

**ALCOHOL AVAILABILITY, POLICE PRESENCE AND VIOLENCE
IN ISOLATED ALASKAN VILLAGES**

by

Darryl S. Wood, Ph.D.
Research Scientist, Prevention Research Center
Visiting Scholar, School of Public Health, University of California, Berkeley
Associate Professor, Justice Center, University of Alaska Anchorage

&

Paul J. Gruenewald, Ph.D.
Scientific Director and Senior Research Scientist, Prevention Research Center

Paper Presented at the Annual Meetings of the
Academy of Criminal Justice Sciences,
Las Vegas, NV, March 2004

ABSTRACT

Although the Alaska Native villages that prohibit the use and possession of alcoholic beverages are safer than those villages that allow alcohol, they nonetheless report much more violence than what is found in most other places. One explanation for the relatively high rates of violence in dry villages (as compared to rates in places outside the Alaska Native village milieu) is a lack of local a police presence in many of the communities that prohibit alcohol. This study uses information from the Alaska Trauma Registry and from the records of police agencies in rural Alaska to test the hypothesis that the lack of a local police presence in dry villages is associated with increased levels of violence.

ACKNOWLEDGEMENTS

The research conducted for this paper was made possible by a Graduate Research Training on Alcohol Problems Fellowship, sponsored by the National Institute on Alcohol Abuse and Alcoholism, T32 AA07240-26. This research was also supported by National Institute of Alcohol Abuse and Alcoholism Center grant AA06282 to the Prevention Research Center, Pacific Institute for Research and Evaluation. The authors would like to thank Keri Wheeler of the Alaska State Troopers for providing information detailing the dates and locations of VPSO employment, Martha Moore of the Alaska Division of Public Health for making possible the use of records from the Alaska Trauma Registry, Phillip Mitchell of the Alaska Bureau of Vital Statistics for providing information from Alaskan death certificate records, and Dr. Matthew Berman, from of the Institute of Social and Economic Research at the University of Alaska Anchorage for allowing us to use his records on local alcohol control elections. Thanks also go out to Aniruddha Banerjee of the Prevention Research Center for composing the map accompanying this paper. All content within, including any errors or omissions, remains the responsibility of the authors.

ALCOHOL AVAILABILITY, POLICE PRESENCE AND VIOLENCE IN ISOLATED ALASKAN VILLAGES

INTRODUCTION

Similar to many other jurisdictions, the drug that is associated with the most harm in Alaska is alcohol. When compared with other states, however, Alaska ranks among those with the highest rates of alcohol problems in the nation (Alaska Division of Alcoholism and Drug Abuse, 1999). Alcohol abuse and its concomitant social problems have long been a concern in Alaska (Anchorage Daily News, 1988; Berreman, 1956; Klausner & Foulks, 1982; Moeller, 1979). Surveys conducted in rural Alaska have found that an overwhelming majority of Alaska Natives — the indigenous inhabitants of Alaska — believe that their villages have problems with alcohol abuse and that alcohol use is the primary source of criminal behavior in their communities (UAA Justice Center, 1994; 1995). The extraordinarily high rates of alcohol related injury deaths in rural Alaska (Landen, 1996) certainly give credence to the rural villagers' perceptions. Alcohol is seen to serve as a catalyst, exacerbating Alaska Natives' culture conflict (Lee, 1995), their acculturation stress (Foulks, 1987), or their post traumatic stress (Napoleon, 1991), eventually leading to elevated incidence of outward-and-inwardly driven violence. The primary response to the alcohol related violence in Alaska Native villages has been the local prohibition of alcohol.

Since early territorial days when alcohol was banned statewide and Alaska was treated as if it was one large Indian reservation for the purpose of alcohol control (Lee, 1997), the solution to alcohol related harm has been to employ formal legal controls on the availability of alcohol in Alaska Native communities. Federal law forbid the sale of alcohol to Alaska Natives until 1953. After that law was repealed alcohol control was localized and tribal councils were empowered to choose to allow alcohol in their villages (Berman & Hull, 2001). With statehood in 1959, however, when the state refused to recognize the authority of tribal councils, local laws banning alcohol were nullified (Conn & Moras, 1986). Over the next 20 years escalating rates of alcohol related mortality resulted in the state legislature passing (in 1980) a local option law that allowed villages to vote on varying levels of local availability. The law originally provided for three different statuses: (1) alcohol could be purchased and sold in a village, (2) alcohol could be imported into a village, or (3) alcohol sales and importation would be illegal in a village. In

1986 the law was amended to allow villages to also choose to ban the local possession of alcohol (Berman & Hull, 2001). The villages where alcohol is banned are largely thought of as being under prohibition:

Many village inhabitants interpret local option to mean ‘prohibition.’ They (and many government agency personnel) talk about voting ‘dry’ and having ‘dry’ communities. To villagers, ‘dry’ means no more alcohol, no more drinking, and no more drunks in the villages (Segal, et al., 1999, p. 68).

Many villages have taken advantage of the law to prohibit alcohol since 1980 (Berman & Hull, 1997).

The effects of local prohibition upon the rates of accidental and intentional injuries that sometimes result from alcohol use are examined in this paper. To do this, the occurrence of traumatic injuries in Alaska Native villages that prohibit the sale, importation, and/or possession of alcoholic beverages is compared to the occurrence of injuries in villages that allow for alcohol to be consumed locally. The analysis conducted to make that comparison indicates that isolated Alaska Native villages are safer places when they are ‘dry.’ Furthermore, this study builds upon earlier research by also considering the extent to which the effectiveness of village level alcohol controls is undermined by the absence of local law enforcement authorities. While it does not appear to make a difference for most types of injuries if a dry village receives (or does not receive) local police services, the rate of assault is lower in dry villages when there is a local police presence compared to when the police are absent. Before presenting these findings in greater detail, we will first review earlier research on local alcohol prohibition as a response to accidental and intentional injury in indigenous communities throughout North America and then describe the methods used to consider its effect in isolated villages inhabited by Alaska Natives.

