



## **Cardiovascular Disease (CVD) - Heart Disease, Stroke & Other Categories**

- ♥ CVD is the number one cause of death in Michigan and has been nationally every year since 1900 except 1918, the year of the devastating flu epidemic.
- ♥ In 2005, heart disease and stroke killed 30,147 Michiganians. <sup>(1)</sup>
- ♥ Michigan ranks 11th worst of the fifty U.S. states for CVD age-adjusted mortality. <sup>(2)</sup>
- ♥ One out of every three deaths in Michigan is due to CVD.
- ♥ The economic burden of CVD in Michigan, direct & indirect costs, is estimated at \$14.7 billion. <sup>(3)\*</sup>
- ♥ More than one in three American adults has some form of CVD; the aging of the population may increase disease incidence, especially of coronary heart disease. <sup>(3)</sup>
- ♥ 72 million Americans have high blood pressure; 16 million have coronary heart disease; 5 million have congestive heart failure; about 6 million have had a stroke. <sup>(3)</sup>
- ♥ Cardiovascular diseases such as congenital defects, diseases of the arteries like peripheral artery disease, aneurysms, etc. comprise the other causes of CVD deaths. <sup>(3)</sup>
- ♥ The Michigan Behavioral Risk Factor Survey (BRFS) has consistently shown that risk factors for CVD are often more common among those with a lower socioeconomic status. <sup>(4)</sup>
- ♥ In Michigan, 7% of individuals 35 years and older reported having a heart attack, 6% coronary heart disease or angina, and 4% reported having a stroke. <sup>(2005 BRFS)</sup> However, many more individuals don't know they have CVD or haven't had an acute event.

### **Heart Disease**

- ♥ Most CVD deaths are due to heart disease. Heart disease has been the leading cause of death for decades. <sup>(1)</sup>
- ♥ Coronary Heart Disease (CHD) is the most prevalent & preventable form of heart disease. <sup>(3)</sup>
- ♥ Michigan has the 6th worst age-adjusted CHD death rate of the fifty U. S. states. <sup>(2)</sup>
- ♥ Since the mid-1970's, Michigan's age-adjusted heart disease death rate has been above the national rate, although the gap has been narrowing. There are 69 heart disease deaths per day in Michigan. <sup>(1)</sup>
- ♥ Michigan's age-adjusted heart disease death rate for Blacks remains higher than national rates. The disparity is greatest between Black and White men.

### **Stroke**

- ♥ Stroke is a leading cause of severe disability and the third leading cause of death in the U.S. and Michigan. In the U.S., someone has a stroke every 45 seconds, and dies of it every 3 minutes. <sup>(3)</sup>
- ♥ In 2005, there were 5,079 stroke deaths. <sup>(1)</sup> An estimated 200,000 Michiganians are stroke survivors, many living with the serious impairments left by the stroke. <sup>(4)</sup>
- ♥ High blood pressure is a major risk factor for stroke. Controlling high blood pressure can reduce the risk of stroke up to 40%.
- ♥ Michigan is ranked as 24th worst in the nation for stroke mortality. <sup>(2)</sup>
- ♥ Michigan's age-adjusted stroke death rate for Blacks is above national and state rates for Whites and national rates for Blacks.

<sup>(1)</sup> Michigan Health Statistics. Division for Vital Records and Health Statistics - Michigan Department of Community Health. January 2007.

<sup>(2)</sup> Circulation; February 14, 2006. p.12.

<sup>(3)</sup> American Heart Association. 2007 Heart and Stroke Statistical Update. January 2007 \*(Cost estimated from report using MI % of U.S. pop.)



## **Emerging Issues**

- ♥ Acute stroke patient access to Michigan stroke centers was studied using Geographic Information Systems (GIS). An optimal, timely service map was developed by identifying the minimum number of hospitals required to provide appropriate acute stroke care to 95% of state residents.
- ♥ An increasing percentage of children are overweight, and at risk for overweight, which eventually will contribute to higher risks of adult obesity and many chronic diseases. Nationally, overweight among children has tripled since the 1960s. See the trend described below.

### **MICHIGAN YOUTH RISK BEHAVIOR SURVEY, 1999-2005** (With Comparison to 2005 National YRBS Average)

**Students grades 9 to 12**

RISK FACTOR	1999	2001	2003	2005	US 2005
Overweight**	10%	11%	12%	12%	12%

\*\*Equal to or greater than the 95<sup>th</sup> percentile for children of same age (CDC data)

### **Multiple Risk Factors**

- ♥ The major modifiable risk factors for CVD are cigarette smoking, physical inactivity, diabetes, overweight, high blood pressure, and high blood cholesterol.
- ♥ Michiganians continuously have higher than average CVD risk factors. Only 4.8% of Michiganians reported engaging in all 4 healthy lifestyles (healthy weight, adequate fruit and vegetable intake, not smoking, and engaging in adequate physical activity).<sup>(4)</sup>
- ♥ Nine out of ten Michigan adults (89.3%) have one or more of the major CVD risk factors: 27.0% reported one, 28.8% reported two, 19.7% reported three, and 13.8% reported four or more risks.<sup>(4)</sup> Risk factors include high blood pressure, high cholesterol, smoking, overweight, diabetes, and inadequate physical activity [ $<30$  min. 5 x/wk].
- ♥ Nationally, of those with high blood pressure, 30% don't know they have it, only 34% have their blood pressure controlled, 25% are on medication but it's not controlled, and 11% aren't on any medication.<sup>(5)</sup>

### **PERCENTAGE OF MICHIGAN ADULTS WITH CVD RISK FACTORS, 1990-2005**<sup>(6)</sup> (With Comparison to 2005 National BRFSS Data)

RISK FACTOR	1990	1994	1998	2001	2005	US 2005
Smoking	29.2	25.4	27.5	26.1	21.9	20.6
Blood Pressure: Ever Told High (of tested)	23.3	NS	NS	27.1	27.8	25.5
Cholesterol: Ever Told High (of tested)	27	NS	NS	33.0	38.9	35.6
Overweight (BMI $\geq$ 25) (Includes obesity)	47.4	54	57.8	60.4	63.1	61.1
Obese (BMI $\geq$ 30)	14.1	17.1	21.5	24.7	26.5	24.4
Fruits & Vegetables: Less than 5 servings/day	NS	70.2	73.6	NS	77.2	76.8
No Leisure Time Physical Activity	NS	23.4	21.7	23.5	22.6	23.8

NS = Not Sampled that year or question/survey not comparable

More detailed information including maps of heart disease and stroke rates by county and epidemiological statistics at [http://www.michigan.gov/mdch/0,1607,7-132-2940\\_2955\\_2959\\_3208-80201--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2940_2955_2959_3208-80201--,00.html)

<sup>(4)</sup> Behavioral Risk Factor Survey, Michigan Department of Community Health (MDCH), 2005.

<sup>(5)</sup> JNC 7, NHLBI, NIH, Hypertension. 2003; 42:1206-1252 and NHANES III.

<sup>(6)</sup> Behavioral Risk Factor Surveys, MDCH, 1990-2005 & U.S. BRFSS 2005. MDCH DCH-0629a 1/07 Authority: P.A.368 of 1978