NTDB® data points

Tighten your belt

by Richard J. Fantus, MD, FACS; and Michele M. Mellett, MD, FACS

According to the 2010 U.S. Census, the resident population of the U.S. exceeded 300 million, which represents an increase of 9.7 percent over the 2000 census. The most populous state was California, the least populous was Wyoming, and Texas was the state that had the biggest gain (http://2010.census.gov/news/releases/operations/cb10-cn93.html).

While the population was growing in number, it was also growing in size. During the past 20 years, obesity has had a dramatic increase in the U.S. In 2009, only the District of Columbia and Colorado had an obesity prevalence of less than 20 percent, 33 states had a prevalence 25 percent or greater, while nine states' prevalence was equal to or greater than 30 percent. Overweight and obesity are labels for ranges of weights that are greater than what are considered healthy for a given height. These ranges have been shown to increase the likelihood of certain disease and other health problems. For adults, these ranges are determined by using height and weight to calculate the body mass index (BMI). An adult with a BMI between 25 and 29.9 is considered overweight, while a BMI equal to or greater than 30 is considered obese (http://www.cdc.gov/obesity/).

Trauma is not immune to the increase in obesity rates. Each year a greater percentage of patients admitted to trauma services are overweight or obese. Obese patients do not have the same outcomes or injury patterns as healthy weight patients. While seat belt use has been one of the factors that has contributed to a 50 percent decrease in motor vehicle crash related injuries and deaths, there is a linear decrease in seat belt use as an individual’s BMI increases. This puts obese motorists at unnecessary risk for death or injury in motor vehicle crashes.

In order to examine the occurrence of injuries in obese trauma patients in the National Trauma Data Bank® Research dataset 2009, admissions records were searched utilizing the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) diagnosis codes 278.00 (obesity unspecified) and 278.01 (morbid obesity, BMI ≥ 40). A total of 1,853 records matched these diagnosis codes; 1,824 records had discharge status recorded, including 1,062 discharged to home, 222 to acute care/rehab, and 477 sent to nursing homes; 63 died. These patients were 55 percent female, on average.


50 years of age, had an average length of stay of 9.3 days, and an average injury severity score of 11.2. Of the 765 motor vehicle occupants, only 276 were recorded as having used lap belts. (These data are depicted in the figure on page 53.)

A perennial top 10 New Year’s resolution is to lose weight. This is evident by the $58.6 billion spent by Americans in 2009 in an effort to lose weight (http://www.marketdataenterprises.com/pressreleases/DietMkt2009PressRelease.pdf). According to the statistics outlined in this article, Americans are not doing such a good job of keeping off the pounds. With all the negative health effects related to obesity, including those seen in trauma patients, the public needs to do a better job this year, and not only tighten their belts, but fasten them as well.

Throughout the year, we will be highlighting these data through brief reports that will be found monthly in the Bulletin. The NTDB Annual Report 2010 is available on the ACS website as a PDF file and a PowerPoint presentation at http://www.ntdb.org. In addition, information is available on our website about how to obtain NTDB data for more detailed study. If you are interested in submitting your trauma center’s data, contact Melanie L. Neal, Manager, NTDB, at mneal@facs.org.

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