Issued 2014

Oregon
American Indian & Alaska Native Community Health Profile

Northwest Tribal Epidemiology Center
Northwest Portland Area Indian Health Board

Thank You.

The Northwest Portland Area Indian Health Board and the Northwest Tribal Epidemiolgy Center would like to acknowledge all of the Tribal members and families who have contributed to our understanding of health in Northwest Tribal communities; NPAIHB delegates and staff at IHS and Tribal health facilities in the Portland area; Portland Area IHS and State staff who have supported this project; and program officers at our funding agencies for their guidance and support.

Suggested Citation: Northwest Portland Area Indian Health Board. *American Indian & Alaska Native Community Health Profile - Oregon.* Portland, OR; Northwest Tribal Epidemiology Center, 2014.

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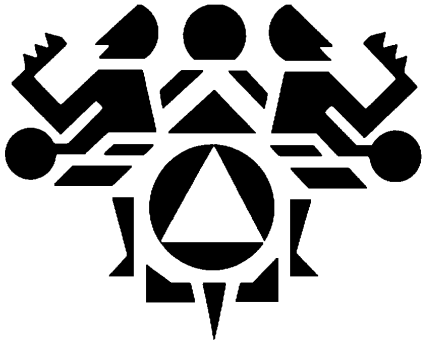
Oregon



American Indian & Alaska Native Community Health Profile

The Northwest Portland Area Indian Health Board (NPAIHB) is a tribal organization governed by the 43 federally recognized Tribes of Idaho, Oregon, and Washington. Tribal governments appoint a delegate to represent them on the Board, which meets on a quarterly basis. The delegates guide the priorities and programs of the NPAIHB.

This report was developed in an effort to provide Tribes in Oregon with accurate health data on priority health issues. Our goal is to provide high quality health data for tribal nations in the Pacific Northwest to inform public health programs and priorities.

The development of this report was supported by grants from the Indian Health Service (#U1B9400001/15) and the Department of Health and Human Services Office of Minority Health (#AIAMP120012-01-00). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of grantor agencies or the U.S. government.

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Letter from the Director

American Indians and Alaska Natives (AI/AN) in the Pacific Northwest are a small but diverse population. Northwest Tribes have demonstrated their resilience and leadership in facing multiple historical, social, economic and health challenges. Tribal leaders recognize that valid and reliable health statistics are the foundation of a strong public health system. However, AI/AN are not well-represented in local, state, and national health status reports. Without reliable health information, Tribes remain limited in their ability to identify priorities and actions that will improve the health of their communities.

This Community Health Profile report describes the health status of AI/AN residing in Oregon, and identifies health disparities experienced by this population. This comprehensive report enhances the available data on the health of AI/AN in Oregon State, and can be used by tribal leaders for health policy development and public health decision making.

Since 1996, the Northwest Tribal Epidemiology Center has worked to provide accurate data, training and technical assistance to the 43 federally recognized Tribes in the Portland Area. This report is one of three state-level reports produced by the Improving Data and Enhancing Access – Northwest (IDEA-NW) project and the Northwest Tribal Epicenter.

Victoria Warren-Mears, PHD, RD
Northwest Tribal Epicenter Director

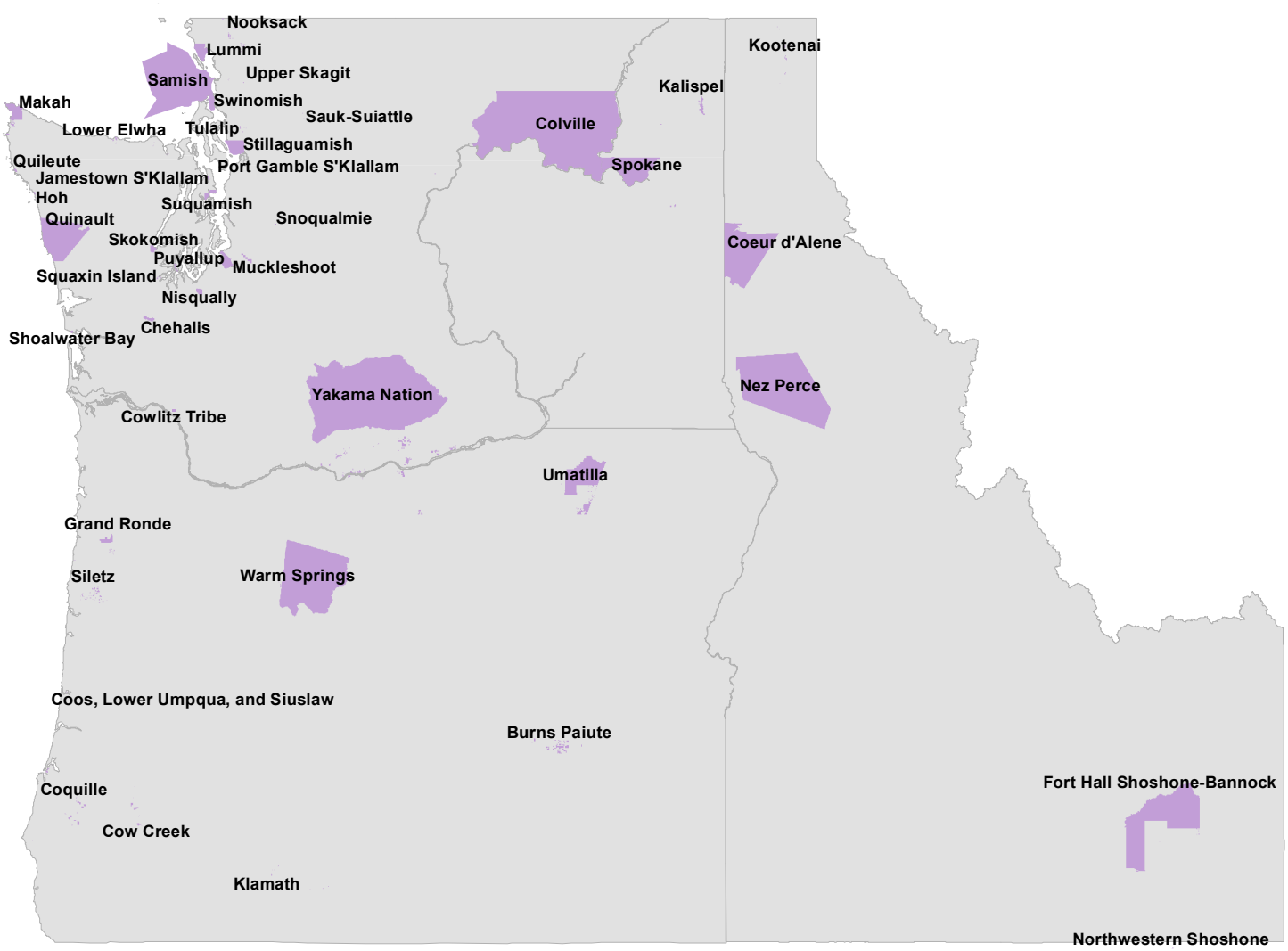
Introduction

Purpose and Objectives

The Northwest Tribal Epidemiology Center (NW TEC), part of the Northwest Portland Area Indian Health Board (NPAIHB), prepared this health profile report in order to provide Northwest Tribes with accurate and up-to-date information on the health of their communities. This report is intended to assist Tribes in Oregon to:

- identify health priorities in Northwest Tribes and Tribal communities,
- aid in the development of new programs and guide allocation of resources,
- identify data gaps and prioritize areas for new research and data collection,
- monitor clinical performance measures for clinic patients, and
- provide supporting data and statistics for grant applications.

NPAIHB Member Tribes



Methods

Selection of Health Topics and Indicators

The NW TEC established a planning team for the health profile reports in December 2013. This core group of NW TEC employees holds planning meetings once or twice per month, with open attendance to anyone at NPAIHB. The planning team selected health topics and indicators based on the availability and quality of data, and whether the indicator was considered a high priority for Northwest Tribes (based on the results from a Tribal Health Priorities survey conducted during the April 2013 Quarterly Board Meeting).

Selection of Data Sources and Years

The most high-quality and recently available data were chosen for each health indicator. If statistically sound data on AI/AN were not available, we did not report on that indicator. For most indicators, we combined several years of data in order to obtain enough information for analysis and comparisons.

This report uses data from several state and federal data sources. We prioritized NW TEC data sets that have been corrected for AI/AN racial misclassification These data sets provide more accurate health statistics for the Northwest AI/AN population. In addition, we considered factors such as AI/AN sample size, sampling design, accessibility of the data set, and ability to examine AI/AN-specific data at the state level. Specific information on data sources can be found in the appendix, and data source information accompanies each indicator throughout this report.

Who is represented by the data?

This report focuses on AI/AN who are residents of Oregon. For the most part, it does not include members of Oregon Tribes who live in other places.

Birth certificate, death certificate and cancer data presented in this report come from vital statistics and cancer registry records held by the state. These data sets usually take their race information from medical records, which sometimes have inaccurate information about a person's race. If an AI/AN person is incorrectly listed as another race in these data sets, the numbers of AI/AN affected by disease or death appear lower than they actually are. In order to correct this, we compared the birth, hospitalization, death, and cancer data sets to our Northwest Tribal Registry (NTR). The NTR is a list of all AI/AN people who have been seen at an IHS or tribal clinic.

For all the data presented on these topics in this report, we have defined AI/AN as anyone who was originally listed as AI/AN in the vital statistics or cancer registries, or who appeared

Methods

in the NTR. It should be noted that the NTR does not include very many urban AI/AN, nor those who self-identify as AI/AN but are not enrolled in a federally recognized Tribe. The NTR also does not include patients who received care at tribal clinics that do not share their patient information with IHS.

Data presented in this report from other sources such as the Behavioral Risk Factor Surveillance System and U.S. Census Bureau use different definitions of AI/AN, most commonly self-identification.

Data Analysis and Interpretation

When possible, we presented data on males, females, and the total population. Some indicators include a breakdown by age group. Most indicators include a comparison between AI/AN race and non-Hispanic whites (NHW) in the state. For some measures, we compared estimates to Healthy People 2020 targets or to Indian Health Service (IHS) performance goals.

Mortality rates presented in this report were calculated using the National Center for Health Statistics bridged race population estimates in the denominator and race-corrected death counts in the numerator. Population estimates were revised after the 2010 census, and as a result the rates presented in this report are not comparable with those found in earlier NW TEC reports.

Where appropriate, statistical tests were used to determine if there were changes over time or differences between groups. If a result is presented as statistically significant, it can be interpreted to mean that there is less than a 5% chance that the difference seen is just a result of random fluctuations. Put another way, it means there is a 95% or higher chance that it reflects a true difference in the population.

It should be noted that statistical significance does not give any insight into whether the difference is relevant clinically or useful for decision making. For example, with a large enough sample size, a tiny decrease in Hemoglobin A1c levels - say from 7.9% to 7.8% - may be statistically significant. However, 7.8% is still well into the diabetic range, and the difference will probably not change a patient's risk of complications. This would be an example of a result that is statistically significant but not clinically relevant.

Definitions and Abbreviations

AI/AN: American Indian or Alaska Native

Age-adjusted rate: A rate that controls for different age distributions in populations; allows for more accurate comparisons of health event rates between populations.

BRFSS: Behavioral Risk Factor Surveillance System *(see Data Sources)*

CDC: Centers for Disease Control and Prevention

CI: Confidence interval

GPRA: Government Performance and Results Act

Hispanic: A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.

ICD: International Classification of Diseases

IHS: Indian Health Service *(see Data Sources)*

Incidence: Number of new health event cases in a population that occur during a specified time period; usually presented as a rate (e.g., number of new HIV cases per 100,000 population that occurred in 2013).

n: Sample size

N: Population size

NHW: Non-Hispanic White

NPAIHB: Northwest Portland Area Indian Health Board ("the Board"); established in 1972 as a non-profit tribal advisory organization serving the 43 federally recognized tribes of Idaho, Oregon, and Washington. NPAIHB is located in Portland, Oregon.

NW TEC: The Northwest Tribal Epidemiology Center, or "the Epicenter," is part of the Northwest Portland Area Indian Health Board. The mission of the EpiCenter is to collaborate with Northwest American Indian tribes to provide health-related research, surveillance, and training to improve the quality of life of AI/AN.

Prevalence: Number of people who have a disease, risk factor, or condition in a population; often presented as a percentage (e.g., percentage of current female smokers).

Principal diagnosis: In hospital discharge data, the reason a patient was admitted to the hospital for care.

Tribe: There are 43 federally recognized tribes in Idaho, Oregon, and Washington, which are represented by the NPAIHB and NW TEC. There are 566 federally recognized tribes in the U.S., plus an unknown number of tribes that are not federally recognized.

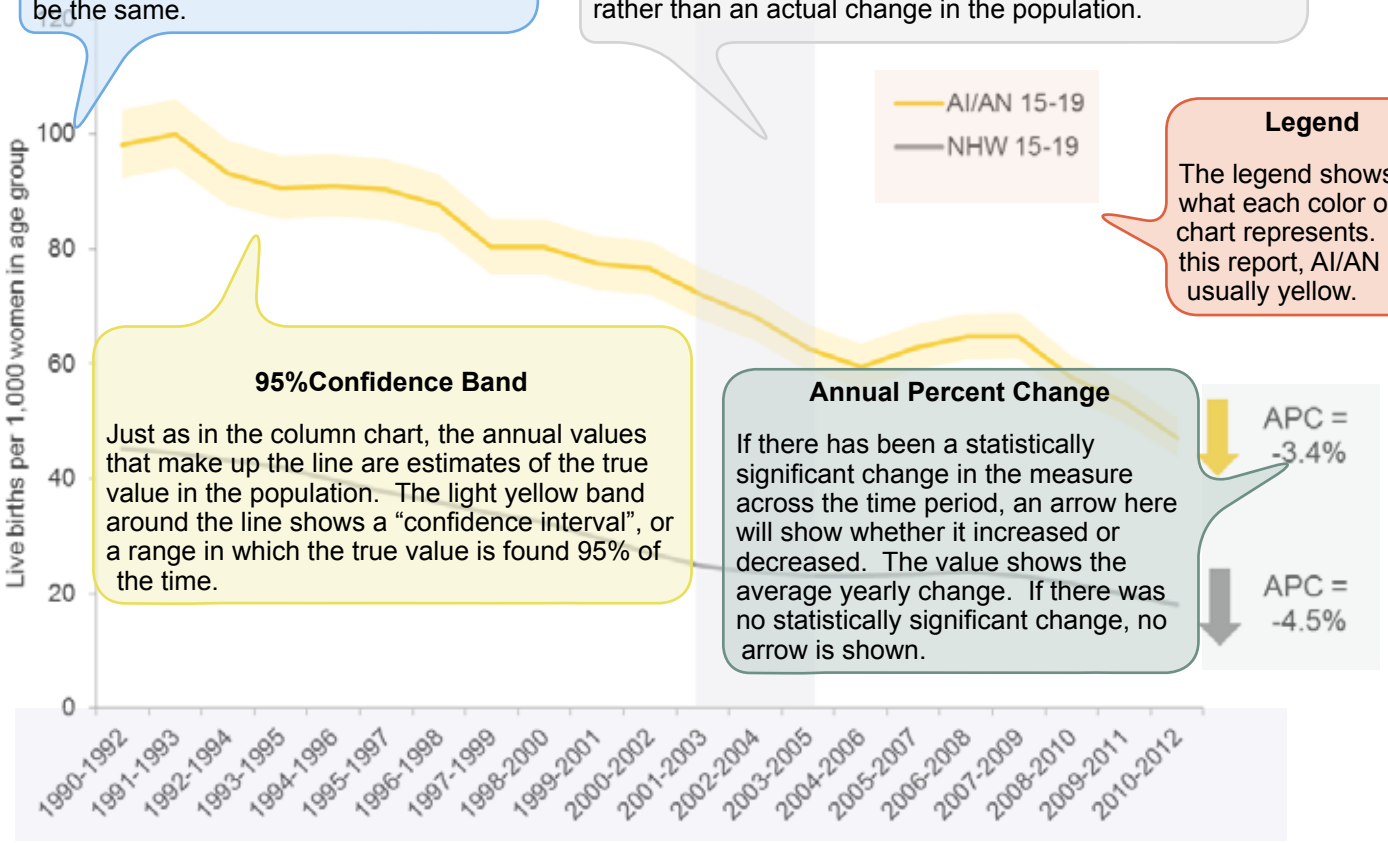
Guide to Reading a Column Chart

Vertical Axis

The vertical axis label shows what is being measured. In this report, it is usually rates or percentages. When comparing charts, note that the starting and ending values of the axes may not be the same.

Shaded Area

The line charts in this report show how a measure has changed over time. Some measures have undergone changes in definition or the way data are collected during the time frame being reported. Shaded areas on the chart indicate the point in time when changes like this occurred. Any abrupt changes across that time should be interpreted with caution - they may be a result of the definition change rather than an actual change in the population.



Legend

The legend shows what each color on the chart represents. In this report, AI/AN is usually yellow.

95%Confidence Band

Just as in the column chart, the annual values that make up the line are estimates of the true value in the population. The light yellow band around the line shows a "confidence interval", or a range in which the true value is found 95% of the time.

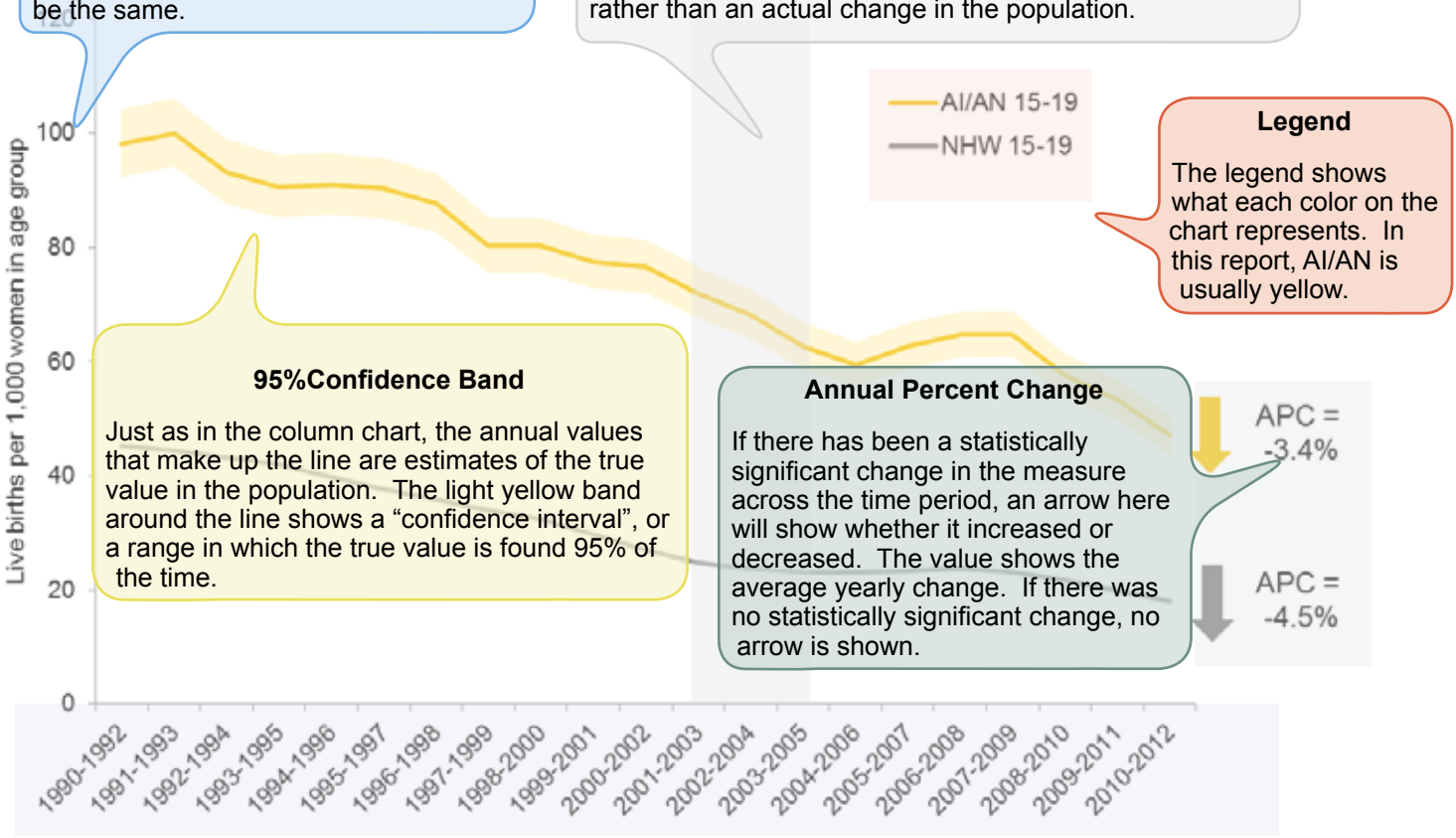
Annual Percent Change

If there has been a statistically significant change in the measure across the time period, an arrow here will show whether it increased or decreased. The value shows the average yearly change. If there was no statistically significant change, no arrow is shown.

Horizontal Axis

These labels show what years are being reported.

Guide to Reading a Line Chart



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These labels show what years are being reported.

Data Sources

U.S. Census Bureau

The U.S. Census provides official population counts and demographic information for the United States. The U.S. Census provides information on population age, race, sex, household make-up, income, education, insurance status, and other demographics. Race information collected by the Census Bureau is self-reported, and individuals can report belonging to more than one race group.

Website: http://www.census.gov/

American Community Survey (ACS)

The ACS is an ongoing national survey conducted by the Census Bureau. It is sent to approximately 250,000 addresses monthly (or 3 million per year), and provides population-level information on age, race, sex, household make-up, income, education, insurance status, and other demographics. Race information in the ACS is self-reported, and individuals can report belonging to more than one race group.

Website: http://www.census.gov/acs/www/

Behavioral Risk Factor Surveillance System (BRFSS)

The BRFSS is a national telephone survey that collects information on health risk behaviors, preventive health practices, and health care access primarily related to chronic disease and injury annually. It is run by the Centers for Disease Control and Prevention (CDC) and conducted by individual state health departments.

Website: http://www.cdc.gov/brfss/

Indian Health Service (IHS) GPRA performance measures

The Indian Health Service (IHS) reports on performance measures to track the quality of care it provides to patients, in accordance with the Government Performance and Results Act (GPRA). Health topics covered by these measures include behavioral health, cancer screening, cardiovascular disease, dental health, diabetes, immunizations, and prenatal HIV screening.

Website: http://www.ihs.gov/qualityofcare/

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) Atlas

The NCHHSTP Atlas provides an interactive platform for accessing data collected by the CDC's NCHHSTP. This interactive tool provides an effective way to disseminate data on the reported occurrence of nationally notifiable infectious diseases in the U.S., including HIV, viral hepatitis, some sexually transmitted diseases (STDs), and tuberculosis (TB), while allowing users to observe trends and patterns by creating detailed reports, maps, and other graphics.

Website: http://www.cdc.gov/nchhstp/atlas/

Data Sources

Oregon birth certificate and linked birth-death files

Data from Oregon birth certificates and linked birth-death files are from the Center for Health Statistics at the Oregon Health Authority. The data were accessed using the Oregon Public Health Assessment Tool (OPHAT) The data included in this report have not been corrected for misclassified AI/AN race.

Website: https://ophat.public.health.oregon.gov/Notes#Data

Oregon death certificates, corrected for misclassified race

Oregon death certificate data are from the Oregon Center for Health Statistics. These are data that have been corrected for misclassified AI/AN race by the IDEA-NW Project (part of the NW TEC). AI/AN includes all death records with any mention of AI/AN race in either the Oregon state dataset or the Northwest Tribal Registry (NTR), which is maintained by the IDEA-NW Project.

Website: http://www.npaihb.org/epicenter/project/improving_data_enhancing_access_northwest_idea_nw

Oregon State Cancer Registry (OSCaR) data, corrected for misclassified race

Oregon cancer registry data are from the OSCaR office at the Oregon Health Authority. These data that have been corrected for misclassified AI/AN race by the IDEA-NW Project (part of the NW TEC). AI/AN includes all records with any mention of AI/AN race in either the OSCaR dataset or the Northwest Tribal Registry (NTR), which is maintained by the IDEA-NW Project.

Website: http://www.npaihb.org/epicenter/project/improving_data_enhancing_access_northwest_idea_nw

Oregon inpatient hospital discharge data, corrected for misclassified race

Oregon inpatient hospital discharge data are from the Oregon Health Policy and Research (OHPR) office at the Oregon Health Authority. These data that have been corrected for misclassified AI/AN race by the IDEA-NW Project (part of the NW TEC). AI/AN includes all inpatient hospitalizations with any mention of AI/AN race in either the Oregon dataset or the Northwest Tribal Registry (NTR), which is maintained by the IDEA-NW Project.

Website: http://www.npaihb.org/epicenter/project/improving_data_enhancing_access_northwest_idea_nw

1. Demographics

Demographics provide information on the age, gender, and geographic distribution of a population. Demographics also include data on social and economic factors that influence people's health, including income levels, educational attainment, and employment status. Demographic information can help health researchers, planners, and healthcare providers understand the communities they serve, and identify factors that might explain health outcomes and disparities experienced by a population.

AI/AN make up about 2.8% of the population in the Northwestern states of Idaho, Oregon, and Washington. AI/AN in the Northwest are noticeably different from the general population on several demographic indicators[1], including the following:

- **AI/AN in the Northwest are younger than the general population.** The median age for AI/AN in Idaho, Oregon, and Washington is about seven years younger than the general population in these states.
- **AI/AN have lower levels of educational attainment than the general population.** About 16% of adult AI/AN have not completed a high school degree (or equivalent), compared to 10% of the general population.
- **AI/AN have lower income levels and higher poverty rates than the general population.** The median income for AI/AN in the Northwest is $9,770 lower than the regional average. About 27% of AI/AN in the Northwest live in poverty, compared to 15.5% of the general population.

This section describes key demographic characteristics of AI/AN in Oregon, and includes data on age distribution, geographic distribution, educational attainment, and economic indicators.

[1] U.S. Census Bureau. American Community Survey 3-year Estimates, 2010-2012.

Population

In 2010, a total of 109,223 AI/AN were living in Oregon, which represents about 3% of the total state population (Table 1.1). Most of Oregon's AI/AN population were living in counties that overlap with tribal lands and/or have large urban centers. This is shown in Figure 1.1 , where the darker shading indicates a larger AI/AN population. Jefferson County had the greatest number of AI/AN residents (N=19,672, or 18% of the total AI/AN population in the state).

