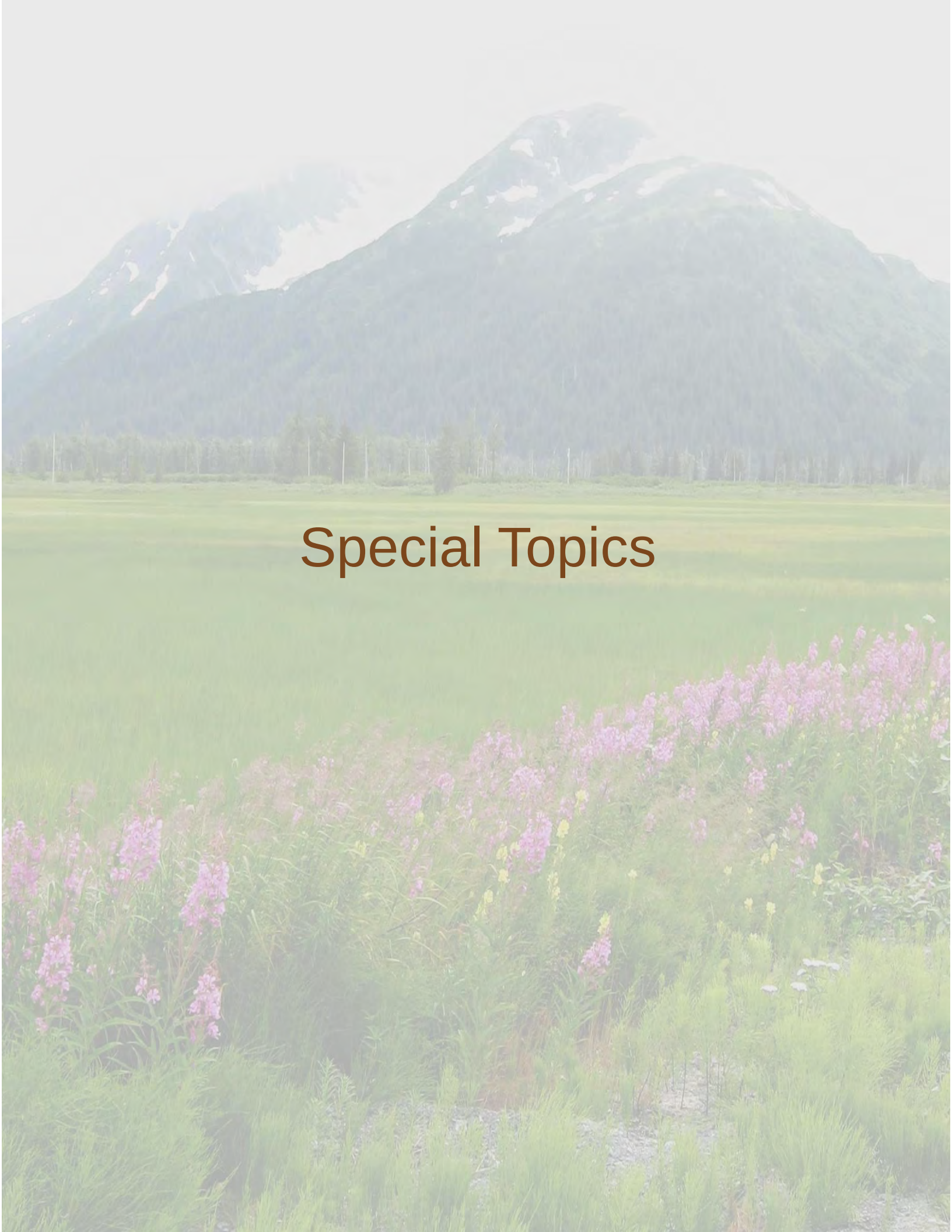

Special Topics

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Special Topics

In response to inquiries received from communities three special topics are covered in this section: drug and alcohol poisonings, injuries associated with drug and alcohol use, and access to care. Additional data are available in tables B61-65 in Appendix B.

