

9. Substance Abuse

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Substance abuse continues to be a major cause of illness and death for Northwest AI/AN. It is a complex social problem in AI/AN communities, associated with multiple underlying issues. For example, childhood physical and sexual abuse, generational trauma, perceived discrimination, and cultural disruption have all been linked to the development of substance abuse.^{1,2}

The abuse of alcohol and prescription medications, use of illicit drugs, and commercial tobacco use are all linked to serious health conditions such as heart disease, cancer, and liver disease. The use of intoxicants also contributes significantly to the incidence of fatal motor vehicle crashes, homicides, suicides, and sexually transmitted diseases. The impact of substance abuse on communities and families can be seen in high rates of homelessness, children in foster care or living with relatives other than parents, incarceration, unemployment, low educational achievement, domestic violence and premature death.

According to national data on drug and alcohol use, AI/AN have the highest rates of substance dependence or abuse of all ethnic groups at 14.9%, compared to 8.4% for whites.³ AI/AN communities report high rates of alcohol,

tobacco and marijuana use, and have the highest estimated Years of Potential Life Lost resulting from alcohol abuse compared to any other race.⁴ Methamphetamine abuse has become a significant problem for Northwest tribes and the abuse of prescription medications has also been on the rise and is causing devastating consequences within AI/AN communities.

While about half of AI/AN in Oregon reported no alcohol consumption in the past month, 35% of AI/AN women and 29% of AI/AN men reported binge drinking. The consequences of substance abuse for AI/AN communities can be seen in hospitalization and mortality data from Oregon. AI/AN have higher rates of alcohol and drug-related hospitalizations and deaths than NHW in the state. Drug and alcohol-associated deaths accounted for 31.6% of all deaths among Oregon AI/AN from 2006-2010.

Effective prevention depends on increased community awareness, screening for substance abuse at clinics and ultimately referral for treatment of substance abuse disorders. Successful programs include community involvement, skills training, leadership commitment and program evaluation.⁵

1. Adverse childhood exposures and alcohol dependence among seven Native American tribes. Koss, M., N. Yuan, D. Dightman, R. Prince, M. Polacca, B. Sanderson, D. Goldman. *Am. J. Prev. Med* 2003; 25(3): 238-2443.

2. Preventing substance abuse in American Indian and Alaska Native youth: Promising strategies for healthier communities. Hawkins, E., L. Cummins, G. Marlatt. *Psych Bull.* 2004;130(2): 304-323.

3. Substance Abuse and Mental Health Services Administration, Results from the 2013 National Survey on Drug Use and Health: Summary of National Findings, NSDUH Series H-48, HHS Publication No. (SMA) 14-4863. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2014.

4. MMWR Morbidity & Mortality Weekly Report. 2014 Mar 14;63(10):213-6. Alcohol-attributable deaths and years of potential life lost--11 States, 2006-2010.