THE EFFECT OF PROHIBITION IN ALASKA NATIVE VILLAGES AND BEYOND

A number of studies have considered the impact of policies aimed at restricting the availability of alcohol upon the problems related to alcohol abuse among populations of American Indians, Alaska Natives, and other groups of North American indigenous peoples. With the exception of a study by Schechter (1986), which found a significant reduction in arrests for violent crime among the primarily Inuit population of Greenland following a program of alcohol rationing implemented in 1979, most of this research has considered the effects of prohibition of alcohol on Indian reservations in the Lower-48 U.S. For the most part, this

research appears to demonstrate the importance of geographic isolation upon the effectiveness of local prohibition in the prevention of alcohol abuse and concomitant behaviors.

At best, the prohibition of alcohol on Indian reservations in the lower-48 states has been ineffective as a tool to alleviate alcohol-related problems. A long line of studies published over the past half-century have concluded that prohibition has negatively effected those reservations subject to it (Back, 1981; Curley, 1967; Gallaher, et al., 1992; Heath, 1964; Honigmann & Honigmann, 1945; Levy & Kunitz, 1974; May, 1975; Northend Ferguson, 1968; Stewart, 1964; Weibel-Orlando, 1990). For example, May (1976) found that three Montana tribes that had removed prohibition in the mid-1950s had mortality rates resulting from cirrhosis of the liver, suicide, homicide, and motor vehicle accidents between 1959 and 1974 that were anywhere from 10 to 50 percent less than a comparable group of four 'dry' tribes in Montana and Wyoming. A replication of May's (1976) study conducted by Landen (1997) for the years 1979 to 1990 also found higher rates of alcohol-related mortality on reservations that prohibited alcohol.

This counterintuitive conclusion that prohibition actually leads to more problems than it prevents becomes less so when one considers the impact of prohibition upon the drinking styles of those affected. Best characterized as 'binge drinking,' Indians who consume alcohol while on prohibited reservations do so rapidly so as to avoid arrests for possession of alcohol (May, 1975; Waddell, 1990). Even among those of the same tribal affiliation, as Levy and Kunitz (1974) showed in their examination of Navajo drinking practices, Indian drinkers residing on prohibited reservations are much more likely to 'binge drink' compared to those living off-reservation where alcohol is readily available.

Contrary to the reservation experience, research on the effects of prohibition in the geographically isolated indigenous communities of the arctic and sub-arctic has shown it to have a positive impact up levels of alcohol-related problems. Smart (1979), for example, found reductions of more than 50 percent in the assault rates of two isolated Native communities in the Canada's Northwest Territories when prohibition was imposed. An examination of violent crime in a dozen isolated Inuit communities in the eastern Canadian arctic showed that the violent crime rates in the 'dry' communities were significantly less than those of the 'wet' communities for a number of years considered (Wood, 1997). It would appear that alcohol prohibition can be an effective policy response to alcohol-related problems when practiced in isolated Native communities that are not connected by road to legal sources of alcohol.

Research on the effects of alcohol prohibition in Alaska Native communities has also provided support for the enactment of such regulations. Landen, et al.'s (1997) comparison of alcohol-related injury deaths in 150 isolated Alaska Native villages between 1990 and 1993 showed that the risk of injury death among Alaska Natives residing in 'dry' villages was 2.7 times less than the risk for those residing in 'wet' villages. A paired-sample study of accidental death rates for 158 isolated villages over the period 1980 through 1993 by Berman, Hull and May (2000) provided similar results: those villages restricting access to alcohol saw a reduction in accidental deaths of 75 per 100,000 population and in homicides of 66 per 100,000 population. A time series analysis of the effects of revolving periods of alcohol prohibition and alcohol availability upon alcohol-related outpatient visits to the hospital in Barrow by Chiu, Perez, and Parker (1997) adds further support to the argument that alcohol prohibition is a viable solution to reduce the problems associated with alcohol abuse in isolated communities. Their comparison of the number of outpatient visits during periods when alcohol was or was not prohibited indicated that the alcohol bans in Barrow were responsible for the reductions in the numbers of those visits (Chiu, et al., 1997). Based upon the results of the earlier research, it is expected in the present study that the rates of traumatic injury and death will be lower in villages that prohibit alcohol as opposed to those villages that allow for local possession of alcoholic beverages.

The research conducted using data from Alaska Native villages has supported the idea that local alcohol prohibition can help to reduce the harms associated with alcohol abuse. However, these studies only serve to explain part of the story regarding alcohol-related harm in Alaska Native villages and they should not be taken to indicate that the presence or absence of these laws can account for all of the violence in the villages. Even dry Alaska Native villages have rates of violence that are on average two-and-a-half times higher than those found nationally (Berman, et al., 2000). In other words, violence still occurs at unacceptable levels even in the villages where the local option of alcohol prohibition is exercised.

A popular explanation for the persistence of relatively high rates of intentional and accidental injury in dry villages is that many villages lack a local police presence to properly enforce local prohibitions. Difficulties providing enough police coverage across the state in territorial times was seen as a prime reason for the ineffectiveness of prohibition; back then the view was that "you can't catch bootleggers with Sunday school teachers" (Lautaret, 1981). Field

research conducted in the late 1970s noted increases in heavy public alcohol consumption during the temporary absence of the police in some villages (Shinkwin & Pete, 1982).

