



Data Linkage Results

Alcohol-related Crashes, Oklahoma, 2009

The Oklahoma Traffic Data Linkage Project (TDLP) is a joint effort between the Oklahoma State Department of Health and the Oklahoma Highway Safety Office to link statewide traffic crash and health outcome databases. This report describes the circumstances and outcomes of persons in crashes that involved alcohol.

Inclusion of Cases

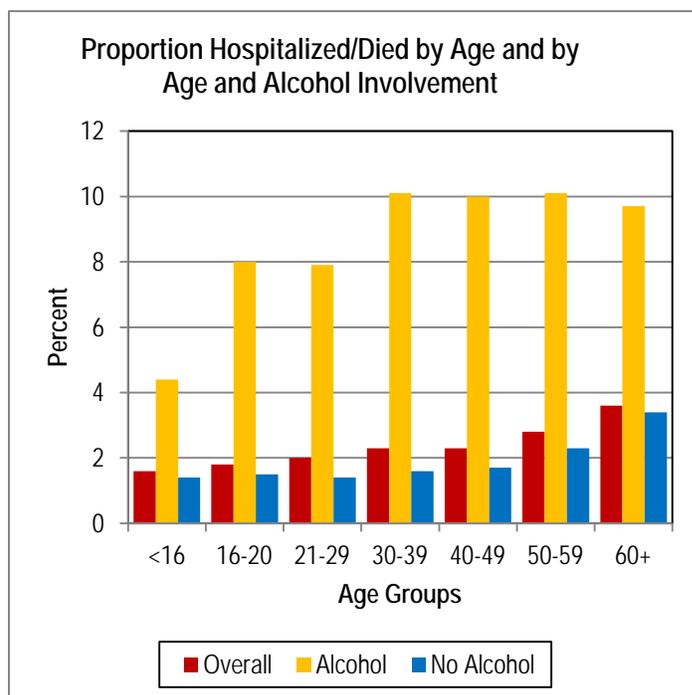
Alcohol-related crashes were identified from the traffic crash database as all incidents where alcohol was recorded as involved. Alcohol 'involvement' does not imply the blood alcohol concentration (BAC) exceeded the legal limit.

Introduction and Demographics

- Of the 71,218 crashes reported in 2009, there were 4,920 crashes identified as involving alcohol.
- 8,498 individuals were involved in alcohol-related crashes – there were 137,370 individuals in crashes that did not document alcohol involvement. Though only accounting for 5.8% of all the individuals reported to the crash database, persons involved in alcohol-related crashes accounted for 748 (23%) of all persons identified as either being hospitalized or died.
- 21 to 29 year olds had the highest proportion (8.2%) of alcohol-related crashes, followed by 30 to 39 (7.4%) and 40 to 49 year olds (6.9%). Even for drivers age 16 to 20, underage for drinking, 4.7% were reportedly alcohol related.
- Gender and alcohol involvement were recorded for 96% of the individuals. Among females, 4.2% had alcohol involved versus 7.6% of males. Within the alcohol-related group, two-thirds were male.
- Overall, 8.8% of the persons in alcohol-related crashes were either hospitalized or died compared to 1.8% of persons in crashes that did not involve alcohol – risk ratio (RR) 4.8 (95% CL 4.4, 5.2). Unadjusted mortality for the alcohol-related group was 2.4% and for the no alcohol group, 0.4% [RR 5.6 (95% CL 4.8, 6.6)].

Circumstances

- 39.5% of persons in alcohol-related crashes were involved in single vehicle crashes as compared to 12.8% of people in crashes that were not alcohol-related. 14.6% of persons in alcohol-related, single vehicle crashes either were hospitalized or died compared to 6.8% hospitalized or died in single vehicle crashes with no alcohol involved.
- Among persons involved in multi-vehicle crashes, 5% of persons in alcohol-related crashes were either hospitalized or died versus 1.1% of persons in multi-vehicle crashes not involving alcohol.
- Among those in alcohol-related crashes, 21.4% were reportedly not restrained compared to 4% where alcohol was not involved. For the unrestrained in alcohol-related crashes, 27% were either hospitalized or died compared to 3.7% for restrained persons. For unrestrained persons in crashes not involving alcohol, 16% were either hospitalized or died compared to 1% for restrained persons.