5. Hawkins, E., L. Cummins, G. Marlatt. *Psych Bull.* 2004

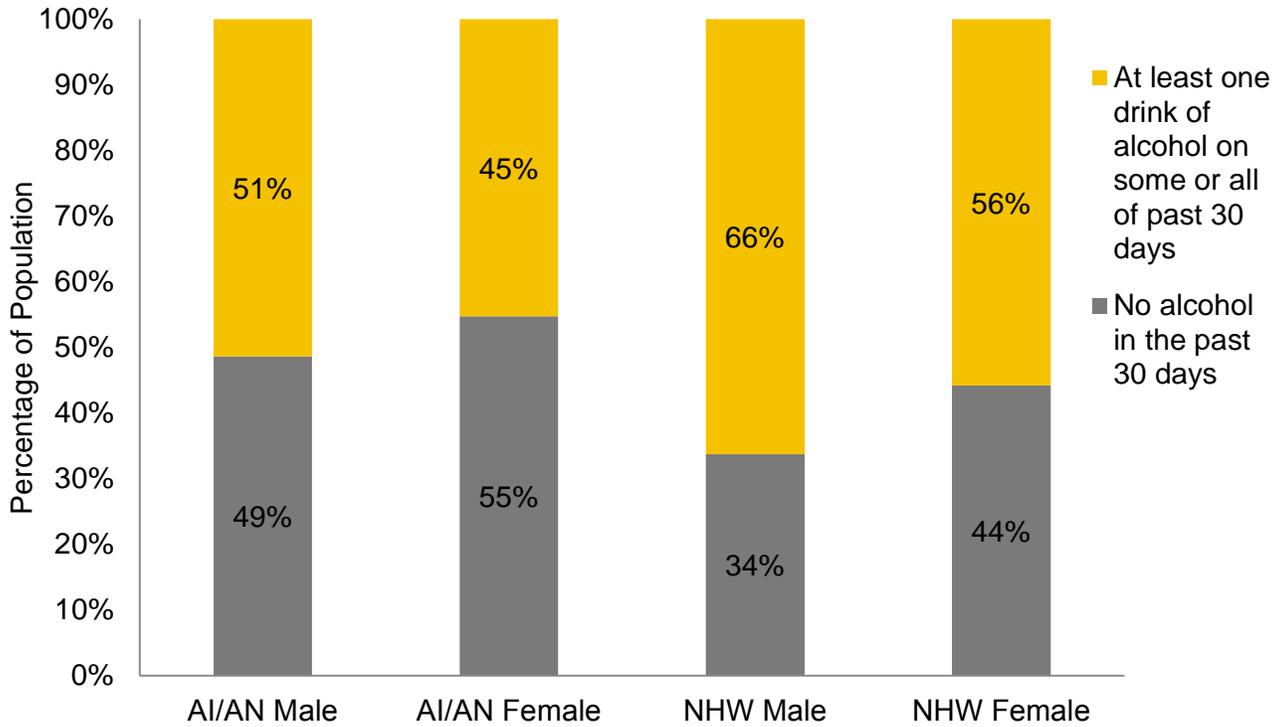
Self-Reported Alcohol Consumption

From 2006-2012, 51% of AI/AN males and 45% of AI/AN females in Oregon reported having at least one alcoholic drink in the past 30 days (Figure 9.1). About half of AI/AN adults in the state reported no alcohol consumption in the past 30 days, compared to 34% of NHW males and 44% of NHW females.

Data Source: CDC Behavioral Risk Factor Surveillance System (BRFSS), 2006-2012.

Data Notes: The BRFSS prevalence estimates (shown as a percentage) are weighted to make the survey responses representative of the Oregon population. The sample sizes presented below the figures are the unweighted number of people who answered this question for the indicated years.

Figure 9.1: Prevalence of self-reported alcohol consumption by race and sex, Oregon, 2006-2012.



Sample sizes (n): AI/AN males=458; AI/AN females=577; NHW males=35,445; NHW females=48,198.