There have always been problems providing adequate police services to the rural areas of Alaska. A lack of economies of scale, the difficulties imposed by extreme weather, and an absence of roads connecting most villages have all precluded the deployment of trained state-certified police officers in the large majority of Alaska Native communities (Angell, 1981). The extent to which these villages have a local police presence to enforce their alcohol regulations varies. Only a few isolated Alaska Native villages have their own local departments that employ fully certified (by the Alaska Police Standards Council) police officers. Another 65 or so villages across the state are served by non-certified paraprofessional Village Public Safety Officers (VPSOs). Villages served by VPSOs frequently go for months without the presence of an officer because of extremely high employee attrition rates (annual mean of 35%) (Wood, 2002). The remainder of the villages have no local police presence and are instead served by Alaska State Troopers on an as-need basis by air or river.

The connection between deficiencies in local police services and elevated rates of alcohol related mortality and injury is commonly seen in the declarations following Alaska Native political meetings. For instance, a recommendation from the 1998 Bristol Bay Women's Conference for combating alcohol related violence called for the expansion of the VPSO program (including improved training and multiple officers per village) (Segal, et al., 1999, Appendix A). Likewise, the Alaska Federation of Natives (1998) has passed numerous resolutions over the years at its annual convention calling for increased state support of the VPSO program as a way to improve the health and welfare of village residents by reducing access to alcohol through improved enforcement of local option prohibitions.

While a number of studies have examined the impact of local prohibition on the incidence of injury and mortality, very little empirical research has considered the ramifications of differential levels of police presence in Alaska Native villages. Only two studies to date, both examining crimes reported to the police, have attempted to determine what effect, if any, the presence or absence of local police authorities has on the amount of violence. Lee (1993), in her comparison of felony and misdemeanor offenses in 16 Yup'ik villages, attributed the higher incidence of misdemeanor and felony violence (as recorded in the Alaska State Troopers database) in villages served by VPSOs as a partial artifact of the availability of a local police

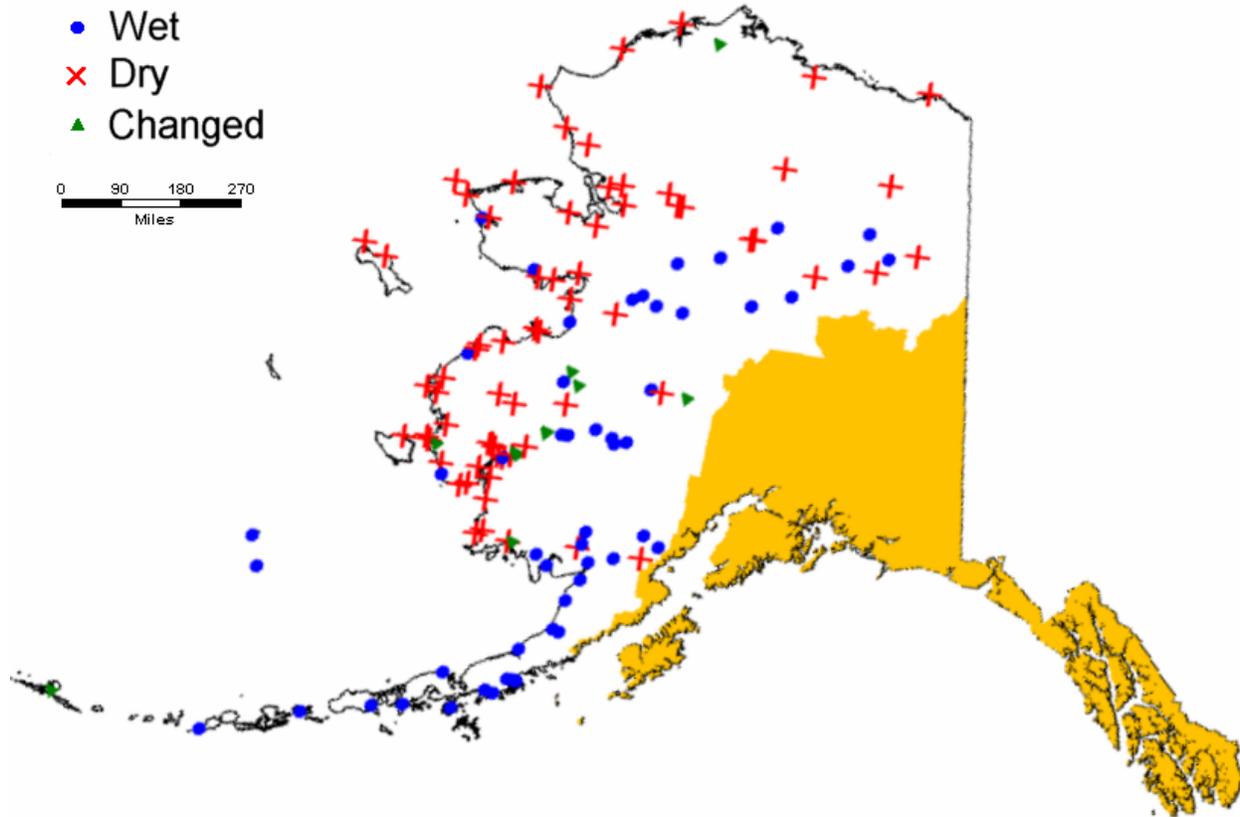
authority for crimes to be reported to. A similar conclusion was reached by Wood (2003), who found higher rates of reported misdemeanor assaults in 115 villages across Alaska when they were served by the VPSO program as opposed to when they went without VPSO service. It is difficult to predict what the effect of police presence will be upon rates of traumatic injury in the isolated Alaska Native villages considered in this study because the previous research has been unable to untangle the actual incidence of the harmful behaviors from the mechanisms by which they are reported. Given this lack of evidence to the contrary, it is probably best to expect that the common sense view (i.e., that local police presence will be associated with lower trauma rates) will be supported by the results of the analysis.

