

Michigan Behavioral Risk Factor Surveillance System (MiBRFSS)

*Chronic Disease Epidemiology Section
Division Sharing Day*

October 23, 2008



Behavioral Risk Factor Surveillance System (BRFSS)

- Coordinated by the CDC
- Composed of annual, state-level telephone surveys of adults
 - ❖ Behavioral Risk Factor Surveys (BRFS)
- All 50 states, 3 territories, and the District of Columbia participated in the 2007 BRFSS

MiBRFSS

- Only source of state-specific, population-based estimates among Michigan adults
- Prevalence of various...
 - ❖ Health behaviors
 - ❖ Medical conditions
 - ❖ Preventive health care practices
- Source for the Asthma Call-Back Survey



Michigan BRFS Protocol

- **Data collected on quarterly basis**
 - ❖ IPPSR at Michigan State University
- **Telephone number sample**
 - ❖ Random-digit-dialed methodology
 - ❖ Disproportionate stratification
- **Calling attempts**
 - ❖ Up to 15 to reach each household
 - ❖ Up to 15 to complete each interview
 - ❖ Made across different days and times

Michigan BRFS Protocol

- Once a household is reached, one adult is randomly selected to complete the interview
- MiBRFS split questionnaire
 - ❖ Core questionnaire from CDC
 - ~ 80 questions
 - ❖ State-added questions
 - Divided across questionnaire splits
 - CDC optional modules
 - State developed questions

Michigan BRFS Protocol

- **Dual focus questionnaire**
 - ❖ **Surveillance component**
 - **Questions asked regularly over time**
 - Core questions
 - Optional modules
 - ❖ **Non-surveillance component**
 - **Questions asked periodically**
 - CDC questions on emerging issues
 - State-added questions

Michigan BRFSS Protocol (2007 Surveillance Component)

Health Status

- General health status
- Quality of life
- Disability
- Weight status
- Health care access

Health Risk Behaviors

- Smoking
- Alcohol
- Inadequate physical activity
- Inadequate fruit & vegetable consumption

Michigan BRFSS Protocol (2007 Surveillance Component)

Clinical Preventive Practices

- Routine checkup in past year
- Hypertension awareness
- Cholesterol awareness
- Adult immunizations
- HIV testing

Chronic Conditions

- Asthma
- Arthritis
- Diabetes
- Cardiovascular Disease

Michigan BRFSS Protocol (2007 State-Added Questions)

CDC optional modules

- Diabetes
- Arthritis Management
- Mental Illness & Stigma

Other state-added questions

- Oral cancer screening
- Tobacco (ATS)
- Family history of sudden cardiac death
- Osteoporosis
- Workers' compensation

Michigan BRFS Protocol

■ 2007 MiBRFS

❖ Average interview length

- ~ 21-22 minutes

❖ 7,505 total interviews

- 7,196 complete interviews
- 309 partial interviews

❖ CASRO response rate

- Michigan: 52.6%
- Median for all participating states: 50.6%



Michigan BRFSS Protocol

■ MiBRFS data analysis

❖ Weighted analysis

- Create our own weights
- Adjust for the probability of selection
- Poststratification weighting factor to adjust for age, gender, and race of the Michigan population

❖ SAS-Callable SUDAAN

- Prevalence estimates
- Asymmetric 95% confidence intervals
- Other statistical comparisons



Dissemination of MiBRFS Results

- **Michigan BRFS Website**

 - ❖ www.michigan.gov/brfs

- **Annual Tables**

 - ❖ Overall annual tables by demographics

 - ❖ Annual tables by race/ethnicity

 - ❖ Region and LHD-specific tables

- **Health Risk Behaviors in the State of Michigan: The Michigan BRFS Annual Report**



Dissemination of MiBRFS Results

- **MiBRFSS Surveillance Briefs**
 - ❖ **Prevalence of Fast Food Consumption and Related Behaviors**
 - ❖ **Highlights of the 2007 MiBRFS and Trends in Physical Activity**
 - ❖ **Public Opinion Regarding Tobacco Policies in Michigan**
- **Conference Presentations**
- **Journal Publications**

MiBRFS Internal Data Usage

■ Findings used by...

