DEPARTMENT OF HEALTH

DATA BRIEF

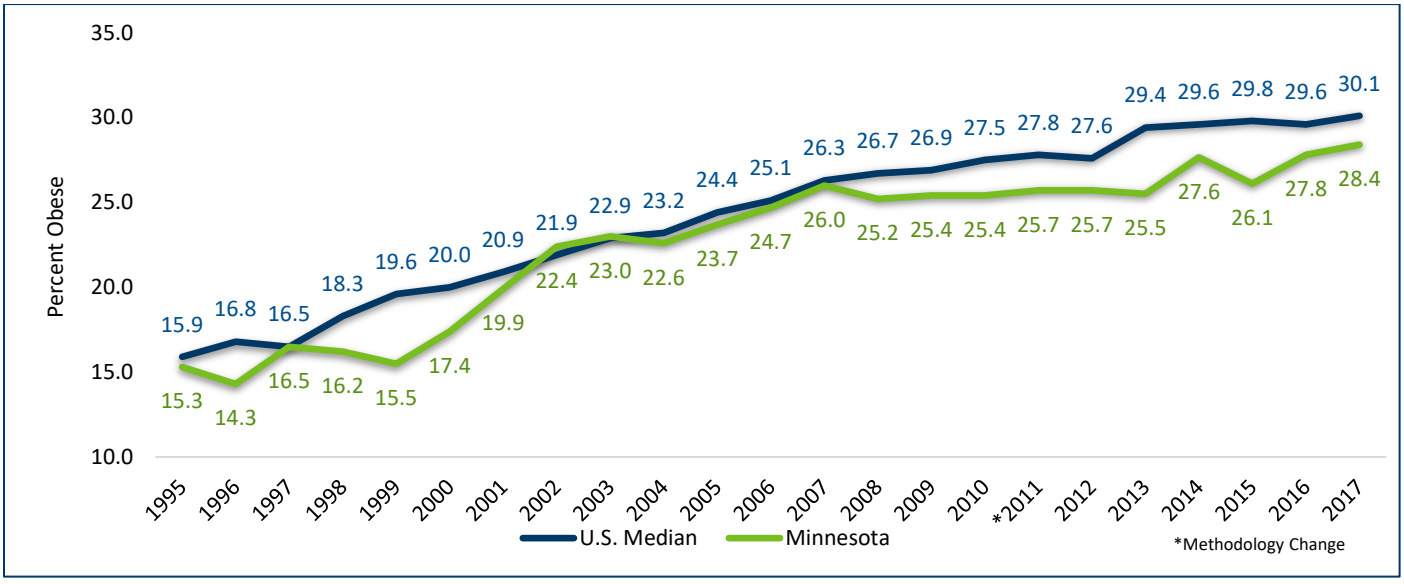
Adult Obesity in Minnesota 2017

Since the 1980s, obesity has been recognized as a national problem [1-3]. The Centers for Disease Control and Prevention (CDC) monitors adult obesity rates annually and provides estimates for each state using data from the Behavioral Risk Factor Surveillance System (BRFSS). Data from BRFSS are used to monitor health behavior trends over time and inform public health programs at the state and national level. The Minnesota Department of Health (MDH) uses these data to inform the public about the prevalence of obesity in the state, track changes over time, and support planning of public health interventions designed to reduce obesity. This data brief presents findings on trends in obesity prevalence from the most recent national and Minnesota BRFSS data.

Minnesota has a lower obesity rate than the U.S. as a whole.

Minnesota's obesity rates have been consistently lower than the U.S. median with the exception of 2001 and 2002 when they were nearly identical [Figure 1] [4]. Following national trends, Minnesota's obesity rate has increased. From 2000 to 2007, the Minnesota obesity rate went from 17.4 percent to 26.0 percent, a 6.3 percentage point increase. From 2007 to 2017, the Minnesota obesity rate increased at a slower rate – from 26.0 percent to 28.4 percent, for a 2.4 percentage point increase – and continues to remain lower than the U.S. rate.