METHODS

A rather straightforward process was followed to examine the effects of local prohibition and local police presence upon the incidence of traumatic injury and fatality in isolated Alaska Native villages. First, each trauma case was coded as (1) occurring during a period of time when a village prohibited or did not prohibit alcohol as well as (2) if it occurred when a village did or did not have a local police presence. The population bases for calculating rates of traumatic injuries and fatalities were then established. Finally, comparisons of the traumatic injury and fatality rates for villages under prohibition were made with those villages not under prohibition and similar comparisons were made for the traumatic injury and fatality rates when the villages had a police presence versus when they lacked a police presence.

The analysis conducted for this paper replicates and expands upon the earlier research by Landen and colleagues (1997) on the effect of prohibition on injury fatalities in isolated Alaska Native villages. A set of villages that is similar to those used earlier is also used in this study. See Figure 1 for a map of these villages. With some exceptions, this includes all villages in what has been defined by the sampling framework of the Alaska Behavioral Risk Factor Surveillance System as the ‘Bush’ stratum (Alaska Dept. of Health & Social Services, 1993).¹ For the purposes of this analysis, an Alaska Native village is an incorporated city or census designated place that corresponded with an “Alaska Native Village Statistical Area” in the 2000 Census. Excluded from this analysis (and from the study by Landen et al. [1997]) are 5 hub communities with populations of greater than 1000 people and 11 villages that are connected hub communities and other villages by state-maintained solid roads. Also excluded from this analysis (but not by Landen et al. [1997]) are 15 villages that had 5 or fewer residents as of the 2000 census.

Figure 1: Alaska Native Villages by Alcohol Control Policy Type, 1991-2000.



Cases for the years 1991 through 2000 from the Alaska Trauma Registry and from the Alaska Bureau of Vital Statistics (BVS) death certificate records database were used to measure the harms that often result from alcohol use in the 132 Alaska Native villages used in the analysis. The Alaska Trauma Registry is a standardized statewide record of all injuries that result in a hospital admission or declaration of death in an emergency room. It has been kept since the beginning of 1991 for all 24 acute care hospitals in the state (Sallee, Moore & Johnson, 2000). A broad range of information concerning each individual trauma case is recorded in the Alaska Trauma Registry. For the purposes of this research, the most important information in the Alaska Trauma Registry includes the date and village of the injury, the age and race/ethnicity of the trauma patient, and the cause of injury ICD-9 E-code. In the present study these E-codes have been aggregated into the categories of (1) assault, (2) self-inflicted harm (i.e., attempted and completed suicide), (3) motor vehicle accidents, and (4) all other causes.² Considerable effort has been made to insure that the Alaska Trauma Registry provides a valid representation of traumatic injury in Alaska. Three different validation studies have been conducted to determine

the extent to which applicable cases are captured in the database. According to Moore & Murphy (2001), 91 percent of potential cases in 11 hospitals, 87 percent of potential cases in 6 hospitals, and 90 percent of potential cases in 11 hospitals in 1994, 1998, and 1999, respectively, were eventually recorded in the Alaska Trauma Registry database.

A limitation of the Alaska Trauma Registry database is that it does not include the many fatal injury cases that go without medical care. For instance, information about homicide victims pronounced dead at the crime scene would not be included in the records of the Alaska Trauma Registry. In order to insure that all of the most serious traumatic injury cases are included in the analysis, it was necessary to also include cases from the Alaska Bureau of Vital Statistics death certificate records. An earlier study successfully employed a similar approach, combining these two data sources to examine firearms injuries among youthful Alaskans (Johnson, et al. 2000). After removing duplicates, the combined data set used in the present analysis contained 3,407 cases which includes 2,947 cases from the Alaska Trauma Registry supplemented by 460 out of hospital fatality cases from the Bureau of Vital Statistics death certificate records. Like the earlier research by Landen et al. (1997), these include only those cases where the trauma patient/decedent was reported to be Alaska Native and was aged 15 years or more.

As with the study by Landen et al. (1997) ‘dry’ villages are defined as those that prohibited the sale and importation and/or possession of alcohol while ‘wet’ villages are defined as those without restrictions on alcohol. To calculate the corresponding rates for wet or dry villages, the location where each trauma registry and death certificate case occurred was coded accordingly.³ Of the 132 villages included in the analysis, 68 were always dry, 53 were always wet, and 11 changed policies at least one time between the period of 1991-2000. Information on village alcohol policy status was taken from a historical listing of local option election results (Berman & Hull, 1999) and updated listings from the Alaska Alcoholic Beverage Control Board (Griffin, 2003).

