



OBESITY AND FUTURE HEALTH CARE COSTS

A Portrait of Two Minnesotas

A Collaborative Report from Blue Cross and Blue Shield of Minnesota, the Minnesota Department of Health and the Minnesota State Demographer

Based on research by Kenneth E. Thorpe, Ph.D., of Emory University

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Executive Summary



WHAT ARE THE FUTURE HEALTH CARE COST IMPLICATIONS OF THE OBESITY EPIDEMIC IN MINNESOTA? *

The prevalence of obesity among U.S. adults doubled from 12 percent to 25 percent between 1990 and 2006.¹ Many health experts now agree that obesity is an “epidemic” in the United States.²⁻⁶ Obesity and overweight have also increased steadily in Minnesota.

The obesity epidemic means increased suffering and premature death for many people. The obese and overweight have significantly higher risks of developing several diseases, including diabetes, heart disease, hypertension and high cholesterol.^{7,8} In addition to the human toll, the increase in obesity and overweight translates into higher health care costs for everyone.

Obesity and Future Health Care Costs: A Portrait of Two Minnesotas focuses on the substantial economic implications of the obesity epidemic in Minnesota. It contains the first Minnesota-specific projections of future health care costs directly attributable to obesity. These projections make it clear that even modest success at curbing the rise in obesity rates would substantially decrease future costs—and improve health and productivity.

This report contains the first Minnesota-specific projections of future health care costs directly attributable to obesity. Actual costs and recent trends in 2005[†] are projected forward to 2010 and 2020 under two scenarios:

Scenario A: Obesity Continues to Increase

Scenario B: Obesity Remains at Current Level

Major Findings:

- If current trends continue, only one-third of Minnesota adults will be of healthy weight by 2010 and more than one in four (27 percent) will be obese. By 2020 only 23 percent of Minnesota adults will be of healthy weight and 31 percent will be obese.[‡]
- The average cost to treat overweight or obese persons has been increasing faster than treatment costs for other adults. If this trend continues, treating an obese person will cost 61 percent more than treating a healthy-weight person by 2020.
- Left unchecked, nearly 31 percent of the overall increase in health care costs from 2005 to 2020 will be due to projected increases in obesity and overweight.
- The projected increase in the prevalence of overweight and obese persons will add nearly \$1 billion to Minnesota’s total annual health care costs by 2010 and \$3.7 billion annually by 2020.

WHY WORRY ABOUT OBESITY? MORE CHRONIC MEDICAL PROBLEMS

People who are obese or overweight have substantially increased risk to acquire one or more of many diseases and health conditions. These include:

- Hypertension
- High cholesterol
- Type 2 diabetes
- Coronary heart disease
- Stroke
- Gallbladder disease
- Osteoarthritis
- Sleep apnea
- Respiratory problems
- Breast cancer
- Colon cancer
- Problems in pregnancy and childbirth

Source: Centers for Disease Control and Prevention (CDC) <http://www.cdc.gov/nccdphp/dnpa/obesity/>

* To answer this question, Kenneth E. Thorpe, Ph.D., of Emory University was invited to apply his national econometric model to Minnesota. However, rather than estimating obesity-related health care costs in the past (Dr. Thorpe’s original model), the Minnesota team asked Dr. Thorpe to project *future* costs, using Minnesota data. To learn more, please see “About This Report” on the back cover or consult the full report.

† The most current year for which data were available at the time of analysis.

‡ This research used standard BMI weight categories: Obese ≥ 30.0; Overweight = 25.0–29.9; Normal weight (described as “Healthy weight” in this report) = 18.5–24.9; Underweight < 18.5.

THREE DRIVERS FUEL FUTURE OBESITY-ATTRIBUTABLE COSTS IN MINNESOTA

Driver #1: Increasing prevalence of obese and overweight adults

The prevalence of overweight and obesity in the United States' adult population has been rising at between one-half percent and one percent per year over the past 15 years.⁹

This may sound small, but the impact over time is substantial. Figure 1 shows the projected impact on Minnesota if current trends continue.

Driver #2: Rising treatment intensity

The average cost of treating a person who is overweight or obese also continues to rise much faster than the cost of treating a healthy-weight person. Figure 2 depicts the change over time in relative treatment costs. (The cost of treating a healthy-weight person is 1.0.)

Driver #3: The aging of Minnesota's population

Minnesota's adult population is projected to rise to almost 4.5 million by 2020. In addition, older age-groups will increase substantially. The 60–69 age-group will experience an 83 percent increase in population by 2020.¹⁰

The impact of Minnesota's demographic changes on future obesity treatment costs is modest compared with the impact of the other two cost drivers. However, the growth and aging of Minnesota's population will continue to influence future health costs.