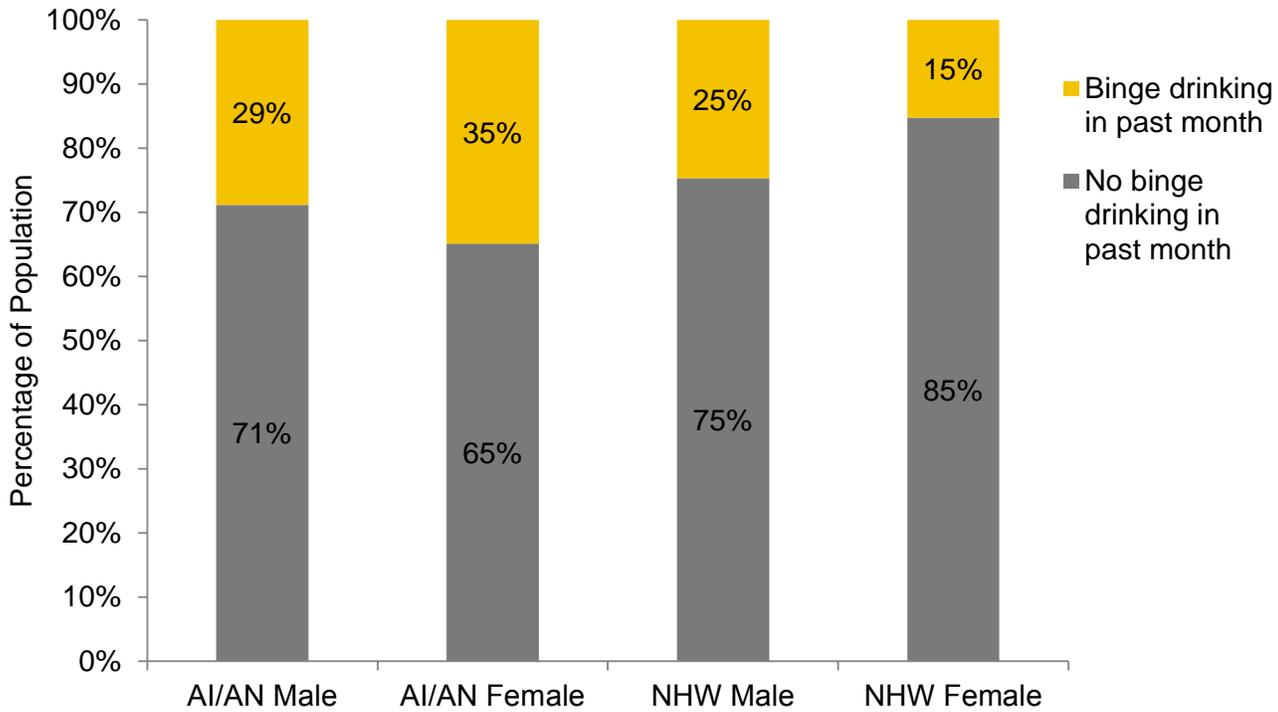
Self-Reported Binge Drinking

Figure 9.2 shows the percentage of Oregon AI/AN and NHW who reported binge drinking in the past month (defined as four or more drinks for women and five or more drinks for men on an occasion). From 2006-2012, 29% of AI/AN males reported binge drinking in the past month. This percentage was higher than NHW males in Oregon (25%). AI/AN females were over twice as likely to binge drink than their NHW counterparts (35% vs. 15%).

Data Source: CDC Behavioral Risk Factor Surveillance System (BRFSS), 2006-2012.

Data Notes: The BRFSS prevalence estimates (shown as a percentage) are weighted to make the survey responses representative of the Oregon population. The sample sizes presented below the figures are the unweighted number of people who answered this question for the indicated years.

Figure 9.2: Prevalence of self-reported binge drinking by race and sex, Oregon, 2006-2012.



Sample sizes (n): AI/AN males=388; AI/AN females=473; NHW males=31,588; NHW females=41,083.

Hospitalizations Related to Alcohol and Substance Abuse

In 2010-2011, 1.5% of AI/AN hospitalizations had a principal diagnosis related to an alcohol or substance abuse disorder (Table 9.1). Compared to NHW, alcohol or substance abuse accounted for a larger proportion of hospitalizations among AI/AN, with the largest difference for males (2.6% vs. 1.0%). Compared to their NHW counterparts, the age-adjusted hospitalization rate for alcohol and substance abuse disorders was 2.3 times higher for AI/AN males and 1.5 times higher for AI/AN females (Figure 9.3). There is considerable uncertainty in these estimates, as demonstrated by the wide confidence intervals around the AI/AN rates, but the differences were still statistically significant.

Data Source: Oregon inpatient hospital discharge data (2010-2011), corrected for misclassified AI/AN race, IDEA-NW Project, NPAIHB.

