

## Analysis of Current and Projected Obesity-related Health Costs and Lost Work-days for Maine Employers

**Abstract:** Annual National surveys of the health the U.S. population (Behavioral Risk Factor Survey, BRFSS) found that the prevalence of obesity in adults increased from 12 percent to 27 percent of the adult population in just 19 years (1989 to 2008). Maine's 2008 BRFSS results found that 25.9 percent of adults were in the obese weight range (BMI  $\geq$ 30), while 36 percent were in the overweight range (BMI 25 to 29.9), and 38.1 percent were neither overweight nor obese. A 2009 study by Thorpe developed U.S and State-level estimates of future obesity prevalence for the years 2013 and 2018, finding that U.S obesity prevalence is estimated to reach 42.8 percent by 2018. An important driver of projected increases in workforce overweight/obesity prevalence will be currently overweight/obese adolescents as they enter the workforce.

This study was designed to measure the current (2010) and estimated future (2013, 2018) health care costs and lost work time associated with overweight and obese employees who are employed by a set of 15 Maine employers. A highly regarded overweight/obesity cost and lost-work-time calculator tool, developed by the U.S. CDC and the Research Triangle Institute, was used to estimate 2010 overweight/obesity-related costs and lost-work-time. Using the Thorpe estimates for future obesity prevalence for Maine, the CDC calculator was also used produce estimates of overweight/obesity-related costs and lost-work-time for 2013 and 2018.

Researchers contacted each of 15 participating Maine employers to collect information on the number of employees in five BMI-defined weight categories based upon the employer's most recent health-risk appraisal findings for their employee population. Additional data elements collected were type of industry, total number of employees, average hourly employee salary, health benefit costs as a percentage of total employee compensation, and expected annual growth in employee hiring.

Employer data were analyzed using the CDC/RTI calculator tool to calculate estimated 2010 healthcare costs, lost-work-time costs and days of lost-work-time related to overweight/obesity in the employer workforces. Using the Thorpe estimates for future obesity prevalence in Maine, current employer workforce overweight/obesity prevalence results were projected forward to 2013 and 2018. Employer data incorporating estimated overweight/obesity prevalence and projected workforce size in 2013 and 2018 were analyzed using the CDC/RTI calculator tool. Estimates of 2013 and 2018 healthcare and lost-work-time costs (in 2010-dollars) and days of lost-work-time related to overweight/obesity were calculated for each employer.

Number of overweight/obese employees in employer workforces.

- The 15 Maine employers, in total, employed a total of 16,016 people in 2010. For this workforce, 31 percent were in the obese BMI range (BMI of 30+), 32 percent were in the overweight BMI range (BMI 25 to 29.9), and 37 percent were in the healthiest BMI range (BMI <25).

- By 2013, the estimated percentage of employees in the obese and overweight ranges for the 15 Maine employers are expected to increase to 34 percent (obese range) and 35 percent (overweight range).
- By 2018, the estimated percentage of employees in the obese and overweight ranges for the 15 Maine employers are expected to increase to 40 percent (obese range) and 42 percent (overweight range).
- The net increase from 2010 in the number of obese and overweight employees for the 15 Maine employers is estimated at +1,650 by 2013 and +6,450 by 2018.

#### Total overweight/obesity-related costs – health costs and lost-work-time costs.

- For the 15 Maine employers, total health care and lost-work-time costs associated with overweight and obese range employees in 2010 was \$5.8 million, broken down as \$3.6 million for health related costs and \$2.8 million for lost-work-time costs.
- By 2018, total health care and lost-work-time costs associated with overweight and obese range employees are expected to nearly double to \$10.1 million (in 2010-dollars), broken down as \$6.3 million for health related costs and \$3.8 million for lost-work-time costs.
- Among the 15 Maine employers, the two smallest employers had overweight/obesity-related costs for 2010 under \$50,000 each, while the two largest employers had 2010 costs over \$1 million each.
- The projected 2018 percentage increase in overweight/obesity-related costs among the 15 Maine employers, relative to 2010, ranged from +46% percent to +158 percent (in 2010-dollars).

#### Overweight/obesity-related days of lost-work-time.

- For 2010, the 15 Maine employers were estimated to have 8,009 overweight/obesity-related lost- work-days.
- By 2018, lost-work-days associated with overweight/obesity are projected to increase to 13,658 days for the 15 employers in the study.
- Among the 15 Maine employers, the projected percentage increase in lost-work-days, relative to 2010, ranged from +32 percent to +158 percent.

#### Conclusion points [working]