- ❖ Arthritis
- ❖ Asthma
- ❖ Cancer
- ❖ CVD
- ❖ Diabetes
- ❖ Disability
- ❖ Genomics
- ❖ Tobacco
- ❖ Other programs

■ Findings used in...

- ❖ Program planning
- ❖ Evaluating programs
- ❖ Establishing program priorities
- ❖ Developing policies
- ❖ Assessing trends
- ❖ Shaping legislation
- ❖ Addressing emerging public health issues



MiBRFS External Data Usage

■ Findings used by...

- ❖ Local public health departments
- ❖ Academic Institutions
- ❖ Non-profit organizations
- ❖ and many others

■ Findings used in...

- ❖ Securing funding for local public health program development
- ❖ Establishment of local public health policies
- ❖ Accessing county-level trends in health behaviors



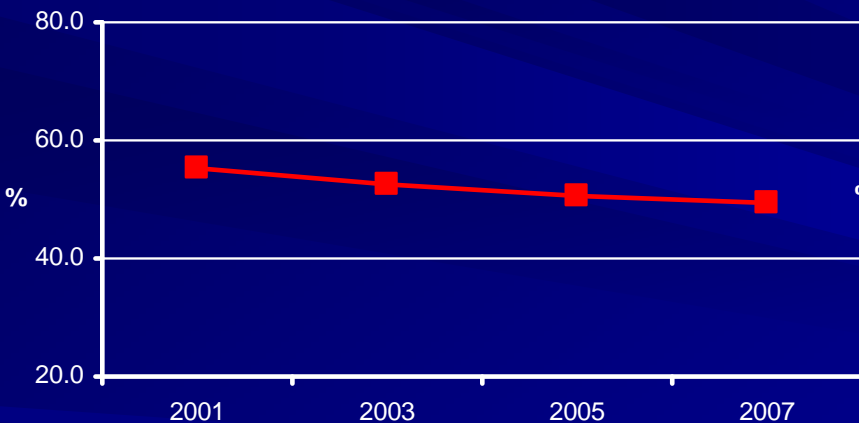
MiBRFS Data Sharing

- **No state-level public-use datasets**
- **MiBRFS Data Use Agreement (DUA)**
- **Current DUAs**
 - ❖ **Diabetes program**
 - **Analysis of Diabetes state-added questions**
 - ❖ **Tobacco program**
 - **Analysis of Adult Tobacco Survey state-added questions**