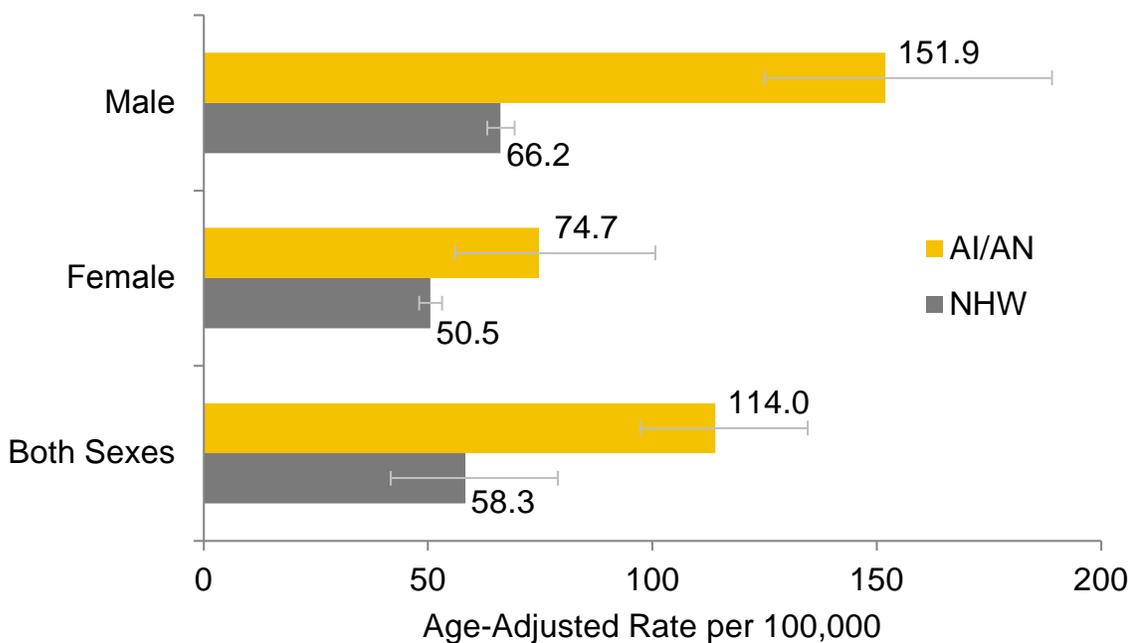
Data Notes: Principal diagnosis codes were categorized using the Agency for Healthcare Research and Quality's Clinical Classification Software. The following level-2 principal diagnosis codes were included: 5.11 (alcohol-related disorders) and 5.12 (substance-related disorders).

Table 9.1: Inpatient hospital discharges for alcohol and substance abuse disorders by race and sex, Oregon, 2010-2011.

Sex	AI/AN N [†] (%)	NHW N [†] (%)
Male	119 (2.6%)	2,195 (1.0%)
Female	56 (0.8%)	1,692 (0.6%)
Both Sexes	175 (1.5%)	3,887 (0.7%)

† N = number of hospitalizations. The percentages were calculated using the total inpatient hospitalizations for each group: AI/AN male (N=4,603), AI/AN female (N=7,015), AI/AN total (N=11,618), NHW male (N=225,270), NHW female (N=303,952), and NHW total (N=529,222).

Figure 9.3: Age-adjusted hospital discharge rates for alcohol and substance abuse disorders by race and sex, Oregon, 2010-2011.



Accidental Poisoning and Overdose Mortality

Accidental poisoning was the second leading cause of AI/AN unintentional injury death in Oregon (following motor vehicle crashes). By far the leading contributor to poisoning deaths was accidental drug and alcohol overdoses. Poisonings due to substances such as gas and vapors, pesticides, household chemicals, and other noxious substances made up less than 2% of poisoning deaths in both AI/AN and NHW.

Figure 9.4 shows the age-adjusted death rates for accidental poisoning among AI/AN and NHW in Oregon. Females were 8% more likely than males to suffer an accidental poisoning death. Compared to NHW, AI/AN accidental poisoning death rates in Oregon were 64% higher. Compared to the rest of the Northwest region, Oregon AI/AN fell in the middle, with lower accidental poisoning rates than those seen among AI/AN in Washington, but higher than those seen in Idaho.

Data Source: Oregon state death certificates, 2006-2010, corrected for misclassified AI/AN by the IDEA-NW Project.