A similar process was used to classify cases according to the presence or absence of a local police authority when and where the trauma or fatality occurred. A number of different sources were brought to bear on this classification. A listing of state certified police departments (Alaska Police Standards Council, 2002) as well as U.S. Department of Justice (1987, 1998a, 1998b, 2003) records of police departments were used to identify those villages with their own local police agencies. Rosters of formerly serving and current VPSOs were also used to

determine if an injury or fatality occurred in the presence or absence of local police services. The Alaska Department of Public Safety's *VPSO Seniority List* and their *VPSO Historical Records – Reason for Termination* report were both used to determine when each village was served by a VPSO. In addition to accounting for the presence of local police and VPSOs, a listing of Alaska State Trooper postings was also consulted. Each injury or fatality case was coded as happening when and where there was a local police presence if it occurred in a village when served either by a certified local or borough police department, or by a VPSO, or by an Alaska State Trooper. Of the 132 villages included in the analysis, 23 always had one of these types of police service while 19 never had any of these types of police service. The remaining 90 villages were served on an off-and-on basis; over the 10 year period these villages received a mean of 209 days per year of police service.⁴

Rather than doing so in a timely fashion, changes in local option alcohol policies and police presence usually happened on a sporadic basis; while villages usually changed alcohol policy at the beginning of a month, VPSOs could come or go on any day of the year. A person-year basis for calculating the trauma rates was used in the analysis because of the lack of uniformity of changes in policies and police presence. For example, the person-year basis for calculating the injury rates of wet villages involved (1) counting the total number of days each village was wet over each year during the 1991-2000 period, (2) multiplying that count of days wet per year by each village's Alaska Native population aged 15 plus, (3) summing each years' product for the full 10 year period, and (4) dividing that result by 365 days to ultimately arrive at the total person-years of population residing in the 132 villages under local option laws that permitted alcohol. Over the 10 year period considered in the analysis there were 61,935 person-years of Alaska Natives aged 15 and up living in villages when they were wet. Similar calculations were completed for dry villages in total (145,756 person-years), for dry villages with local police presence (97,033 person-years), and for dry villages without local police presence (48,723 person-years).

The rates for comparing wet and dry villages and for comparing dry villages with and without police presence were calculated using the crude rate comparisons function of the StatsDirect epidemiological statistical program. This function allows for the use of person-time denominators in order to compare the rates of two groups having exposures to risk factors that are of different time periods for groups with different population bases. The comparison of the

two rates is made in the form of a ratio of the rates of one group (such as villages when alcohol is prohibited) to the rates of the other group (such as villages when alcohol is not prohibited) and confidence intervals (CI) for the rate ratios (RR) are calculated based upon a Poisson distribution (Sahai & Kurshid, 1996).

RESULTS

In order to put the results of the comparisons between the wet and dry villages into context, the trauma rates of the isolated Alaska Native villages are compared with what is found for the state of Alaska as a whole. In Table 1, these comparisons are made for both fatalities and for the total of all injuries for four different cause of injury categories. For the total of all injuries (which includes fatal and non-fatal injuries) the rates per 100,000 population in both wet and dry isolated Alaska Native villages exceed those of the state as a whole for all four causes of injury. The assault injury rate in the dry isolated villages is nearly twice that of the state as a whole while for the wet isolated villages it is almost triple the rate for the state. With the exception of fatal assault and motor vehicle accident rates in dry isolated Alaska Native villages, the fatality rates in the isolated villages are also higher than those found statewide.⁵

The results of the rate comparison analysis for the wet and dry villages are presented in Table 2. Most of the results support the hypothesis that there will be less traumatic injury and death in villages that prohibit alcohol. The rate of injury by assault was one-and-a-half times greater in wet villages compared to dry villages (RR = 1.48, 95% CI = 1.19 to 1.83) while the relative incidence of injuries attributed to motor vehicle accidents in wet villages was about a third greater than that of dry villages (RR = 1.34, 95% CI = 1.15 to 1.56). Contrary to expectations, however, the rate of injury attributed to self-harm was actually lower in the isolated Alaska Native villages that allowed alcohol when compared those that prohibit it (RR = 0.81, 95% CI = 0.68 to 0.97).

In Table 3 the results of the comparisons of rates of traumatic injury in dry villages during periods of time with and without a local police presence are presented. The rates of traumatic injury caused by assault were 31 percent lower (RR = 0.69, 95% CI = 0.53 to 0.91) in villages during periods of police presence than when the police were absent. There were no differences in the rates of traumatic injury resulting from self-harm, from motor vehicle accidents, or from the combined category of other causes, during periods with or without local police.

Table 1: Average Annual Rates per 100,000 Population Age 15 and Up of Traumatic Injuries and Fatal Traumatic Injuries by Injury Location in Wet and Dry Isolated Alaska Native Villages and for all of Alaska, 1991 to 2000.

Cause of Injury by Degree of Seriousness	Alaska Natives, Wet Isolated Villages	Alaska Natives, Dry Isolated Villages	Statewide Total Population
<u>Assault</u>			
Total Injuries	234	159	82
Fatalities	36	12	10
<u>Self-Harm</u>			
Total Injuries	275	339	120
Fatalities	97	102	28
<u>Motor Vehicle Accidents</u>			
Total Injuries	454	338	208
Fatalities	53	19	21
<u>Other Causes</u>			
Total Injuries	854	730	502
Fatalities	97	86	38

Table 2: Rates of Traumatic Injury by Injury Location in Wet versus Dry Isolated Alaska Native Villages, Alaska Native Population Age 15 and Up, 1991 to 2000.

Injury Cause and Presence of Alcohol Control Laws	Number of Injuries [#]	Injury Rate (Injuries per 100,000 Person-Years) [#]	Rate Ratio	95 % Confidence Interval
<u>Assault</u>				
Wet Village	145	234	1.48	1.19 to 1.83***
Dry Village	231	159		
<u>Self-Harm</u>				
Wet Village	170	275	0.81	0.68 to 0.97*
Dry Village	494	339		
<u>Motor Vehicle Accidents</u>				
Wet Village	281	454	1.34	1.15 to 1.56***
Dry Village	493	338		
<u>Other Causes</u>				
Wet Village	529	854	1.17	1.05 to 1.30**
Dry Village	1064	730		

[#]Includes all injuries, fatal and non-fatal.