I. Drug and Alcohol Poisonings

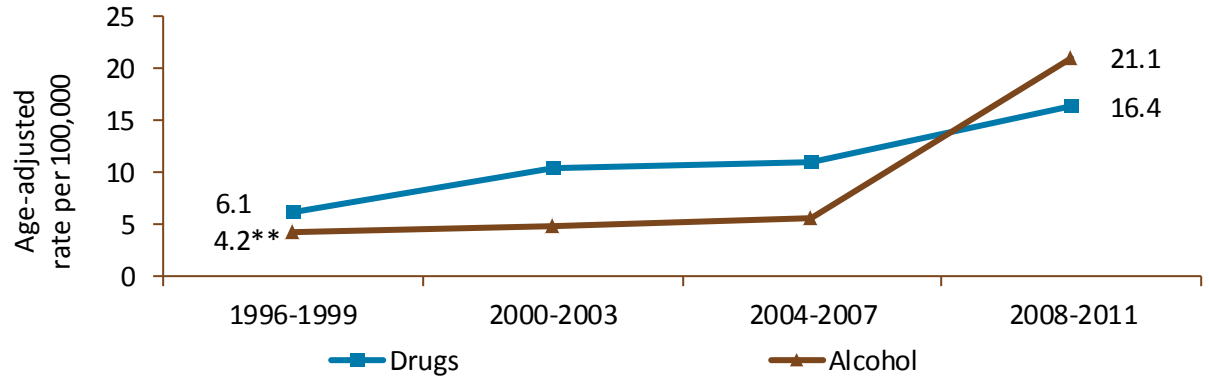
Data on drug and alcohol poisoning are reported as unintentional or intentional injuries. *Unintentional poisonings* result from unplanned overconsumption of alcohol or drugs. *Intentional poisoning* is the deliberate overconsumption of alcohol or drugs and is typically categorized as a suicide, suicide attempt, homicide, or assault.

A. Unintentional Poisoning Deaths

During 2002–2011, alcohol and drug poisoning combined were the mechanisms for 15.8% of all unintentional injury deaths for people of all ages in Alaska and 14.4% of all AN/AI injury deaths. Among the 276 AN/AI unintentional poisoning deaths, 142 (51.4%) were caused by drugs, 114 (41.3%) by alcohol, and 20 (7.2%) by solvents, gases, vapors and other poisons. In contrast, in 2010 nationwide, 90.8% of unintentional poisoning deaths involved drugs per the Centers for Disease Control and Prevention WISQARS™. The age-adjusted rate of unintentional alcohol and drug poisoning deaths for AN/AI (25.3 per 100,000) was 2.3 times that of non-Natives (10.9 per 100,000) in Alaska.

Figure 55. Alaska Native Unintentional Poisoning Death Rate, Type and Year, 1996-2011

Data Source: Alaska Bureau of Vital Statistics



** Rate is based on 10-19 deaths and should be interpreted with caution.

The rate of unintentional drug and alcohol poisoning deaths for AN/AI increased significantly during 1996–2011, most of this increase since 2007. The drug death rate increased 2.7 times from 1996-1999 to 2008-2011 (6.1 and 16.4 per 100,000, respectively, Figure 55). The alcohol death rate increased 5.0 times from 1996-1999 to the 2008-2011 (4.2 and 21.1 per 100,000, respectively, Figure 55).

The observed increase may be largely explained by changes in classification. Between 2007 and 2009 acute drug or alcohol intoxication codes associated with behavioral health were discontinued. The Centers for Disease Control and Prevention (personal communication, 2013) indicated that most acute intoxications that historically would have been assigned one of the discontinued codes were subsequently assigned to unintentional poisoning. The acute intoxication by drugs or alcohol codes were not previously counted as poisoning injuries because they were classified under behavioral

Drug and Alcohol Poisonings (continued)

health codes. This change must be taken into consideration for both deaths and hospitalization injuries when comparing poisoning data before and after 2007.

B. Unintentional Poisoning Hospitalizations Among Children

The Alaska Trauma Registry reports all classes of poisoning hospitalizations for patients aged 17 and younger. During 2002–2011, 549 Alaskan children aged 17 and younger were hospitalized for an unintentional poisoning; 291 (53.0%) were Alaska Native/American Indian (AN/AI) children (Table 26). Alcohol and prescription or illicit drugs were the most frequently reported poisons involved. Other poisons reported included non-potable alcohols and petroleum products.

