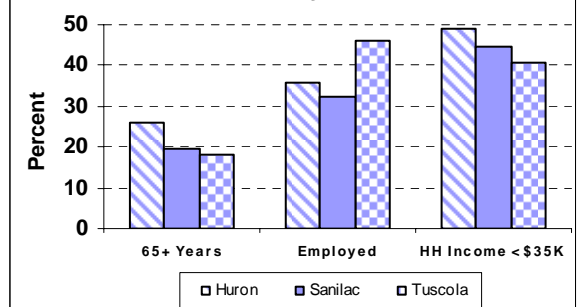


Figure 2. County Characteristics, 2008 Thumb BRFSS



### MiBRFSS News:

- 2008 preliminary standard tables and expanded race tables are available on the MiBRFSS website, [www.michigan.gov/brfs](http://www.michigan.gov/brfs).

- To learn more about this piggy-back option, please contact Larry Hembroff, PhD at [hembroff@msu.edu](mailto:hembroff@msu.edu).
- To learn more about the MiBRFSS, please contact Chris Fussman, MS at [mibrfss@michigan.gov](mailto:mibrfss@michigan.gov).

Results (continued).

Notable variation in prevalence across the 3 counties was observed for several risk factors (Table 2). Compared with Sanilac and Tuscola Counties, Huron County had a higher prevalence of no health insurance among 18-64 year-olds (26.4% in Huron vs. 19.2% and 15.2% in Sanilac and Tuscola, respectively) and a lower prevalence of ever diagnosed with high cholesterol (among those tested). Women aged 20 years and older in Huron County had a lower prevalence of having had a Pap test in the past 2 years compared with those in Sanilac and Tuscola Counties. The prevalence of obesity was higher in Tuscola County compared with the other 2 counties, while the prevalence of inadequate fruit and vegetable consumption (< 5 times/day) was higher in Sanilac compared with Huron and Tuscola Counties.

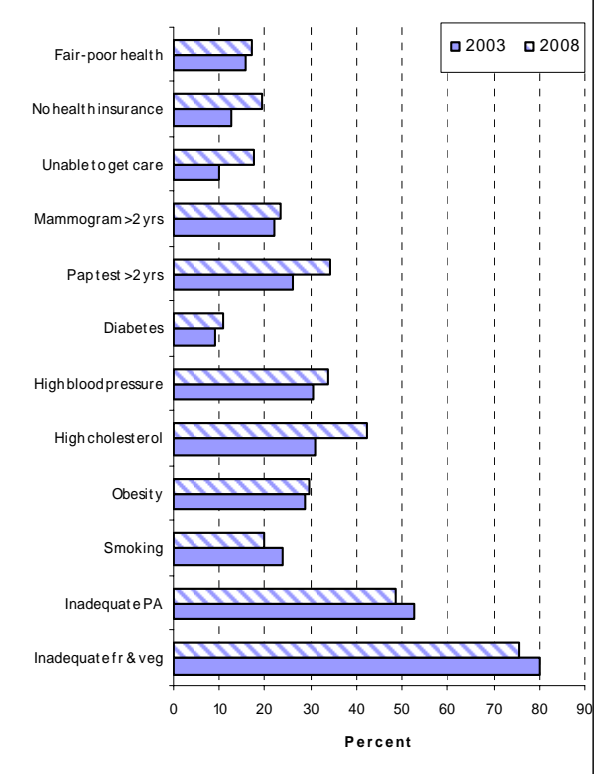
A comparison of prevalence estimates for the Thumb Region from 2003 and 2008 is presented in Figure 3. Although statistical tests were not calculated, there appear to be patterns of increased poor health, chronic conditions, and lack of health insurance in 2008 compared with 2003. The proportion of adults aged 18-64 years in the Thumb Region who did not have health insurance increased from 12.5% in 2003 to 19.2% in 2008; correspondingly the proportion who needed to see a doctor in the past 12 months but could not because of cost increased from 10.1% to 17.4%. However, it also appears that the prevalence of some unhealthy behaviors may have decreased, or at least not increased, especially inadequate fruit and vegetable consumption, which decreased from 80.2% in 2003 to 75.7% in 2008.

**Discussion.** TRHN members, which include all of the rural hospitals and health departments located in Huron, Sanilac, and Tuscola counties and 2 tertiary hospitals, utilized data from the 2003 Thumb BRFS to establish baseline health risk information. Since then members have formalized their network around 3 key issues: cost savings, access to care for the uninsured, and health information technology. Members will utilize estimates from the 2003 and 2008 Thumb BRFS, both as individual organizations and as a network, for assessing trends in health risk behaviors, grant writing, and strategic planning related to improving access to healthcare and the health status of county residents. TRHN encourages use of these data and has made the 2008 Thumb BRFS report available to the public via their Data and Statistics webpage at [www.trhn.org](http://www.trhn.org). In order to track the use of these data and better serve the community, data users are required to agree to a user agreement that includes providing feedback on use of the data. TRHN anticipates increased impact of the BRFS project through use of the data by other agencies and hopes that organizations who benefit from the 2008 report will consider becoming partners in future survey projects.

Table 2. County-Specific Prevalence Estimates, 2008

	Huron	Sanilac	Tuscola
Fair-Poor Health	11.5	19.1	18.7
No health insurance (18-64)	26.4	19.2	15.2
Unable to get care due to cost	17.8	14.6	19.2
No mammogram in past 2 yrs (women 40+)	76.6	83.2	71.1
No Pap test in past 2 yrs	54.8	69.7	70.0
Ever told diabetes	10.8	13.2	8.6
Ever told high blood pressure	40.0	34.8	29.4
Ever told high cholesterol	32.0	49.4	43.8
Smoking	18.0	21.4	20.2
Obesity (BMI >=30)	24.1	26.4	35.2
Inadequate physical activity	42.3	50.0	45.6
Inadequate fruits & vegetables	72.2	81.3	73.3

Figure 3. Prevalence Estimates for the Thumb Region, 2003 & 2008



**The Michigan Behavioral Risk Factor Surveillance System (MiBRFSS)**

The MiBRFSS comprises annual, statewide telephone surveys of Michigan adults aged 18 years and older and is part of the national BRFS coordinated by the CDC. The annual Michigan Behavioral Risk Factor Surveys (MiBRFS) follow the CDC BRFS protocol and use the standardized English core questionnaire that focuses on various behaviors, medical conditions, and preventive health care practices related to the leading causes of mortality, morbidity, and disability. Interviews are conducted across each calendar year. Data are weighted to adjust for the probabilities of selection and a poststratification weighting factor that adjusts for the sex, age, and race distribution of the adult Michigan population.

**Suggested citation:** Hembroff L, Balcer K, Rafferty AP, Fussman C, Lyon-Callo SK. Piggy-backing onto the Michigan Behavioral Risk Factor Survey: An example from the Thumb Region. *Michigan BRFS Surveillance Brief*. Vol. 3, No. 3. Lansing, MI: Michigan Department of Community Health, Chronic Disease Epidemiology Section, September 2009.