* p < .05; ** p < .01; *** p < .001

Table 3: Rates of Traumatic Injury by Injury Scene Location in Dry Isolated Alaska Native Villages With and Without Police Presence, Alaska Native Population Age 15 and Up, 1991 to 2000.

Injury Cause and Police Presence	Number of Injuries [#]	Injury Rate (Injuries per 100,000 Person-Years) [#]	Rate Ratio	95 % Confidence Interval
<u>Assault</u>				
With Police	134	138	0.69	0.53 to 0.91**
Without Police	97	199		
<u>Self-Harm</u>				
With Police	330	340	1.01	0.84 to 1.23
Without Police	164	337		
<u>Motor Vehicle Accidents</u>				
With Police	339	349	1.11	0.91 to 1.35
Without Police	154	316		
<u>Other Causes</u>				
With Police	703	724	0.98	0.86 to 1.11
Without Police	361	741		

[#]Includes all injuries, fatal and non-fatal.

** p < .01

DISCUSSION AND CONCLUSION

The results presented above serve to improve our understanding of the issues of violence and unintentional injury in Alaska Native villages in a couple of ways. First of all, these results confirm the findings of earlier studies on the incidence of accidents and interpersonal violence in Alaska Native villages. The finding that the rates of injury for Alaska Natives aged 15 and up in the 132 isolated villages for the years 1991 through 2000 were much higher than those found for Alaska as a whole corresponds with study after study on the subject. Villages under prohibition — the communities that are considered to be the safest Alaska Native villages — even had rates of injury that were higher than the statewide rates during those years. With or without prohibition, isolated Alaska Native villages continue to be much more dangerous locations compared to what is typically found outside of the Alaska Native milieu.

The results presented in this paper also confirm the findings of studies on the effectiveness of alcohol control policies in isolated Alaska Native communities. For the 10 year period we examined, the dry villages suffered fewer injuries (including fatal injuries) resulting from assault, from motor vehicle accidents, and from a whole host of other causes. Only those

injuries caused by self-harm were higher in the dry villages than in the wet villages. The two other studies on the subject (Landen et al., 1997; Berman et al., 2000) also reported higher rates of all types of injury causes other than suicide in wet villages when compared to dry villages. This present study adds further credence to the idea that isolated Alaska Native villages are safer places when they prohibit the sale and importation or sale, importation, and possession of alcoholic beverages.

Aside from corroborating other research, the results presented above demonstrate the importance of a local enforcement presence upon the effectiveness of village alcohol control policies. Dry villages experience less serious intentional interpersonal violence when they have a local law enforcement presence than when they are without such a presence. Use of information from public health records rather than police statistics in this study allowed for a clearer examination of the effect of local law enforcement presence without the problems of prior studies (Lee, 1993; Wood, 2003) that were unable to untangle the actual occurrence of violence from the ease of reporting those cases.

From a public policy standpoint, the implications of the findings of this research are clear. Isolated Alaska Native villages are safer places when they are under ‘prohibition.’ Residents of wet villages contemplating a change in their community’s alcohol controls should expect to experience fewer serious assaults, motor vehicle accidents, and a host of other injuries if the importation and (or) possession of alcohol are locally forbidden. However, the enactment of local option regulations to create a dry community is only a partial solution to improving public safety. Confirming what has long been known by members of the Alaska Native leadership, the local presence of police authority is required to enforce those regulations or they will be less useful in reducing the harm that so often results from alcohol use. Although it is a very difficult task, ways must be found to provide police services in those villages where there are none and to reduce the turnover of officers in villages currently served by arrangements such as the VPSO program.

Of course, changing alcohol control policies and improving policing arrangements is only part of the answer to making Alaska Native villages safer places to live. The rates of violent behavior and unintentional injury in villages with local prohibition and viable enforcement arrangements are still much higher than what is found elsewhere. Additional research should be conducted to further our understanding of why these elevated rates persist. Berman (2002)

suggests a number of hypotheses regarding aspects of village life (such as underemployment, declines in local traditions, a lack of community cohesiveness) under which local alcohol controls in American Indian and Alaska Native communities might not be so beneficial. A multitude of other possible community characteristics including sex ratios, racial heterogeneity, or location along transportation networks could also be considered to determine where prohibition might or might not be effective. Multivariate analyses should be conducted so as to better understand the relative impact of these and other influences (including local prohibition) upon violence and unintentional injuries at the village level. A clearer understanding of the dynamics among those influences should ultimately lead to the identification of additional strategies that Alaska Native villages might follow to improve the safety of their communities.