Table 26. Frequency of Unintentional Poisoning Hospitalization among Alaska Native Children by Poison Type (N = 549) - Alaska, 2002-2011

Data Source: Alaska Trauma Registry

	Ages 0–9 Years						Ages 10–17 Years						Total
	Alcohol		Drugs		Other Poisons		Alcohol		Drugs		Other Poisons		
	n	%	n	%	n	%	n	%	n	%	n	%	n
AN/AI	<5	(<2%)	86	(78.9%)	23	(21.1%)	132	(72.5%)	27	(14.8%)	23	(12.6%)	**291**
Non-Native	<5	(<2%)	136	(77.7%)	37	(21.1%)	22	(26.5%)	45	(54.2%)	16	(19.3%)	**258**

Among all Alaskan children aged 0–9 years, drugs were the cause of three out of four unintentional poisoning hospitalizations (78.7%). Among AN/AI children aged 10–17 years, alcohol caused three out of four unintentional poisoning hospitalizations (72.5%, Table 26). This proportion of unintentional poisoning hospitalizations caused by alcohol was 2.7 times that of non-Natives of the same age. For unintentional alcohol poisoning, AN/AI females aged 0 to 17 years had a hospitalization frequency (84) 1.8 times greater than AN/AI males of the same age (48). Frequencies of unintentional drug poisoning hospitalizations for AN/AI children ages 0 to 17 years were similar for males (60) and females (53).

C. Intentional Poisonings

During 2002–2011 among all AN/AI people in Alaska, there were comparatively few intentional alcohol and drug poisoning deaths (24) and self-inflicted alcohol poisoning hospitalizations (70). The majority of intentional poisonings were hospitalizations from self-inflicted drug use (2,121). The Alaska Trauma Registry did not collect self-inflicted poisoning hospitalizations after January 1, 2011.

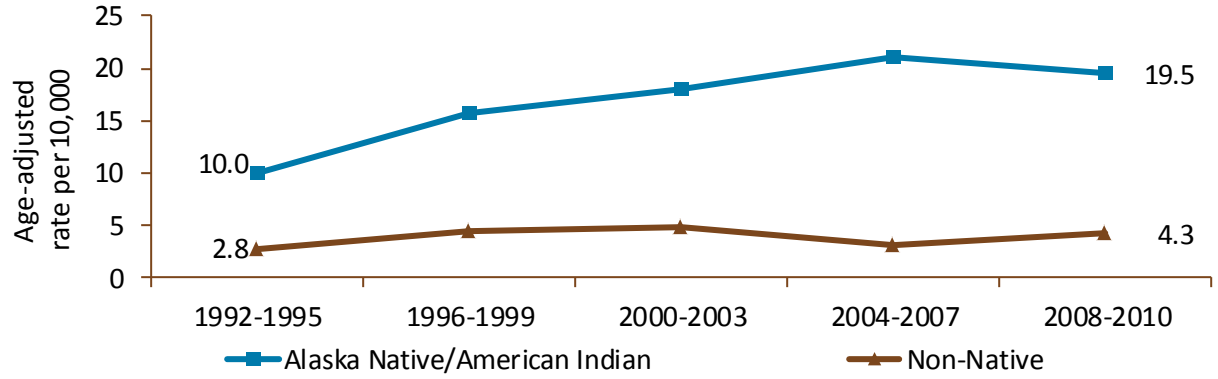
During 2002-2010, 2,121 of the 14,914 total injury hospitalizations among AN/AI people (14.2%) resulted from self-inflicted drug poisoning, compared with 2,296 of the 26,415 total injuries among non-Natives (8.7%). These injuries made up the majority of the suicide attempt hospitalizations for both AN/AI people (73.1%) and non-Natives (82.4%). Two drug types, (1) analgesics, antipyretics, and antirheumatics (e.g., Ibuprofen, Vicodin, Prednisone) and (2) tranquilizers and psychotropic agents (e.g., Ativan, Thorazine) caused about half of the suicide attempt hospitalizations for AN/AI people (48.3%) and non-Natives (53.8%).

AN/AI 20-29 year olds had a self-inflicted drug poisoning hospitalization rate (40.7 per 10,000) 1.6 times that of AN/AI 10-19 and 30-39 year olds (both 25.2 per 10,000). AN/AI people aged 10-29 years represented nearly two thirds (61.0%) of all AN/AI hospitalizations for self-inflicted drug poisoning.