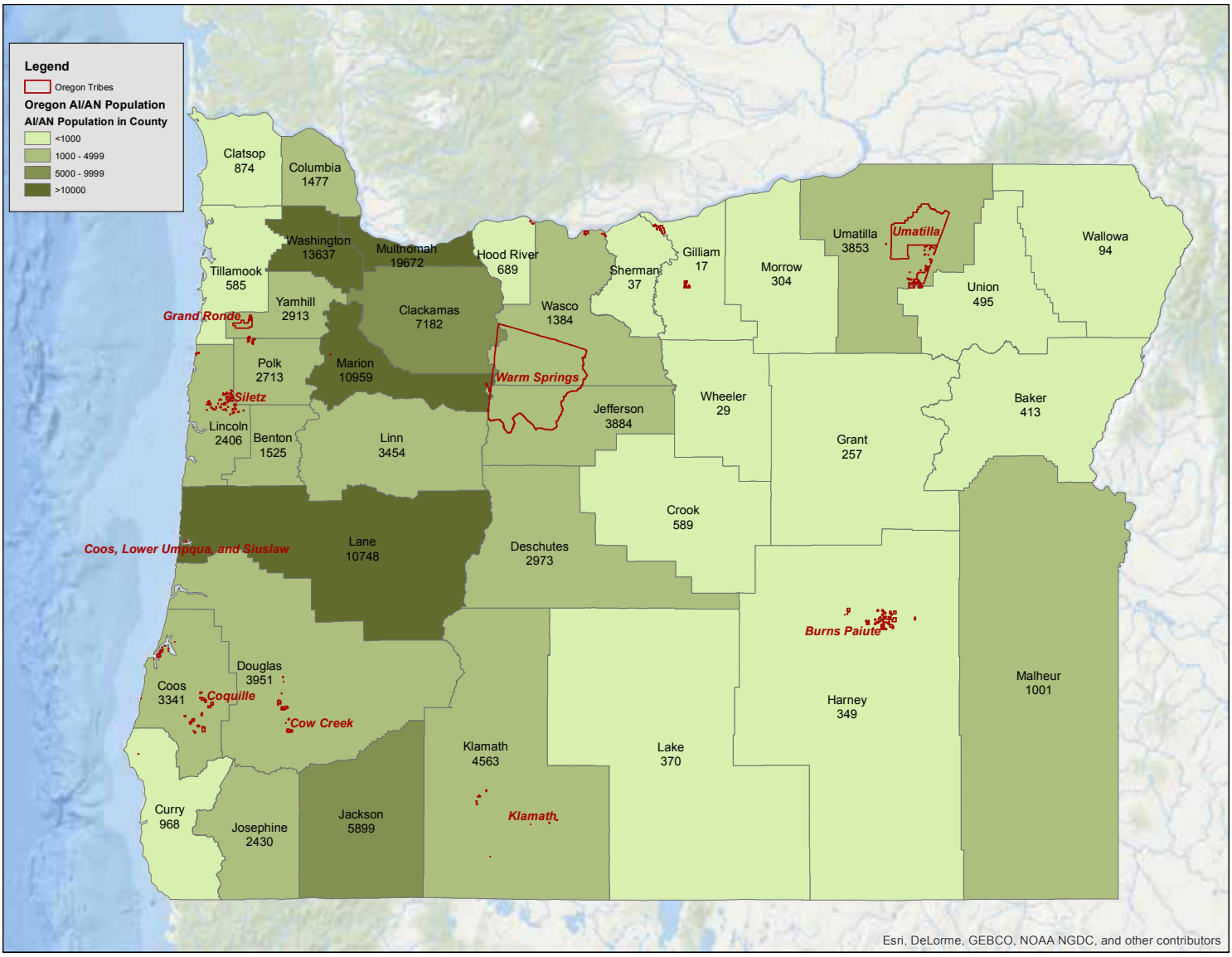
Table 1.1: Population by race and sex, Oregon, 2010.

	Male Population N (%)	Female Population N (%)	Total Population N (%)
AI/AN	54,141 (2.9%)	55,082 (2.8%)	109,223 (2.9%)
NHW	1,476,562 (77.9%)	1,529,286 (79.0%)	3,005,848 (78.5%)
Other Races	365,299 (19.3%)	350,704 (18.1%)	716,003 (18.7%)
All Races	1,896,002 (100.0%)	1,935,072 (100.0%)	3,831,074 (100.0%)

Data Source: U.S. Census Bureau, 2010.

Data Notes: Data are from Census Summary File 2 Table QT-P1. AI/AN include people who identify as AI/AN alone or in combination with other races of both Hispanic and non-Hispanic ethnicity.

Figure 1.1: AI/AN population by county, Oregon, 2007-2011.



Data Source: U.S. Census Bureau, American Community Survey 5-year estimates, 2007-2011.

Data Notes: AI/AN include people who identify as AI/AN alone or in combination with other races of both Hispanic and non-Hispanic ethnicity.

Age Distribution

AI/AN in Oregon were younger than NHW in the state. In 2010, the median age for AI/AN was 30.3 years, which was 10.7 years younger than the median age for NHW (41.0 years). The age distribution for Oregon AI/AN (Figure 1.2) was noticeably different than the age distribution for NHW in the state (Figure 1.3). A larger proportion of the AI/AN population was in the younger age groups, while a larger proportion of the NHW population was in the older age groups. In both race groups, females were older on average than males.

Data Source: U.S. Census Bureau, 2010.

Data Notes: Data are from Census Summary File 2 Table QT-P1. AI/AN include people who identify as AI/AN alone or in combination with other races of both Hispanic and non-Hispanic ethnicity.

Figure 1.2: Age distribution by sex for AI/AN, Oregon, 2010.

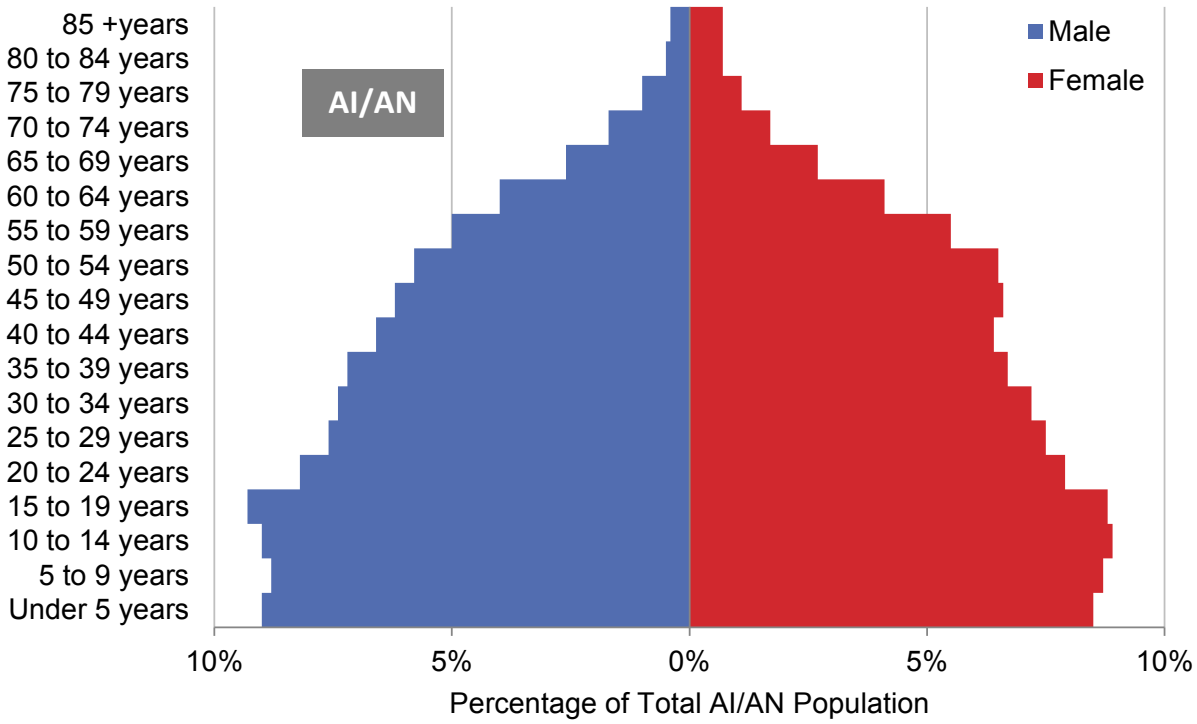
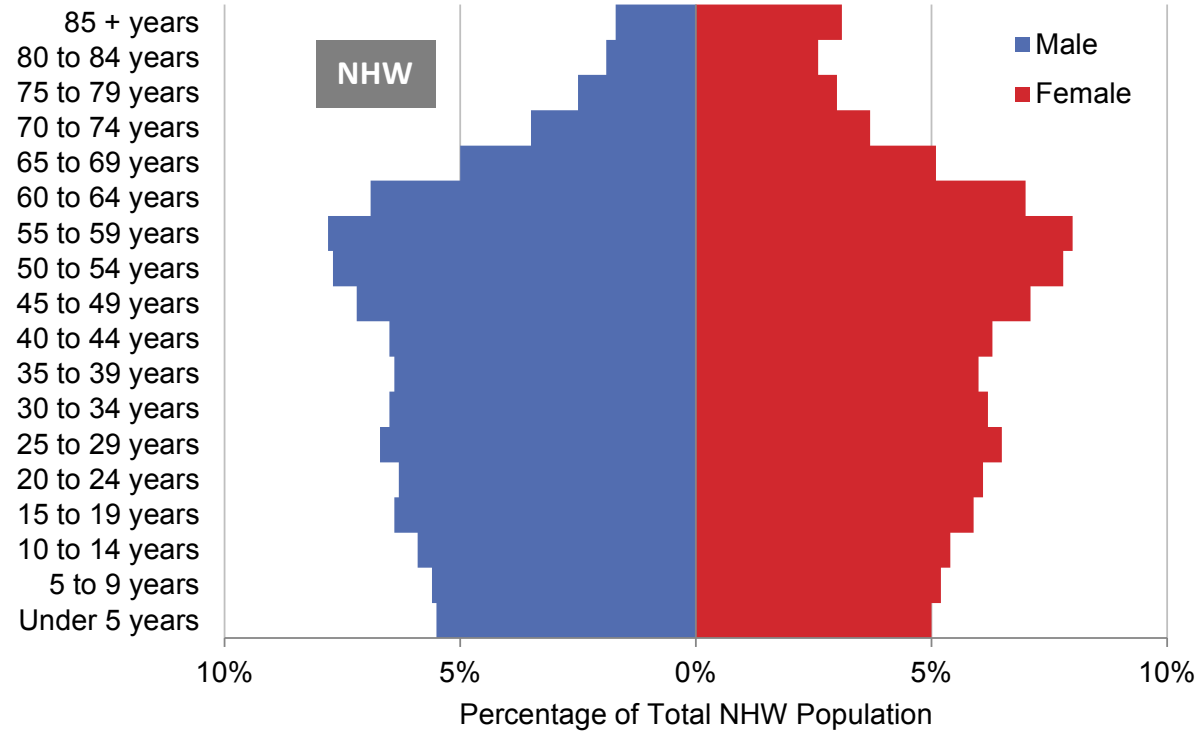


Figure 1.3: Age distribution by sex for NHW, Oregon, 2010.



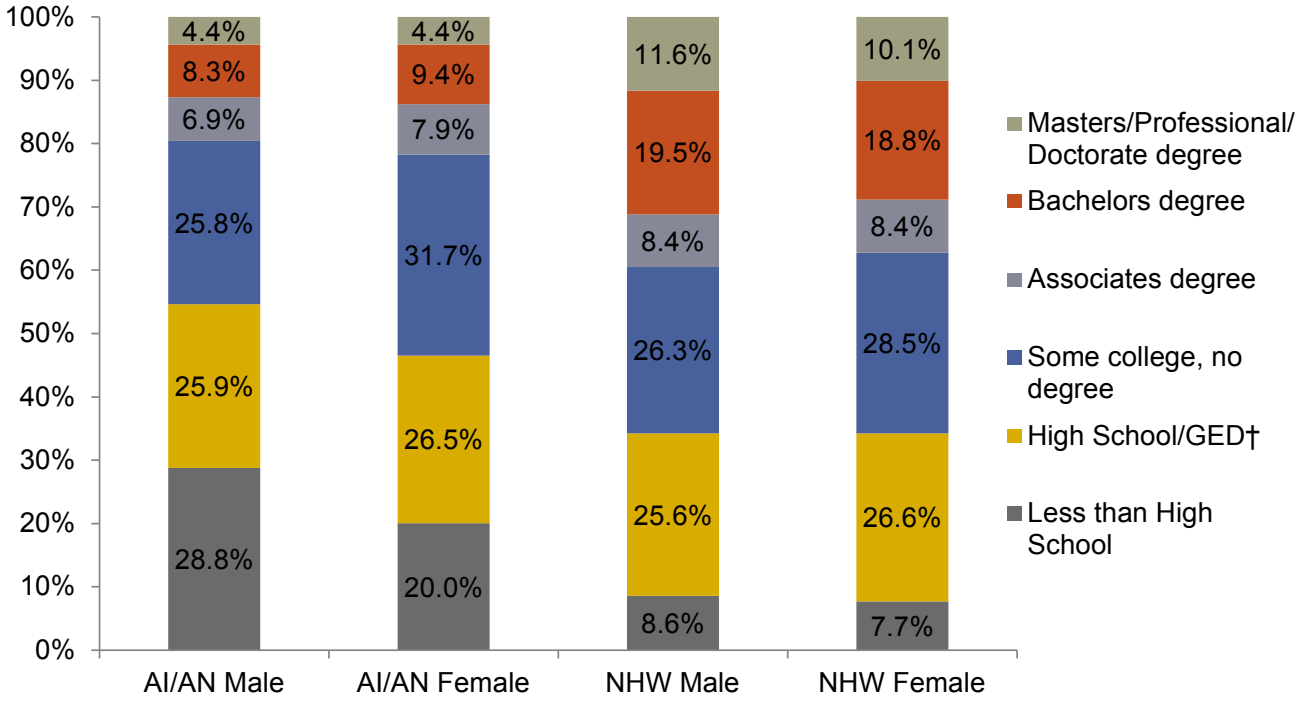
Educational Attainment

Figure 1.3 compares educational attainment for adult AI/AN and NHW in Oregon. Compared to NHW, a higher percentage of AI/AN did not complete high school. About 29% of AI/AN males and 20% of AI/AN females did not complete high school, while less than 9% of NHW males and 8% of NHW females had this level of educational attainment. AI/AN were less likely than NHW to have a bachelor's, master's, professional, or doctorate degree. NHW males were most likely to have attained either a bachelor's or post-graduate degree (31.1%) followed by NHW females (28.9%), AI/AN females (13.8%), and AI/AN males (12.7%).

Data Source: American Community Survey (ACS), 2006-2010, selected population tables.

Data Notes: AI/AN include people who identify as AI/AN alone or in combination with other races of both Hispanic and non-Hispanic ethnicity.

Figure 1.4: Educational attainment for adults by race and sex, Oregon, 2006-2010.



N (25yrs+): AI/AN males=33,155; AI/AN females=33,530; NHW males=1,033,596; NHW females=1,103,010.

† GED = General Educational Development degree.

Economic Indicators

Table 1.2 shows some key economic indicators for AI/AN and NHW in Oregon. From 2006-2010, the median income for AI/AN in Oregon was over $13,000 lower than NHW in the state. AI/AN families and individuals were over twice as likely to live in poverty, and children were nearly twice as likely to live in poverty than NHW in Oregon. From 2006-2010, almost 10% of AI/AN were unemployed, and over 27% received food stamp benefits.

Data Source: American Community Survey (ACS), 2006-2010, selected population tables.

Data Notes: AI/AN includes people who identify as AI/AN alone or in combination with other races of both Hispanic and non-Hispanic ethnicity.

Table 1.2: Economic indicators by race, Oregon, 2006-2010.

Economic Indicator	AI/AN	NHW
Median Income	$36,867	$50,093
Percent of Families in Poverty	21.0%	8.5%
Percent of People in Poverty	25.9%	12.7%
Percent of Children† in Poverty	30.1%	16.3%
Percent Unemployed	9.1%	5.4%
Receive Food Stamp Benefits	27.6%	5.4%

†Under 18 years of age

2. Maternal & Child Health

Maternal and child health indicators describe the health and well-being of mothers, infants, children, and families. We focus attention on this specific group because their health and well-being affects not only the present generation, but also the health and well-being of future generations. A mother's health and well-being before, during, and after pregnancy has direct and sometimes lifelong effects on the health of her child. Promoting healthy practices before, during, and after pregnancy is critical to ensuring that children will have the chance to begin life with good health.

The U.S. has shown improvement on several maternal and child health indicators over the last 20 years. However, we continue to see disparities by race and ethnicity, with some of the greatest burden in American Indian and Alaska Native populations. It is a nation-wide priority to eradicate these disparities and improve the health and well-being of AI/AN women, children, and communities.

In Oregon from 2008-2012, AI/AN teen birth rates were significantly higher compared to NHW. The infant mortality rate for AI/AN was 1.8 times higher compared to NHW, with over half of infant deaths occuring, during the first 27 days of life (during the neonatal period). Approximately 22% of AI/AN mothers in Oregon reported smoking during pregnancy, and only 66% received adequate prenatal care. Compared to NHW infants, a larger percentage of AI/AN infants had low weight at birth and/or were born premature, although these percentages were small.

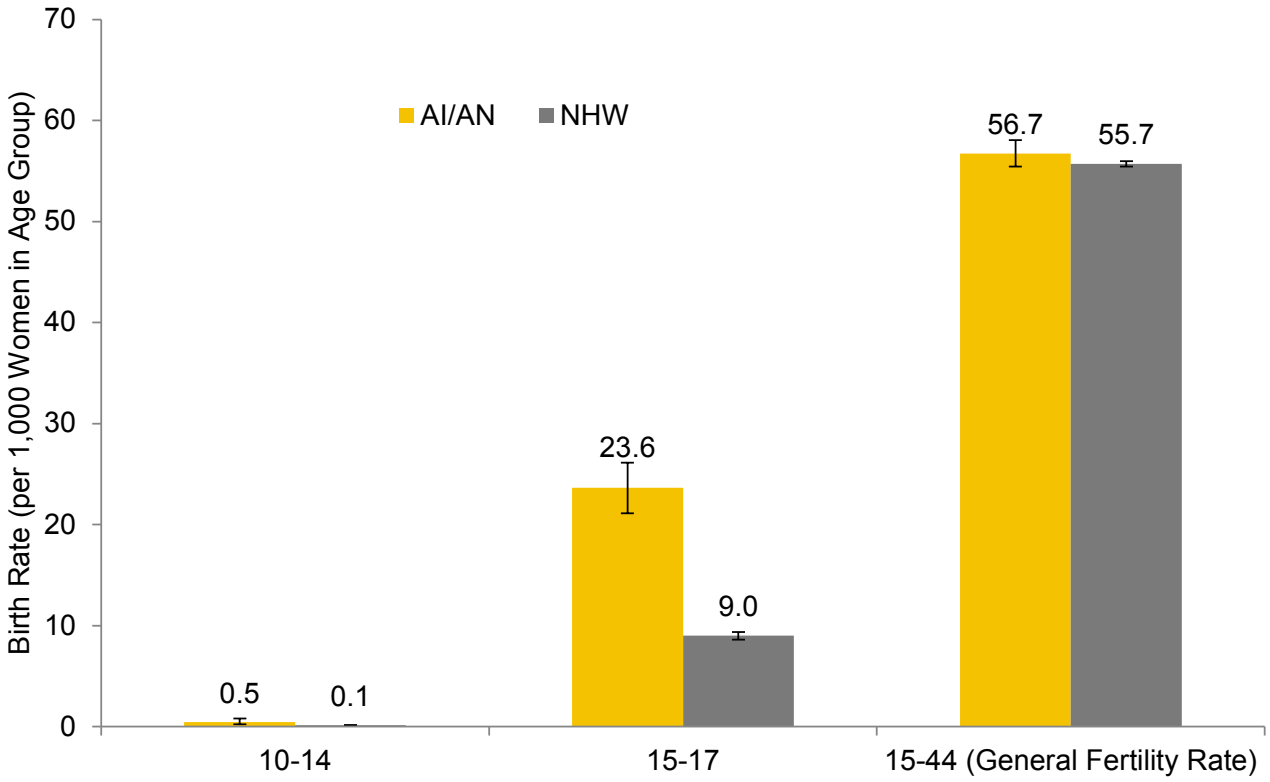
Birth Rates

The general fertility rate (GFR) is the birth rate among women of reproductive age (15-44 years). From 2008-2012, the GFR for AI/AN in Oregon was higher compared to NHW (56.7 vs. 55.7 live births/1,000 women) (Figure 2.1). During the same time period, AI/AN had higher teenage birth rates compared to NHW in the state. The birth rate for AI/AN ages 10-14 was 0.5 births/1,000 women, compared to 0.01 births/1,000 women for NHW. The AI/AN birth rate among 15-19 year olds was 2.6 times higher than the NHW rate.

Data Source: Oregon Health Authority, Center for Health Statistics birth certificate file. Data accessed using the Oregon Public Health Assessment Tool (OPHAT).

Data Notes: AI/AN data are not corrected for misclassified race.

Figure 2.1: Birth rates by age group and race, Oregon, 2008-2012.



Infant Mortality

From 2008-2012, the infant mortality rate for AI/AN in Oregon was 8.4 deaths per 1,000 live births (Figure 2.2). This was 1.8 times higher than the rate for NHW in the state (4.6 deaths per 1,000 live births). Over half of infant deaths for AI/AN and NHW occurred during the first 27 days of life (neonatal period). Deaths during the neonatal period accounted for 41% of infant deaths for AI/AN and 67% for NHW. AI/AN had a higher proportion of deaths during the post neonatal period compared to NHW (58% vs. 33% for NHW).

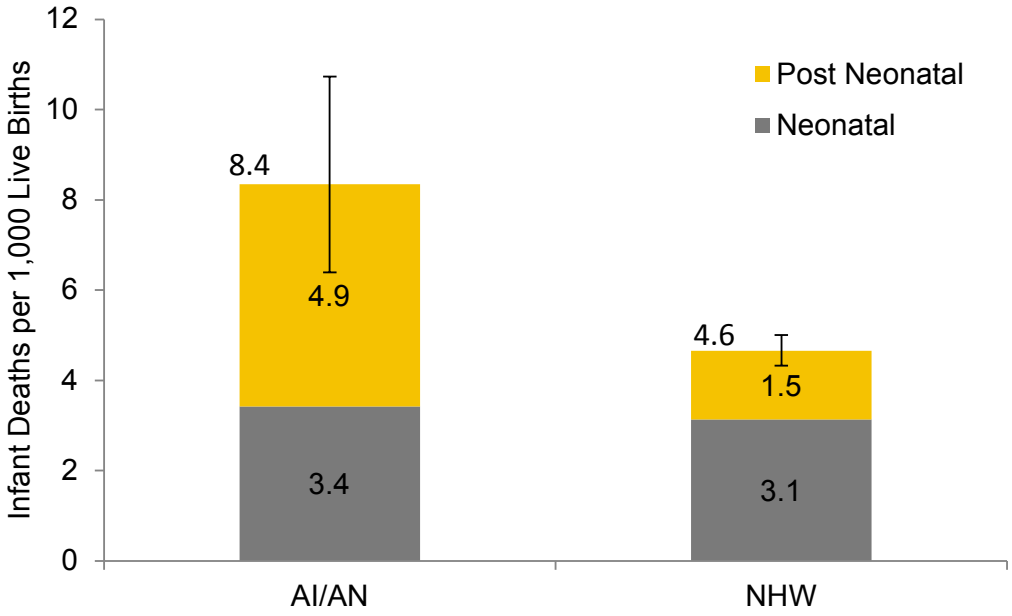
Deaths during the neonatal period are often related to prematurity (i.e., short gestation and/or low birthweight), complications during pregnancy, and birth defects. Post neonatal deaths are often from accidents, infections, and sudden infant death syndrome (SIDS).[1]

[1]Centers for Disease Control and Prevention. QuickStats: Leading Causes of Neonatal and Postneonatal Deaths, United States, 2002. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5438a8.htm.

Data Source: Oregon Health Authority, Center for Health Statistics birth certificate file. Data accessed using the Oregon Public Health Assessment Tool (OPHAT).

Data Notes: AI/AN data are not corrected for misclassified race.

Figure 2.2: Infant mortality rates by race and infant's age at death, Oregon, 2008-2012.



Maternal Risk Factors

Table 2.1 shows selected maternal risk factors during pregnancy for AI/AN and NHW mothers in Oregon. AI/AN women have higher risks for some factors, which could affect their babies' health and the outcomes of their pregnancies. These factors include the following:

- Over 20% of AI/AN women reported smoking during their pregnancy. This was 1.6 times higher than the smoking rate among NHW pregnant women.
- About 40% of AI/AN mothers had a pre-pregnancy body mass index (BMI) in the obese category, compared to 27% of NHW women.
- Only 26.2% of AI/AN mothers gained the recommended amount of weight during pregnancy. About 18% of women gained less than the recommended amount, and 56% gained more than the recommended amount.
- Compared to NHW, a lower percentage of AI/AN women began prenatal care during the early stages of their pregnancy (65.3% vs. 76.1%). Over 1% of AI/AN mothers received no prenatal care. Around 66% of AI/AN women received adequate prenatal care (i.e., had at least 80% of the prenatal care visits expected, based on when they started prenatal care).

Data Source: Oregon Health Authority, Center for Health Statistics birth certificate file. Data accessed using the Oregon Public Health Assessment Tool (OPHAT).

Data Notes: AI/AN data are not corrected for misclassified race.

Table 2.1: Maternal risk factors by race, Oregon, 2008-2012.

	AI/AN N† (%)	NHW N† (%)
Smoked during pregnancy	1,595 (22.1%)	21,984 (13.8%)
Pre-pregnancy BMI		
Underweight (<18.5)	220 (3.1%)	5,183 (3.3%)
Normal (18.5-24.9)	2,808 (39.2%)	79,921 (50.4%)
Overweight (25.0-29.9)	1,811 (25.3%)	37,560 (23.7%)
Obese (30.0-39.9)	2,328 (32.5%)	35,791 (22.6%)
Morbidly Obese (40.0-99.8)	528 (7.4%)	7,152 (4.5%)
Weight Gain during Pregnancy		
Below Recommended Amount	1,251 (17.7%)	26,884 (17.2%)
Recommended Amount	1,853 (26.2%)	48,948 (31.3%)
Above Recommended Amount	3,977 (56.2%)	80,461 (51.5%)
Diabetes		
Pre-pregnancy	83 (1.1%)	1,164 (0.7%)
Gestational	460 (6.3%)	7,973 (5.0%)
Hypertension		
Pre-pregnancy	120 (1.6%)	2,373 (1.5%)
Gestational	471 (6.5%)	9,132 (5.7%)
Prenatal Care Initiation		
First Trimester	4,721 (65.3%)	121,285 (76.1%)
Second Trimester	1,971 (27.3%)	31,473 (19.8%)
Third Trimester	459 (6.4%)	5,436 (3.4%)
No Care	83 (1.2%)	1,093 (0.7%)
Received Adequate Prenatal Care (>=80% of expected visits)	4,801 (65.8%)	120,047 (74.6%)

† N (total number of birth certificates): AI/AN = 7,305; NHW = 160,857
Percentage of records missing data for indicator (AI/AN, NHW):
Smoking (1.2%, 0.8%); BMI (1.9%, 1.5%); Weight gain (3.1%, 2.8%); Diabetes/Hypertension (0%, 0%); Prenatal care initiation (1.0%, 1.0%); Adequacy of prenatal care (0.1%, 0.0%)

Birth Outcomes: Birth Weight & Prematurity

Babies who have very low or very high weight at birth can be at higher risk of death and other complications as they grow up[1]. Low birth weight is also often indicative of broader public health concerns among the mothers, including poor nutrition, substance abuse, and inadequate access to health care.

From 2008-2012, the majority of AI/AN and NHW babies in Oregon were born with normal weight at birth. About 12% of AI/AN and NHW infants were born with high birth weight (Figure 2.3). Compared to NHW, a larger percentage of AI/AN babies had low weight at birth (7.3% vs 6.0% for NHW).

From 2008-2012, 9.4% of AI/AN babies were born premature (before 36 weeks gestation) (Figure 2.4). Most of these premature births were moderately premature (from 32 to less than 36 weeks), and 1.3% were very premature (less than 32 weeks). For NHW, 6.6% of babies were moderately premature and 1.1% were very premature.

1. Maureen Hack, Nancy K. Klein, and H. Gerry Taylor, "Long-Term Developmental Outcomes of Low Birth Weight Infants," The Future of Children 5, no. 1 (1995), 176–96.

Data Source: Oregon Health Authority, Center for Health Statistics birth certificate file. Data accessed using the Oregon Public Health Assessment Tool (OPHAT).

Data Notes: AI/AN data are not corrected for misclassified race.

Figure 2.3: Birth weight by race, Oregon, 2008-2012.