WORKS CITED

- Alaska Department of Health and Social Services, 1993. *1991 Behavioral Risk Factor Survey*. Juneau, AK: Alaska Department of Health and Social Services.
- Alaska Division of Alcoholism and Drug Abuse, 1999. *A Summary of Recent Findings Regarding Substance Abuse in Alaska*. Juneau, AK: Dept. of Health and Social Services.
- Alaska Federation of Natives. 1998. *1998 Annual Convention, Resolution No. 98-31*. Anchorage, AK: Anchorage Federation of Natives, Inc.
- Alaska Police Standards Council. 2002. *APSC Member Agencies*. Juneau, AK: Alaska Police Standards Council. Available on-line at: <http://www.dps.state.ak.us/apsc/asp/member.asp>.
- Anchorage Daily News*, 1988. A People in Peril (Special reprint of a 10-part series beginning in January). Anchorage, Alaska.
- Angell, J. E. 1981. *Public Safety and the Justice System in Alaskan Native Villages*. Anchorage, AK: Justice Center, University of Alaska Anchorage.
- Back, W. D. 1981. The ineffectiveness of alcohol prohibition on the Navajo Indian Reservation. *Arizona State Law Journal*, 4, 925-943.
- Berman, M. D. 2002. Alcohol control policies and American Indian communities. In Mail, P. D., Heurtin-Roberts, S., Martin, S. E., & Howard, J. (eds.) *Alcohol Use Among American Indians and Alaska Natives: Multiple Perspectives on a Complex Problem*. NIAAA Research Monograph No. 37. Washington, DC: U.S. Department of Health and Human Services. pp. 87-109.
- Berman, M. D., & Hull, T. 1997. Community control of alcohol in Alaska. *Alaska Review of Social and Economic Conditions*, 31(1), 1-8.
- Berman, M. D. & Hull, T. 1999. *A Historical Sketch of the Elections for Local Option Control of Alcoholic Beverages in Communities of Alaska*. Anchorage, AK: Institute for Social and Economic Research, University of Alaska Anchorage. Available online at <http://www.iser.uaa.alaska.edu/projects/alcohol/elections.htm>.

- Berman, M. D., & Hull, T. 2001. Alcohol control by referendum in northern Native communities: The Alaska local option law. *Arctic*, 54(1), 77-83.
- Berman, M. D., Hull, T., & May, P. 2000. Alcohol control and injury death in Alaska Native communities: Wet, damp and dry under Alaska's local option law. *Journal of Studies on Alcohol*, 61, 311-319.
- Berremann, G. D. 1956. Drinking patterns of the Aleuts. *Quarterly Journal of Studies on Alcohol*, 17, 503-514.
- Chiu, A. Y., Perez, P. E., & Parker, R. N. 1997. Impact of banning alcohol on outpatient visits in Barrow, Alaska. *Journal of the American Medical Association*, 278, 1775-1777.
- Conn, S. & Moras, A. 1986. *No Need of Gold: Alcohol Control Laws and the Alaska Native Population*. Anchorage, Alaska: School of Justice, University of Alaska.
- Curley, R. T. 1967. Drinking Patterns of the Mescalero Apache. *Quarterly Journal of Studies on Alcohol*. 28, 116-131.
- Foulks, E. F. 1987. Social stratification and alcohol use in north Alaska. *Journal of Community Psychology*, 15, 349-356.
- Gallaher, M. M., Fleming, D. W., Berger, L. R., & Sewell, C. M. 1992. Pedestrian and hypothermia deaths among Native Americans in New Mexico. *Journal of the American Medical Association*, 267, 1345-1348.
- Griffin, D. B. 2003. *Schedule of Local Option Communities*. (Last updated Oct. 31, 2003). Anchorage, AK: Alaska Alcoholic Beverage Control Board. Available on-line at: <http://www.dps.state.ak.us/abc/LocalOption.htm>.
- Heath, D. B. 1964. Prohibition and Post-Repeal Drinking Patterns among the Navaho. *Quarterly Journal of Studies on Alcohol*. 25:119-135.
- Honigmann, J. J. & Honigmann, I. 1945. Drinking in an Indian-White community. *Quarterly Journal of Studies on Alcohol*, 5, 575-619.
- Johnson, M. S., Moore, M., Mitchell, P., Owen, P., & Pilby, J. Serious and fatal firearm injuries among children and adolescents in Alaska: 1991-1997. *Alaska Medicine*, 41(1), 3-10, 27.
- Klausner, S. Z. & Foulks, E. F. 1982. *Eskimo capitalists: Oil, politics and alcohol*. Totowa, NJ: Allanheld, Osmun & Co.
- Landen, M. G. 1996. Alcohol-Related Mortality in Alaska: 1992-94. *State of Alaska Epidemiology Bulletin Number 6*, Alaska Division of Public Health.
- Landen, M. G. 1997. Alcohol-related mortality and tribal alcohol legislation. *Journal of Rural Health*, 13(1), 38-44.
- Landen, M. G., Beller, M., Funk, E., Propst, M., Middaugh, J., & Moolenaar, R. L. 1997. Alcohol-related injury death and alcohol availability in remote Alaska. *Journal of the American Medical Association*, 278, 1755-1758.
- Lautaret, R. 1981. 'You can't catch bootleggers with Sunday school teachers.' *Alaska Journal*, 11, 39-46.