Drug and Alcohol Poisonings (continued)

Figure 56. Self-Inflicted Drug Poisoning Hospitalization Rate by Race and Year, 1992-2010

Data Source: Alaska Trauma Registry



A significant increase in self-inflicted drug poisoning hospitalizations rates over time was exhibited for all Alaskans (Figure 56, $p<0.05$).

Females had higher rates of self-inflicted drug poisoning hospitalizations than males. The rate for AN/AI women (28.1 per 10,000) was 2.5 times that of AN/AI men (11.4 per 10,000). The Norton Sound region (35.6 per 10,000) had the highest rate of self-inflicted drug poisoning hospitalization. The Copper River/Prince William Sound region (8.2 per 10,000) had the lowest rates (Table 27).

Table 27. Alaska Native Self-Inflicted Drug Poisoning Hospitalization Rates, 2002-2010

Data Source: Alaska Trauma Registry

Region of Occurrence	n	Rate§
Norton Sound	526	35.6
Northwest Arctic	353	30.0
Interior	533	21.8
Southeast	478	18.0
Arctic Slope	171	16.5
Yukon-Kuskokwim	601	14.2
Anchorage and Matanuska-Susitna	730	13.6
Kodiak Area	54	12.7
Bristol Bay	103	10.5
Kenai Peninsula	72	8.7
Copper River/Prince William Sound	23	8.2
Aleutians and Pribilofs	7	¶
Total	**3,657**	**18.0**

§ Hospitalization rate per 10,000 age-adjusted to 2000 US standard population

¶ Rate not calculated due to small number of hospitalizations (<20)

II. Alcohol or Drug Use-related Injuries

The Alaska Trauma Registry (ATR) reports whether alcohol or drugs were known or suspected to be involved with the injury. The criteria for known involvement is "having a positive alcohol or drug blood test or breathalyzer result within 6 hours of injury" (ATR Field Data Dictionary, 2006). Cases with suspected association are those with "any documentation in the medical record that alcohol or Illicit drugs were involved" (ATR Field Data Dictionary, 2006). These data focus on the patient and do not reflect cases where someone other than the patient involved with causing the injury was under the influence.

Not all injury hospitalization patients could be tested for alcohol or drugs. Among 6,799 Alaska Native (AN/AI) injury hospitalizations reported as having an association with alcohol in the ATR during 2002–2011, 3,790 (55.7%) included a positive blood alcohol test result. From 2002-2011, 1,679 (66.4%) of the 2,259 AN/AI injury hospitalizations coded as having drug involvement had a positive blood test for drugs.

During 2002–2011, the number of injury hospitalizations for AN/AI people with known or suspected alcohol and/or drug association was 7,483, 46.4% of the total injury hospitalizations. Of the 16,141 injury hospitalizations among AN/AI people, 6,799 (42.1%) were recorded as having alcohol involvement and 2,529 (15.7%) had drug involvement. However, many hospitalizations involved both alcohol and drugs: for those hospitalizations involved with drugs, three out of four (73.0%) also indicated alcohol involvement.

Table 28. Alaska Native Hospitalizations with Known or Suspected Alcohol or Drug Involvement by Mechanism, 2002-2011

Data Source: Alaska Trauma Registry

Mechanism	Total Injury Hospitalizations for Mechanism	Known or Suspected Alcohol Involvement		Known or Suspected Drug Involvement	
		n	%	n	%
Suicide Attempt or Self Harm	**3,022**	1,741	57.6%	1,126	37.3%
Assault	**2,047**	1,461	71.4%	380	18.6%
Total Intentional Injuries	**5,069**	3,202	63.2%	1,506	29.7%
Falls	**4,809**	1,412	29.4%	241	5.0%
Motor Vehicle	**1,375**	624	45.4%	268	19.4%
All-terrain Vehicle	**776**	261	33.6%	91	11.8%
Snowmachine	**749**	301	40.2%	123	16.4%
Other Injury Incidents	**3,363**	999	29.7%	300	8.9%
Total Unintentional Injuries	**11,072**	3,597	32.5%	1,023	9.2%
Total Injuries	**16,141**	**6,799**	**42.1%**	**2,529**	**15.7%**

Among AN/AI people, the three injury mechanisms with the highest proportion of association with alcohol or drugs were assault, suicide attempt and self harm, and motor vehicle crashes.

