Introduction

Motor vehicle accidents (MVAs) are a leading cause of preventable death and injury in the United States, causing nearly 33,000 fatalities per year.\(^1\)

Seatbelt use can reduce crash-related morbidity and mortality by more than 50%.\(^2\)

Previous studies have demonstrated lower seatbelt usage in obese individuals.\(^3\)

Improving seatbelt compliance should be an important public health initiative especially for patients with extreme obesity.

Purpose

The purpose of this study was to evaluate the usage of seat belts in a cohort of extremely obese patients.

Methods

We surveyed 33 subjects at our Weight Management clinic in New Orleans, LA. (NOLA) to evaluate for seat belt usage.

Patients were asked on a pre-examination questionnaire if they regularly used seat belts (yes or no).

If they did not use seat belts, further questioning attempted to find the reason for non-use.

Body Mass Index (BMI) was calculated using the patients measured body weight (kilograms) per measured height (m²).

Logistic regression analyses were conducted to calculate odds ratios (OR) and 95% confidence intervals (CI) for seat belt usage.

Results

Baseline characteristics included: mean body mass index (BMI) 59.3 +/- 10.7 kg/m²; mean age 44.3 +/- 5.7 years; 69.7% were females; 57.6% were African American. (see table 1.0)

Greater than 90% of patients had existing multiple co-morbidities including diabetes, hypertension, obstructive sleep apnea, anxiety/depression and dyslipidemia. (i.e., Edmonton Obesity Stage 2 or greater)

78.8% of patients reported regular seat belt usage.

Risk factors associated with nonuse included: higher mean BMI: 74.3 +/- 8.1 kg/m², younger mean age (38.3 years) and African American descent (71.4%).

Passenger discomfort and inadequate seat belt size were the most common reasons for non-use.

Discussion

The state of Louisiana has a primary enforcement seat belt law in effect. Occupants can be ticketed for not using their seatbelts. This may have had an effect on the higher than expected seatbelt usage in our cohort.

Current seat belt design does not accommodate many patients with extreme obesity.\(^7\) The use of seat belt extenders should be available for all persons unable to use regular seat belts.

Small sample size and seat belt self-reporting may limit generalizing these results.

Non-use of seat belts should be added as another potential health risk associated with obesity.

Conclusions

Patients with extreme obesity have decreased seatbelt compliance versus their normal weight counterparts.

Compared to previous reported data, our sample demonstrated improvements in seatbelt compliance.

Physician communication and means to further improve seatbelt usage in obese patients is an important healthcare and public safety initiative.

References