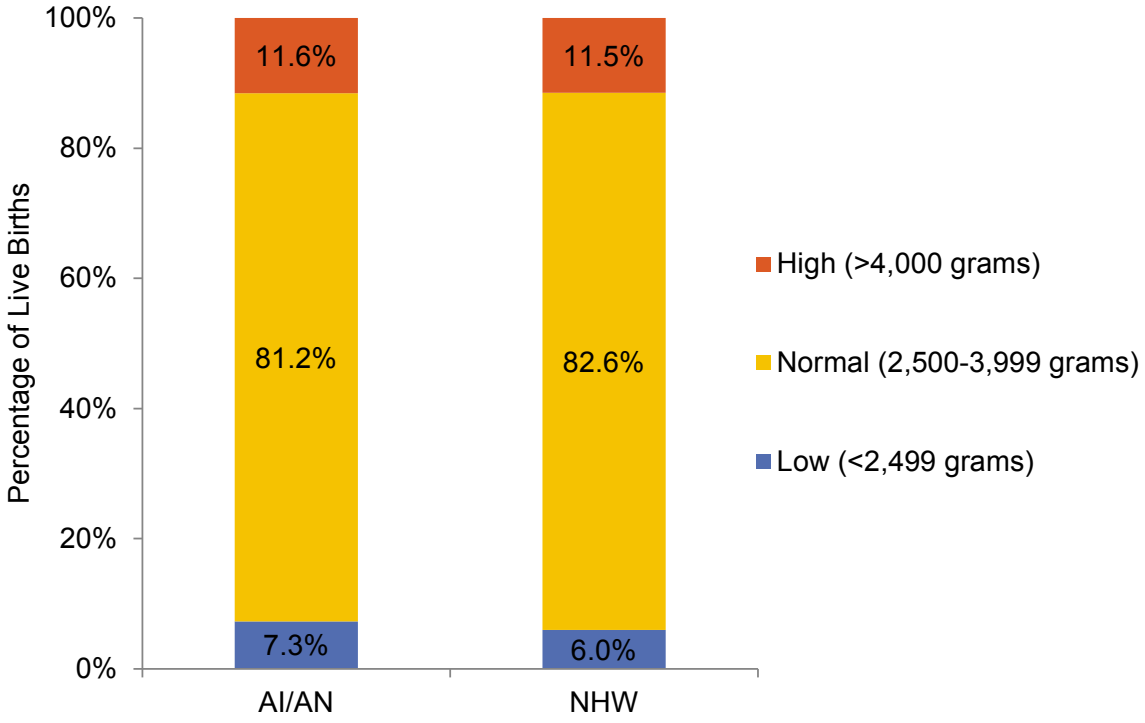
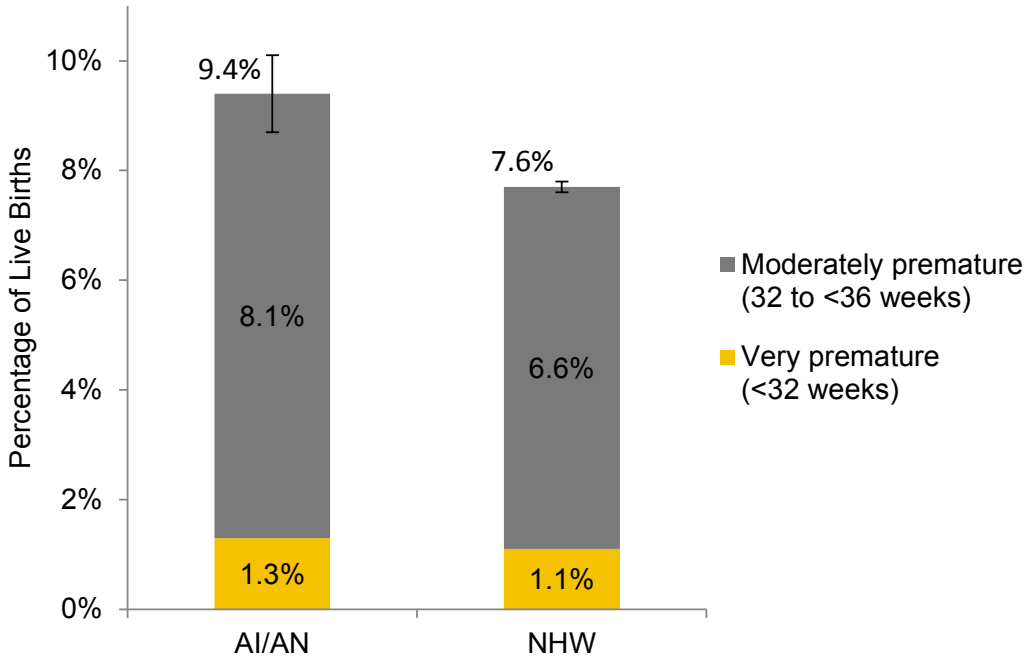


Figure 2.4: Premature births by race, Oregon, 2008-2012.



Program Spotlight: Native CARS

NPAIHB's Native CARS (Native Children Always Ride Safe) is working with tribal communities to design, implement and test the effectiveness of tribal interventions to improve the use of child safety seats among AI/AN children.

Working in partnership with the six Northwest tribes, Native CARS sought to identify the barriers to and facilitators of proper and consistent use of child restraints. The study partnership used this information to design and implement community-level interventions. The interventions resulted in significant reductions in the percentage of children riding completely unrestrained in motor vehicles from 29% in 2009 to 14% in 2013 and increased proper restraint from 49% in 2009 to 60% in 2013. NATIVE CARS is currently working to disseminate its evidence-based protocols and intervention materials through the **Native CARS Atlas**, which can be used by other tribes in the Northwest and nationwide.

For more information, please contact:

Tam Lutz (Lummi Tribe), Project Director/Junior Investigator

tlutz@npaihb.org 503-416-3271

nativecars@npaihb.org http://www.npaihb.org/epicenter/project/native_cars_study

Program Spotlight: Northwest Tribal Fetal Alcohol Spectrum Disorder (FASD) Project

The consumption of alcohol during pregnancy is one of the leading preventable causes of birth defects and childhood disabilities in the United States. The Northwest Tribal FASD Project seeks to reduce the incidence of FASD and to assist tribal communities to improve the quality of life of those living with FASD. by providing prevention education about the effects of fetal exposure to alcohol. The project also provides training for community members in diagnosing FASD, and works with communities to develop services that support and protect community members already affected by FASD. The Northwest FASD Project has worked with Northwest Tribes to develop tribal coalitions to address FASD within their communities. These coalitions have identified long-term goals and strategies, and receive trainings on counseling for expecting mothers, educational strategies for children, and chemical dependency for adolescents and adults who may have had fetal alcohol exposure. For more information, please contact:

Jacqueline Left Hand Bull (Sicangu Lakota) jlefthandbull@npaihb.org

http://www.npaihb.org/programs/the_northwest_tribal_fetal_alcohol_spectrum_disorders_project

3. Mortality

Mortality rates, also known as death rates, are a measure of the number of deaths in a community compared to the population size during a given time period. These statistics are one of the most fundamental measures of health of community. Consistent monitoring of mortality helps let us know if our interventions and programs are working or not. Examining leading causes of mortality show us where new threats are emerging, and where to focus limited resources. Comparing mortality across regions, gender and age groups shows us which populations are facing greatest challenges, and allows us to identify those which have achieved successes that can be shared with others.

Nationally, the mortality rate for AI/AN is 964.4 per 100,000[1]. This is about 19% higher than the national rate for whites. In Oregon, the all-cause mortality rate for AI/AN was 1,068.2, which was higher than the rate for Idaho AI/AN, but lower than the rate for Washington AI/AN. Compared to NHW, the Oregon AI/AN mortality is 40% higher. Cancer, heart disease, and unintentional injury were the top causes of death for AI/AN in the state, which highlights the need to build upon initiatives aimed at supporting healthy lifestyles. Unintentional injury is of particular concern for youth in Oregon. Although diabetes caused fewer deaths among AI/AN, disparities in diabetes mortality were particularly concerning with AI/AN dying of the disease at 2.8 times the rate of NHW.

Across the state, the highest AI/AN mortality rates occurred in the central and south east regions (containing Warm Springs and Burns Paiute tribal lands). The lowest rates occurred in the north west region (containing Grand Ronde and Siletz tribal lands).

The statistics reported here show only the numbers; what they fail to capture is the profound impact each preventable or early death has on the Tribal community. Loss of a young person who will never have the opportunity to grow into the leader he or she could have become is tragic. The death of a middle aged person may have the widest spread impact, as they are often vital members of the community upon whom both children and elders rely for support and care. And every elder who is lost too soon takes with them the history, language and knowledge of the tribe that is held by so few.

1. Espey DK, Jim MA, Cobb N, Bartholomew M, Becker T, Haverkamp D, et al. Leading causes of death and all-cause mortality in american indians and alaska natives. American journal of public health. 2014;104 Suppl 3:S303-11.

Leading Causes of Death

Table 3.1 presents the top ten causes of death for Oregon. Both AI/AN and NHW shared the same top two causes of death, heart disease and cancer. However, these leading two causes accounted for a larger proportion of deaths among NHW (45%) than AI/AN (36%). Unintentional injury was the third leading cause for AI/AN, accounting for proportionally almost twice as many deaths as among NHW. Diabetes and chronic liver disease were the fifth and sixth leading causes of death respectively for AI/AN, but did not appear in the top five for NHW. Alzheimer's disease was the sixth leading cause of death for NHW but did not appear in the top ten causes for AI/AN. Throughout the five year period, the age-adjusted all-cause mortality rate for AI/AN was 1.4 times that of NHW.

Data Source: Oregon state death certificates, 2006-2010, corrected for misclassified AI/AN race.

Data Notes: ICD classification follows WISQARS; excludes deaths of infants under one year old. AI/AN includes all deaths with any mention of AI/AN race in either the Oregon state death certificate data or the Northwest Tribal Registry (NTR), which is maintained by the IDEA-NW Project at NPAIHB.

Table 3.1: Top ten causes of death by race, Oregon, 2006-2010.

Rank	AI/AN	% (N†)	NHW	% (N†)
1	Cancer	21.5% (441)	Cancer	23.7% (34,948)
2	Heart disease	14.7% (301)	Heart Disease	20.8% (30,572)
3	Unintentional injury	9.6% (196)	Chronic lower respiratory disease	6.2% (9,186)
4	Chronic lower respiratory disease	7.2% (148)	Stroke	5.9% (8,755)
5	Diabetes	6.0% (123)	Unintentional injury	4.9% (7,147)
6	Liver disease	5.4% (111)	Alzheimer's disease	4.1% (6,071)
7	Stroke	4.1% (83)	Diabetes	3.3% (4,808)
8	Suicide	2.8% (58)	Suicide	1.9% (2,815)
9	Influenza & pneumonia	1.9% (38)	Influenza & Pneumonia	1.6% (2,313)
10	Viral Hepatitis	1.4% (28)	Liver Disease	1.4% (2,089)
Total deaths		**2,048** (100%)		**147,307** (100%)

† N = number of deaths

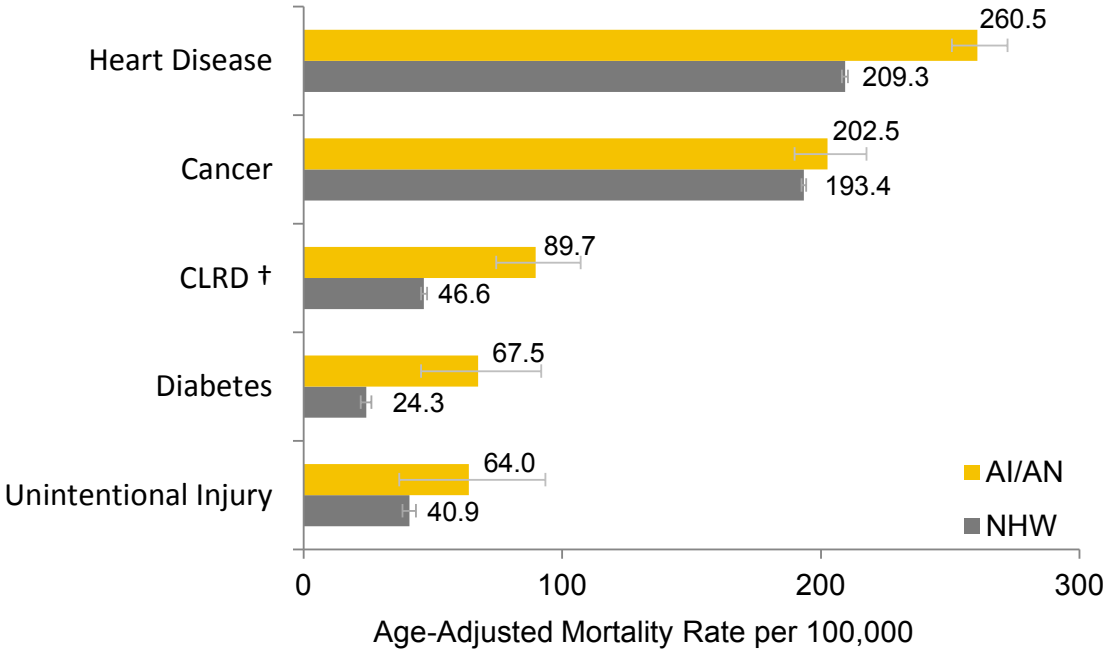
Mortality Rates

Figure 3.1 shows the five highest age-adjusted death rates from 2006-2010 in Oregon. AI/AN rates were higher than NHW for all five causes of death. AI/AN rates of death due to liver disease (not shown) and diabetes are notable for particularly large disparities – 3.6 times higher for liver disease and 2.8 times higher for diabetes.

Data Source: Oregon state death certificates, 2006-2010, corrected for misclassified AI/AN race.

Data Notes: ICD classification follows WISQARS; excludes deaths of infants under one year old. AI/AN includes all deaths with any mention of AI/AN race in either the Oregon state death certificate data or the Northwest Tribal Registry (NTR), which is maintained by the IDEA-NW Project at NPAIHB.

Figure 3.1: Top five age-adjusted mortality rates for AI/AN, Oregon, 2006-2010.



† Chronic Lower Respiratory Disease

All-Cause Mortality Rates

Figure 3.2 presents the all-cause mortality rates for AI/AN and NHW in Oregon. The mortality rate fo AI/AN males was 22% higher mortality than females, and AI/AN rates were higher than NHW for both sexes. For males, AI/AN mortality rates were 35% higher than NHW males; for females the difference was larger at 53% higher for AI/AN.

Compared to other AI/AN in the region, Oregon's population was in the middle; all-cause mortality rates were higher than those seen among Idaho AI/AN, but lower than those seen among Washington AI/AN.

Table 3.2: All-cause mortality rates by race and sex, Oregon, 2006-2010.

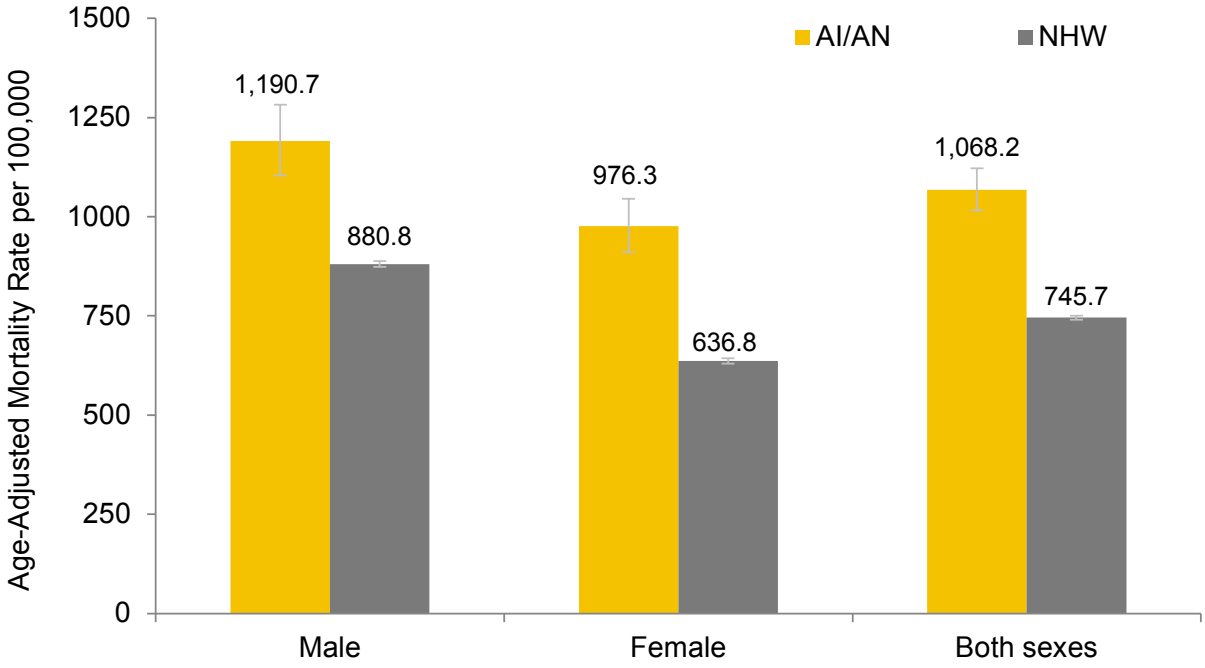
Sex	AI/AN Rate (95% CI)	NHW Rate (95% CI)	AI/AN vs. NHW Rate Ratio (95% CI)
Male	1190.7 (1104.6, 1282.9)	880.8 (873.8, 887.9)	1.4 (1.3, 1.4)†
Female	976.3 (911.0, 1045.5)	636.8 (1629.9, 643.7)	1.5 (1.4, 1.6)†
Both Sexes	1068.2 (1016.2, 1122.5)	745.7 (740.8, 750.7)	1.4 (1.4, 1.5)†

CI = confidence interval

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

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

Figure 3.2: AI/AN and NHW all-cause mortality rates, Oregon, 2006-2010.



Life Expectancy at Birth

Figure 3.3 displays life expectancy at birth for AI/AN and NHW by sex, as estimated from life tables calculated based on linkage-corrected death certificate data (see appendix for abridged life tables). Life expectancy at birth can be thought of as the average number of years a baby born today would be expected to live, given current mortality patterns. Life expectancy for Oregon AI/AN was 74.8 years. This was the longest life expectancy for AI/AN in the three Northwest states at 3.4 years longer than AI/AN in Washington, and 0.3 years longer than those in Idaho.

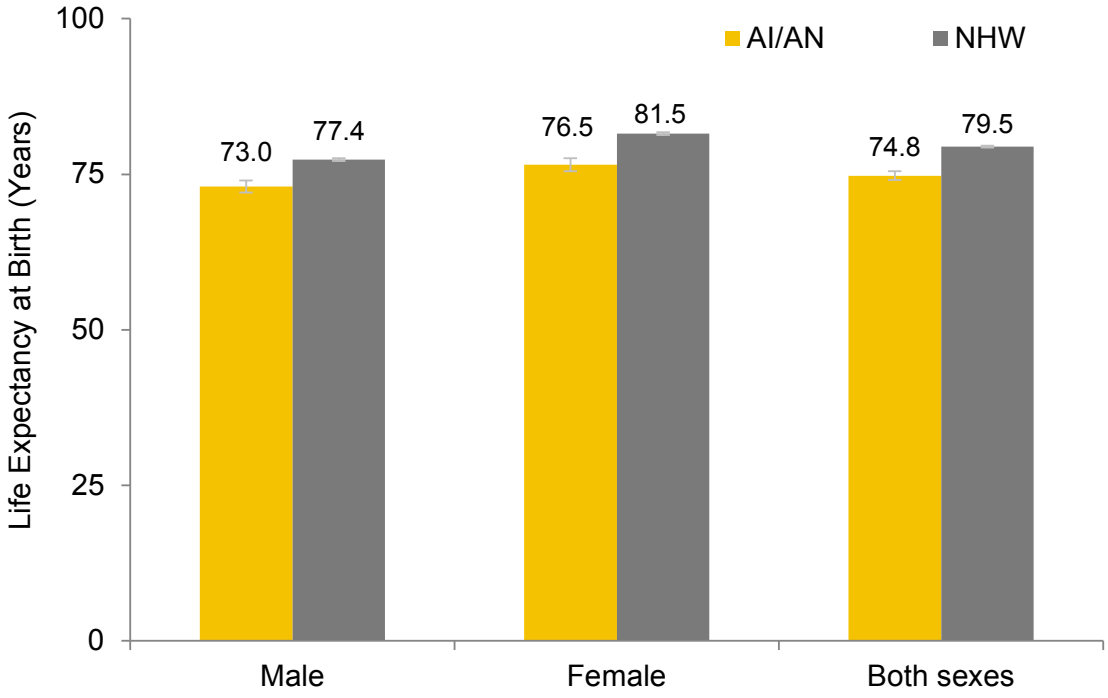
Across the Northwest, female AI/AN had a life expectancy 3.7 years longer than male AI/AN. The gender gap among the Oregon population was 3.9 years.

Compared with their NHW counterparts, life expectancy at birth was 4.7 years lower for Oregon AI/AN. The gap between races was greater for females than males: AI/AN females had a life expectancy 5 years shorter than their NHW counterparts, versus 4.4 years for males.

Data Source: Oregon state death certificates, 2008-2010, corrected for misclassified AI/AN race by the IDEA-NW Project.

Data Notes: Life tables were generated using death counts and mortality rates computed from Oregon state death certificate data.

Figure 3.3: Life expectancy at birth by race and sex, Oregon, 2008-2010.



4. Diabetes

Diabetes (also called diabetes mellitus) is a chronic disease caused by high levels of blood glucose (or blood sugar). Blood glucose levels are controlled by the hormone insulin, which moves glucose from the blood into cells to be used as energy. In type 1 diabetes, the body does not make enough insulin to control blood sugar levels. In type 2 diabetes (the most common type), the body no longer uses insulin efficiently. Although the two forms are different in many ways, the end result of both is high blood sugar. If left untreated, diabetes can damage nearly every tissue in the body, and can cause heart attacks, stroke, blindness, kidney failure, and amputations of toes, feet, or legs because of non-healing infections.[1]

AI/AN adults have among the highest rates of diabetes in the U.S. From 2010-2012, the age-adjusted percentage of AI/AN adults with diabetes was 15.9%, compared to 7.6% for NHW, 12.8% for Hispanics, and 13.2% for African Americans.[2] AI/AN diabetes rates vary by region, from 6% for Alaska Natives to 24.1% for American Indians in Arizona.[2] Diabetes is the fourth leading cause of death for AI/AN nationwide.

While AI/AN in Oregon have higher rates of diabetes than NHW in the state, the prevalence of diabetes among IHS patients is lower in Oregon compared to the national IHS average. Diabetes is the fifth leading cause of death for AI/AN in Oregon. The death rate from diabetes is nearly three times higher for AI/AN compared to NHW, and AI/AN men have a higher risk of dying from diabetes than AI/AN women.

While diabetes is a life-long disease, it can be managed by exercising regularly, eating a healthful diet, taking medications, and getting regular health check-ups. People with pre-diabetes can reduce their risk by getting regular physical activity, losing a moderate amount of weight, and eating a balanced diet. Since 1997, the Special Diabetes Program for Indians (SDPI) has funded initiatives to prevent and treat diabetes in AI/AN communities. These initiatives have resulted in improved access to treatment and prevention services and improved clinical outcomes for diabetes patients.[3]

1. National Diabetes Information Clearinghouse. Your guide to diabetes: Type 1 and Type 2. Available at: http://www.diabetes.niddk.nih.gov/dm/pubs/type1and2/index.aspx.

2. Centers for Disease Control and Prevention. National Diabetes Statistics Report: Estimates of Diabetes and Its Burden in the United States, 2014. Atlanta, GA: US Department of Health and Human Services; 2014.

3. Indian Health Service Division of Diabetes Treatment and Prevention. Special Diabetes Program for Indians: Successful Interventions and Sustained Achievements (2012). Available at: http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=resourcesFactSheets#2

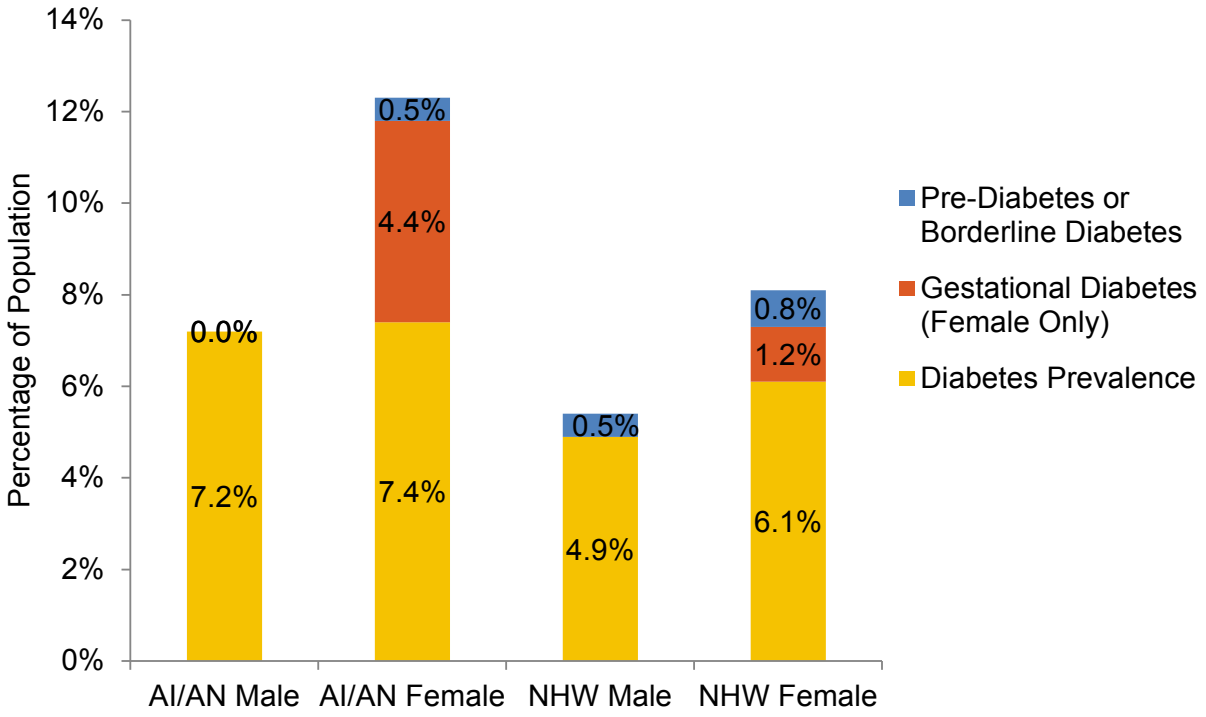
Self-Reported Diabetes

Figure 4.1 shows the prevalence of self-reported diabetes among AI/AN and NHW adults in Oregon. From 2006-2012, AI/AN males and females had the same rate of diabetes (7%). This was higher than the rate among NHW males (5%) and females (6%). The rate of gestational diabetes was higher for AI/AN females (4%) than NHW females (1%). The rate of pre-diabetes was the same for AI/AN and NHW females, and slightly higher for AI/AN males compared to NHW males.

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 4.1: Self-reported diabetes by race and sex, Oregon, 2006-2012.



Sample sizes (n): AI/AN males=170; AI/AN females=221; NHW males=13,060; NHW females=19,475.

