

Bending the Obesity Cost Curve in Massachusetts:

REDUCING BODY MASS INDEX RATES BY FIVE PERCENT COULD LEAD TO HEALTH CARE SAVINGS OF MORE THAN \$5 BILLION IN 10 YEARS AND \$14 BILLION IN 20 YEARS

Obesity rates have grown dramatically in Massachusetts over the past 15 years, and are on track to grow significantly more in the next 20 years.

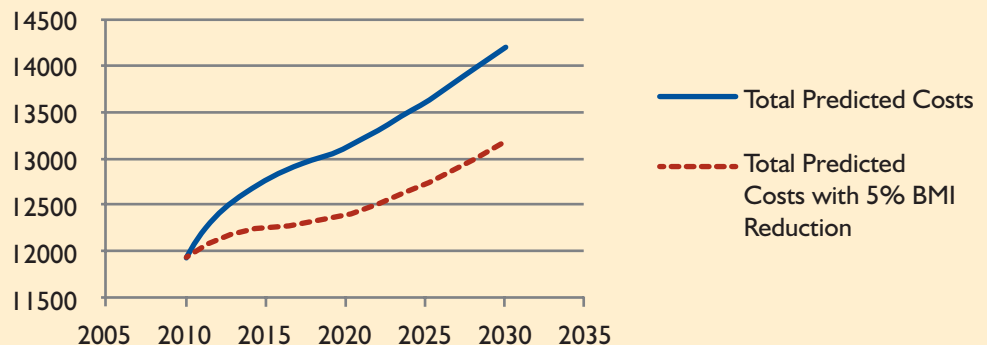
However, if we take action, using evidence-based strategies in our schools, neighborhoods and workplaces to improve nutrition and increase physical activity by making healthy choices easier for people in Massachusetts, we could significantly reduce rates of obesity-related diseases and reduce health spending.

A new analysis by the Trust for America's Health (TFAH) and the National Heart Forum (NHF) found that if we reduce the

collective body mass index (BMI) rate in the state by only five percent, we could spare thousands of people in Massachusetts from type 2 diabetes, coronary heart disease and stroke, hypertension, cancer and arthritis, while saving billions of dollars each year. Individuals are considered obese if their BMI of 30 or higher; for an adult reducing BMI by one percent is equivalent to a weight loss of around 2.2 lbs for an adult of average weight.¹

MASSACHUSETTS TOTAL OBESITY-RELATED HEALTH SPENDING BY YEAR 2010-2030:

Predicted (blue solid); 5% BMI reduction (red dotted)



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PREVENTING EPIDEMICS.
PROTECTING PEOPLE.

Obesity-Related Health Care Costs in Massachusetts: Trend Projections	
Potential savings by 2020 if reduce BMI rates by 5% (cumulative)	Potential Savings by 2030 if reduce BMI rates by 5% (cumulative)
\$5,045,000,000	\$14,055,000,000

Potential Health and Cost Savings by Top Obesity-Related Health Problems					
	2010 Number of Cases*	Potential Cases Avoided by 2020 if Reduce BMI Rates by 5% (cumulative)*	Potential Cost Savings by 2020, if Reduce BMI Rates by 5% (cumulative)	Potential Cases Avoided by 2030 if Reduce BMI Rates by 5% (cumulative)*	Potential Cost Savings by 2030, if Reduce BMI Rates by 5% (cumulative)
Type 2 Diabetes	483,815	77,200	\$1,656,000,000	155,519	\$5,436,000,000
Obesity-Related Cancers ^	102,428	6,851	\$250,000,000	13,108	\$489,000,000
Coronary Heart Disease & Stroke	374,998	65,080	\$2,358,000,000	138,064	\$5,918,000,000
Hypertension	1,258,446	75,882	\$340,000,000	135,297	\$952,000,000
Arthritis	1,270,369	40,774	\$439,000,000	76,080	\$1,257,000,000

2010 baseline for potential cases, costs and savings

*Total cases and cases avoided calculated by TFAH using per 100,000 rates and 2011 census population data

^ Top obesity-related cancers include endometrial (uterine), esophageal, kidney, colon and post-menopausal breast cancer.