Comparing regions, alcohol association ranged from a high of 48.0% of all AN/AI injury hospitalizations in the Interior Region to a low of 32.4% in the Kenai Peninsula Region. Injury hospitalizations suspected of having drug involvement ranged from 29.4% of all injury hospitalizations in the Copper River/Prince William Sound Region to 1.9% in the Northwest Arctic Region.

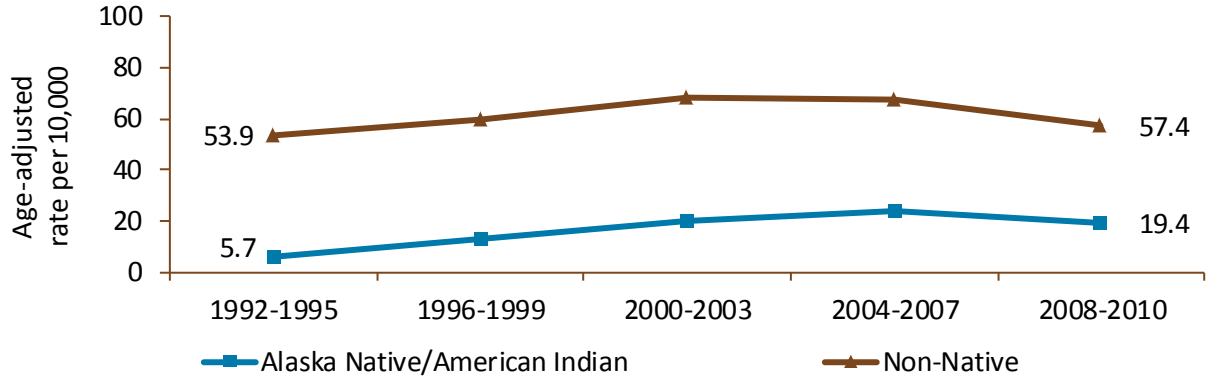
Alcohol or Drug Use-related Injuries (continued)

Table 29. Alaska Native Hospitalizations with Alcohol or Drug Involvement by Region, 2002-2011
Data Source: Alaska Trauma Registry

Region of Occurrence	Total Injury Hospitalizations for Region	Known or Suspected Alcohol Involvement		Known or Suspected Drug Involvement	
		n	%	n	%
Anchorage and Matanuska-Susitna	**3,913**	1,787	45.7%	587	15.0%
Yukon-Kuskokwim	**2,942**	1,135	38.6%	407	13.8%
Southeast	**1,904**	736	38.7%	374	19.6%
Interior	**1,895**	910	48.0%	308	16.3%
Norton Sound	**1,513**	646	42.7%	222	14.7%
Northwest Arctic	**1,263**	541	42.8%	277	21.9%
Bristol Bay	**810**	376	46.4%	113	14.0%
Arctic Slope	**724**	239	33.0%	103	14.2%
Kenai Peninsula	**479**	155	32.4%	65	13.6%
Kodiak Area	**210**	85	40.5%	27	12.9%
Copper River/Prince William Sound	**203**	90	44.3%	19	9.4%
Aleutians and Pribilofs	**133**	54	40.6%	8	6.0%

The proportion of injury hospitalizations with alcohol association was similar for males (43.6%) and females (40.3%). This was also true for drug involvement (males 15.5% and females 15.8%). AN/AI people aged 20–29 had the highest rates of suspected association with drugs (51.4 per 10,000) or alcohol (119.1 per 10,000). AN/AI injury hospitalization rates with alcohol involvement increased significantly ($p<0.05$) from 53.9 per 10,000 to 57.4 per 10,000 during 1992–2011. During that time rates for AN/AI hospitalizations with suspected drug involvement increased 3.4 times from 5.7 to 19.4 per 10,000.

Figure 57. Rate of Hospitalizations Associated with Drugs or Alcohol by Race, Alaska, 1992-2011
Data Source: Alaska Trauma Registry



III. Access to Care

Because of Alaska's unique geography, access to care differs by community. Recovery from an injury may depend on how soon an injured person reaches a healthcare facility. In Alaska, healthcare facilities range from small clinics staffed by Community Health Aides/Practitioners in remote villages to referral hospitals in Anchorage with the most advanced care capabilities. Remote Alaskan villages may have additional transportation challenges due to lack of road access and weather conditions that may prevent air or water transport. This section of the report compares injuries that occur in communities with different levels of access to care.