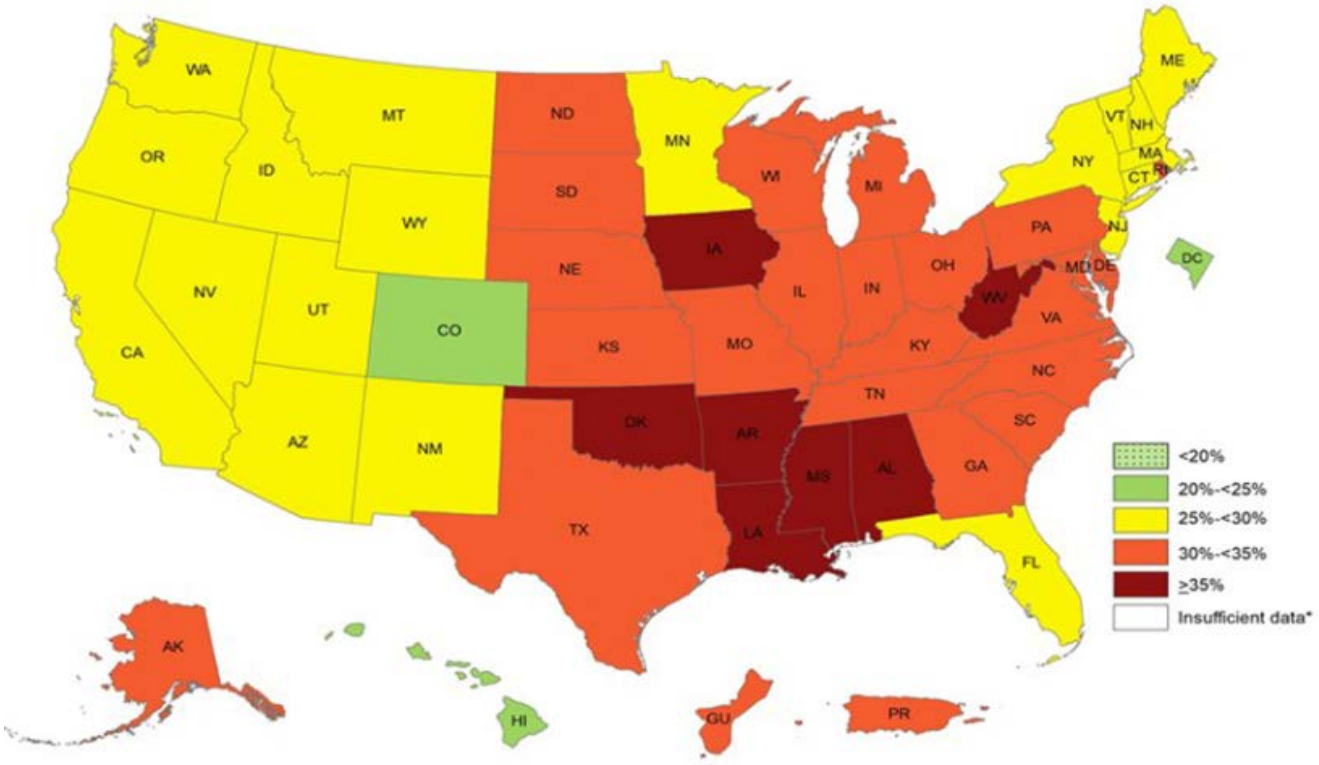
Figure 1. Obesity rates: Minnesota vs. U.S. median, 2000-2017



Data source: CDC Behavioral Risk Factor Surveillance System

Figure 2 maps the 2017 adult obesity rate for each state in five groupings. Colorado, District of Columbia, and Hawaii have the lowest obesity rates. Minnesota and 18 other states are in the second to lowest grouping (25% - <30%).