FIGURE 1

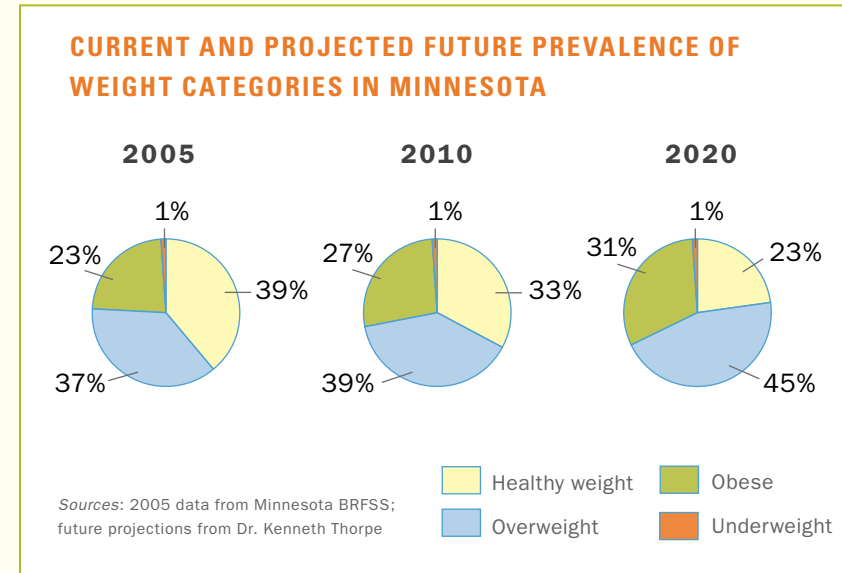
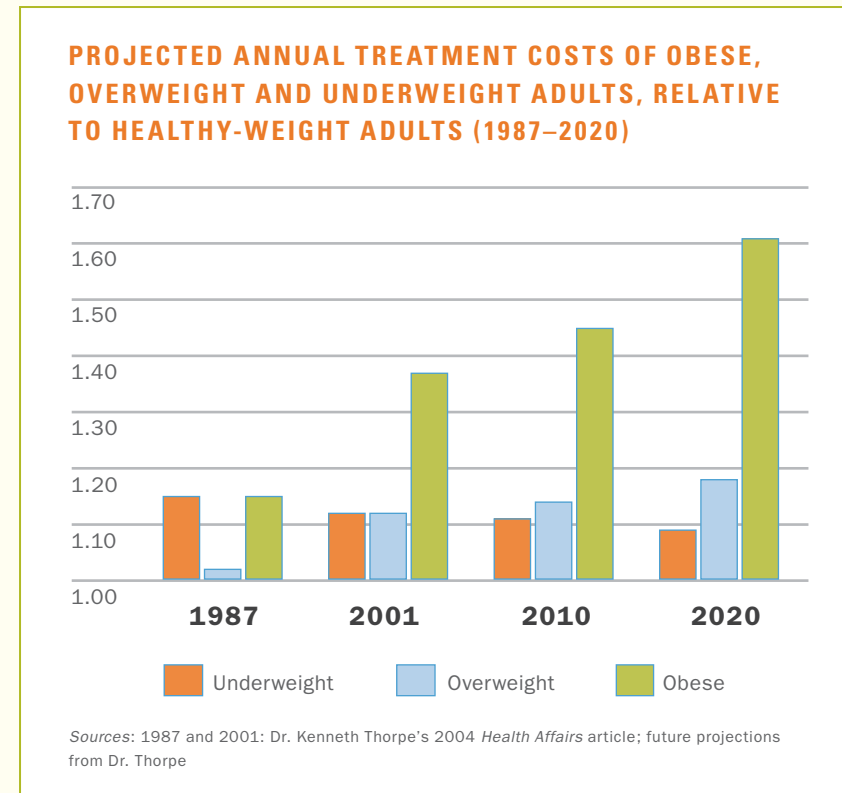


FIGURE 2



CURBING OBESITY GROWTH RATES WOULD HELP CONTAIN COSTS

Dr. Thorpe's Minnesota analysis projects future health care costs under two scenarios, holding all else constant.

- Scenario A: Obesity Continues to Increase**
 The prevalence of overweight and obesity continues to rise at current rates (driver #1), the treatment intensity continues to increase at current rates (driver #2), and demographic changes will occur as expected (driver #3).
- Scenario B: Obesity Remains at Current Level**
 The prevalence of overweight and obesity remains at the 2005 level (NO driver #1), but the treatment intensity continues to increase at current rates (driver #2), and demographic changes will occur as expected (driver #3).

As Figure 3 shows, in Scenario A, total annual costs would rise from \$9.3 billion in 2005 to \$22.9 billion in 2020 (in 2020 dollars).

In contrast, annual costs for Scenario B would rise to \$19.2 billion in 2020.