The "Alaska Rural Primary Care Facility Needs Assessment Project" report prepared by the Alaska Native Tribal Health Consortium, the Alaska Department of Health and Social Services, and the Indian Health Service, was given to the Denali Commission in October, 2000. It gave an "Isolation Score" for each community in Alaska, rating the level of access to medical services. It took into consideration distance to the nearest hospital, emergency medical services available, and primary mode of travel to next level of care. The table of community isolation scores from the Denali Commission report was used as the basis for the five access categories in this report. The list of how each community in Alaska was rated can be found in Appendix D.

Table 30. Distribution of Population in Alaska by Access to Care Category and Race, 2010

Location of Occurrence	Estimated Proportion of Statewide Population *	
	AN/AI	Non-Native
In community with highest level of hospital care in Alaska (Anchorage)	26.6%	46.1%
In community with a hospital with more limited services (e.g. Sitka)	24.5%	18.3%
On the road system within 100 miles of a hospital (e.g. Nenana)	14.0%	30.3%
Within 100 air/water miles of a hospital, or more than 100 miles by road (e.g. King Salmon)	5.6%	2.9%
More than 100 air/water miles from a hospital (e.g. Atqasuk)	29.3%	2.4%

* Estimated from the 2010 census population counts for individual communities

A higher proportion of Alaska Native/American Indian (AN/AI) people live in the most remote communities ("more than 100 air/water miles from a hospital") than non-Natives (29.3% and 2.4%, respectively, Table 30). Nearly one out of every three AN/AI injury hospitalizations (30.9%) and two of every five AN/AI injury deaths (42.6%) occurred in the most remote communities. Among non-Natives, less than one out of twenty injury hospitalizations or deaths (4.7%) involved events in the most remote communities. Thus, a smaller proportion of AN/AI people than non-Natives have immediate access to the level of care needed after being injured.

The rates of AN/AI injury hospitalizations are significantly lower for those injured in the most remote communities when compared to those injured in communities with a hospital (121.9 and 134.7, unadjusted rate per 10,000, respectively, $p<0.05$). There was no significant difference between these two community types for non-Natives (58.1 and 60.0, unadjusted rate per 10,000, respectively).

Access to Care (continued)

In contrast, the rates of injury deaths are significantly higher for both races for injuries occurring in the most remote communities (AN/AI people 164.7, non-Natives 141.9, unadjusted rate per 100,000) compared to those that happened in communities with hospitals (AN/AI people 138.9, non-Natives 86.4, unadjusted rate per 100,000, $p<0.05$).

Mechanisms of injury showed differences by remoteness of injury occurrence for AN/AI injury deaths and hospitalizations. The mechanisms with the greatest difference between the highest and lowest levels of access to care for hospitalizations were transportation and intentional injuries (Table 31).

Hospitalizations for assaults made up a higher proportion of AN/AI injuries occurring in Anchorage than in the most remote areas, while suicide attempts and self harm made up a higher portion of hospitalizations for injuries that occurred in the most isolated settings (Table 31).

Table 31. Alaska Native Injury Hospitalizations, Access to Care by Mechanism, 2002-2011

Mechanism	Access Category		Difference
	Least Remote (Anchorage)	Most Remote	
All-Terrain Vehicle	0.2%	10.4%	10.2%
Motor Vehicle	15.0%	2.8%	12.2%
Snowmachine	0.2%	9.1%	8.9%
Assault	18.1%	10.0%	8.1%
Suicide Attempt or Self Harm	13.7%	20.3%	6.6%

For injury deaths, the mechanisms with the greatest difference between the highest and lowest levels of access to care included drowning, motor vehicles, poisoning, and suicide (Table 32).

Table 32. Alaska Native Injury Deaths, Access to Care by Mechanism, 2002-2011

Mechanism	Access Category		Difference
	Least Remote (Anchorage)	Most Remote	
Drowning	1.2%	16.7%	15.5%
Motor Vehicle	12.7%	4.4%	8.3%
Poisoning	27.8%	6.2%	21.6%
Suicide	17.7%	39.9%	22.2%

The highest proportion of motor vehicle injuries for both hospitalizations and deaths for AN/AI people occurred in communities “on the road system within 100 miles of a hospital” (21.4%).

Notes