Obesity Trends in Massachusetts			
Obesity 1995	Obesity 2010	Obesity 2030 if continue on current track*	Obesity 2030, if lower BMI rates by 5%*
11.6%	22.3%	48.7%	42.4%

*All ages, all genders, adjusted for self-reporting bias.

PEER-REVIEWED MODELING

The analysis is based on a model developed by researchers at the National Heart Forum. Micro Health Simulations used the model in a peer reviewed study, "Health and Economic Burden of the Projected Obesity Trends in the [United States and the United Kingdom]," published in 2011 in *The Lancet*.²



EFFECTIVE WAYS TO REDUCE OBESITY

According to the U.S. Centers for Disease Control and Prevention (CDC), more than half of Americans live with a chronic disease, many of which are related to obesity, poor nutrition and physical inactivity — and a majority of these diseases could be prevented.³

A wide range of evidence-based studies have found that effective disease prevention programs in communities can reduce obesity rates, improve nutrition and increase physical activity.

■ CDC's Community Preventive Services Taskforce conducts a systematic review and evaluation process to determine effective programs and policies for improving health and preventing disease. The results, published in the Community Guide for Preventive Services, feature a series of evidence-based, community approaches to increasing physical activity, promoting good nutrition, lowering diabetes rates and reducing obesity, ranging from addressing the built environment, such as building sidewalks and access to parks, to workplace wellness programs to increasing physical activity in schools.⁴

■ The Compendium of Proven Community-Based Prevention Programs by The New York Academy of Medicine (NYAM) includes a summary and examples from an extensive literature review that NYAM conducted of peer

reviewed studies evaluating the effectiveness of community-based disease prevention programs.⁵ NYAM identified 84 articles, including programs that can directly reduce obesity and obesity-related diseases, including type 2 diabetes, heart disease, stroke, kidney disease and some forms of cancer.

■ In 2011, the American Heart Association (AHA) published a review of more than 200 research studies and concluded that most cardiovascular disease can be prevented or at least delayed until old age through a combination of direct medical care and community-based prevention programs and policies.⁶ Some of the key findings included:⁷

▲ Every \$1 spent on building biking trails and walking paths would save an estimated nearly \$3 in medical expenses.

▲ For every \$1 spent in wellness programs, companies would save about \$3.27 in medical costs and \$2.73 in absenteeism costs.

▲ One year interventions found that every \$1 spent targeting poor eating and poor physical activity habits resulted in \$1.17 of savings.

▲ Lifestyle changes in nutrition and activity reduced the incidence of type 2 diabetes by 58 percent compared to drug therapy, which only reduced the incidence by 31 percent.

ENDNOTES

1 "Obesity and Cancer Risk." National Cancer Institute. <http://www.cancer.gov/cancertopics/factsheet/Risk/obesity> (accessed June 12, 2012).

2 Wang YC et al. Health and Economic Burden of the Projected Obesity Trends in the USA and the UK. *The Lancet*, 378, 2011.

3 Kung HC, Hoyert DL, Xu JQ, and Murphy SL. *Deaths: final data for 2005. National Vital Statistics Reports 2008*. Atlanta, GA: Centers for Disease Control and Prevention, 2008. http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_10.pdf (accessed July 14, 2010).

4 *Community Guide to Preventive Services*. U.S. Centers for Disease Control and Prevention, 2011. <http://www.thecommunityguide.org/index.html> (accessed January 17, 2012).

5 *A Compendium of Proven Community-Based Prevention Programs*. New York, NY: The New York Academy of Medicine, 2009.

6 Weintrub WS et al. AHA Policy Statement: Value of Primordial and Primary Prevention for Cardiovascular Disease. *Circulation*, 124: 967-990, 2011.

7 Busko M. "As treatment costs soar, AHA preaches prevention as savvy investment." *Heartwire* July 26, 2011. <http://www.theheart.org/article/1256761.do> (accessed January 11, 2012).