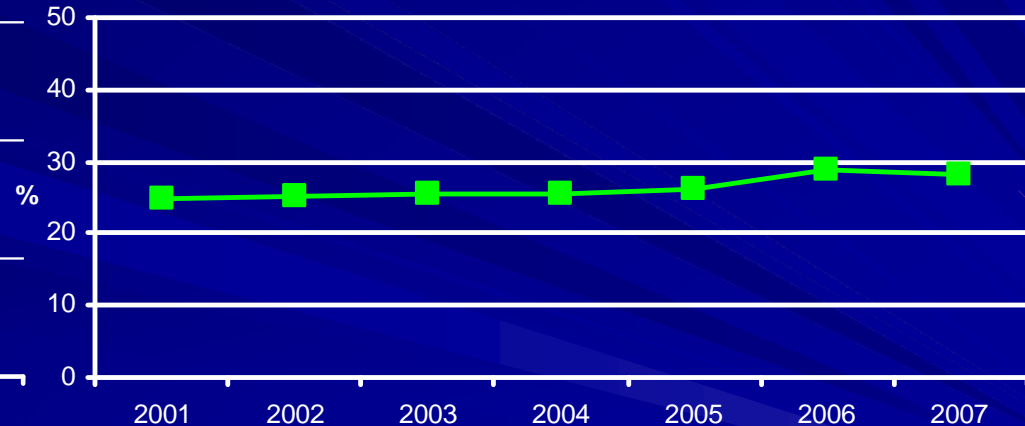
Public Health Implications

- Michigan adults are becoming more active, but obesity is still on the rise

Inadequate Physical Activity
Michigan, 2001-2007



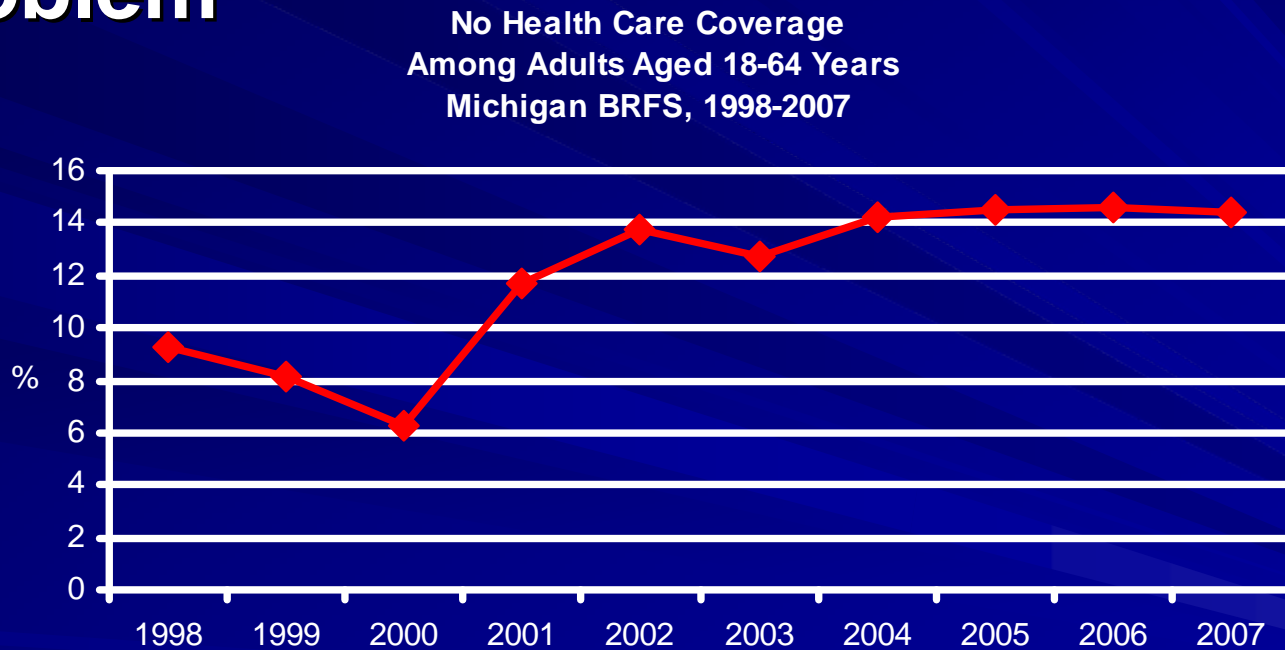
Obesity
Michigan, 2001-2007



- MDCH has a number of programs to increase physical activity and promote healthy eating

Public Health Implications

- Access to health care is an increasing problem



- MDCH programs such as the Smokers Quit Kit and Quit Line, Breast and Cervical Cancer Programs, and Influenza Vaccine Exchange Program

Public Health Implications

- Disparities remain in risk behaviors, preventive care measures, and disease prevalence
 - ❖ Most often found in...
 - Older adults
 - Females
 - African Americans
 - Adults with less than college education
 - Adults living in lower income households
 - ❖ Need for integration of public health across disease areas
 - Michigan Primary Care Initiative



Limitations of the MiBRFSS

■ Non-coverage

- ❖ Increase in the use of cell phones and other communication modalities

 - cell phone survey & multi-mode pilot project

- ❖ Non-coverage bias more of a problem with health insurance, smoking, and binge drinking questions

■ Non-response

- ❖ BRFSS responses rates are normally around 50%

■ Self-reported data

- ❖ Underestimates of obesity, smoking, etc.

Future of the MiBRFSS

- **Simultaneous modes of data collection**
 - ❖ RDD landline sample
 - ❖ Cell phone sample
 - ❖ Mail follow-up to RDD soft refusals
- **New weighting methods**
 - ❖ Statistical “Raking”
 - ❖ Calculate our own weights?

Contact Information

Michigan BRFS Coordinator

Ann Rafferty

(517) 335-8403

Raffertya@michigan.gov

Michigan BRFS Epidemiologist

Chris Fussman

(517) 335-8144

Fussmanc@michigan.gov



?Questions?