

Examination of alcohol-related motor vehicle accidents and the alcohol retail environment on and near American Indian reservations in Minnesota

Meghan Porter, MPH; Samantha Lucas, MPH

Abstract Submitted by GLITEC to the American Public Health Association's Call for Abstracts for the 2012 Annual Meeting (Alcohol, Tobacco, and Other Drugs Section), Accepted for Oral Presentation

If any Tribal communities would like to discuss this project, motor vehicle accidents, or the alcohol retail environment on and near their reservations, please contact Meghan Porter (612-625-7804 mporter@glitc.org) or Samantha Lucas (612-626-2676 slucas@glitc.org). Copies of the presentation are available upon request.

Background:

American Indians in the United States face numerous health, social, and economic disparities. Though data are insufficient in quality and number, alcohol abuse may disproportionately affect this population.

Methods:

Contract Health Service Delivery Areas (CHSDAs) were used as the level of geography for this study. CHSDAs are counties including or adjoining American Indian reservations; they are commonly used when calculating American Indian health statistics when using national or state datasets.

The number of motor vehicle accidents (MVA) in which alcohol was a factor was examined via crash report form data for non-metropolitan CHSDA and non-CHSDA counties in Minnesota for 2007-2011. The number of businesses in 2011 that sold alcohol (liquor stores and alcohol-serving establishments) and alcohol sale revenue in these areas were examined using Nielsen Company's PrimeLocation Web tool.

Results:

It was found that there were three times as many alcohol-serving establishments per capita and 50% more liquor stores in CHSDAs than in non-CHSDAs. Per capita there were 20% higher alcohol sales in CHSDAs than in non-CHSDAs.

An MVA in CHSDA counties had significantly higher odds of being alcohol-related (OR=1.43; 95% CI: 1.25, 1.64) and alcohol-related MVAs in CHSDAs had significantly higher odds of being fatal (OR=2.32; 95% CI: 1.32, 4.09) compared to non-CHSDAs.

Conclusion:

Greater availability of alcohol in areas on and near American Indian reservations may contribute to higher rates of alcohol-related MVAs in these regions.

