



TRENDS IN COST, LENGTH OF STAY, AND MORTALITY IN HOSPITALIZED CELIAC DISEASE PATIENTS IN THE GERIATRIC POPULATION

Anmol Mittal¹, MD, Mansi Patel¹, MD, Faiz Afridi¹, MD, Sushil Ahlawat¹, MD
¹ Department of Internal Medicine, Rutgers NJMS

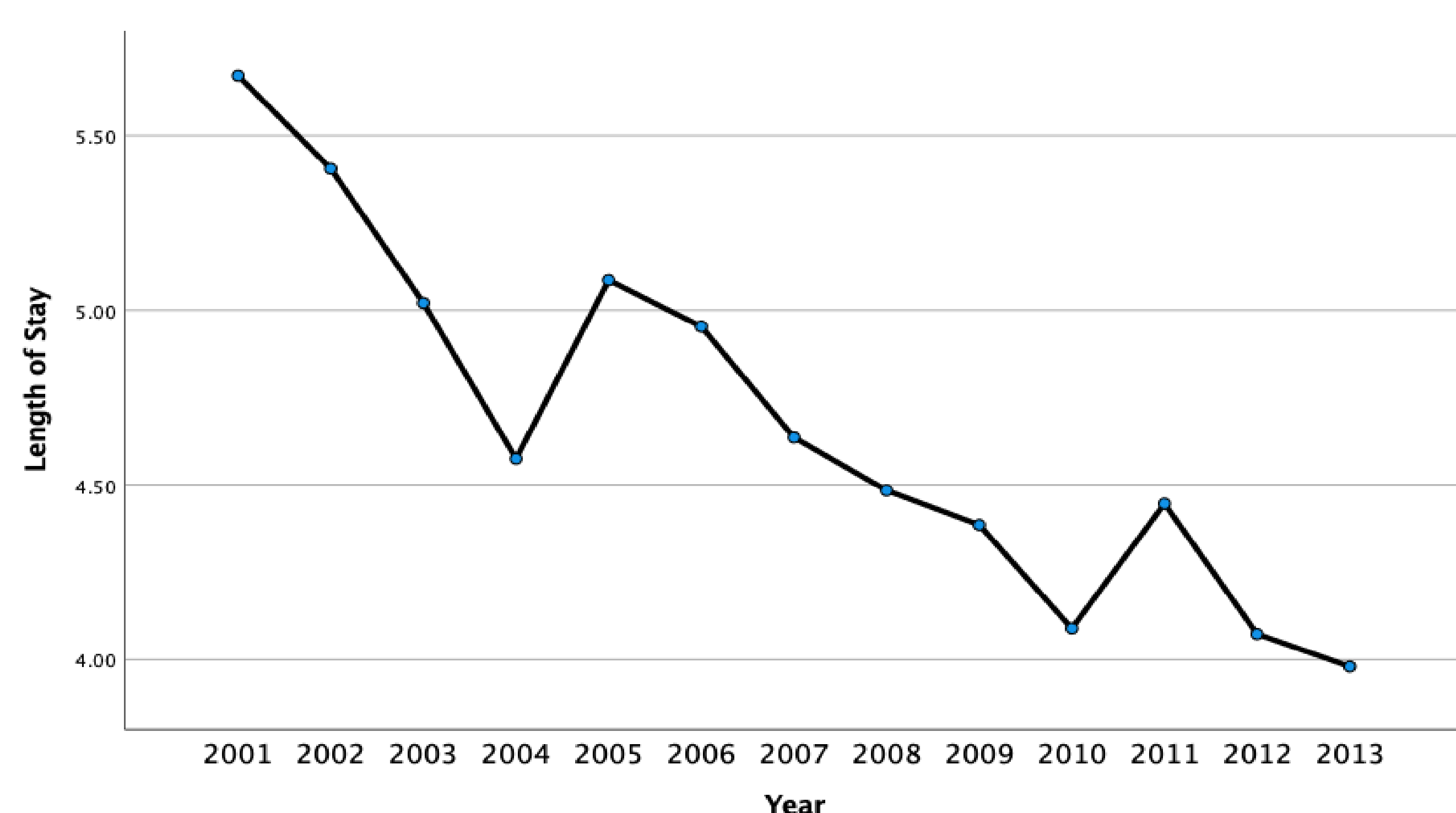
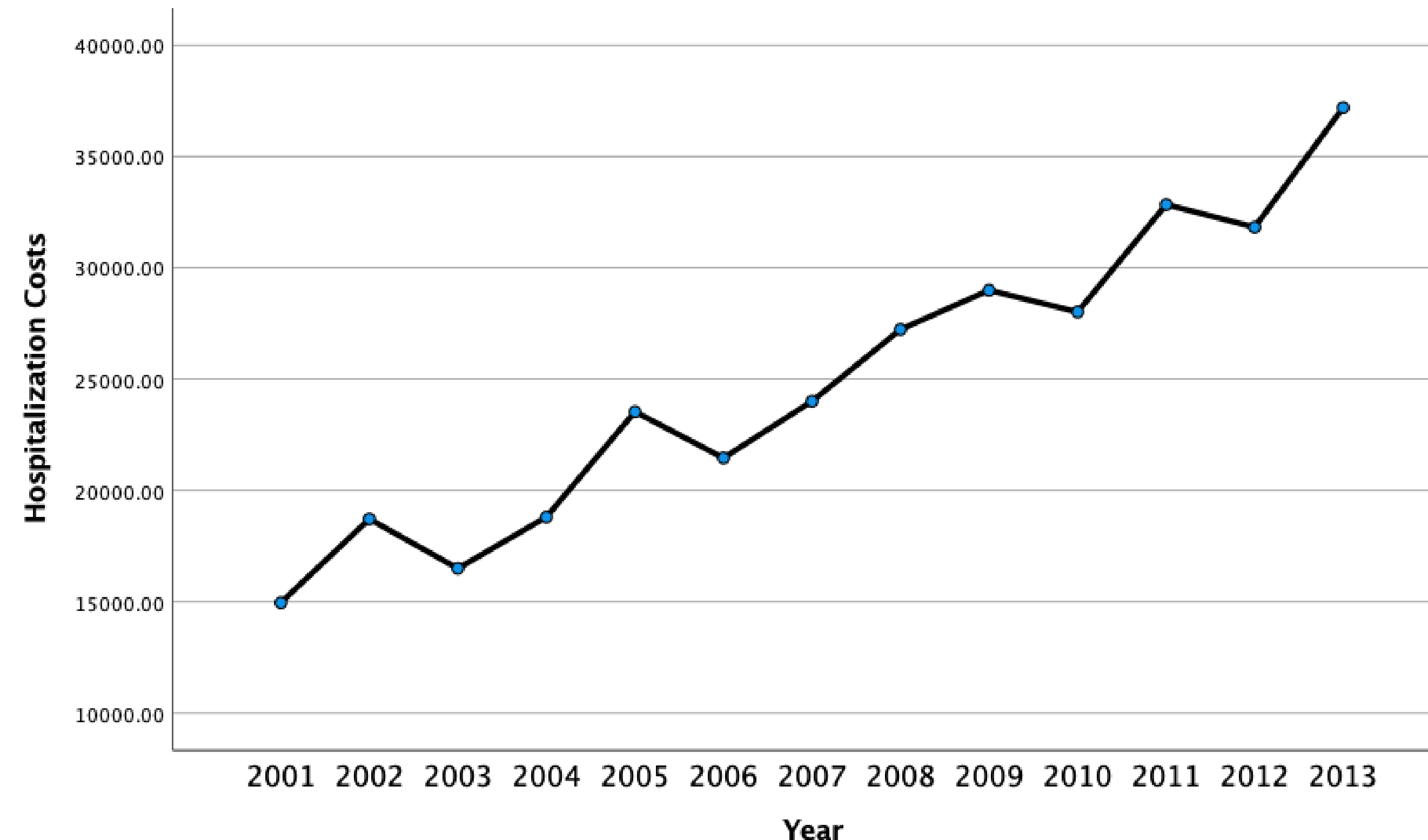
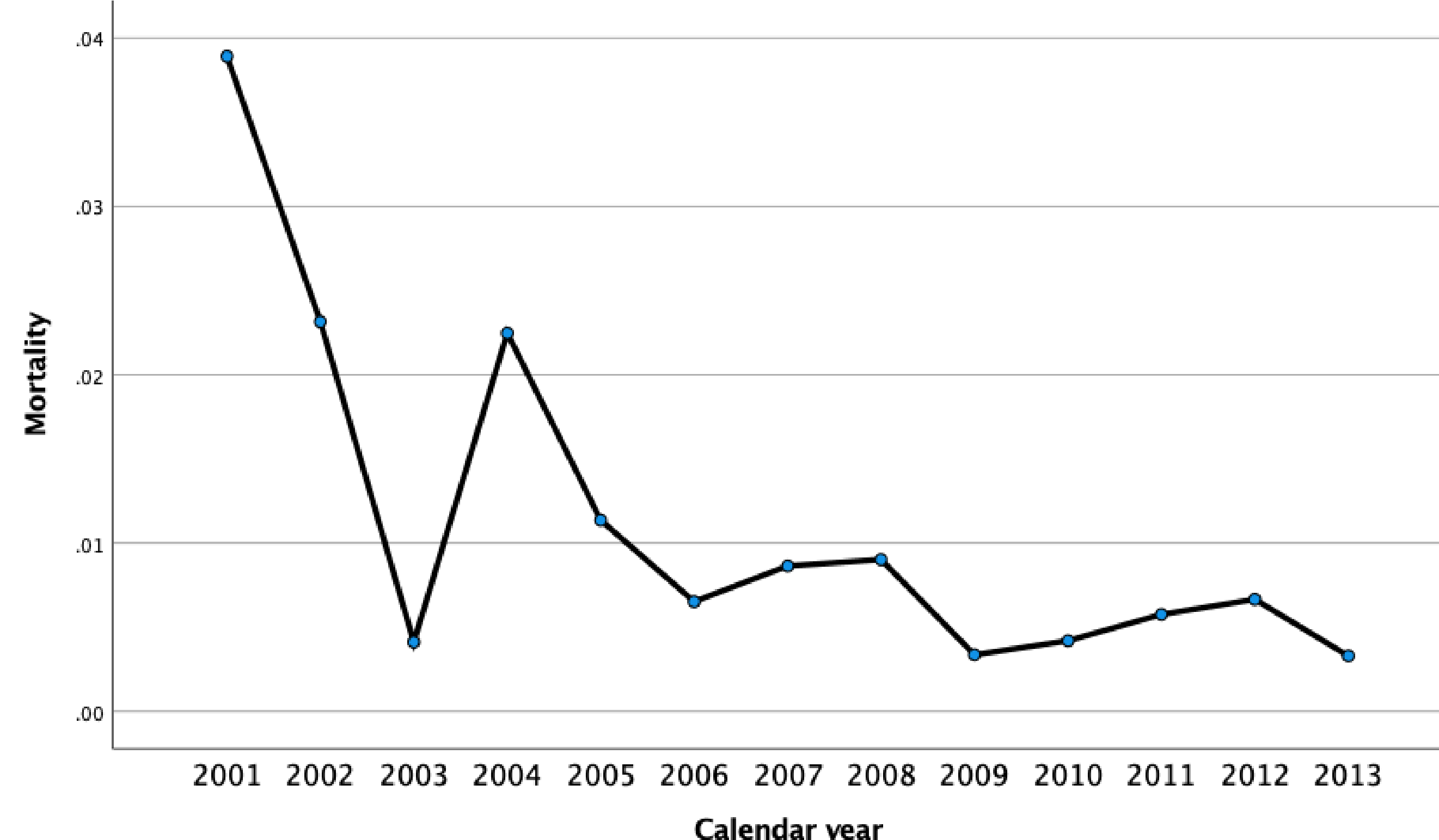
BACKGROUND

