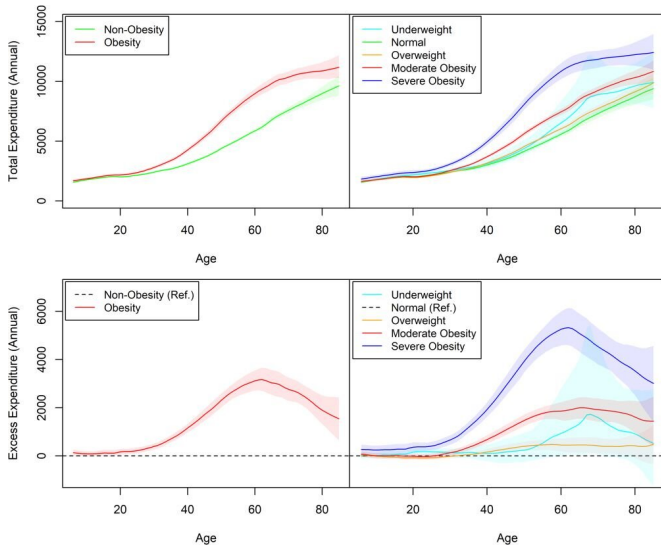


Higher health care costs linked with excess weight across range of BMIs

24 March 2021



Estimated Age-Specific Medical Expenditures by BMI Category. Credit: Ward et al, 2021, PLOS ONE (CC-BY 4.0, creativecommons.org/licenses/by/4.0/)

A new analysis shows that excess body weight is associated with higher health care costs for people across a wide range of body-mass-index (BMI) levels in the U.S. Zachary Ward of the Harvard T. H. Chan School of Public Health in Boston, MA, and colleagues present these findings in the open-access journal *PLOS ONE* on March 24, 2021.

Previous research has linked excess weight to higher health care costs. However, those studies have primarily focused on broad categories, such as moderate versus severe [obesity](#). As a result, they can only detect cost changes that might occur when shifts in people's BMI put them in a new category—while neglecting potential costs linked to within-category BMI shifts.

To provide a more accurate picture of BMI-related costs, Ward and colleagues analyzed data from 175,726 people collected in a survey on health

care costs from 2011 to 2016. They controlled for other factors that might influence costs, as well as potential biases in self-reported BMI.

The analysis found that, over 30 units of BMI, every BMI increase of one unit was associated with a boost in annual health care costs of \$253 per adult (in 2019 US dollars). Costs were higher for [adult women](#) and increased with age and BMI for men and women. Among adults with obesity (BMI of 30 or greater), 60- to 70-year-olds had the highest health care costs. The lowest costs were associated with a BMI of 20.5 for women and 23.5 for men.

While obesity was associated with an overall increase in annual costs of \$1,861 per adult, in children obesity was associated with an overall increase in annual costs of \$116 per child. Adult obesity was associated with a total of \$170 billion in excess costs per year in the U.S. Severe adult obesity was linked to \$3,097 in excess annual costs per person.

These findings emphasize the need to promote healthy weight for people of all ages and across the BMI scale, and could help inform policies and programs to address obesity. Future studies could help refine these estimates and incorporate indirect costs of obesity, such as lost wages due to disability.

The authors add: "Excess body weight is associated with higher [health](#) care costs across a broad range of ages and BMI levels, with especially high excess [costs](#) for people with [severe obesity](#)—over \$3,000 per year. This leads to large economic impacts at the population level, with overweight and obesity accounting for over \$200 billion in excess [health care costs](#) every year in the US."

More information: Ward ZJ, Bleich SN, Long MW, Gortmaker SL (2021) Association of body

mass index with health care expenditures in the
United States by age and sex. *PLoS ONE* 16(3):
e0247307. doi.org/10.1371/journal.pone.0247307

Provided by Public Library of Science

APA citation: Higher health care costs linked with excess weight across range of BMIs (2021, March 24)
retrieved 26 September 2022 from <https://medicalxpress.com/news/2021-03-higher-health-linked-excess-weight.html>

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