

Case Study: Obesity's Impact on Mortality in the US and within the NERIC States

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Objectives: To understand long-term patterns of obesity's impacts on mortality and to examine the presence of statistically significant correlations, we data-mined the CDC Wonder database's 1999-2015 vital records.

Background: In the US, obesity is correlated to a variety of disease challenges and its national epidemic prevalence has proven negative implications on the allocation of healthcare resources.

Case Description: Using SAS programming, we data-mined the 1999-2015 CDC Wonder database's mortality and population counts. Using the tenth revision of the International Classification of Disease (ICD-10) codes, we determined the obesity-related causes of death. This study was done to investigate obesity's impacts on mortality rates across the United States and on the NERIC states—Maine, New Hampshire, Vermont, Rhode Island, and Delaware. Furthermore, to understand divergent and prevalence trends across counties for the five NERIC states, we performed correlation tests between obesity-related mortality rates and socio-economic demographic data (median household income, poverty rate, and education levels).

Conclusions: Nationally since 1999, obesity related mortality rates increased by 132%. At 246%, the underrepresented Asian/Pacific Islander race showed the highest increase. In the decennial age group ranges, 25-34 and 35-44, the increase in obesity-related mortality rates was over 150%. For Chittenden County, Vermont, the NERIC Conference host county, there were significant correlations between obesity mortality rates, income, and education levels.

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