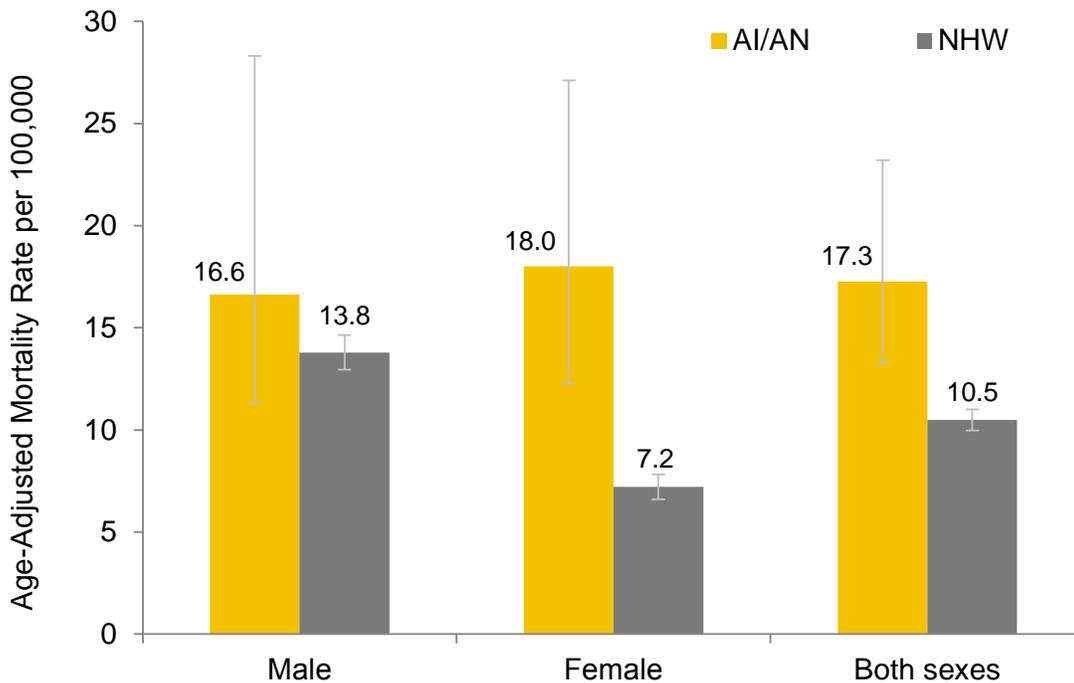
Table 9.2: Age-adjusted accidental poisoning mortality rates by race and sex, Oregon, 2006-2010.

Sex	AI/AN Rate (95% CI)	NHW Rate (95% CI)	AI/AN vs. NHW Rate Ratio (95% CI)
Male	16.6 (11.3, 28.3)	13.8 (12.9, 14.7)	1.2 (0.9, 1.7)
Female	18.0 (12.3, 27.1)	7.2 (6.6, 7.8)	2.5 (1.8, 3.6) [†]
Both Sexes	17.3 (13.3, 23.2)	10.5 (10.0, 11.0)	1.6 (1.3, 2.1) [†]

CI = confidence interval

[†] Indicates a statistically significant difference (p<.05)

Figure 9.4: Age-adjusted accidental poisoning mortality rates by race and sex, Oregon, 2006-2010.



Types of Drug and Alcohol Overdose Deaths

Table 9.3 summarizes the types of drug and alcohol overdose deaths seen among Oregon AI/AN and NHW. This includes both deaths with underlying cause of drug or alcohol use, and those with contributing cause of drug or alcohol use. For example, a death with an underlying cause of motor vehicle crash may have had alcohol as a contributing factor - this would be included in the row “alcohol associated deaths”. Note that “drug associated” and “alcohol associated” include deaths from both short term and long term substance use, but exclude drug deaths that are not related to substance abuse such as medical errors or allergic reactions.