- Lee, N. 1993. Differential deviance and social control mechanisms among two groups of Yup'ik Eskimo. *American Indian and Alaska Native Mental Health Research*, 5(3), 56-72.
- Lee, N. 1995. Culture conflict and crime in Alaskan Native villages. *Journal of Criminal Justice*, 23, 177-189.
- Lee, N. 1997. Impossible mission: A history of the legal control of Native drinking in Alaska. *Wicazo Sa Review*, 12(2), 95-109.
- Levy, J. E. & Kunitz, S. J. 1974. *Indian Drinking: Navajo Practices and Anglo-American Theories*. New York, NY: John Wiley & Sons.
- May, P. A. 1975. Arrests, alcohol, and alcohol legalization among an American Indian tribe. *Plains Anthropologist*, 20(68), 129-134.
- May, P. A. 1976. *Alcohol Legalization and Native Americans: A Sociological Inquiry*. Ph. D. Dissertation, University of Montana.
- Moeller, K. L. 1979. *Alcohol Abuse and the Police in Rural Alaska.: The North Slope Borough and City of Barrow Experience* (2nd ed.). Barrow, AK: North Slope Borough Department of Public Safety.
- Moore, M. & Murphy, Z. 2001. *Serious and Fatal Child and Adolescent Injuries in Alaska 1994-1998*. Juneau, AK: Alaska Community Health and Emergency Medical Services.
- Napoleon, H. 1991. *Yu'ya'raq: the Way of the Human Being*. Fairbanks, AK: Center for Cross-Cultural Studies, University of Alaska Fairbanks.
- Northend Ferguson, F. 1968. Navaho drinking: some tentative hypotheses. *Human Organization*, 27(2), 159-167.
- Sahai, H. & Khurshid, A. 1996. *Statistics in Epidemiology: Methods, Techniques, and Applications*. Boca Raton, FL: CRC Press.
- Sallee, D., Moore, M. & Johnson, M. 2000. Traumatic Brain Injuries in Alaska, 1996-1998. *Alaska Medicine*, 42(2), 37-40.
- Schechter, E. J. 1986. Alcohol Rationing and Control Systems in Greenland. *Contemporary Drug Problems*, 13, 587-620.
- Segal, B., Burgess, D., DeGross, D., Frank, P., Hild, C., & Saylor, B. 1999. *Alaska Natives Combating Substance Abuse and Related Violence Through Self-Healing: Report Prepared for The Alaska Federation of Natives*. Anchorage, AK: the Center for Alcohol and Addiction Studies and the Institute for Circumpolar Health Studies, University of Alaska Anchorage.
- Shinkwin, A., & Pete, M. 1982. Alaskan villagers' views on problem drinking: 'Those who forget.' *Human Organization*, 41(4), 315-322.
- Smart, R. G. 1979. A Note on the Effects of Changes in Alcohol Control Policies in the Canadian North. *Journal of Studies on Alcohol*, 40, 908-913.
- Stewart, O. 1964. Questions Regarding American Indian Criminality. *Human Organization*, 23, 61-66.

- U.S. Department of Justice, Bureau of Justice Statistics. 1987. *Directory of Law Enforcement Agencies, 1986* [Computer file]. Ann Arbor, MI: Inter-university Consortium for Political and Social Research.
- U.S. Department of Justice, Bureau of Justice Statistics. 1998a. *Directory of Law Enforcement Agencies, 1992* [Computer file]. Ann Arbor, MI: Inter-university Consortium for Political and Social Research.
- U.S. Department of Justice, Bureau of Justice Statistics. 1998b. *Directory of Law Enforcement Agencies, 1996* [Computer file]. Ann Arbor, MI: Inter-university Consortium for Political and Social Research.
- U.S. Department of Justice, Bureau of Justice Statistics. 2003. *Census of State and Local Law Enforcement Agencies, 2000*. [Computer file]. Ann Arbor, MI: Inter-university Consortium for Political and Social Research.
- UAA Justice Center. 1994. *North Slope Department of Public Safety Community Survey*. Anchorage, AK: Justice Center, University of Alaska Anchorage.
- UAA Justice Center. 1995. *Alaska Public Safety Statewide Survey*. Anchorage, AK: Justice Center, University of Alaska Anchorage.
- Waddell, J. O. 1990. Playing the paradox: Papago Indian management of reservation / off-reservation prohibition policies. *Contemporary Drug Problems*, 19, 271-292.
- Weibel-Orlando, J. 1990. American Indians and prohibition: effect or affect? Views from the reservation and the city. *Contemporary Drug Problems*, 19, 293-321.
- Wood, D. S. 1997. *Violent Crime and Characteristics of Twelve Inuit Communities in the Baffin Region, NWT*. Ph.D. Dissertation, Simon Fraser University, Burnaby, B.C., Canada.
- Wood, D. S. 2000. *Turnover Among Alaska Village Public Safety Officers: An Examination of the Factors Associated with Attrition*. Anchorage, AK: Justice Center, University of Alaska Anchorage.
- Wood, D. S. 2002. Explanations of employment turnover among Alaska Village Public Safety Officers. *Journal of Criminal Justice*, 30(3), 197-215.
- Wood, D. S. 2003. *Village Public Safety Officer Turnover and Violent Crime in Alaska Native Communities*. Paper presented at the Annual Meetings of the Western and Pacific Association of Criminal Justice Educators, Park City, Utah.

NOTES

¹ This includes the following organized boroughs and census areas: Aleutians East, Aleutians West, Bethel, Bristol Bay, Dillingham, Lake and Peninsula, Nome, North Slope, Northwest Arctic, Wade Hampton, and Yukon-Koyukuk.

² These latter cases include accidental falls, drownings, and poisonings, water and air transport accidents, firearms accidents, and injuries of ‘unknown accidental or purposeful infliction.’

³ This is another departure from Landen et al. (1997) who classified cases as occurring in a wet or dry village by the status of their village of residence at the time of death.

⁴ The lack of local police, VPSOs, or State Trooper coverage does not necessarily mean that a given village is without someone who can deal with emergencies. Many isolated Alaska Native villages are also served by uncertified tribal and village police officers. Nearly half (49 %) of the VPSOs surveyed in 1998 reported working in a village where either tribal or village police officers were also present (Wood, 2000). These tribal and village police serve without any formal recognition by the Alaska Police Standards Council, they usually lack formal training, and they are responsible only to local tribal or village governments. Since there are no formal records of the employment or location of these officers, it is not possible to take into account the effect of their presence upon the incidence of traumatic injury and fatality in the villages they serve.

⁵ It is important to point out that these rates are only adjusted to the population aged 15 and higher and that the differences between rates in isolated villages and those for the state as a whole could partially be an artifact of a somewhat younger Alaska Native population. According to the 2000 Census, 28 percent of the state's population aged 15 and higher was between the ages of 15 and 29 compared to 37 percent of the Alaska Natives in the isolated villages under consideration in this study.