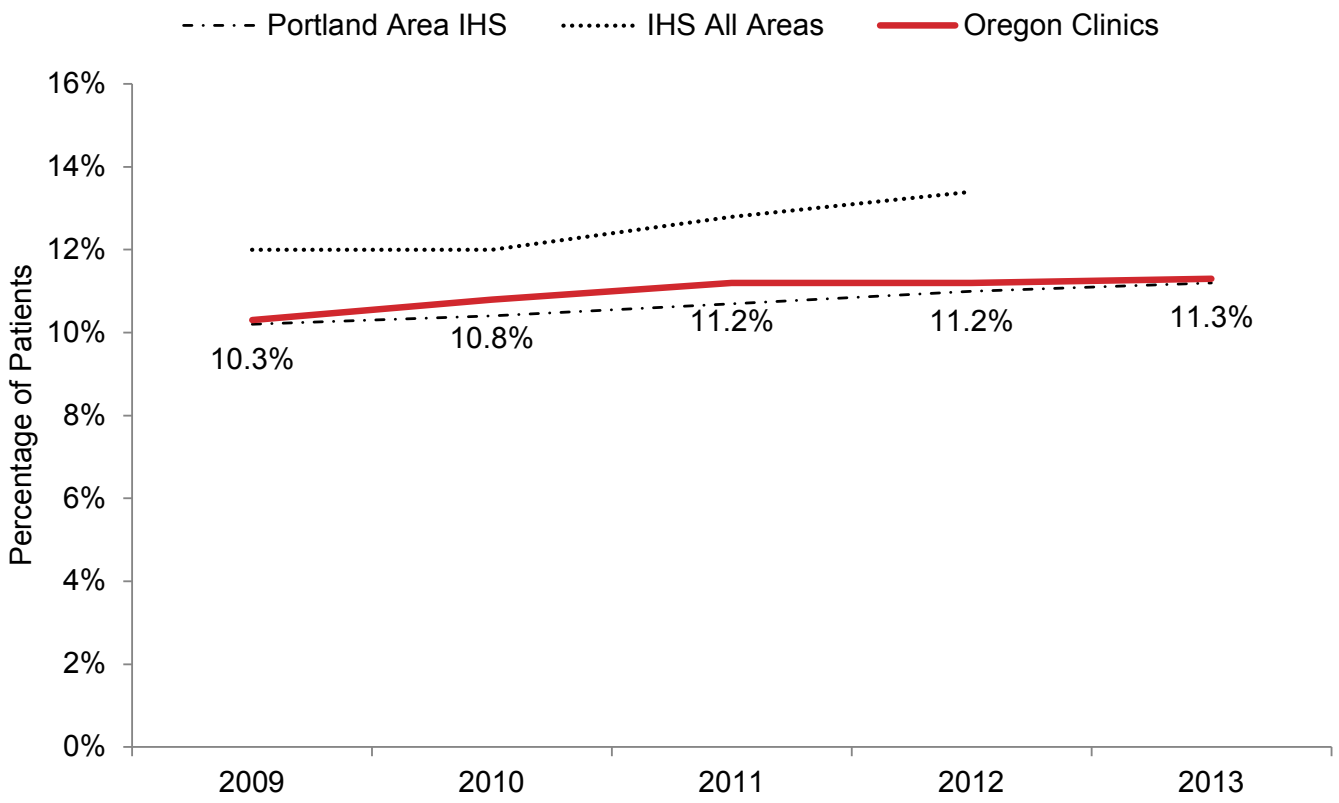
Diabetes Prevalence

From 2009-2013, AI/AN patients who received care at Indian health facilities in Oregon had a lower prevalence of diabetes compared to IHS patients nationwide, and similar prevalence to Portland Area patients (Figure 4.2). The diabetes prevalence in the Oregon patient population followed the Portland Area IHS trend, with approximately a 1% increase over the 5 years, while the prevalence in the national IHS patient population saw a larger increase over the same time period.

Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Oregon clinics. 2013 data not available for IHS All Areas. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 4.2: Diabetes prevalence among IHS patients, 2009-2013.



Diabetes Control and Management:
Blood Sugar Control

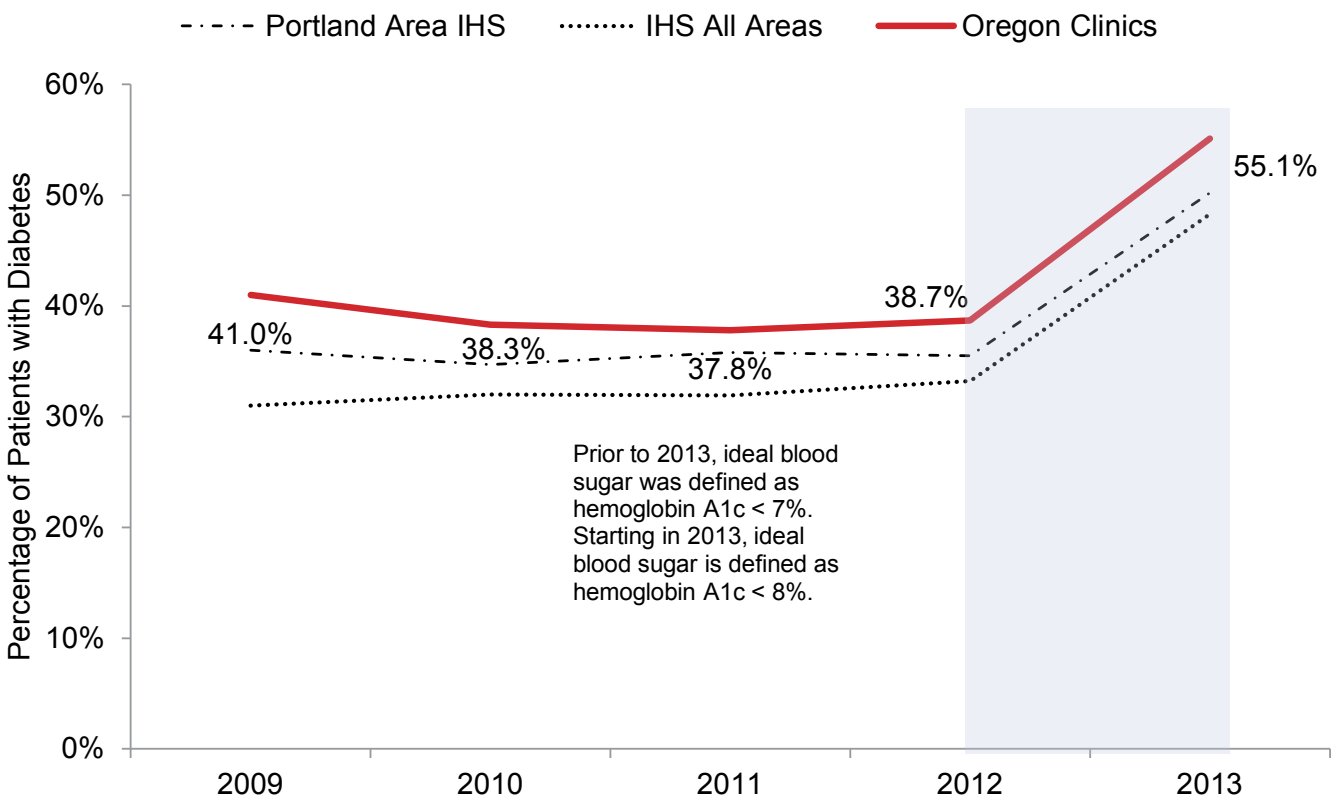
Blood sugar control, as measured by the Hemoglobin A1c, is an important indicator of how well diabetes patients are managing their disease. The U.S. goal is for 58.9% of adults with diabetes to have a hemoglobin A1c level below 7% (Healthy People 2020). Until 2012, IHS defined ideal blood sugar control as having a hemoglobin A1c level below 7%. This treatment goal was relaxed in 2013 to a hemoglobin A1c result below 8%.

From 2009 to 2012, between 38-41% of AI/AN diabetes patients seen in Oregon clinics had ideal blood sugar levels. In 2013, this increased to 55.1% as a result of the definition change. Over all years, Oregon clinics have a higher percentage of patients with controlled blood sugar compared to both the Portland Area IHS overall, national IHS average.

Data Source: Portland Area Indian Health Service.

Data Notes: The shaded area shows the year when the definition for ideal blood control changed. Data labels only shown for Oregon clinics. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 4.3: Percentage of IHS diabetes patients with ideal blood sugar control, 2009-2013.



Blood Pressure Control

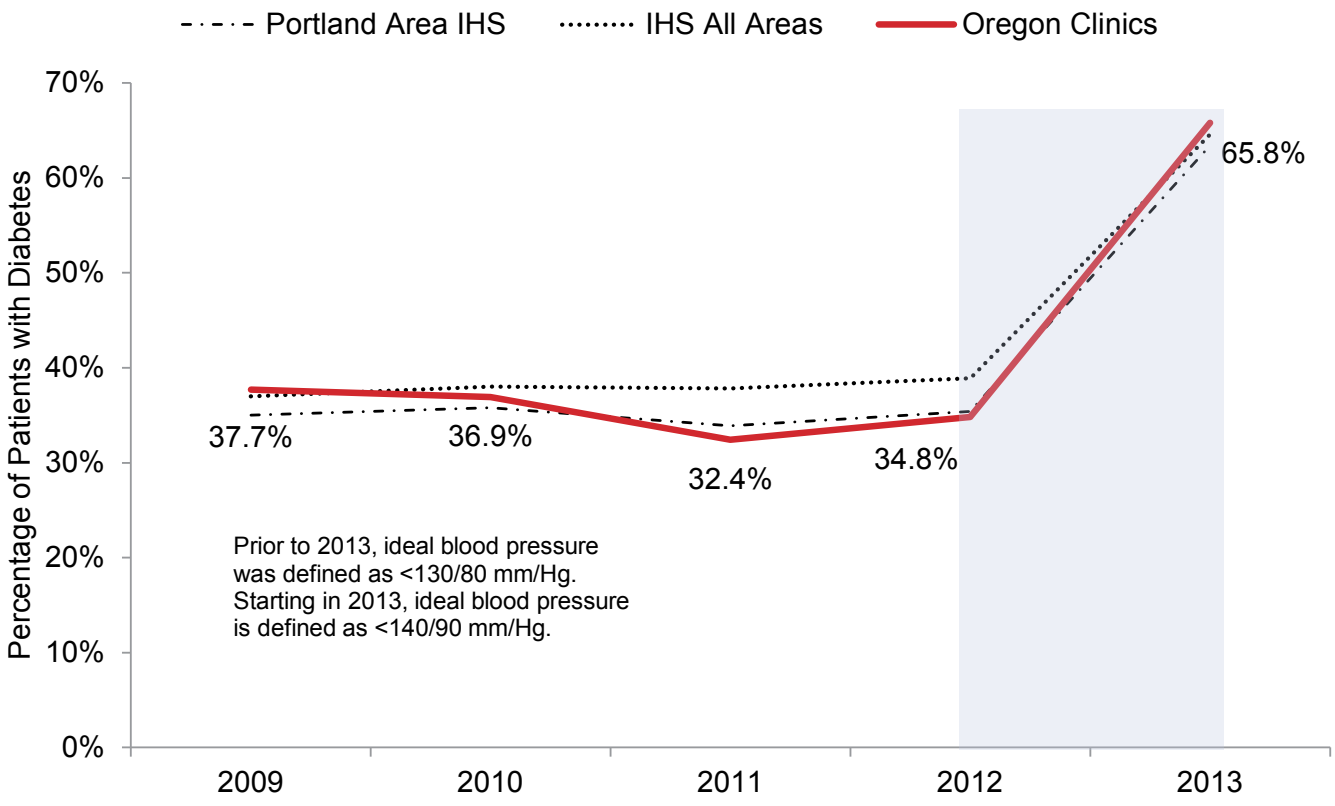
Diabetes patients have increased risks for heart disease, and can reduce these risks by managing their blood pressure. The U.S. goal is for 57% of adults with diabetes to have their blood pressure under control (Healthy People 2020). Until 2012, IHS defined ideal blood pressure control for diabetes patients as having a blood pressure level below 130/80 mm Hg. This treatment goal was relaxed in 2013 to a blood pressure level below 140/90 mm Hg.

From 2009 to 2012, approximately between 34-38% of AI/AN diabetes patients seen in Oregon clinics had ideal blood pressure levels. In 2013, this increased to 55.8% as a result of the definition change. Oregon clinics have a lower percentage of patients with controlled blood sugar compared to all IHS areas, but are approximately equal to the Portland Area IHS average.

Data Source: Portland Area Indian Health Service.

Data Notes: The shaded area shows the year when the definition for ideal blood control changed. Data labels only shown for Oregon clinics. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 4.4: Percentage of IHS diabetes patients with ideal blood pressure, 2009-2013.



Screening - LDL Cholesterol Assessment

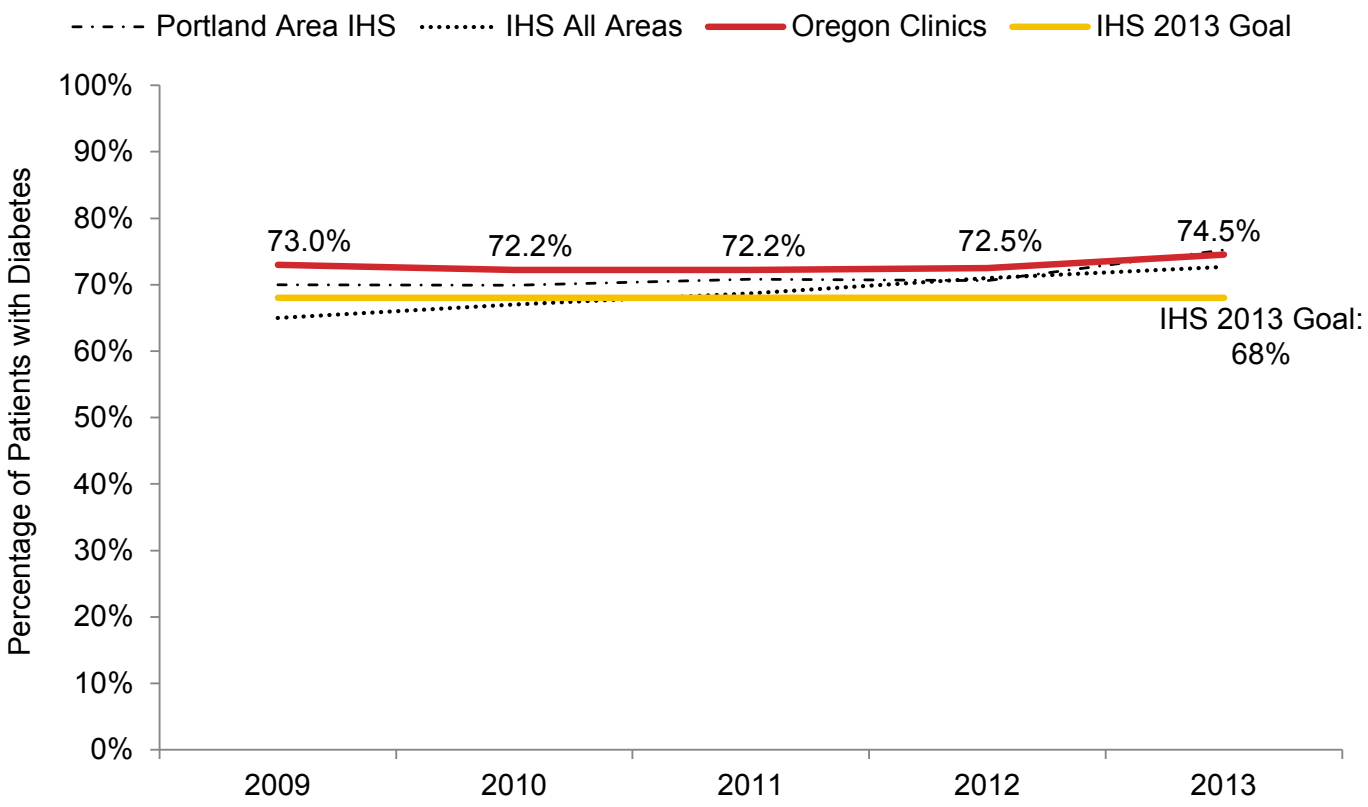
Diabetes patients are at increased risk for heart disease, kidney disease, eye problems, and other health issues. Diabetes patients can reduce their risk for these complications by receiving regular screening and monitoring. Routine physical examinations and test can help patients and their healthcare providers to manage diabetes and related health issues. IHS has performance goals to measure how many diabetes patients are examined yearly for LDL (low density lipoprotein) cholesterol (related to heart disease risk), nephropathy (related to kidney disease risk), and diabetic retinopathy (or diabetic eye disease).

LDL Cholesterol Assessment: From 2009-2012, approximately 73% of AI/AN diabetes patients seen in Oregon clinics had their LDL cholesterol levels assessed. This increased to 74.5% in 2013, which exceeded the IHS goal of 68% (Figure 4.5). Since 2009, Oregon clinics have matched or performed better than both Portland Area and national IHS patients. The national IHS average has increased since 2009, and also exceeded the 2013 goal.

Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Oregon clinics. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 4.5: Percentage of IHS diabetes patients who received an LDL assessment, 2009-2013.



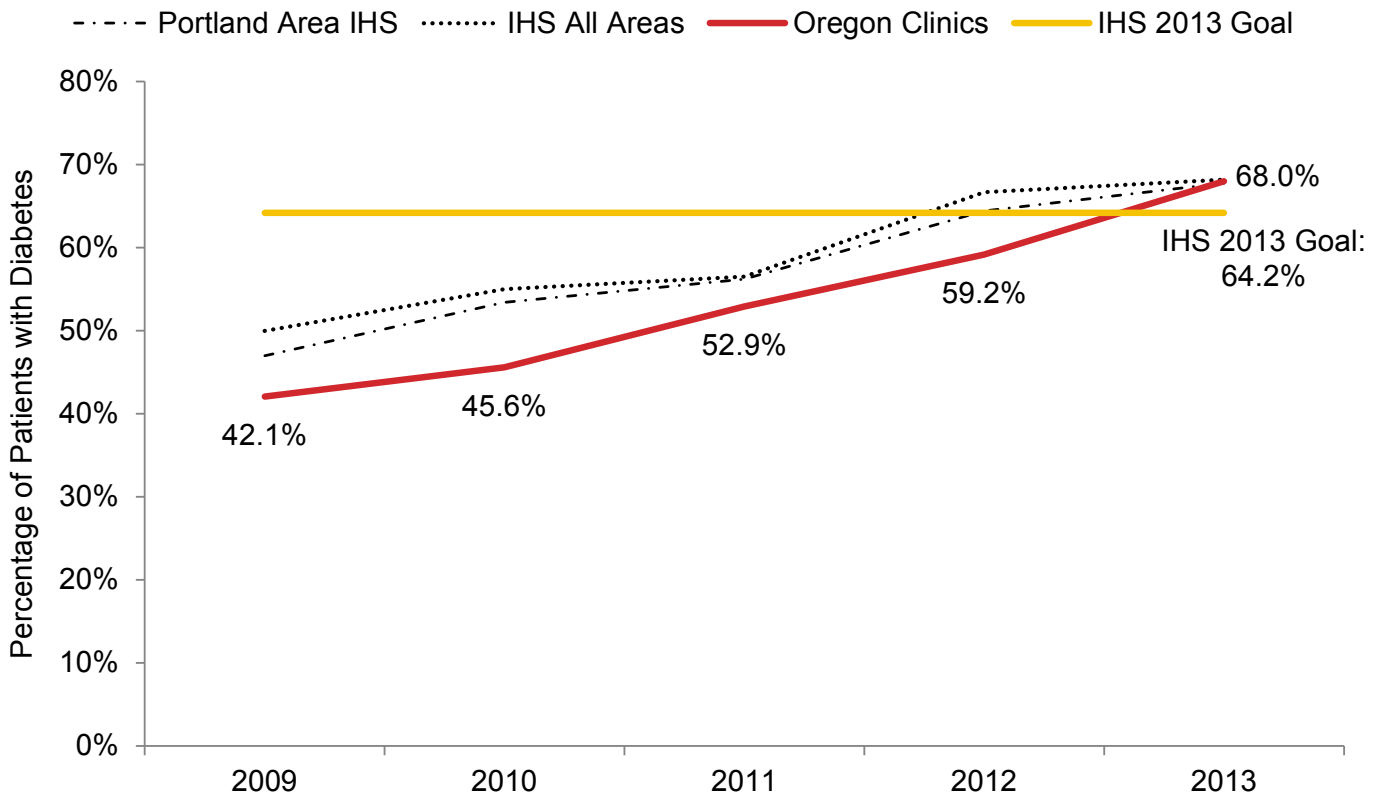
Screening - Nephropathy Assessment

Diabetic Nephropathy: The percentage of Oregon AI/AN diabetes patients who had a diabetic nephropathy assessment has increased from 42.1% in 2009 to 68% in 2013, exceeding the IHS 2013 goal of 64.2%. Until 2013, Oregon clinics have had a lower percentage of patients who received this recommended screening compared to both the Portland Area IHS and national IHS. By 2013, Oregon clinics are performing on par with both Portland Area and national IHS, all of which are exceeding the national goal.

Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Oregon clinics. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 4.6: Percentage of IHS diabetes patients who received a nephropathy assessment, 2009-2013.



Screening - Retinopathy Assessment

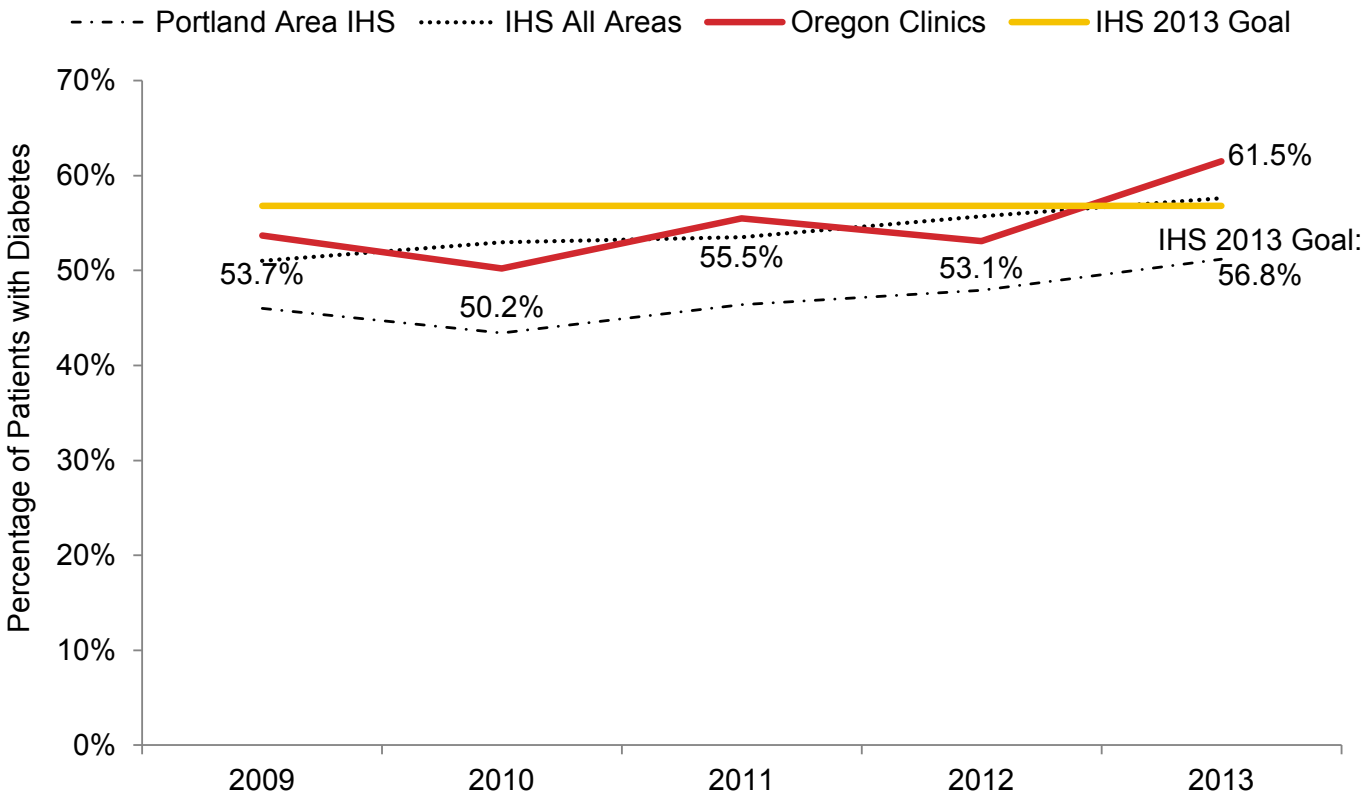
Diabetic Retinopathy: The U.S goal is for 58.7% of adults with diabetes to have had a dilated eye exam in the past year, (Healthy People 2020), and the IHS goal for 2013 was for 56.8% to have received this recommended screening.

The percentage of Oregon AI/AN diabetes patients who had a diabetic retinopathy exam has increased from 53.7% in 2009 to 61.5% in 2013. Since 2009, Oregon clinics have had a higher percentage of patients who received this recommended screening compared to the Portland Area IHS (Figure 4.7). In 2013, Oregon clinics exceeded the IHS 2013 Goal of 56.8%. The national IHS average has increased over time and met the 2013 goal for this measure.

Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Oregon clinics. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 4.7: Percentage of IHS diabetes patients who received a retinopathy assessment, 2009-2013.



Diabetes Hospitalizations

From 2010 to 2011, 1.8% of AI/AN inpatient hospitalizations in Oregon had a primary diagnosis of diabetes (with or without complications); this percentage is almost two times greater than for NHW (1.0%) (Table 4.1). Males had a higher percentage than females for both race groups, with AI/AN males having the highest percentage of hospitalizations for diabetes (2.6%). The age-adjusted hospital discharge rate for diabetes mellitus was higher for AI/AN than NHW regardless of sex, with the widest gap seen among females – the rate for AI/AN females was nearly twice that of NHW females.

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

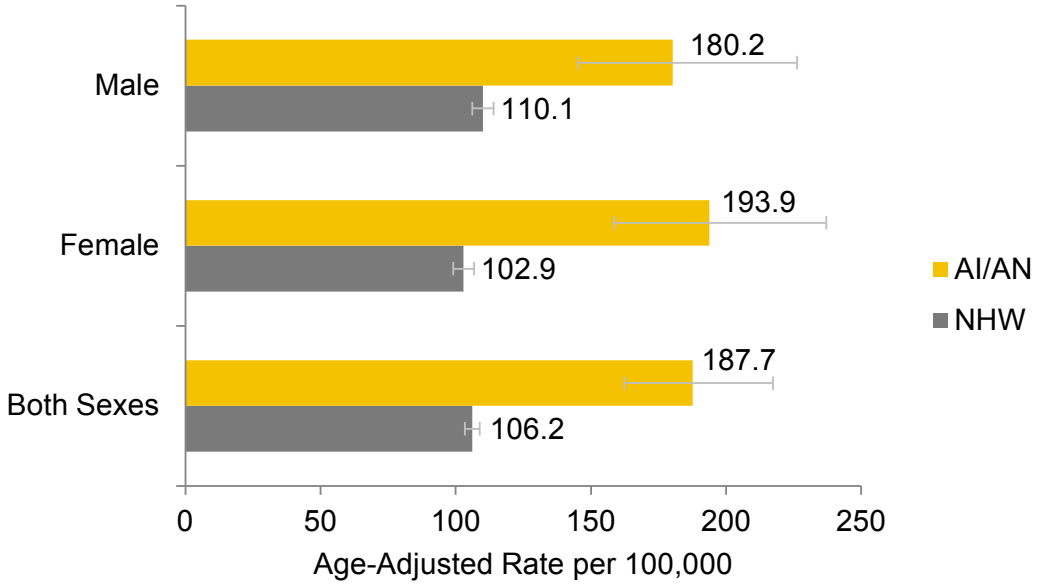
Data Notes: Data are from the Oregon Office for Health Policy and Research; race-corrected and compiled by the IDEA-NW Project, NPAIHB. AI/AN includes any mention of AI/AN in either the OR state hospital discharge data or the Northwest Tribal Registry (NTR), which is maintained by the IDEA-NW Project at NPAIHB.

Table 4.1: Inpatient hospital discharges for diabetes by race and sex, Oregon, 2010-2011.

Sex	AI/AN N† (%)	NHW N† (%)
Male	120 (2.6%)	2,830 (1.3%)
Female	85 (1.2%)	2,393 (0.8%)
Both Sexes	205 (1.8%)	5,223 (1.0%)

† 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 4.8: Age-adjusted hospital discharge rates for diabetes by race and sex, Oregon, 2010-2011.



Diabetes Mortality

From 2006-2010, diabetes was the fifth leading cause of death among AI/AN in Oregon. Figure 4.9 shows the age-adjusted death rates for diabetes among AI/AN and NHW in Oregon. AI/AN males were 23% more likely to die from the disease than AI/AN females. Compared to NHW, AI/AN diabetes death rates were 2.8 times higher (Figure 4.9). Throughout the Northwest, AI/AN in all three states had very similar diabetes death rates.