Drugs and alcohol played a role in 37.4% of all AI/AN deaths in Oregon. Over 3% of all AI/AN deaths had drug overdose as the underlying cause. Only 1% were recorded as being related to illicit drug use; however, this accounted for twice as many deaths than seen among NHW in the state (1.1% versus 0.4%). The majority of drug associated deaths among AI/AN had prescription drugs identified as the underlying or contributing cause. Alcohol was a factor in 35.5% of all Oregon AI/AN deaths.

Data Source: Oregon state death certificates, 2006-2010, corrected for misclassified AI/AN by the IDEA-NW Project.

Data Notes: Note that columns do not add up due to multiple drugs contributing to a single death and cross-over in the definitions.

Table 9.3: Types of drug and alcohol overdose deaths by race, Oregon, 2006-2010.

	AI/AN		NHW		Total	
	N	% of all deaths	N	% of all deaths	N	% of all deaths
Drug OD deaths (underlying only)¹	71	3.4%	2,227	1.5%	2,298	1.5%
Drug associated deaths²	78	3.8%	2,448	1.7%	2,526	1.7%
Prescription drugs contributing ³	32	1.5%	1,567	1.1%	1,599	1.1%
Prescription OPR contributing ⁴	23	1.1%	1,182	0.8%	1,205	0.8%
Illicit drugs contributing ⁵	21	1.0%	635	0.4%	656	0.4%
Alcohol associated deaths⁶	738	35.5%	37,526	25.4%	38,264	25.5%
Total drug & alcohol associated	778	37.4%	39,012	26.4%	39,790	26.5%
Total deaths	2,079		148,028		150,107	

1 Underlying COD X40--X44, X60--X64, X85, or Y10--Y14

2 Underlying or Contributing COD X40--X44, X60--X64, X85, Y10--Y14. F11.0-F19.9, R78.1-R78.5, T36- T39, T40.1 -T40.9, T41.0-T43.9, T44.0-T50.9

3 Contributing COD T36--T39, T40.2--T40.4, T41--T43.5, and T43.7--T50.8, any underlying COD

4 Contributing COD T40.2--T40.4, any underlying COD

5 Contributing COD T40.1, T40.5, T40.7--T40.9, and T43.6, any underlying COD

6 Underlying or Contributing COD—F10, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K85.2, K86.0, R78.0, X45, X65, E24.4, Y15

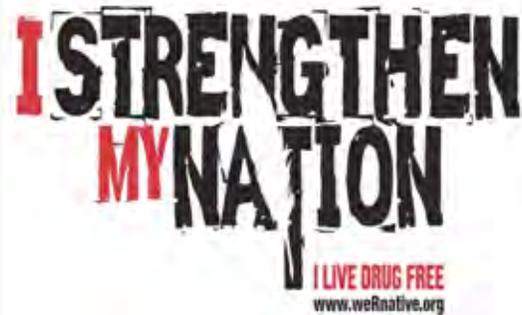
Note that columns do not add up to 100% because multiple drugs may contribute to a single death and crossover in the definitions

N = number, OD = Overdose, OPR = Opioid Pain Reliever, COD = Cause of Death

Program Spotlight:

THRIVE

NPAIHB's THRIVE project (Tribal Health: Reaching Out Involves Everyone) works with Northwest Tribes to prevent drug and alcohol abuse. In 2010 the project hosted meetings with regional partners to develop a 5-year strategic plan: the Northwest Tribal Substance Abuse Action Plan. The plan is now being used to guide program planning, catalyze community outreach efforts, and foster a coordinated response to substance abuse in our Northwest Tribes.



Acting upon one of the goals of the plan - to increase knowledge and awareness about substance abuse - the THRIVE project developed a national media campaign focusing on alcohol and drug prevention for AI/AN teens and young adults. The campaign, **Strengthen My Nation**, was funded by the Indian Health Service's Methamphetamine & Suicide Prevention Initiative, and was developed with feedback from hundreds of teens, parents, and health educators throughout the U.S. The campaign includes posters, brochures, fact sheets, and public service announcements on television and radio.

All of the campaign materials are available on the NPAIHB website:

http://www.npaihb.org/epicenter/project/mspi_prevention_media_resources/

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