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Access to Alcohol and Alcohol-Related Injury Deaths
in Alaska, 1990-1993

Background: Alaska had the highest rate of injury death in the United States during 1988-1992. Higher rates occurred in rural Alaska, where the majority of injury deaths were alcohol-related and among Alaska Natives. We studied the association between restrictive alcohol laws and alcohol-related injury deaths in rural Alaska where more than 70 villages prohibit the sale and importation of alcohol.

Methods: We used vital statistics data and medical examiner records to compare mortality rates from overall injury and alcohol-related injury during 1990-1993. Alaskans 15 years of age and older who had resided in rural villages that had either more or less restrictive alcohol laws were studied. More restrictive laws prohibited the sale and importation of alcohol; less restrictive laws included those prohibiting only the sale of alcohol or not specifically regulating availability. Alcohol-related injury deaths were defined as injury deaths with blood alcohol concentrations (BACs) ≥ 80 mg/dL. Rural villages were defined as communities (Figure 1) with less than 1,000 persons.

We excluded villages that were accessible by road from Fairbanks and those that allowed a village-run liquor store. Of villages that met these criteria at the end of 1993, 82 had less restrictive laws and 71 had more restrictive laws.

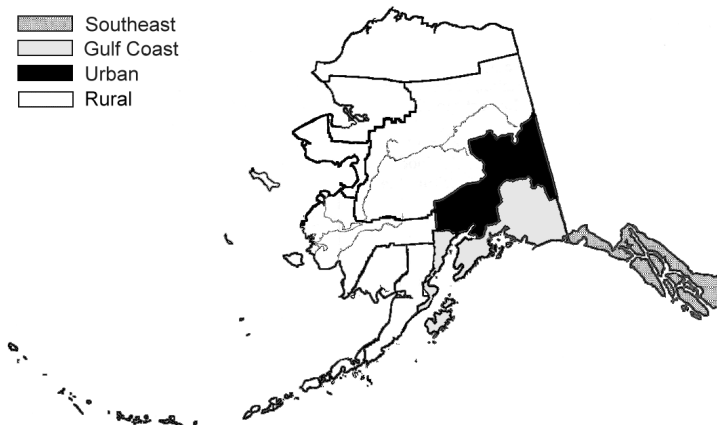
Results: Of 305 injury deaths, blood alcohol concentrations (BACs) were available for 202 (66.2%) decedents. Of these, 132 were classified as alcohol-related with BACs ≥ 80 mg/dL (65.3%), 52 had BACs that were negative, and 18 decedents had BACs between 1-79 mg/dL.

The overall injury mortality rate was greater among Alaska Natives from less restrictive villages than from more restrictive villages [rate ratio (RR) 1.6, 95% confidence interval (CI) 1.2-2.0]. This difference was not present for all residents [RR 1.0, CI 0.8-1.3].

The alcohol-related injury mortality rate was greater among residents of less restrictive villages [RR 1.5, CI 1.1-2.2], and especially among Alaska Natives [RR 2.5, CI 1.8-3.6]. Motor vehicle injuries showed the greatest difference in cause specific, alcohol-related injury death rates with the rate far greater in less restrictive villages [RR 4.2 CI 1.8-9.9].

Conclusions: Although we lacked data to adjust for the effects of all potential confounders, less restrictive alcohol laws were associated with higher alcohol-related, injury death rates among Alaska Native residents of rural Alaska villages with less than 1000 persons. Our findings indicate that **measures limiting access to alcoholic beverages in rural villages may decrease alcohol-related injury deaths.**

Figure 1. Alaska Regions



All villages in this study were located in the "Rural" area.