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

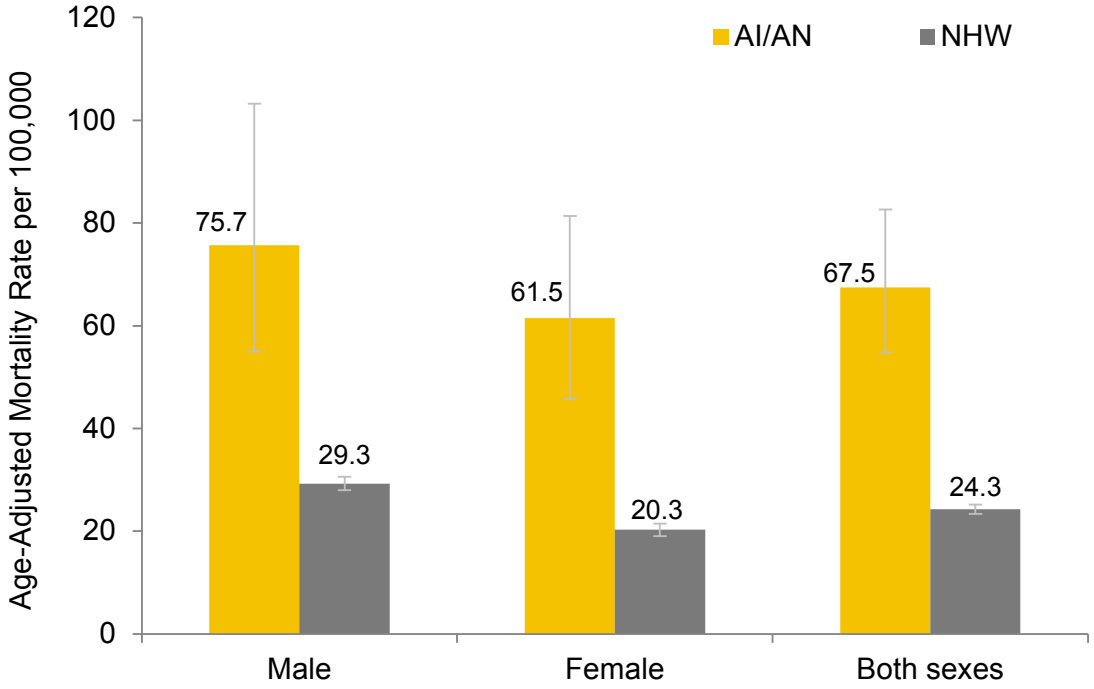
Table 4.2: Age-adjusted diabetes mortality rates by race and sex, Oregon, 2006-2010.

Sex	AI/AN Rate (95% CI)	NHW Rate (95% CI)	AI/AN vs. NHW Rate Ratio (95% CI)
Male	75.7 (55.0, 103.2)	29.3 (28.0, 30.6)	2.6 (2.0, 3.3)†
Female	61.5 (45.8, 81.3)	20.3 (19.0, 21.5)	3.0 (2.4, 3.9)†
Both Sexes	67.5 (55.8, 82.6)	24.3 (23.4, 25.2)	2.8 (2.3, 3.3)†

CI = confidence interval

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

Figure 4.9: Age-adjusted diabetes mortality rates by race and sex, Oregon, 2006-2010.



Program Spotlight: Western Tribal Diabetes Project

The WTDP assists tribal programs in tracking, reporting, and utilizing accurate data on patients with diabetes. This information is used to improve the quality of patient care, gain additional resources, and plan effective intervention programs to reduce the burden of diabetes at the local level. WTDP provides tribes with training, technical assistance, and tools so they can:

- Build a foundation to provide complete and accurate information about patients with diabetes
- Estimate the burden of disease and impact of diabetes by using an electronic diabetes register
- Improve health outcomes by using an electronic diabetes register to make informed decisions about clinical diabetes care
- Prevent diabetes in high-risk individuals.

For more information, please contact:

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Project Director

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

WTDP holds regular trainings on the Diabetes Management System, provides technical assistance with completing the Annual IHS Diabetes Audit and maintaining local diabetes registers, prepares tribe and area-level reports on patient care and outcomes, and provides information on best practices to prevent and manage diabetes. WTDP also partners with the Portland Area IHS and Nike to host Nike Native Fitness workshops at the Nike World Headquarters in Beaverton, OR. WTDP is funded by an annual 5% set-aside from the Portland Area's allocation for the Special Diabetes Program for Indians.

5. Cardiovascular Disease & Stroke

Heart disease (also known as cardiovascular disease, ischemic heart disease or coronary artery disease) is the leading cause of death in the United States. AI/AN have similar rates of self-reported and diagnosed heart disease compared to Non-Hispanic Whites (NHW) but higher rates of hospitalization and death. Risk factors for heart disease include smoking, sedentary lifestyle and obesity. Other medical conditions that increase the risk of developing heart disease include hypertension, diabetes and hyperlipidemia. Heart disease is more common in men compared to women and increases with age.

Efforts to prevent heart disease in AI/AN include smoking cessation, dietary counseling, exercise programs and control of blood pressure, blood sugar and cholesterol. The Department of Health and Human Services launched a campaign in 2011 to prevent 1 million heart attacks by 2017- the Million Hearts campaign. Many of the efforts outlined by this campaign to prevent heart disease are tracked by IHS through the Government Performance and Reporting Act. IHS is working to prevent heart disease by setting goals for the control of blood pressure, diabetes, cholesterol, and obesity, and increasing smoking cessation. Concerted effort has led to improvements in all of these risk factors in Oregon Tribes.

Despite efforts at all levels of care, mortality rates for heart disease among AI/AN in Oregon remain significantly higher than for NHW. Hospitalizations for heart diseases are also higher for Oregon AI/AN than for NHW. Heart disease management and assessment is important for heart disease patients to monitor their disease and inform lifestyle and medical interventions. Stroke mortality was similar for AI/AN and NHW. Of adult AI/AN IHS patients with heart disease, 38.1% received a comprehensive cardiovascular disease (CVD) assessment in 2013, which was above the IHS 2013 goal of 32.3% Since 2010, across all IHS Areas, including Oregon, CVD assessment for AI/AN heart disease patients has increased.

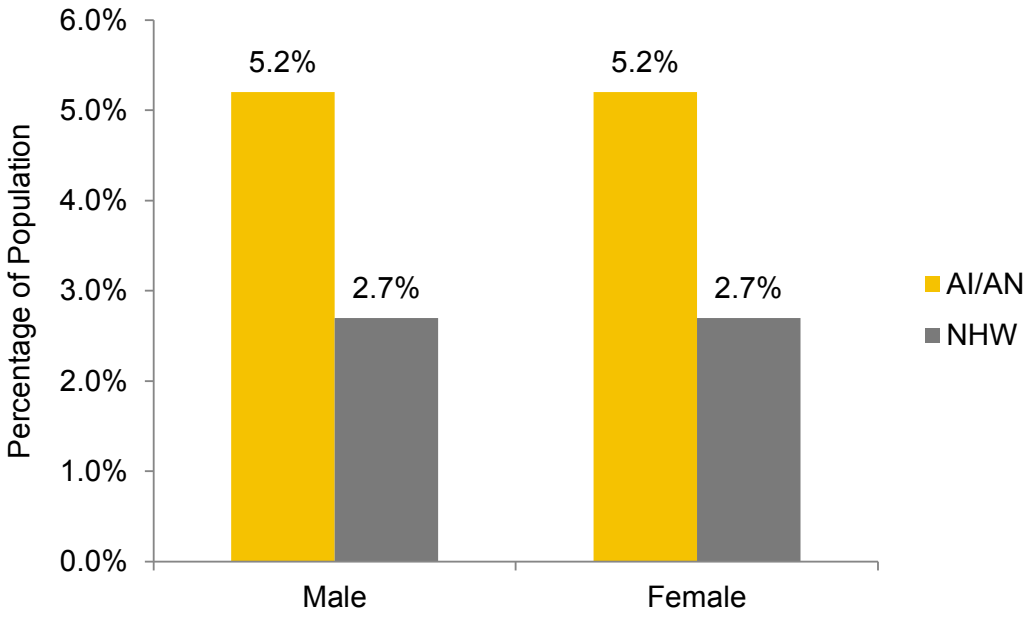
Self-Reported Heart Disease

Figure 5.1 shows the percentage of AI/AN and NHW adults who had ever been told they had angina or coronary heart disease by a health care provider. From 2006-2012, AI/AN and NHW males in Oregon had similar rates of self-reported heart disease (5%). The prevalence of heart disease in AI/AN females was also similar to that in NHW females in Oregon (3%).

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 shown below the figures are the unweighted number of people who answered this question for the indicated years.

Figure 5.1: Prevalence of self-reported heart disease by race and sex, Oregon, 2006-2012.



Sample sizes (n): AI/AN males=372; AI/AN females=502; NHW males=27,667; NHW females=2,349.

Heart Disease Management

IHS has a performance goal for the percentage of adult heart disease patients who receive a comprehensive cardiovascular disease (CVD) assessment. Prior to 2012, IHS measured the percentage of AI/AN patients ages 22 and older with ischemic heart disease who received a comprehensive CVD assessment. In 2013, IHS changed the definition to the percentage of AI/AN patients ages 22 and older with coronary heart disease who received a CVD assessment. A comprehensive CVD assessment includes having the following:

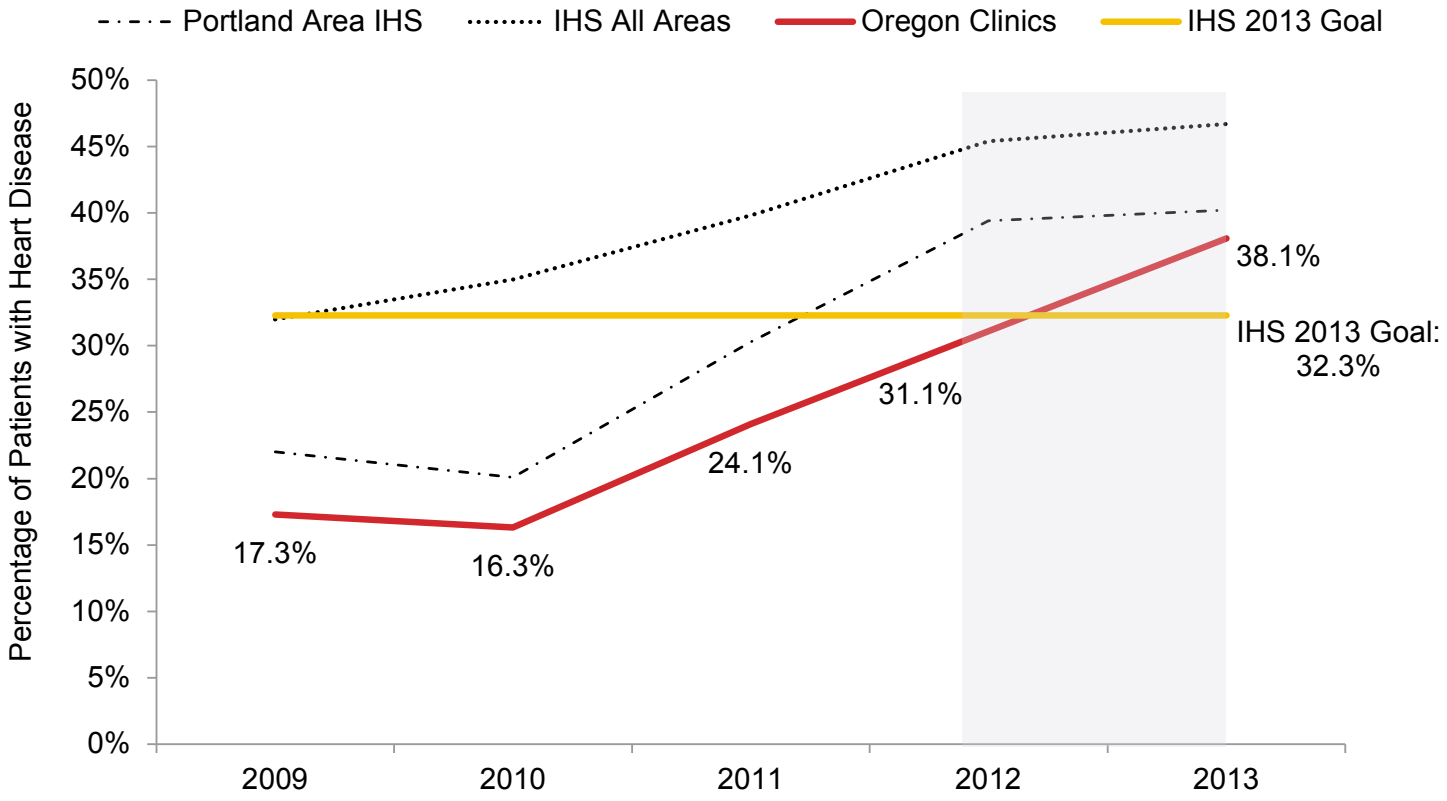
- blood pressure measured at least twice in the past two years;
- low-density lipoprotein (LDL) cholesterol measured in the past year;
- tobacco use screened in the past year;
- BMI calculated in the past year; and,
- lifestyle adaptation counseling (e.g., nutrition counseling, exercise education) in past year.

Since 2010, the percentage of at-risk patients who received a comprehensive CVD assessment has increased for Oregon clinics, the Portland Area IHS, and the national IHS (Figure 5.2). In 2013, all three areas exceeded the IHS goal of 32.3%.

Data Source: Portland Area Indian Health Service.

Data Notes: The shaded area shows the year when the definition for comprehensive CVD assessment changed. Data labels only shown for Oregon clinics. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 5.2: Percentage of IHS AI/AN patients (ages 22 years and older) with heart disease who received a comprehensive CVD assessment.



Hospitalizations for Hypertension

From 2010 to 2011, there were 31 inpatient hospital discharges for hypertension among AI/AN in Oregon. The percentage of AI/AN hospitalizations with a principal diagnosis of hypertension was similar to that of NHW (Table 5.1). AI/AN of both sexes had slightly lower hospitalization rates for hypertension than their NHW counterparts, though these differences were not statistically significant (Figure 5.3).

Data Source: Oregon state hospital discharge data (Oregon Office for Health Policy and Research), 2010-2011, corrected for misclassified AI/AN race by the IDEA-NW Project.

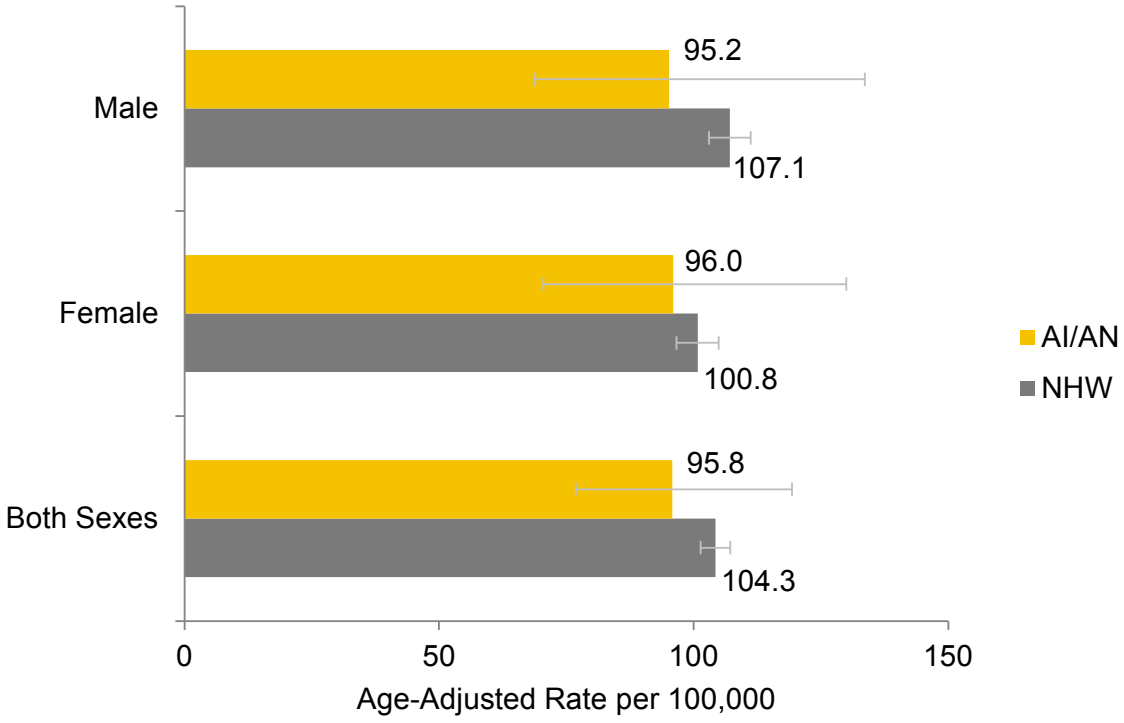
Data Notes: Principal diagnosis codes were categorized using the Agency for Healthcare Research and Quality's Clinical Classification Software. The following level-2 principal diagnosis codes were included: 7.1 (hypertension).

Table 5.1: Inpatient hospital discharges for hypertension by race and sex, Oregon, 2010-2011.

Sex	AI/AN N† (%)	NHW N† (%)
Male	14 (0.3%)	656 (0.3%)
Female	17 (0.2%)	799 (0.3%)
Both Sexes	31 (0.3%)	1,455 (0.3%)

† 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 5.3: Age-adjusted hospital discharge rates for hypertension by race and sex, Oregon, 2010-2011.



Hospitalizations for Heart Diseases

From 2010 to 2011, there were 700 inpatient hospital discharges for heart diseases among AI/AN in Oregon. The percentage of total hospitalizations that were related to heart diseases was lower for AI/AN compared to NHW (6.0% vs. 9.6% for both sexes, Table 5.2). The age-adjusted hospital discharge rate for heart diseases was higher for AI/AN compared to NHW overall (Figure 5.4). By sex, AI/AN males had hospitalization rates similar to NHW males, while AI/AN females had significantly higher hospitalization rates compared to their NHW counterparts.

Data Source: Oregon state hospital discharge data (Oregon Office for Health Policy and Research), 2010-2011, corrected for misclassified AI/AN race by the IDEA-NW Project.

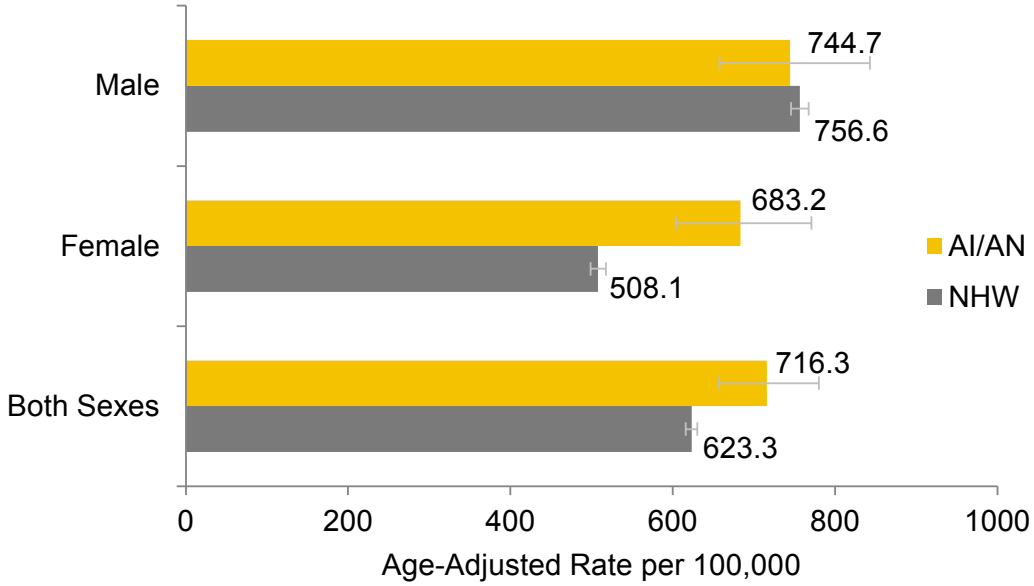
Data Notes: Principal diagnosis codes were categorized using the Agency for Healthcare Research and Quality's Clinical Classification Software. The following level-2 principal diagnosis codes were included: 7.1 (hypertension).

Table 5.2: Inpatient hospital discharges for diseases of the heart by race and sex, Oregon, 2010-2011.

Sex	AI/AN N† (%)	NHW N† (%)
Male	385 (8.4%)	28,305 (12.6%)
Female	315 (4.5%)	22,655 (7.5%)
Both Sexes	700 (6.0%)	50,960 (9.6%)

† 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 5.4: Age-adjusted hospital discharge rates for diseases of the heart by race and sex, Oregon, 2010-2011.



Hospitalizations for Cerebrovascular Disease

Cerebrovascular disease (which includes stroke) was the principal diagnosis for 1.6% (N=231) of hospitalized AI/AN, which was lower compared to NHW (2.6% of all NHW inpatient hospitalizations, Table 5.3). Hospitalization rates for cerebrovascular disease were similar for AI/AN males and NHW males; for AI/AN females, the hospitalization rate was significantly higher (Figure 5.5).

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

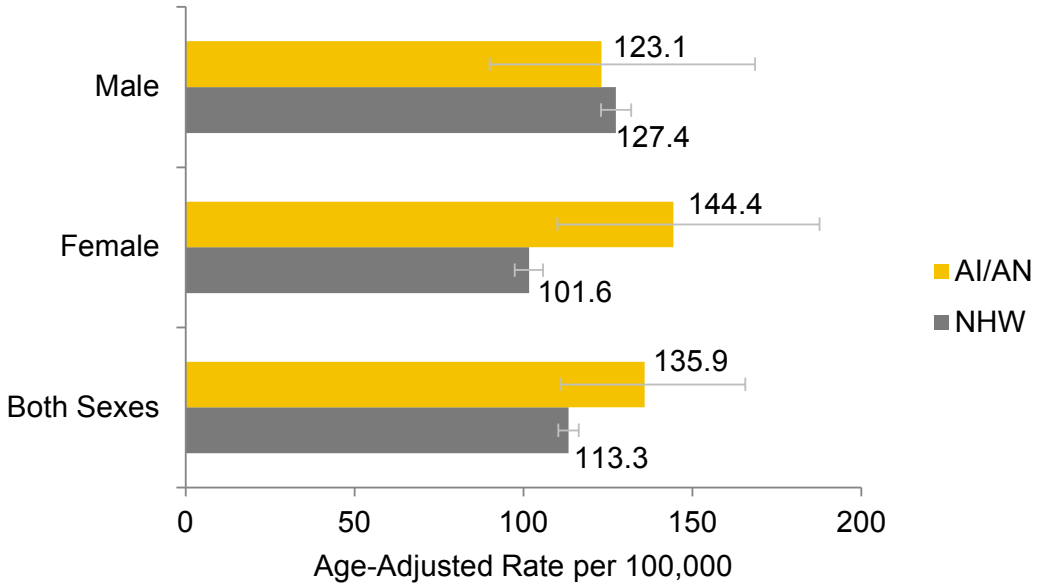
Data Notes: Principal diagnosis codes were categorized using the Agency for Healthcare Research and Quality's Clinical Classification Software. The following level-2 principal diagnosis codes were included: 7.3 (cerebrovascular disease [stroke]).

Table 5.3: Inpatient hospital discharges for cerebrovascular disease by race and sex, Oregon, 2010-2011.

Sex	AI/AN N† (%)	NHW N† (%)
Male	74 (1.6%)	6,316 (2.8%)
Female	87 (1.2%)	6,408 (2.1%)
Both Sexes	161 (1.4%)	12,724 (2.4%)

† 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 5.5: Age-adjusted hospital discharge rates for cerebrovascular disease by race and sex, Oregon, 2010-2011.



Heart Disease Mortality

Heart disease was the second leading cause of death among Oregon AI/AN. Figure 5.6 shows the age-adjusted death rates for heart disease among AI/AN and NHW in Oregon. Male AI/AN were 38% more likely to die of the disease than females. Compared to NHW, AI/AN heart disease death rates were about 24% higher. Among AI/AN in the Northwest, those living in Oregon had the lowest heart disease death rates.

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

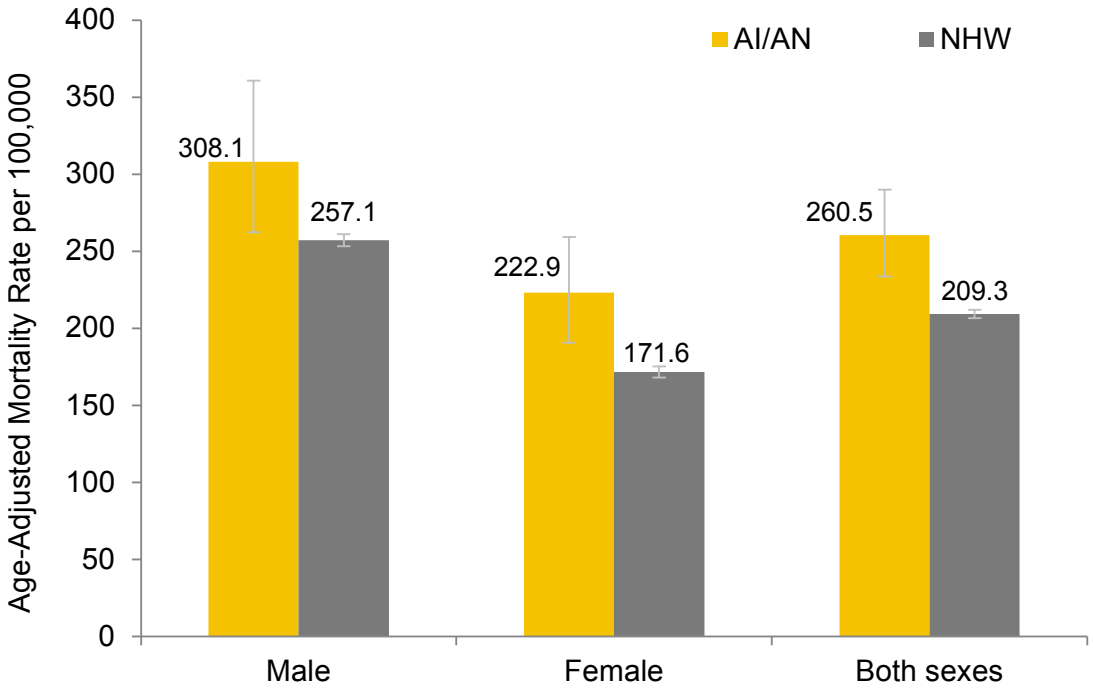
Table 5.4: Age-adjusted heart disease mortality rates by race and sex, Oregon, 2006-2010.

Sex	AI/AN Rate (95% CI)	NHW Rate (95% CI)	AI/AN vs. NHW Rate Ratio (95% CI)
Male	308.1 (262.3, 360.8)	257.1 (253.3, 260.9)	1.2 (1.1, 1.4) †
Female	222.9 (190.7, 259.3)	171.6 (167.9, 175.3)	1.3 (1.1, 1.5) †
Both Sexes	260.5 (233.5, 289.9)	209.3 (206.6, 212.0)	1.2 (1.1, 1.4) †

CI = confidence interval

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

Figure 5.6: Age-adjusted heart disease mortality rates by race and sex, Oregon, 2006-2010.



Stroke Mortality

Stroke was the seventh leading cause of death among Oregon AI/AN. Figure 5.7 shows the age-adjusted death rates for stroke among AI/AN and NHW in Oregon. Male AI/AN were about 20% more likely to die of the disease than females. Compared to NHW, AI/AN stroke death rates were about 22% higher, however this differences was not statistically significant. Among AI/AN in the Northwest, those living in Oregon fell in the middle – rates were higher in Washington, but lower in Idaho.

