TRENDS IN HOSPITAL UTILIZATION AND MORTALITY IN PATIENTS WITH ULCERATIVE COLITIS AND PRIMARY CLOSTRIDIUM DIFFICILE INFECTION

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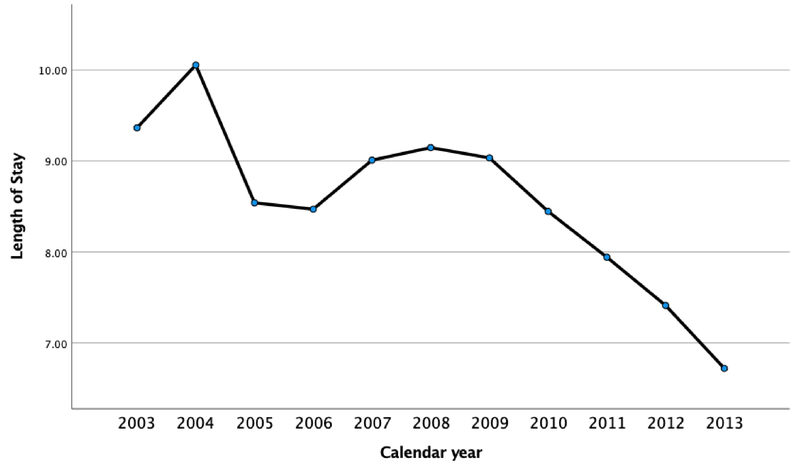
BACKGROUND

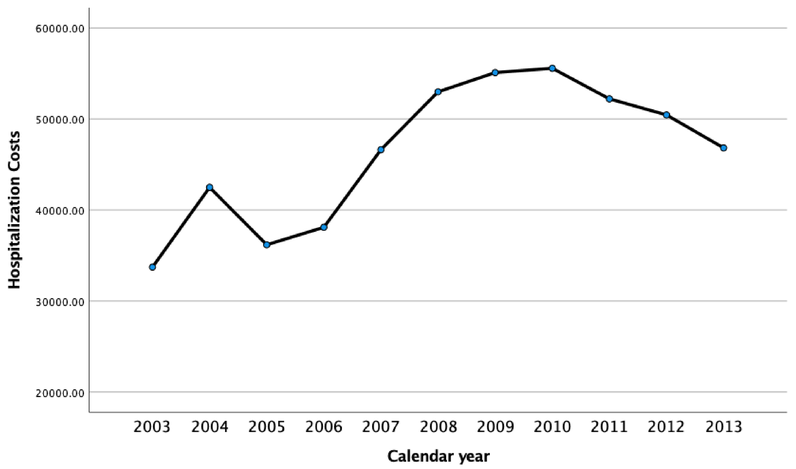
Ulcerative Colitis (UC) is treated with immunosuppressive agents that can predispose these patients to opportunistic infections. It has been demonstrated that there is increased risk of Clostridium difficile infection (CDI) among those being treated for UC. While there are studies that have observed this trend, there are not many studies analyzing the association between hospital costs of hospitalized UC patients with primary CDI and mortality in this patient population. We aim to understand developing shifts in this group.

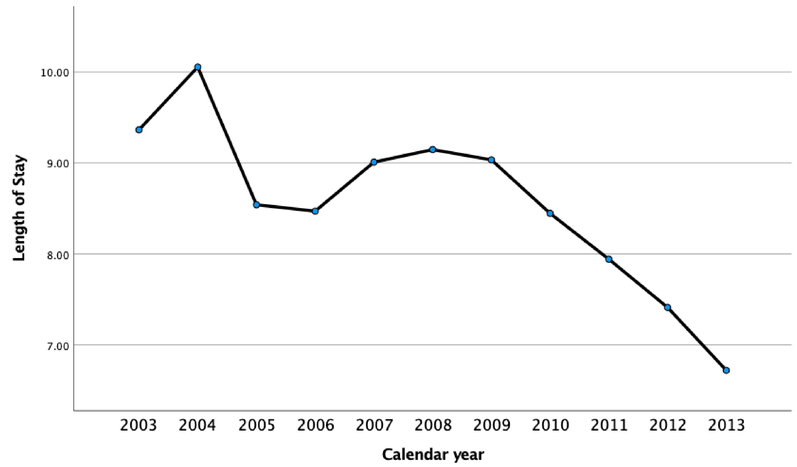
METHODS

The Nationwide Inpatient Sample (NIS) 2003-2013 database was queried for patients with a primary diagnosis of Clostridium difficile infection with a concurrent diagnosis of ulcerative colitis using International Classification of Diseases, Ninth Revision (ICD-9) codes. A one-way analysis of variance (ANOVA) test with linear trend analysis was used to compare the mean length of stay (LOS) and mean hospitalization cost with mortality.

RESULTS







RESULTS

A one-way analysis of variance with linear trend was used to determine significance for the trends. The mean (M) mortality rate was 7.29%, the standard deviation (SD) was 25.73%, and the sample size (n) was 24,164. Mortality for these patients decreased from 9.14% to 4.15% ($p<0.001$). For hospital charges M=$46,390, SD =$62,299, n=23,622. The average total charges of hospitalizations went up from $33,729 to $46,390 ($p<0.001$) from 2003 to 2013. Finally, the length of stay was found to have a M=8.6, SD = 7.7, n=24,195. The average length of stay for this patient population went down from 9.4 days to 6.7 days ($p<0.001$) from 2003 to 2013.

CONCLUSION

Our analysis found that the mortality rate and hospital LOS decreased for this patient population from 2003 to 2013. However, the hospitalization costs increased. It is important to understand the factors leading to improved outcomes but also those that influence higher costs of these admissions. It is noted, however, that we may have reached the acme towards the end of the trend for costs and that further years have led to decreased costs.