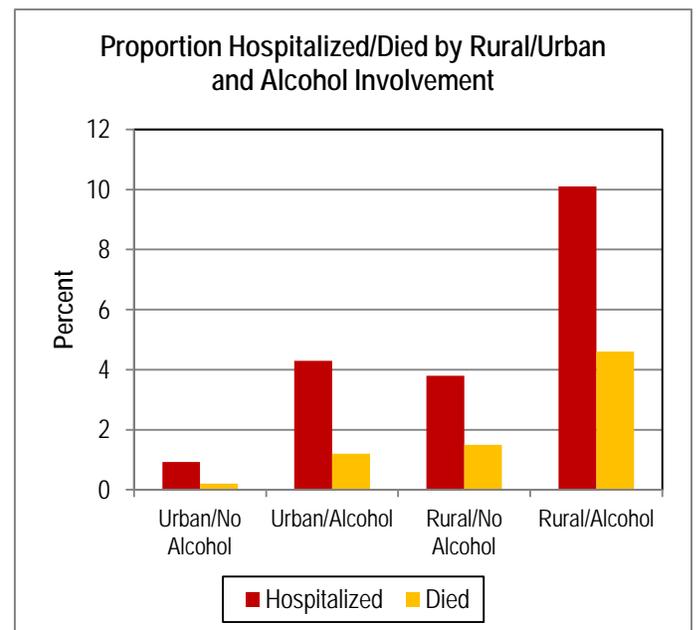
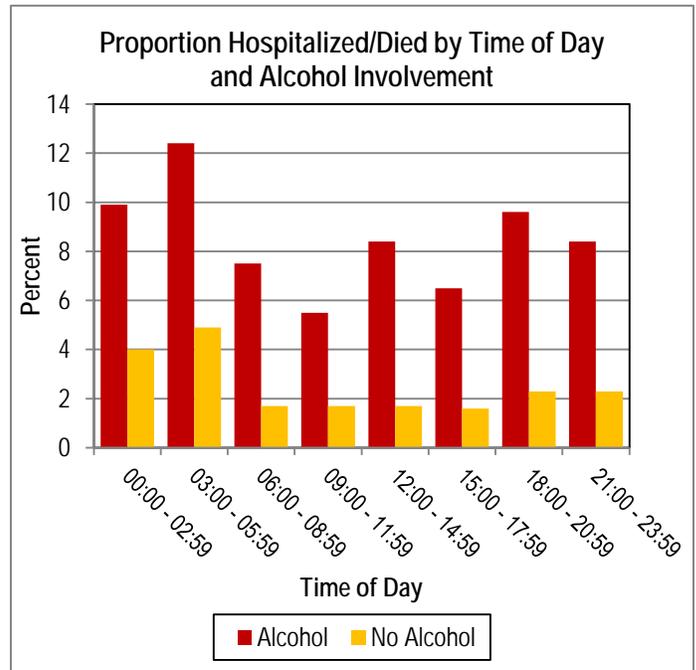
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- A greater proportion of people (12.6%) in alcohol-related crashes were in vehicles that reportedly rolled compared to persons in crashes that did not involve alcohol (3.3%) – 13.3% of persons in a vehicle that rolled were either hospitalized or died. Moreover, the rate of hospitalization or death varied by whether the rollover crash involved alcohol (21.7%) or not (11%).
- 37% of the persons in crashes between midnight and 3 am (over 40% on Friday and Saturday) were part of an alcohol-related crash.
- Alcohol-related crashes, regardless of the time of day, had much higher proportions of persons that were either hospitalized or killed compared to crashes at the same time of day that did not involve alcohol – which may be related to the finding above that persons in alcohol-related crashes were less likely to wear seat belts or use motorcycle helmets.
- Among persons in rural area crashes, 10.5% were in alcohol-related crashes as compared to 4.7% of persons in an urban area crash. The hospitalization rate for rural crashes not involving alcohol was 3.8% compared to 1% for no alcohol urban crashes. Rates for rural alcohol-related crashes was 10.1% and for urban crashes involving alcohol, 4.3%.

Motorcycles and Pedestrians

- Among motorcycle riders with reported helmet use status, 12% of persons in alcohol-related crashes were wearing a helmet versus 42% of those in crashes that did not involve alcohol.
- 46% of persons involved in alcohol-related motorcycle crashes were either hospitalized or died compared to 23% of those in crashes where alcohol was not involved.
- Alcohol was involved with 94 (16%) of the pedestrians involved in crashes; alcohol-related incidents accounted for nearly a third of pedestrian deaths.



Hospital Charges and Primary Payer Source

- Median total hospital charges for persons hospitalized following a crash involving alcohol (\$38,698) were higher than for those in a crash not involving alcohol (\$32,150).
- Median length of stay was 4 days for both alcohol-related and crashes not involving alcohol.
- A greater proportion of persons in alcohol-related crashes had self-pay listed as their primary payer source.

Type and Site of Injuries for Hospitalized Persons

- There was very little variation in the site or type of injuries when comparing alcohol-related crashes to no alcohol crashes. The most frequently reported diagnosis sites were the torso (29%), head/neck/face (18%; plus traumatic brain injuries included another 8.4%), lower extremity (15%), and upper extremity (14%).