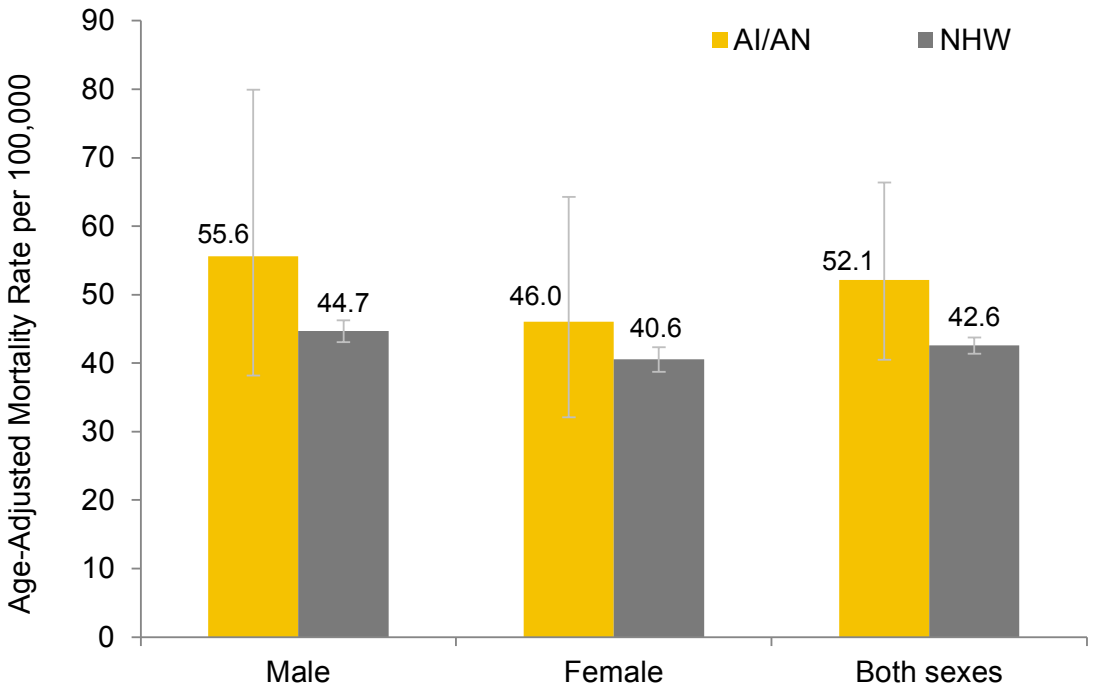
Data Source: Oregon state death certificates, 2006-2010, corrected for misclassified AI/AN by the IDEA-NW Project.

Table 5.5: Age-adjusted stroke 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	55.6 (38.2, 80.0)	44.7 (43.1, 46.2)	1.2 (0.9, 1.7)
Female	46.0 (32.1, 64.3)	40.6 (38.7, 42.4)	1.1 (0.8, 1.6)
Both Sexes	52.1 (40.5, 66.3)	42.6 (41.4, 43.8)	1.2 (1.0, 1.5)

CI = confidence interval
† Indicates a statistically significant difference (p<.05)

Figure 5.7: Age-adjusted stroke mortality rates by race and sex, Oregon, 2006-2010.



6. Cancer

Cancer is the second leading cause of death for AI/AN In the Northwest and nationwide. Cancer occurs when cells in the body begin to grow abnormally and spread throughout the body. The severity, progression, and the ability to screen for and treat cancer often depend on the place in the body where the abnormal growth first occurs. Some cancer sites (such as lung, breast, and prostate cancers) are relatively common, while others are rare. While there are many risk factors for cancer, there are also many strategies to reduce the risk for developing cancer, and to improve survival and quality of life for cancer patients.

Perhaps the most important strategy to reduce cancer mortality is early detection. The primary clinical tool to dectect cancer early is by routine cancer screening tests. Cancer screening tests can detect cancer in its early stages, which can improve treatment outcomes and survival for cancer patients. IHS tracks those cancers for which valid screening tests exist (cervical, breast, and colorectal cancers) as part of its reporting for the Government Performance Reporting Act (GPRA).

In Oregon, screening rates for breast and cervical cancers increased between 2009 and 2013. IHS began tracking colorectal cancer (CRC) screening in 2006 and initiated a CRC Screening Task Force in 2007 to support improvement in CRC screening rates. The impact of this national and regional effort is seen in improvements in CRC screening from 2009 to 2012.

The most common cancer sites for AI/AN in Oregon are lung, breast, prostate, blood, and colorectal cancers. Cancer incidence rates for AI/AN are similar to rates for NHW in the state and have remained relatively stable since 1996. However, compared to NHW in the state, a smaller percentage of AI/AN cancer patients have their cancers detected in the earliest stages. A diagnosis made at late stages of illness when the cancer may already have spread is less responsive to treatment and leads to increased mortality, which is also seen among AI/AN in Oregon, with mortality rates 30% higher than those of NHW.

This section presents data on cancer screening, incidence, stage at diagnosis and mortality for AI/AN in Oregon.

Cancer Screening:
Cervical Cancer

Pap screenings are used to detect early signs of cervical cancer. The U.S. goal is for 93% of women (ages 21-65) to receive a cervical cancer screening at least once every three years (Healthy People 2020).

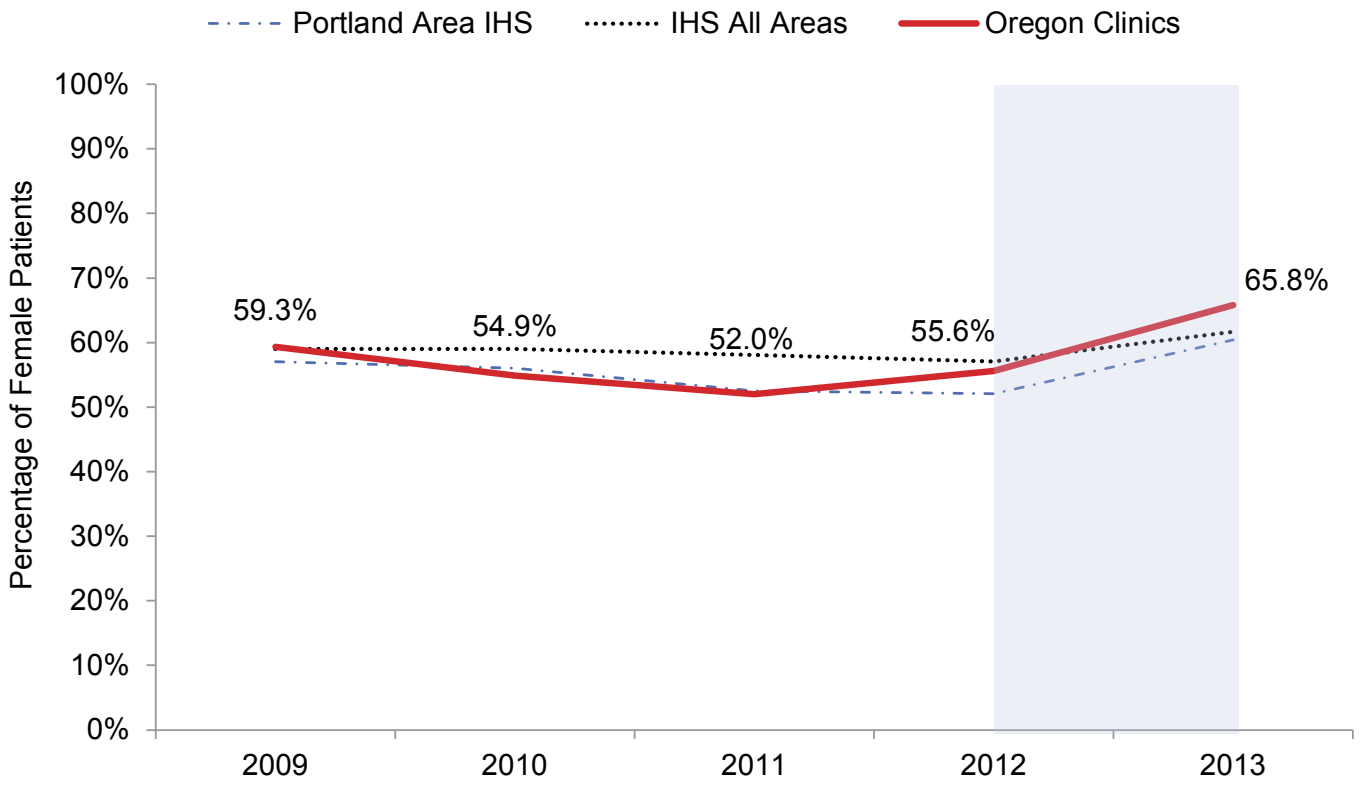
Until 2012, IHS measured the percentage of female AI/AN patients ages 21-64 who received a Pap screen within the past three years. The 2012 IHS goal for this measure was 59.5%. In 2013, IHS changed the definition for this measure to the percentage of women ages 25-64 who received a Pap screening within the previous four years.

Pap screening rates decreased within the Oregon patient population from 2009 to 2011, but have since increased to 55.6% in 2012 (Figure 6.1). In 2013, Oregon clinics had a higher screening rate compared to the Portland Area and national IHS. In 2012, the screening rates for all three areas were below the 2012 IHS goal of 59.5%. The increase in rates across all areas between 2012 and 2013 is likely due to the change in this measure's definition.

Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Oregon clinics. The shaded area shows the year when the definition for pap screening rates changed. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 6.1: Pap screening rates for IHS female patients, 2009-2013.



Breast Cancer

Mammograms are an important tool for detecting breast cancer early. Women ages 50-64 should receive a mammogram at least once every two years. The U.S. goal is for 81.1% of women (ages 50-74) to receive a mammogram at least once every two years (Healthy People 2020).

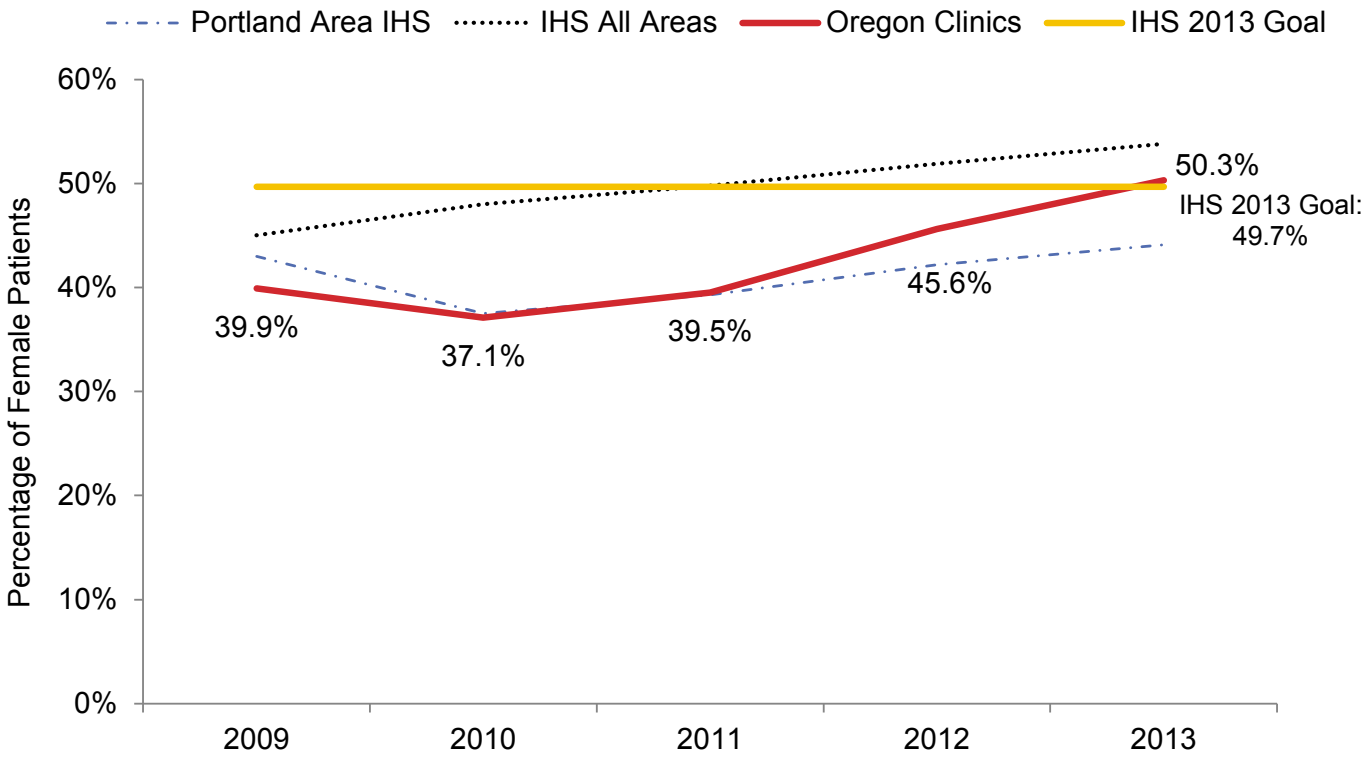
IHS tracks the percentage of AI/AN female patients ages 52-64 who have received at least one mammogram in the past two years. The 2013 goal for the measure was 49.7%.

The mammogram screening rate in the national IHS patient population has steadily increased since 2009 (Figure 6.2). The mammogram screening rate for Oregon clinics has increased since 2010, and was higher than the Portland Area IHS rate in recent years. Oregon clinics and the national IHS met the 2013 goal for this measure.

Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Oregon clinics. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 6.2: Mammogram screening rates for IHS female patients, 2009-2013.



Colorectal Cancer

Colorectal cancer screenings can identify colorectal cancer in its early stages and improve treatment outcomes. The U.S. goal is for 70.5% of adults (ages 50-75) to be screened for colorectal cancer by (Healthy People 2020).

Up until 2012, IHS tracked the percentage of patients ages 51-80 who received any of the following screenings:

- fecal occult blood test or fecal immunochemical test during the past year
- double-contrast barium enema (DCBE)
- flexible sigmoidoscopy in the past five years
- colonoscopy in the past ten years

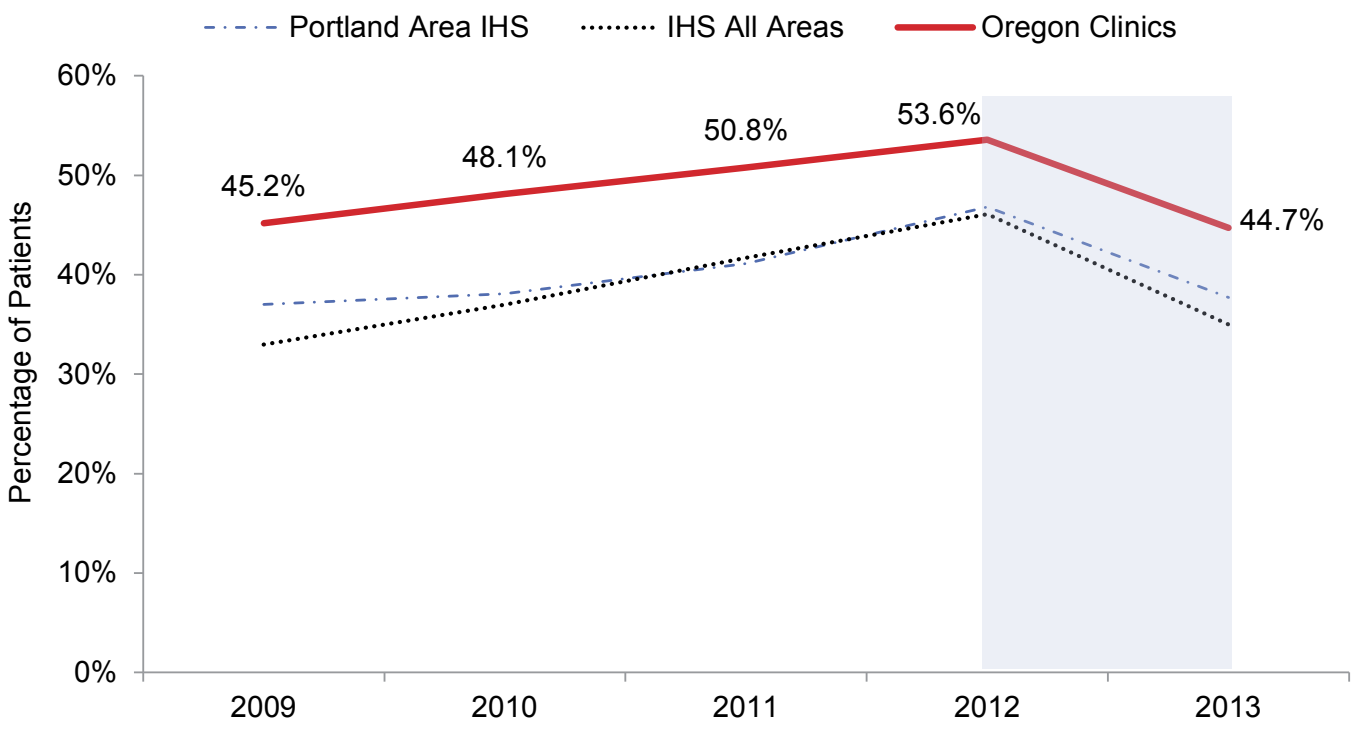
In 2013, IHS changed this measure's definition to the percentage of patients ages 50-75 who received a colorectal cancer screening and eliminated DCBE as a screening test.

Colorectal cancer screening rates increased across all areas from 2009-2012 (Figure 6.3). The screening rate for Oregon clinics has been consistently higher than screening rates for the Portland Area and national IHS. All three areas exceeded the 2012 goal of 43.2%. The drop in screening rates between 2012 and 2013 is likely due to the change in this measure's definition.

Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Oregon clinics. The shaded box shows the year when the definition for colorectal cancer screening changed. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 6.3: Colorectal cancer screening rates for IHS patients, 2009-2013.



Leading Cancer Incidence Sites

Table 6.1 shows the leading cancer incidence sites for AI/AN males and females in Oregon. From 2006-2011, there were 520 newly diagnosed cancers for AI/AN males and 612 newly diagnosed cancers for AI/AN females. The most common cancer sites for AI/AN men were cancers of the lung, prostate, and blood. Breast cancer was the most common cancer site for AI/AN women, followed by lung cancer and blood cancers.

Data Source: Oregon State Cancer Registry (OSCaR), 2006-2011, corrected for misclassified AI/AN race by the IDEA-NW Project.

Data Notes: Incidence counts and rates include invasive cancers and in situ urinary bladder cancer.

Table 6.1: Leading cancer incidence sites for AI/AN by sex, Oregon, 2006-2010.

Rank	Males	N (%)	Females	N (%)
1	Lung & Bronchus	90 (17.3%)	Breast*	159 (26.0%)
2	Prostate	87 (16.7%)	Lung & Bronchus	99 (16.2%)
3	Blood Cancers†	57 (11.0%)	Blood Cancers†	41 (6.7%)
4	Colorectal*	55 (10.6%)	Colorectal*	55 (9.0%)
5	Liver & Intrahepatic Bile Duct	30 (5.8%)	Uterine	36 (5.9%)
6	Kidney & Renal Pelvis	27 (5.2%)	Kidney & Renal Pelvis	29 (4.7%)
7	Bladder	22 (4.2%)	Liver & Intrahepatic Bile Duct Pancreas	18 (2.9%)
8	Pancreas	20 (3.8%)	Cervix* Melanoma Thyroid	17 (2.8%)
Total	All Invasive Cancers	520 (100.0%)	All Invasive Cancers	612 (100.0%)

* Screenable cancers

† Blood cancers include leukemia, Hodgkin lymphoma, non-Hodgkin lymphoma, and multiple myeloma

Cancer Incidence Rates

From 2006-2011, AI/AN males in Oregon had a lower overall cancer incidence rate than NHW in the state. The rate for AI/AN females was similar to the rate for NHW females (Table 6.2). For both races, males had higher cancer incidence rates than females, though the gap between sexes was smaller for AI/AN.

Figure 6.4 shows the age-adjusted incidence rates for most common cancer sites among AI/AN in Oregon, with comparisons to NHW. AI/AN had significantly lower rates of prostate cancers than NHW in the state, and had significantly higher rates of lung and liver/bile duct cancers. The rate of lung cancer was 32% higher for AI/AN. The AI/AN rate for liver and intrahepatic bile duct cancers was 2.4 times higher than the NHW rate.

Data Source: Oregon State Cancer Registry (OSCaR), 2006-2011, corrected for misclassified AI/AN race by the IDEA-NW Project.

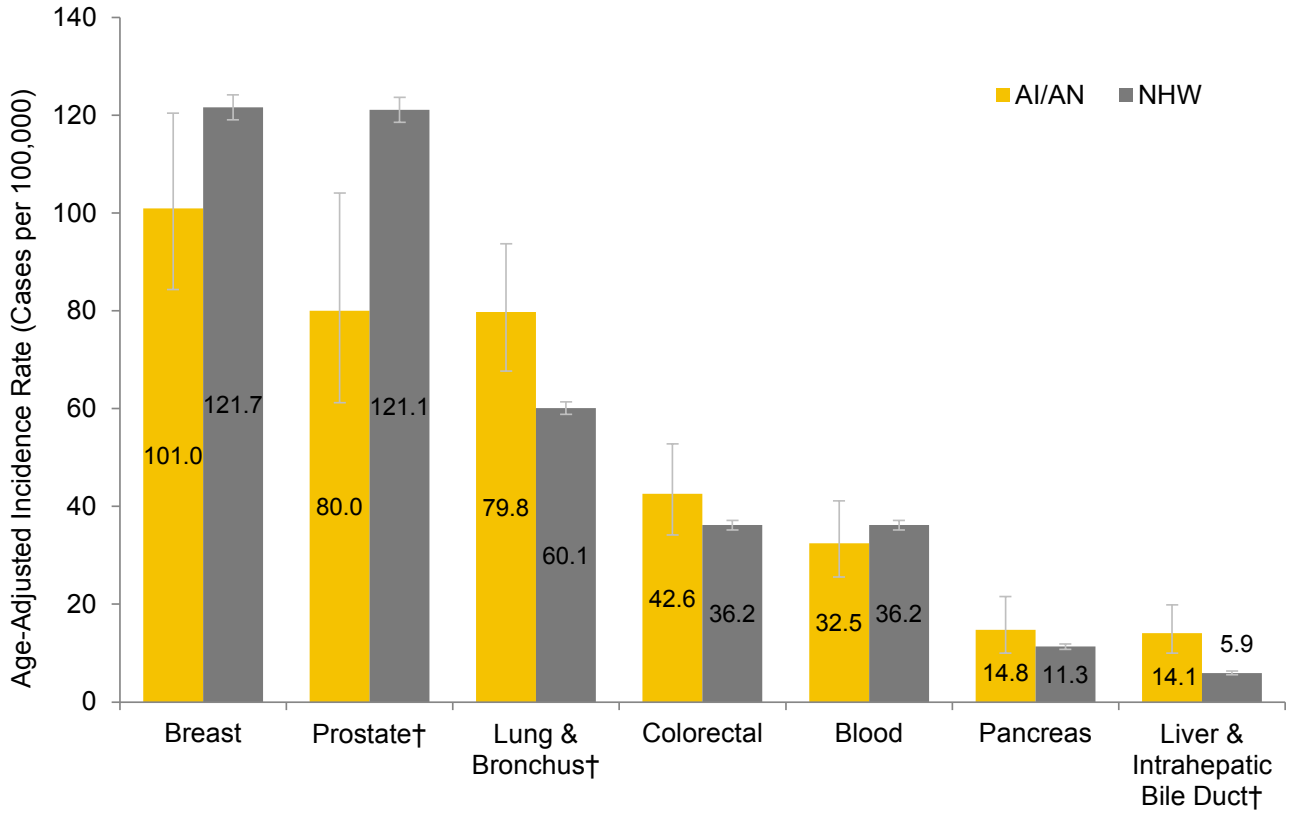
Data Notes: Incidence counts and rates include invasive cancers and in situ urinary bladder cancer.

Table 6.2: Cancer incidence 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	421.4 (379.6, 467.9)	463.4 (458.5, 468.3)	0.9 (0.83, 0.99)†
Female	416.1 (380.5, 454.6)	405.9 (401.2, 410.6)	1.0 (0.95, 1.11)
Both Sexes	414.2 (387.4, 442.7)	429.4 (426.0, 432.7)	1.0 (0.91, 1.02)

CI = confidence interval
† Indicates a statistically significant difference (p<.05).

Figure 6.4: Age-adjusted incidence rates for leading cancer sites by race, Oregon, 2006-2010.



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

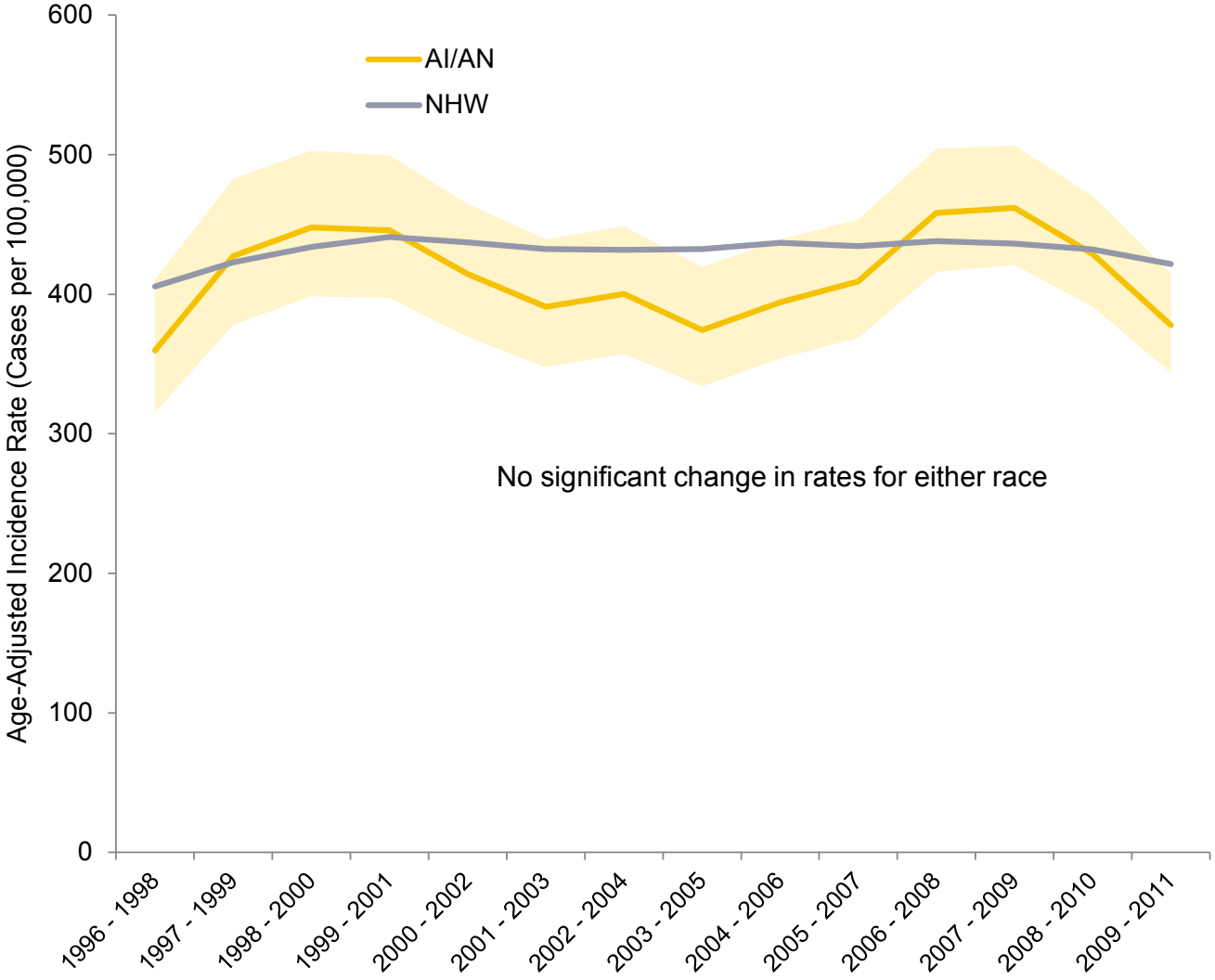
Cancer Incidence Trends

Figure 6.5 shows trends in age-adjusted cancer incidence rates for AI/AN and NHW in Oregon. From 1996-2011, there was no observable upward or downward trend for AI/AN or NHW. For most years, AI/AN incidence rates have been similar to or slightly lower than NHW rates.

Data Source: Oregon State Cancer Registry (OSCaR), 1996-2011, corrected for misclassified AI/AN race by the IDEA-NW Project.

Data Notes: Incidence counts and rates include invasive cancers and in situ urinary bladder cancer.

Figure 6.5: Age-adjusted cancer incidence rates, three-year rolling averages, by race, Oregon, 1996-2011.