Figure 2. 2017 BRFSS obesity prevalence among U.S. adults by state and territory

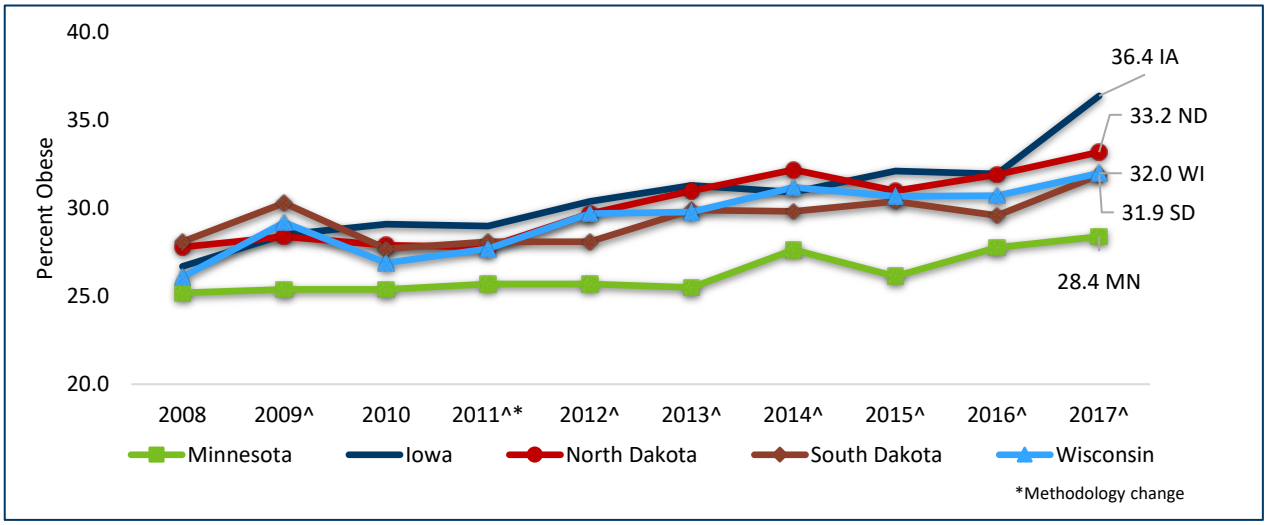


Data source: CDC Behavioral Risk Factor Surveillance System

Minnesota has a significantly lower obesity rate than neighboring states

Minnesota's obesity rate was significantly lower than the neighboring states of Iowa, North Dakota, South Dakota and Wisconsin in 2009 and from 2011 to 2017 [Figure 3].

Figure 3. BRFSS obesity rates 2008-2017: Minnesota and neighboring states



^Minnesota rate lower than four neighboring states: t-test P < 0.05. Data source: CDC Behavioral Risk Factor Surveillance System

Discussion

Minnesota's obesity rate trend closely followed the U.S. median from 2001 to 2007. In 2008 the Minnesota rate diverged from the U.S. and has been lower than the U.S. median from 2008 to 2017 [Figure 1]. This same divergence can be seen from 2009 to 2017 between Minnesota obesity rates and those states on Minnesota's borders [Figure 3]. Estimates are affected by sample size and changes in demographic make-up of survey respondents from year to year [5].

The difference between the obesity rates of Minnesota, the U.S., and our neighboring states suggest that some aspects of the Minnesota environment may be different from the rest of the nation. Economic opportunity, differences in population demographics and differences in natural resources are all potentially part of an explanation for these differences over time. Health policies that differentiate Minnesota from other states may also play a part.

In 2009, Minnesota implemented the Statewide Health Improvement Partnership (SHIP), a statewide effort that provides community-level support for improved access to physical activity opportunities and better nutrition choices. Although other states have implemented programs to improve physical activity and nutrition, one key difference is that SHIP is statewide working with all 87 Minnesota counties and 10 of its 11 tribal nations.

Although it is beyond the scope of BRFSS data to determine whether or not it is the moderating influence for Minnesota obesity rates, SHIP may be a factor that contributes to a trend toward lower obesity rates.

Technical Notes

Obesity Definition

Obesity is an abnormal or excessive fat accumulation that may impair health [2]. Although there are a number of ways to measure fat accumulation, the most common population-level measure is a calculation based on weight and height called Body Mass Index (BMI) [3]. Using this system a person with a BMI of 30 kg/m^2 or greater is defined as obese [2].

Data Source and Methods

Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) is an annual statewide random telephone and cellular surveillance survey designed by the Centers of Disease Control and Prevention (CDC). The survey is conducted in all 50 states and U.S. territories. BRFSS monitors modifiable risk behaviors and other factors contributing to the leading causes of morbidity and mortality in the population. Data from the BRFSS are useful for planning, initiating, and supporting health promotion and disease prevention programs at the state and federal level [6]. The survey has three sections:

- Standard Core Questions – Asked every year and are required by all states.
- Rotating Core Questions – Asked every other year and are required by all states.
- Optional Modules – Sets of standardized questions on various topics that each state may select and include in its questionnaire. Once selected, a module must be used in its entirety and asked of all eligible respondents

Given the random selection of survey participants each year, the data collected each year are cross-sectional and do not follow a single group of individuals over time. This means that changes in estimates from year to year are affected by sample size and changes in demographics of survey respondents from year to year, and that determinations regarding changes in estimates must be made by examination of data trends over time.

References

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