Inpatient Burden of Morbid Obesity in U.S.: An analysis of time trends from 1997 to 2012

Introduction

Obesity is a chronic disease that is increasing in prevalence in adults, adolescents, and children, and is now widely considered a global epidemic. It is a well-established risk factor for increased morbidity and mortality. The aim of this study was to evaluate the burden of inpatient admission, length of stay and associated cost related to inpatient management and how it has changed over the past two decades.

Methods

Using data from the Nationwide Inpatient Sample and National Emergency Department Sample we examined the characteristics of hospitalization for Morbid Obesity (ICD-9 code 278.01) and evaluated the time trends of resource utilization from 1997 to 2012. Fisher’s exact test and two-sample t-test were used where appropriate

Results

In 2012, the number of patients with a diagnosis of morbid obesity on discharge from the hospital was 124,650. Majority of these patients were females (77.9%) and aged between 18 and 44 years (62.5%). The mean charges per hospitalization were $47,229 and resulted in a national bill of $ 5,884,814,897. Based on regions defined by bureau of census, southern states accounted for majority of these hospitalizations. Only 10.2% patients were uninsured and median income for zip code was not low (>25 percentile) for majority of the hospitalizations (76%). Between 1997 and 2012, the number of hospitalizations with a discharge diagnosis of morbid obesity increased from 10,833 to 124,650 (relative risk 10.5, 95% CI: 10.2-10.6, p <0.001). The number of hospitalized patients older than 44 increased from 32.8% to 49.7% (relative risk 1.2, p<0.01). Despite a significant reduction in average length of stay from 5 to 2.1 days, aggregate charges increased 29 folds from $ 198,069,897 to $ 5,884,814,897. ($ 4115255173 when corrected for inflation according to the consumer price index).

Discussion:

Our analysis shows that there has been an increasing burden of morbid obesity in the hospitalized population. This corresponds with the increasing prevalence of obesity in the US during this same time period. There are gender and regional differences with females and southern states accounting for majority of admissions. There is also an increasing prevalence of morbid obesity in older population who tend to have longer...
hospital stays, and inpatient morbidity and mortality. From 1997 to 2012 number of hospitalizations and associated cost has increased profoundly.