Stage at Diagnosis

Stage at diagnosis describes the extent to which a cancer has spread in the body. In most cases, cancers that are diagnosed at an earlier stage are less severe and easier to treat. Cancer registries use five main categories to describe stage at diagnosis:

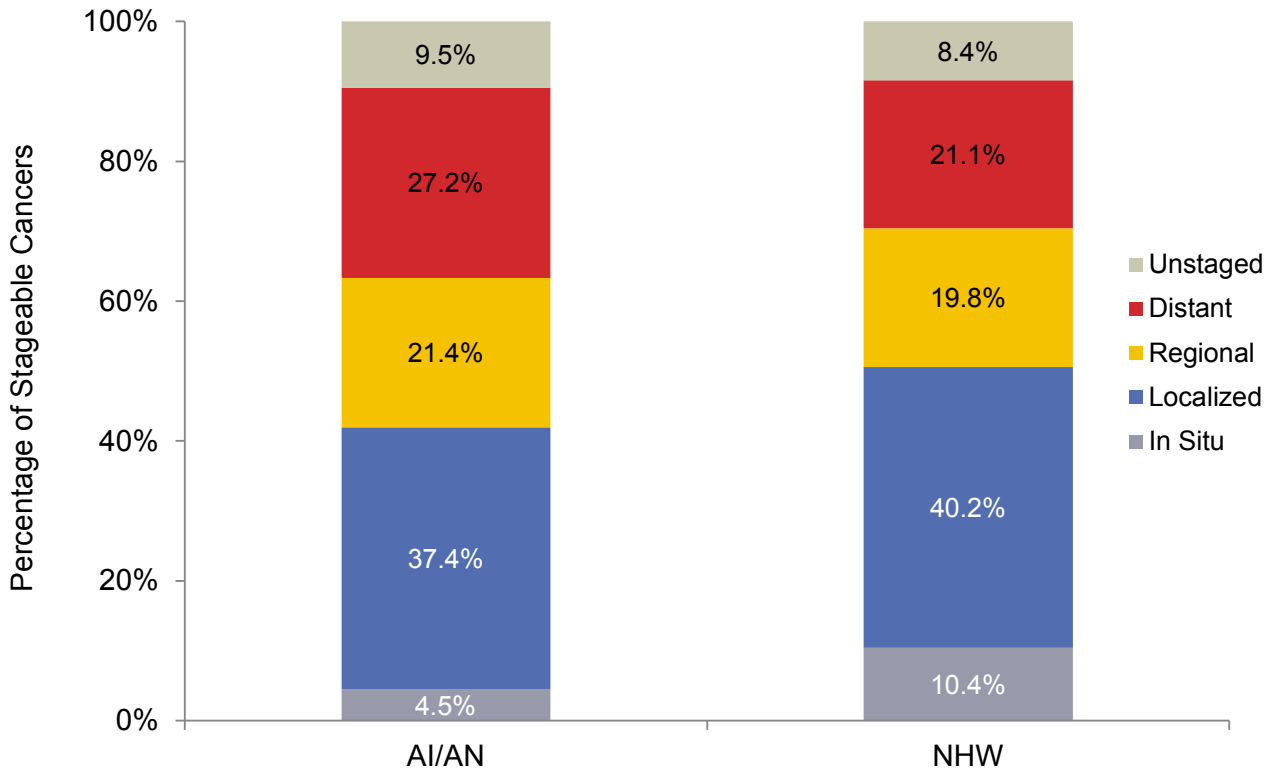
- In-situ: Cancer cells are only present in the layer of cells in which they developed
- Localized: Cancer cells are only present in the organ where the cancer began
- Regional: Cancer cells have spread beyond the primary organ to nearby tissues, organs, or lymph nodes
- Distant: Cancer cells have spread to distant tissues, organs, or lymph nodes
- Unstaged: Not enough information to determine the stage

Compared to NHW in the state, a smaller proportion of AI/AN in Oregon are diagnosed during the earlier stages of their cancers (Figure 6.6). From 2006-2011, less than 5% of cancers among AI/AN were diagnosed during the earliest (in situ) stage of cancer, compared to 10.4% of cancers among NHW. About 27% of AI/AN cancers and 21% of NHW cancers were diagnosed when the cancer had spread to distant organs and tissues.

Data Source: Oregon State Cancer Registry (OSCaR), 2006-2011, corrected for misclassified AI/AN race by the IDEA-NW Project.

Data Notes: Incidence counts and rates include invasive cancers and in situ urinary bladder cancer.

Figure 6.6: Stage at diagnosis for incident cancer cases by race, Oregon, 2006-2011.



Leading Cancer Mortality Sites

Table 6.3 shows the leading cancer mortality sites for AI/AN males and females in Oregon. From 2006-2012, lung cancer was the most common cause of cancer deaths for AI/AN in the state, accounting for 25.7% of cancer deaths among males and 28.5% of cancer deaths among females. Blood cancers were the second leading cause of cancer deaths for AI/AN males, followed by colorectal and prostate cancers. Breast cancer was the second leading cause of cancer deaths for AI/AN females, followed by colorectal and blood cancers. It is notable that two of the three screenable cancers were among the top three causes of cancer mortality.

Data Source: Oregon state death certificates, 2006-2012, corrected for misclassified AI/AN race by the IDEA-NW Project.

Data Notes: Mortality rates exclude deaths from benign cancers.

Table 6.3: Leading cancer mortality sites for AI/AN by sex, Oregon, 2006-2012.

Rank	Males	N (%)	Females	N (%)
1	Lung & Bronchus	78 (25.7%)	Lung & Bronchus	90 (28.5%)
2	Blood Cancers†	34 (11.2%)	Breast*	43 (13.6%)
3	Colorectal*	27 (8.9%)	Colorectal*	30 (9.5%)
4	Prostate	26 (8.6%)	Blood Cancers†	19 (6.0%)
5	Liver & Intrahepatic Bile Duct	22 (7.2%)	Pancreas	18 (5.7%)
6	Pancreas	21 (6.9%)	Ovary	13 (4.1%)
7	Kidney & Renal Pelvis	14 (4.6%)	Liver & Intrahepatic Bile Duct	10 (3.2%)
Total	All Invasive Cancers	304 (100.0%)	All Invasive Cancers	316 (100.0%)

* Screenable cancers

† Blood cancers include leukemia, Hodgkin lymphoma, non-Hodgkin lymphoma, and multiple myeloma

Cancer Mortality Rates

From 2006-2012, AI/AN in Oregon had higher cancer mortality rates compared to NHW in the state (Table 6.4). AI/AN males had a mortality rate that was 20% higher than their NHW counterparts, and AI/AN females had a rate that was 36% higher than NHW females. For both races, the cancer mortality rate for males was higher than the rate for females.

For many leading cancer sites, AI/AN had higher cancer mortality rates than NHW in Oregon, though the only statistically significant differences were for lung and liver cancers (Figure 6.7). The largest disparity was for liver cancer; the rate for AI/AN was nearly twice the rate for NHW.

Data Source: Oregon state death certificates, 2006-2012, corrected for misclassified AI/AN race by the IDEA-NW Project.

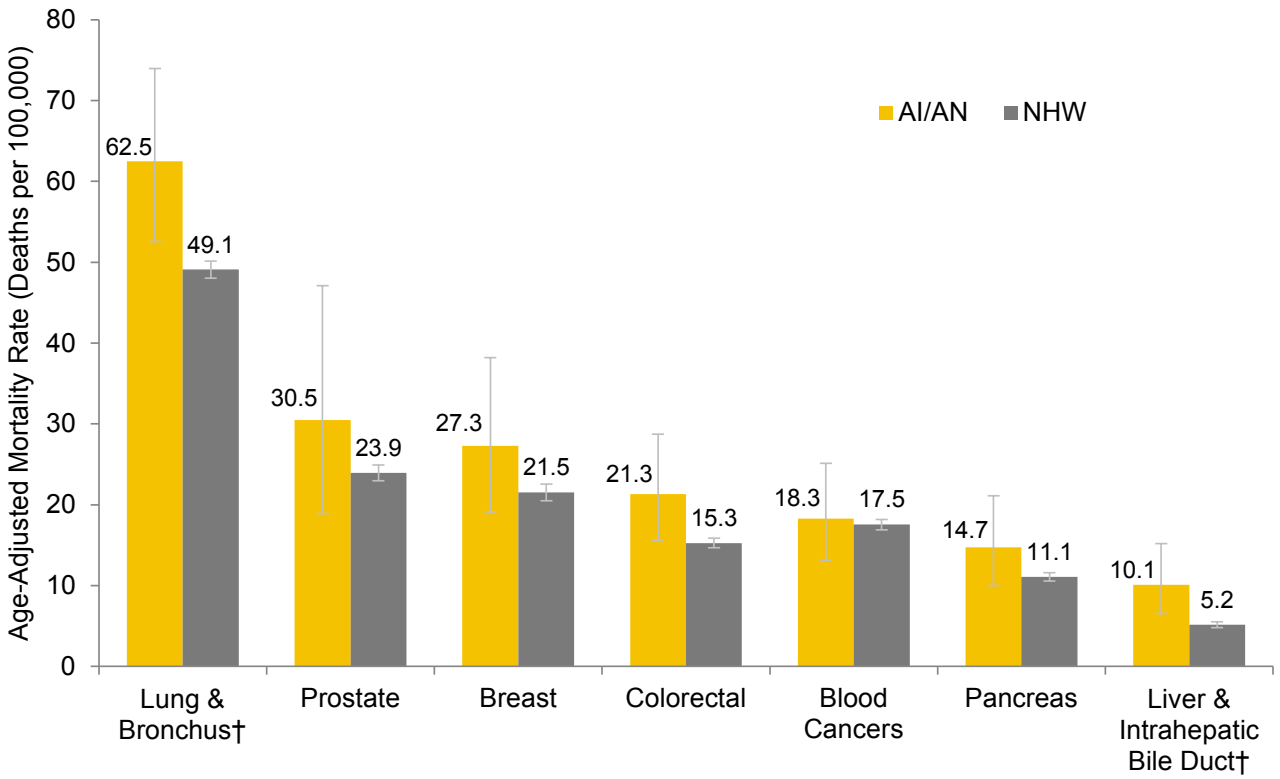
Data Notes: Mortality rates exclude deaths from benign cancers.

Table 6.4: Cancer mortality rates by race and sex, Oregon, 2006-2012.

Sex	AI/AN Rate (95% CI)	NHW Rate (95% CI)	AI/AN vs. NHW Rate Ratio (95% CI)
Male	249.1 (217.7, 284.5)	208.2 (205.2, 211.1)	1.2 (1.07, 1.34)†
Female	207.1 (183.0, 233.9)	152.5 (149.8, 155.3)	1.4 (1.22, 1.52)†
Both Sexes	223.8 (204.7, 244.5)	175.6 (173.6, 177.7)	1.3 (1.18, 1.38)†

CI = confidence interval
† Indicates a statistically significant difference (p<.05).

Figure 6.7: Age-adjusted mortality rates for leading cancer sites by race, Oregon, 2006-2012.



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

Program Spotlight: Northwest Tribal Comprehensive Cancer Project (NTCCP)

In collaboration with 43 Northwest tribes, the NTCCP works toward cancer-free tribal communities by taking an integrated and coordinated approach to cancer control. The NTCCP was the first tribal recipient of a Comprehensive Cancer Grant from the CDC. NTCCP has been at the forefront in developing and implementing strategies to address cancer in tribal communities. These strategies include developing a tribal comprehensive cancer plan, forming a multi-state tribal cancer coalition, and designing a tribal behavioral risk factor survey.

NTCCP's goals are to:

- Facilitate a process for Northwest tribes to promote cancer risk reduction strategies
- Provide information on the most current early detection, screening and treatment practices through education and resource materials.
- Provide education regarding quality of life for cancer patients, their families and caretakers
- Coordinate and collaborate with local and national cancer organizations and individuals
- Improve Indian-specific cancer control data

NTCCP coordinates three tribal cancer coalition meetings per year. These meetings provide a forum for tribal programs, cancer centers, local and state health departments, non-profits, and private organizations to network and share resources. NTCCP also provides technical assistance to tribes to implement local cancer control plans, provides toolkits and educational materials to promote cancer screening, and assists tribes with data and funding resources. The Northwest Tribal Comprehensive Cancer Program is funded by a cooperative agreement from the Centers for Disease Control and Prevention.

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7. Injury & Violence

Injuries and violence have been major public health concerns in Indian Country for many years.[1] Generally, injuries are separated into two categories: unintentional injuries, which result from events such as motor vehicle crashes, falls, accidental poisoning, or drowning; and intentional injuries, which are caused deliberately by one person to another or to himself, such as physical abuse, homicide, or suicide.

According to the most recently available national data for 1999-2011, intentional injuries are the leading cause of death for American Indian and Alaska Natives (AI/AN) ages 1-44 and the third leading cause of death for AI/AN of all ages combined.[2] Homicide is among the top five leading causes of death for AI/AN ages 1-44.[2] A 2010 study found that AI/AN women have the highest reported lifetime rates of domestic violence among all racial and ethnic groups, at 46%[3].

Unintentional injuries were the third leading cause of death for AI/AN of all ages in Oregon from 2006-2010. The major causes of unintentional injury deaths were motor vehicle crashes, accidental poisonings (due to alcohol and drug overdoses), and falls. AI/AN hospitalizations for unintentional injuries from 2010-2011 were 1.2 times higher than for NHW in the state, and from 2006-2010, the mortality rate for unintentional injuries was1.6 times higher than NHW. AI/AN hospitalizations and mortality rates from homicide were nearly three times higher compared to NHW in the state.

This section presents hospitalization and mortality data for unintentional injury and homicide, as well as screening for domestic or intimate partner violence. Suicide-related data can be found in the chapter on Mental Health and Suicide.

1. Smith, R.J., and Robertson L.S. (2000). Unintentional Injuries and trauma. In Roades ER (ed.), American Indian Health, Baltimore, MD: Johns Hopkins University Press.

2. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. (2013) [cited 2014 Sep 25]. Available from URL: www.cdc.gov/ncipc/wisqars

3.Black, M.C., Basile, K.C., Breiding, M.J., Smith, S.G., Walters, M.L., Merrick, M.T., Chen, J., & Stevens, M.R. (2011). The National Intimate Partner and Sexual Violence Survey (NISVS): 2010 Summary Report. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

Hospitalizations for Unintentional Injuries

From 2010 to 2011, 6.1% of AI/AN hospital discharges in Oregon were for unintentional injuries (Table 7.1). Overall, the percentage of hospitalizations for unintentional injuries for AI/AN was slightly lower than for NHW, though the percentage for AI/AN males was higher than that for NHW males (8.3% vs. 7.8%), while AI/AN females had a lower percentage than NHW females (4.7% vs. 6.2%). Men of both races had a higher proportion of unintentional injury hospitalizations than females. For both sexes combined and for females alone, the age-adjusted hospital discharge rate for unintentional injury was 21.7% higher for AI/AN than NHW (Figure 7.1).

Data Source: Oregon state hospital discharge data (Oregon Office for Health Policy and Research), 2010-2011, corrected for misclassified AI/AN race by the IDEA-NW Project.

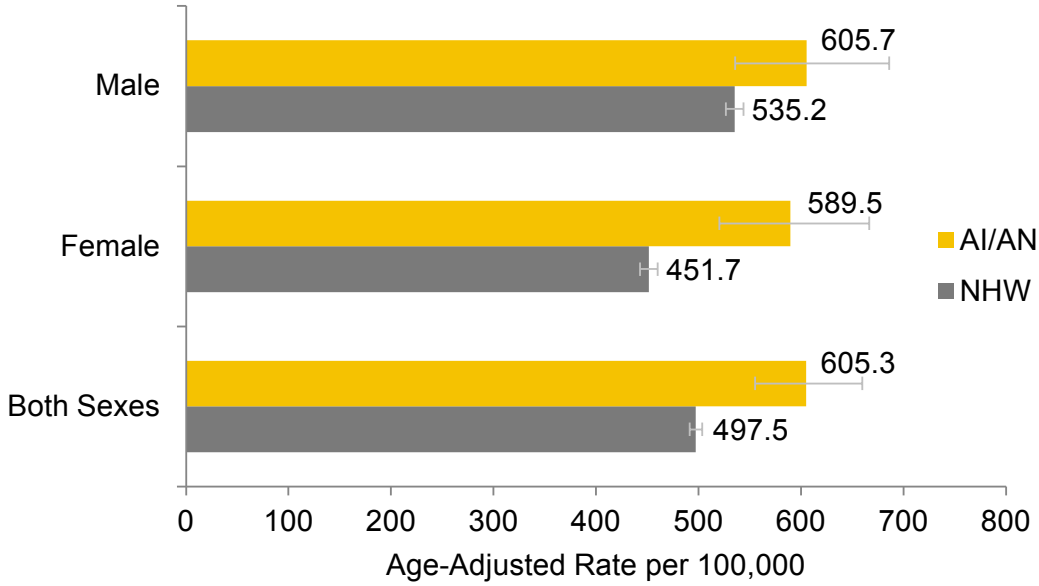
Data Notes: Injury manner and intent were determined using the External Cause of Injury Matrix developed for ICD-9 external cause codes, from the Centers for Disease Control and Prevention (CDC). ("ICD Injury Matrices," 2009)

Table 7.1: Inpatient hospital discharges for unintentional injury by race and sex, Oregon, 2010-2011.

Sex	AI/AN N† (%)	NHW N† (%)
Male	381 (8.3%)	17,541 (7.8%)
Female	328 (4.7%)	18,906 (6.2%)
Both Sexes	709 (6.1%)	36,447 (6.9%)

† 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 7.1: Age-adjusted hospital discharge rates for unintentional injury by race and sex, Oregon, 2010-2011.



Mortality from Unintentional Injuries

Unintentional injury is the third leading cause of death for Oregon AI/AN. Figure 7.2 shows the age-adjusted death rates for unintentional injury among AI/AN and NHW in Oregon. Male AI/AN were 46% more likely to die from unintentional injury than females. Compared to NHW, AI/AN unintentional injury death rates were 56% higher. AI/AN of both sexes had statistically significantly higher death rates due to unintentional injury compared to their NHW counterparts. Among AI/AN in the Northwest region, those living in Oregon and Idaho had similar rates of unintentional injury deaths, which were below those seen in Washington AI/AN.

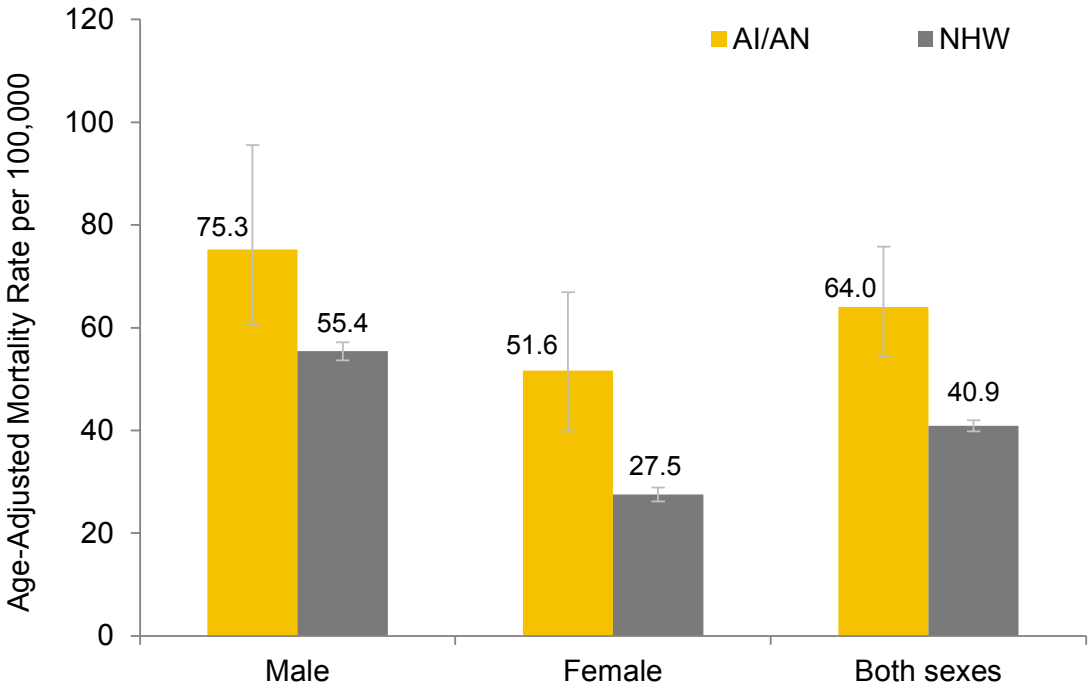
Data Source: Oregon state death certificates, 2006-2010, corrected for misclassified AI/AN by the IDEA-NW Project.

Table 7.2: Age-adjusted unintentional injury 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	75.3 60.5, 95.6)	55.4 (53.7, 57.1)	1.4 (1.1, 1.6) †
Female	51.6 (39.8, 66.9)	27.5 (26.2, 28.9)	1.9 (1.5, 2.4) †
Both Sexes	64.0 (52.2, 75.7)	40.9 (39.8, 42.0)	1.6 (1.4, 1.8) †

CI = confidence interval
† Indicates a statistically significant difference (p<.05).

Figure 7.2: Age-adjusted unintentional mortality rates by race and sex, Oregon, 2006-2010.

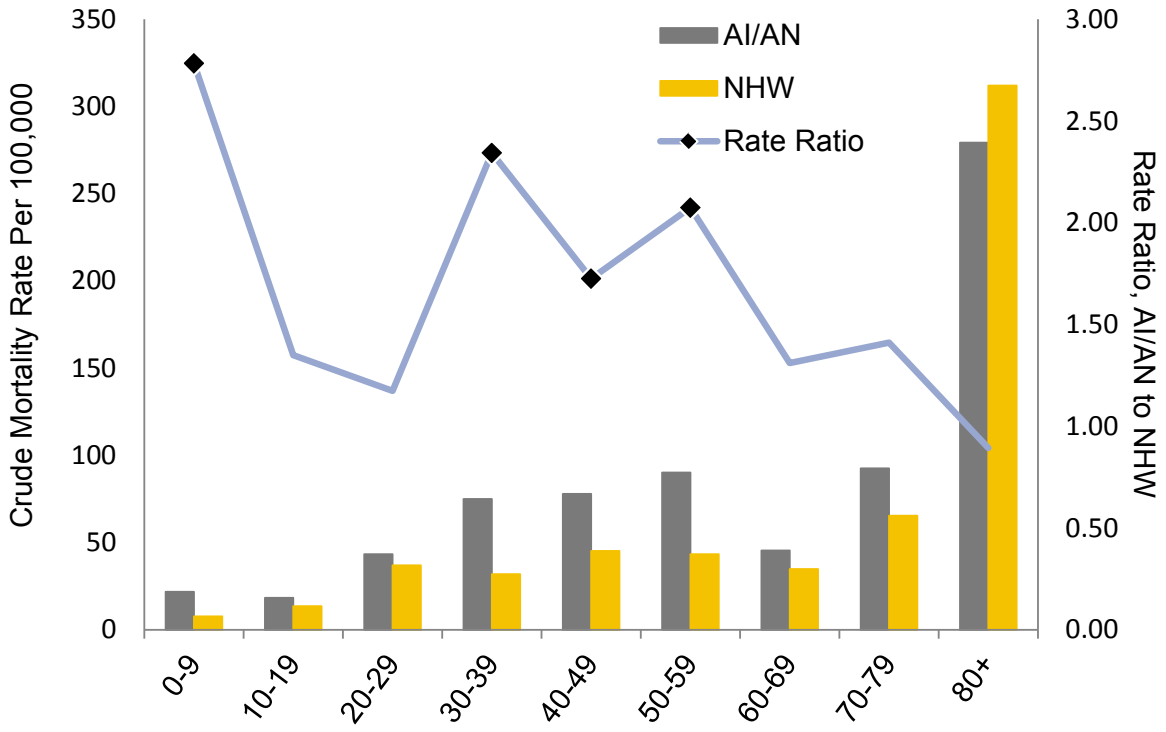


Unintentional Injury Mortality Across the Life Span

Figure 7.3 shows the death rates by age group for AI/AN and NHW. The blue line shows the rate ratio comparing the two populations. Among those younger than 79, AI/AN aged 30-59 years were at highest risk of death from unintentional injuries. These were also the ages at which disparities were seen in comparing AI/AN death rates to NHW. However, the largest disparity was seen in children under 10. For this group, AI/AN children 0-9 years were almost three times more likely to suffer an unintentional injury death than NHW children of the same ages.

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

Figure 7.3: Age-specific unintentional injury death rates by race, Oregon, 2006-2010.



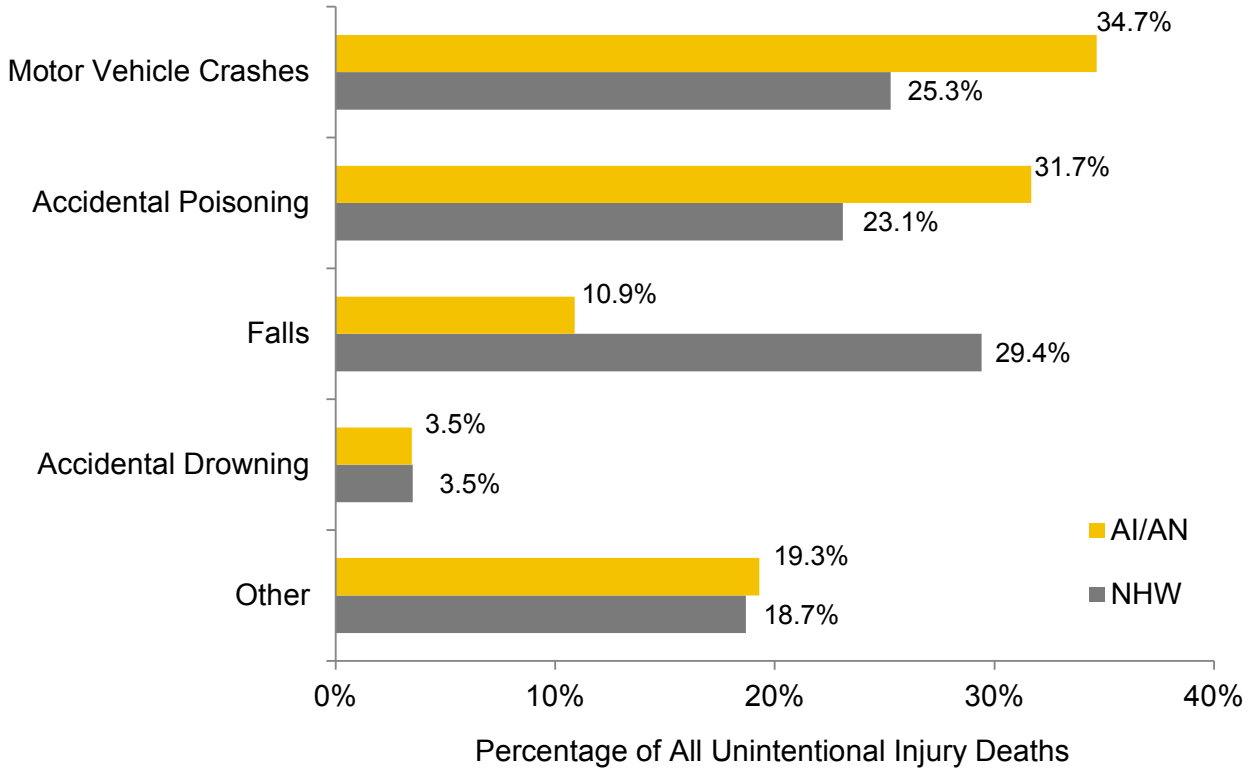
Note: Rate Ratio is a comparison of AI/AN to NHW rates; a value above 1 indicates AI/AN rates are higher than NHW. Black markers are shown for age groups in which the AI/AN rates are statistically significantly higher than NHW rates.

Causes of Unintentional Injury Deaths

The majority of unintentional injury deaths among both groups came from motor vehicle crashes (MVC) and accidental poisoning, although these two top causes accounted for about two thirds of all unintentional injury deaths among AI/AN, but only half for NHW (Figure 7.4). NHW had a much higher proportion of unintentional injury deaths due to falls than AI/AN. This is possibly related to the difference in age at death. AI/AN mortality occurs at younger ages from other causes while most fall deaths among NHW occur in those eighty years and older.