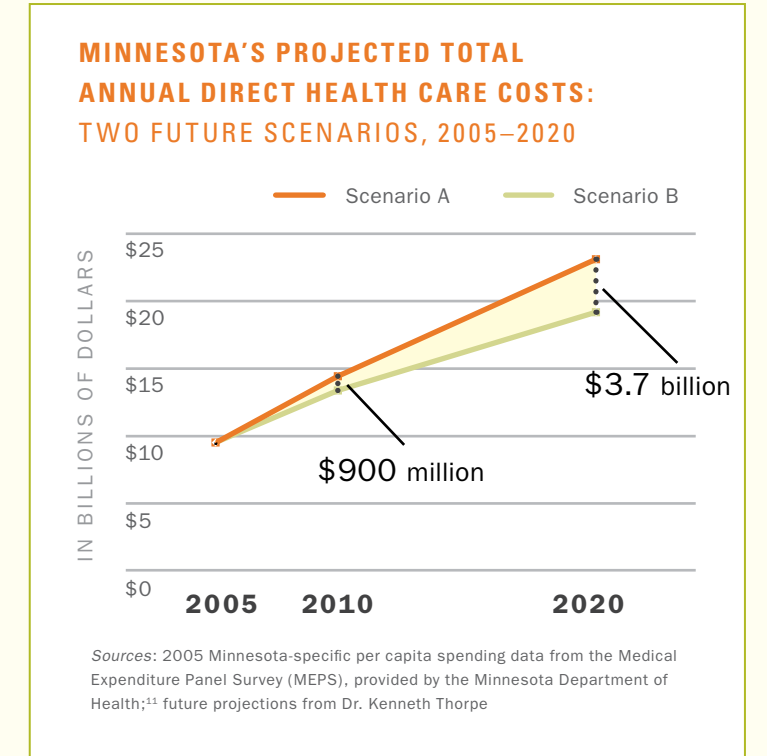
Thus, if current trends continue, treating Minnesota's obese and overweight population would cost an additional \$900 million each year by 2010 and \$3.7 billion by 2020.

Reframing the obesity epidemic

Tackling Minnesota's obesity epidemic requires a clear understanding of the root causes. Although obesity has multiple causes, including genetics, biological factors cannot explain the rapid increase in U.S. obesity rates, which has occurred among all socioeconomic groups.

Being overweight is commonly considered an issue of personal responsibility, even a failure of personal willpower. However, the choices individuals make are always influenced by the social and physical environments in which they live.

FIGURE 3



The obesity epidemic may best be understood as an *epidemic of inadequate physical activity and unhealthy eating*. Our social and physical environments consistently promote poor eating choices and less activity—that is “what’s normal” right now in Minnesota.

Changing “what’s normal” can be done. It will take creativity and persistence, and concerted action by community leaders. This report focuses on the economic payoff. But the payoff in human terms is equally compelling.

About this report

Estimates of the costs of obesity typically focus on a single year.¹²⁻¹⁴ However, in 2004, Kenneth E. Thorpe, Ph.D., and colleagues from Emory University published in *Health Affairs* the results of their econometric model with which they estimated the impact of the increase in the prevalence of obesity on the growth of health care costs between 1987 and 2001.¹⁵ This analysis allowed Dr. Thorpe to estimate the independent contribution of obesity to the rise in inflation-adjusted per capita spending. Researchers from Blue Cross and Blue Shield of Minnesota collaborated with colleagues from the Minnesota Department of Health and the Minnesota State Demographer to invite Dr. Thorpe to apply his national econometric model to Minnesota, to extend the model forward using Minnesota data, and to factor in changing demographics.

Dr. Thorpe conducted the research on which this report is based. He is the Robert W. Woodruff Professor and Chair of the Department of Health Policy & Management, in the Rollins School of Public Health of Emory University, Atlanta, Georgia. Steven S. Foldes, Ph.D., led the Minnesota research team and wrote this report. He is the Director of Research and Evaluation in the Center for Prevention, Blue Cross and Blue Shield of Minnesota. Other contributors to this report include Rebecca Fee, M.P.H., from Blue Cross, and Thomas Gillaspay, Ph.D., and John Oswald, Ph.D., from the State of Minnesota. Seven other researchers from Blue Cross and the Minnesota Department of Health reviewed and commented on this report.

Limitations

As in any such exercise, this analysis is but one estimate of future costs. Its accuracy depends on the model on which it is built, and all models are approximations of the more complex reality they seek to describe. Although Dr. Thorpe's published analysis received the scrutiny of academic peer review and has been widely cited, it was based on historical data and did not project future costs. In the present application of this model, Dr. Thorpe trends current rates forward to estimate future costs. This analysis is sensitive to the assumptions made about future trends in the continuing rise of obesity, the costs of treatments for obesity and demographic changes, all of which may change.

Endnotes

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11. Minnesota-specific per capita spending estimates from the Medical Expenditure Panel Survey (MEPS) were used because Dr. Thorpe's model is also based on national data from MEPS. The U.S. Department of Health and Human Service's Agency for Healthcare Research and Quality (AHRQ) has published state-specific estimates of per capita spending for people who had any expenses in 2005. The MDH's Health Economics Program used this information to calculate a statewide per capita spending number for Minnesota based on MEPS. Although Dr. Thorpe's national research and this analysis are based on health care spending data from MEPS, it should be noted that MEPS excludes some important sources of health care spending. (See Selden TM, Levit KR, Cohen JW et al. Reconciling medical expenditure estimates from the MEPS and the NHA. *Health Care Fin Rev*. 1996;23:161-178.)
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The full report on which this Executive Summary is based is available online at www.bluecrossmn.com/preventionminnesota.