Celiac disease has traditionally been known to affect young adults, however, there has been an increasing prevalence in the elderly. The median age of diagnosis is between the 4th and 6th decade of life and due to its complicated clinical course and delayed risk of malignancy, a significant portion of healthcare costs are attributed to Celiac disease. As both mean life expectancy and incidence of celiac disease increase nationwide, the healthcare costs and patient mortality rates attributed to a dilatory diagnosis of celiac disease remain poorly understood.

METHODS

The Nationwide Inpatient Sample (NIS) 2001-2013 database was queried for patients with a primary diagnosis of Celiac disease using International Classification of Diseases, Ninth Revision (ICD-9) codes. Age was stratified using 65 years of age as the cut off for the geriatric population. A one-way analysis of variance (ANOVA) test with linear trend analysis was used to compare the mean length of stay (LOS), mean hospitalization cost, and mortality.

RESULTS



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A one-way analysis of variance with linear trend was used to determine significance for the trends. The mean (M) mortality rate was 0.8%, the standard deviation (SD) was 8.9%, and the sample size (n) was 30,915. Mortality for these patients decreased from 3.9% to about 0.3% ($p < 0.001$). For hospital charges $M = \$28,219$, $SD = \$34,204$, $n = 30,423$. The average total charges of hospitalizations went up from \$14,959 to \$37,201 ($p < 0.001$) from 2001 to 2013. Finally, the length of stay was found to have a $M = 4.5$, $SD = 5.6$, $n = 30,942$. The average length of stay for this patient population went down from 5.7 days to 4.0 days ($p < 0.001$) from 2003 to 2013.

CONCLUSION

In the geriatric population, a delayed diagnosis of celiac disease leads to greater length of stay and increased healthcare costs compared to the average population. However, the trend demonstrates a shorter length of stay and diminishing mortality rate. The rise in hospital costs is likely multifactorial and additional factors contributing to the hospital course including barriers to diagnosis, atypical presentations, lag from diagnosis to treatment, and additional comorbidities need to be further studied to decrease costs associated with Celiac disease in the geriatric population.