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

Figure 7.4: Leading causes of unintentional injury mortality by race, Oregon, 2006-2010.



Homicide-Related Hospitalizations

In 2010-2011, 0.6% of AI/AN hospitalizations in Oregon were related to homicide (Table 7.3). AI/AN of both sexes had a significantly higher proportion of homicide-related hospitalizations compared to NHW, but the difference was larger for males (1.2% for AI/AN males vs. 0.3% for NHW males). Compared to their NHW counterparts, the age-adjusted hospitalization rates for homicide were 3.3 times higher for AI/AN females and 2.6 times higher for AI/AN males (Figure 7.5). Because of the overall small numbers of individuals, there is considerable uncertainty in these estimates - however, the associations were statistically significant.

Data Source: Oregon state hospital discharge data (Oregon Office for Health Policy and Research), 2010-2011, corrected for misclassified AI/AN race by the IDEA-NW Project.

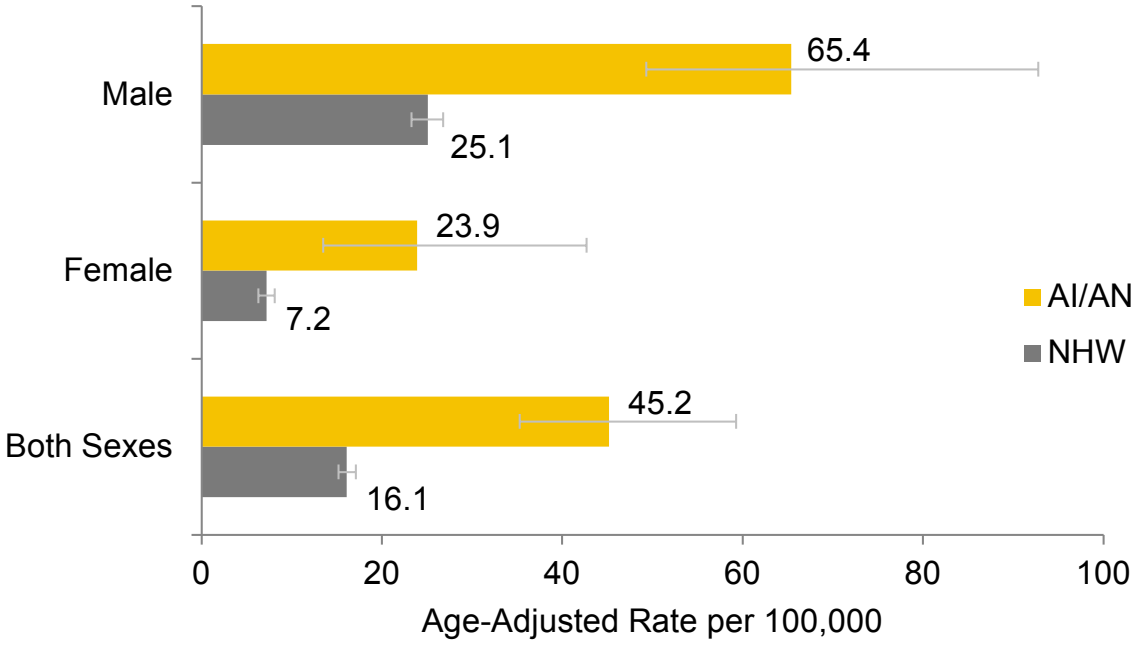
Data Notes: Injury manner and intent were determined using the External Cause of Injury Matrix developed for ICD-9 external cause codes, from the Centers for Disease Control and Prevention (CDC). ("ICD Injury Matrices," 2009)

Table 7.3: Inpatient hospital discharges for homicide by race and sex, Oregon, 2010-2011.

Sex	AI/AN N† (%)	NHW N† (%)
Male	57 (1.2%)	734 (0.3%)
Female	18 (0.3%)	211 (0.1%)
Both Sexes	75 (0.6%)	945 (0.2%)

† 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 7.5: Age-adjusted hospital discharge rates for homicide by race and sex, Oregon, 2010-2011.



Mortality from Homicide

Table 7.4 and Figure 7.6 shows the age-adjusted homicide rates among AI/AN and NHW in Oregon from 2006-2010. Male AI/AN in Oregon were more than three times more likely to die through a homicide than AI/AN females. Compared to NHW, AI/AN homicide rates were nearly three times higher. Rates of homicide death among Oregon AI/AN fell in the middle for the region; they were higher than Idaho AI/AN homicide rates, but lower than those seen in Washington.

It should be noted that, due to small numbers, the rates presented here may be unstable (as seen in the wide confidence intervals). Statistical tests take into account this level of uncertainty, and thus the rate ratio comparisons with NHW shown in Table 7.4 can be interpreted as reflecting a true disparity, while differences in the actual rate estimates alone may not.

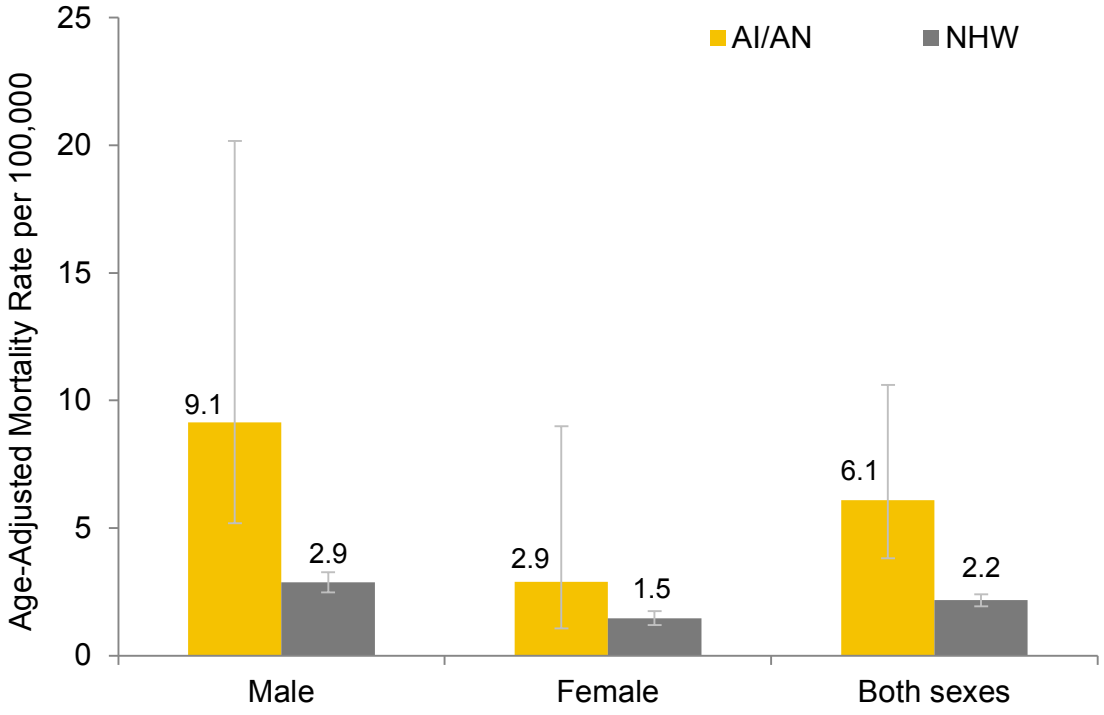
Data Source: Oregon state death certificates, 2006-2010, corrected for misclassified AI/AN by the IDEA-NW Project.

Table 7.4: Age-adjusted homicide 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	9.1 (5.2, 20.2)	2.9 (2.5, 3.3)	3.2 (2.0, 5.2) †
Female	2.9 (1.1, 9.0)	1.5 (1.2, 1.7)	2.0 (0.9, 4.5)
Both Sexes	6.1 (3.8, 10.6)	2.2 (1.9, 2.4)	2.8 (1.9, 4.3) †

CI = confidence interval
† Indicates a statistically significant difference (p<.05).

Figure 7.6: Age-adjusted homicide mortality rates by race and sex, Oregon, 2006-2010.



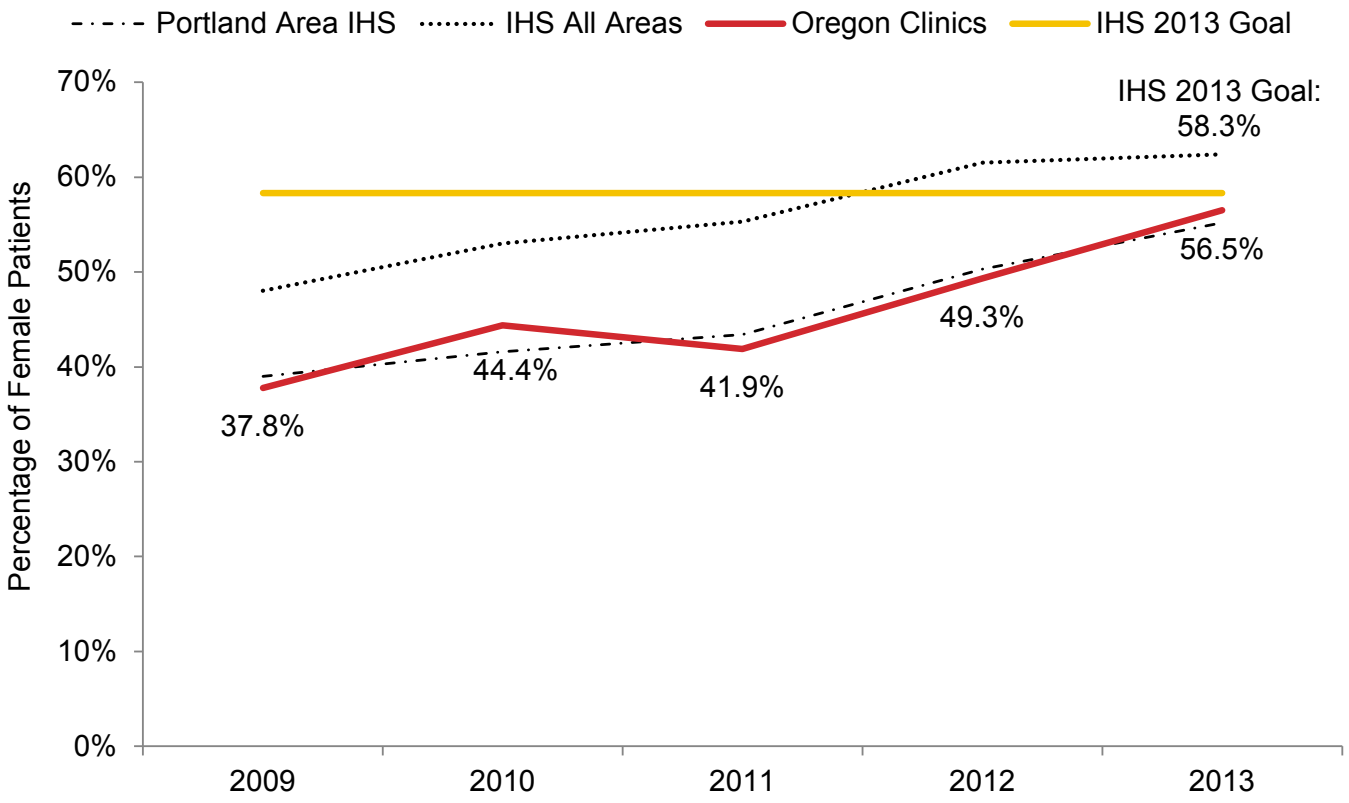
Domestic and Intimate Partner Violence Screening

IHS tracks the percentage of AI/AN female patients ages 15-40 who were screened for domestic or intimate partner violence in the past year. The domestic violence screening rate has steadily increased for Oregon clinics, the Portland Area IHS, and the national IHS since 2009 (Figure 7.7). The screening rate for Oregon clinics has consistently been lower than the rates for the national IHS, but on par with those for the Portland Area IHS. In 2013, neither the screening rates for Oregon clinics nor the Portland Area IHS met the 2013 goal of 58.3%.

Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Oregon clinics. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 7.7: Domestic violence screening rates for IHS female patients, 2009-2013.



Program Spotlight: Injury Prevention Program

The Injury Prevention Program (IPP) works to develop and implement effective injury prevention strategies across the 43 Northwest Tribes. The IPP coordinates a Northwest Tribal Injury Prevention Coalition, whose members represent Northwest tribes, transportation safety organizations, and other key stakeholders. The IPP and Coalition members completed a 5-year Tribal Injury Prevention Plan in 2012, and are now working on implementing injury prevention and education strategies, with an emphasis on motor vehicle safety and elder falls prevention. The IPP also contributes to the collection, analysis and interpretation of injury data. The IPP is funded through a cooperative agreement with the Indian Health Service.

The IPP's goals are to:

- Provide a central location for coordination and dissemination of injury prevention resources and expertise for Northwest tribes.
- Collaborate with Northwest tribes to provide information, technical assistance and training for injury prevention, and to increase IP-related activities at the tribal level.
- Collect and evaluate community-specific data on injuries among American Indians in the Northwest, and support development of reducing injuries in targeted communities.

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8. Mental Health & Suicide

Mental health is closely tied to and affected by our physical, social, and spiritual health. Historical trauma, community violence, family history, and drug or alcohol use can all contribute to poor mental health outcomes. Common mental health conditions include depression, anxiety, panic disorder, attention deficit disorder, and obsessive-compulsive disorder. Patients can manage these conditions with proper treatment from qualified medical providers.

Self-harm and suicide are among the most tragic consequences of mental health illness. Suicide rates for AI/AN are typically highest in early adulthood and decrease with age, while suicide rates in the general population tend to increase with age. In recent data from the CDC, suicide was the second leading cause of death for AI/AN teens and young adults. At the state level, annual suicide rates for AI/AN tend to fluctuate widely because the actual number of deaths each year is relatively small. Data from several years are often compiled to address this challenge.

This section of the report presents data on mental health and suicide in Oregon. On the whole, AI/AN in Oregon reported higher rates of poor mental health and depression than NHW in the state. Despite reporting relatively high levels of poor mental health, AI/AN men were less likely than NHW men to receive treatment for these conditions. Females were more likely than males to be hospitalized for suicide, while males had higher mortality rates from suicide. Suicide is the eighth leading cause of death for AI/AN in Oregon.

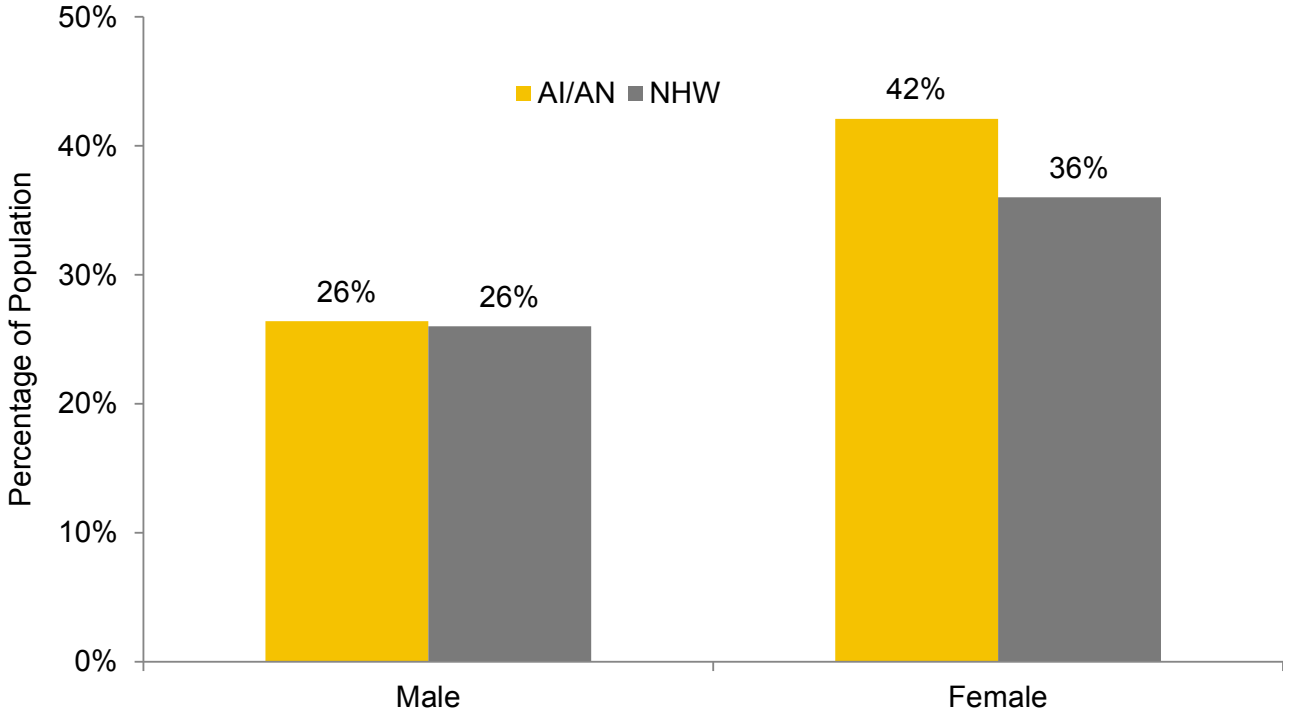
Self-Reported Poor Mental Health or Depression

From 2006-2012, approximately 26% of AI/AN males and 42% of AI/AN females in Oregon reported feeling depressed or in poor mental health for one or more days in the past month (Figure 8.1). This percentage similar for males (26% of NHW males reported poor mental health or depression), and was higher for AI/AN females than for NHW females (36%).

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 8.1: Prevalence of self-reported depression or poor mental health in the past month by race and sex, Oregon, 2006-2012.



Sample sizes (n): AI/AN males=783; AI/AN females=1,148; NHW males=49,342; NHW females=77,177.

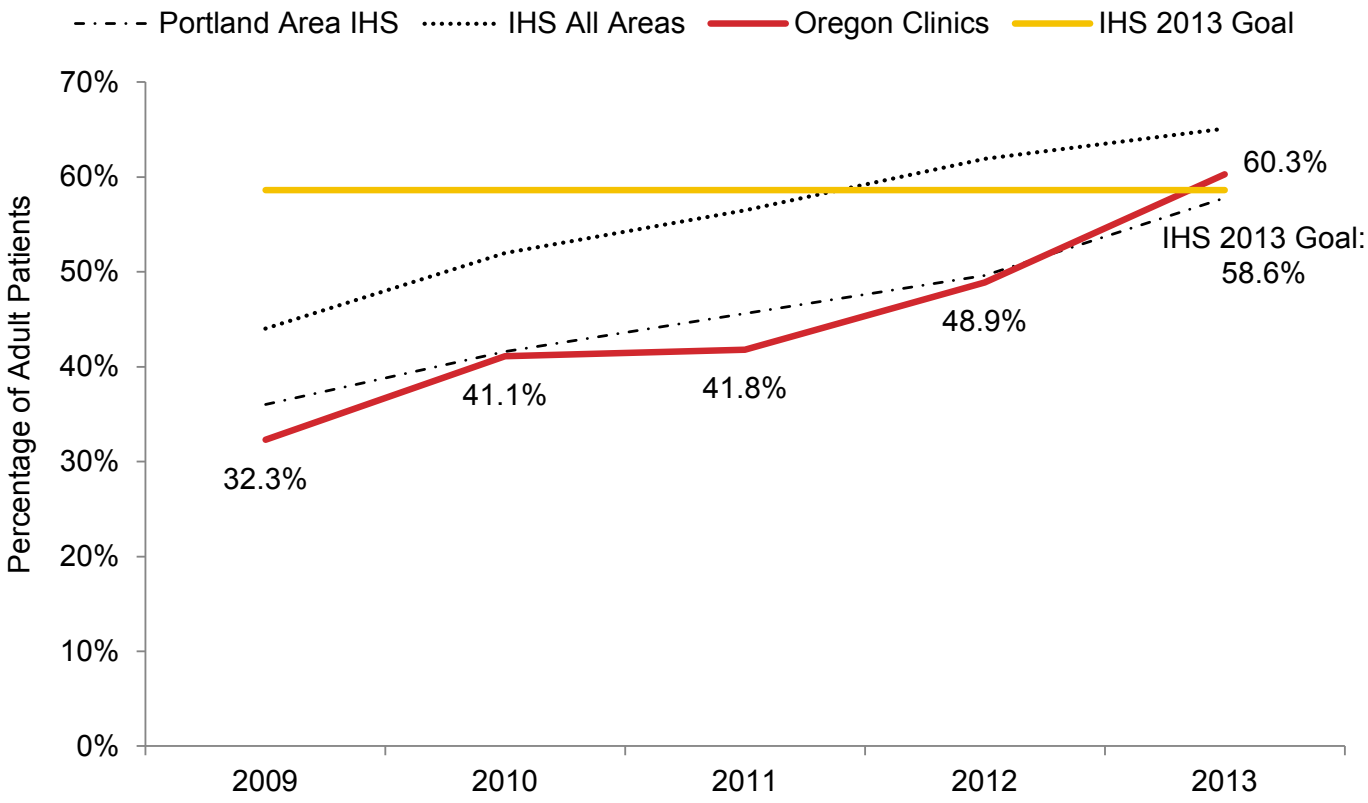
Depression Screening

IHS tracks the percentage of AI/AN patients ages 18 years and older who received a depression screening in the past year. Since 2009, the screening rate for depression has increased for Oregon clinics, the Portland Area IHS, and the national IHS (Figure 8.2). Oregon clinics and the national IHS average exceeded the 2013 goal of 58.6%, while Portland Area IHS was slightly below the 2013 goal for this measure.

Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Oregon clinics. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 8.2: Percentage of IHS AI/AN patients (ages 18 and older) who were screened for depression during the past year, 2009-2013.



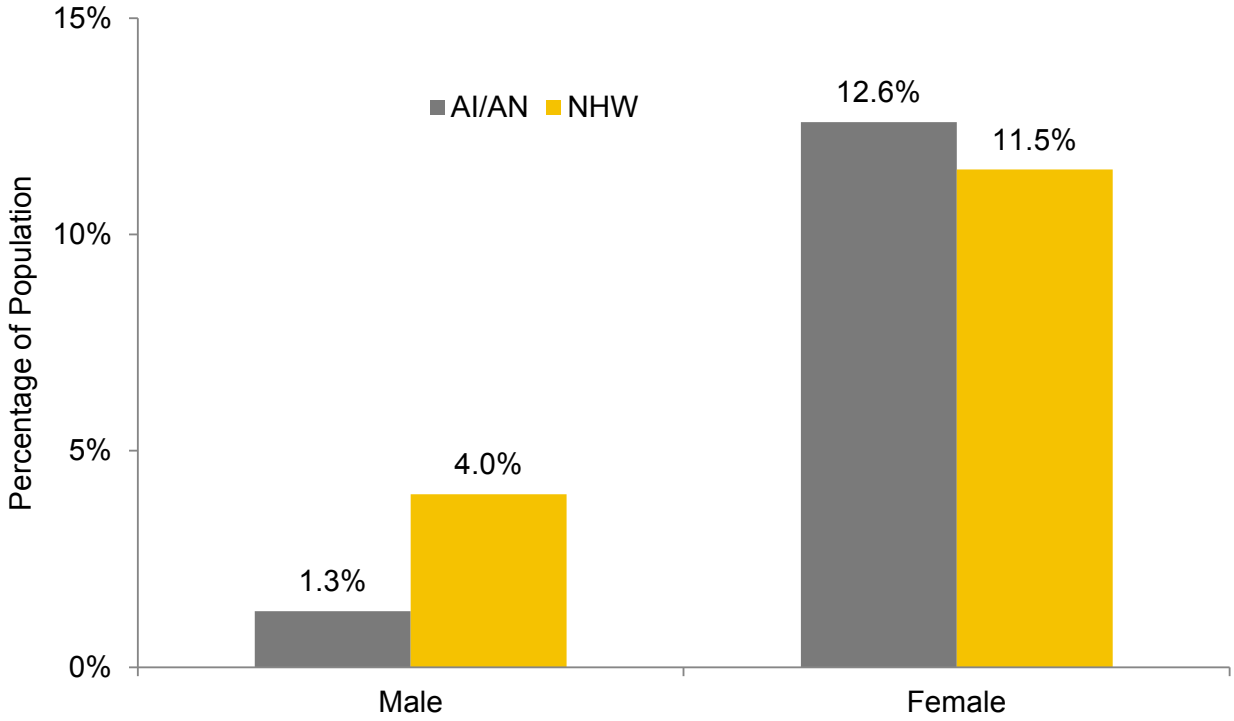
Self-Reported Mental Health Treatment

Despite reporting high levels of depression and poor mental health, only 1.3% of AI/AN males in Oregon reported receiving treatment for a mental health condition or emotional problem from 2006-2012 (Figure 8.3). A higher percentage of AI/AN females (12.6%) reported receiving mental health treatment when compared to NHW females (11.5%).

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 8.3: Prevalence of self-reported mental health treatment by race and sex, Oregon, 2006-2012.



Sample sizes (n): AI/AN males=73; AI/AN females=80; NHW males=5,343; NHW females=8,313.

Mental Health Hospitalizations

From 2010 to 2011, 5.2% of AI/AN hospitalizations in Oregon had a mental health disorder as the principal diagnosis (Table 8.1). Males of both races had a higher proportion of mental health hospitalizations than females. The age-adjusted hospital discharge rate for mental health disorders was significantly higher for AI/AN males compared to NHW males (Figure 8.4).

Data Source: Oregon state hospital discharge data (Oregon Office for Health Policy and Research), 2010-2011, corrected for misclassified AI/AN race by the IDEA-NW Project.

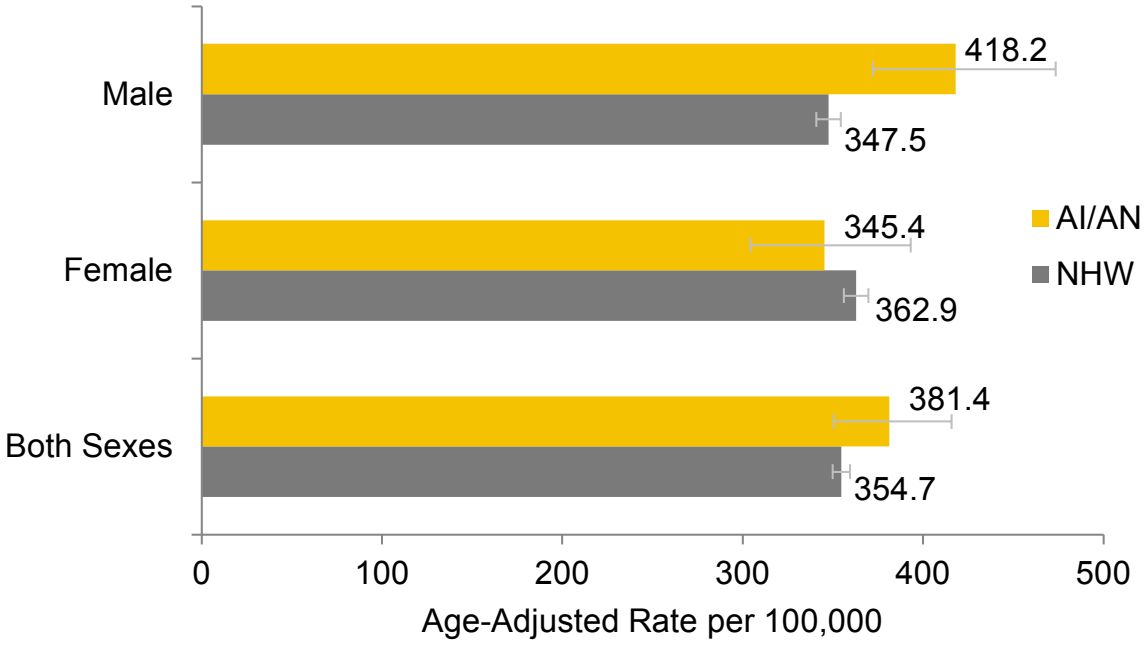
Data Notes: Principal diagnosis codes categorized using the Agency for Healthcare Research and Quality's Clinical Classification Software. The following level-2 principal diagnosis codes were included: 5.1 (adjustment disorders), 5.2 (anxiety disorders), 5.3 (attention deficit, conduct, and disruptive behavior disorders), 5.4 (delirium, dementia, and amnestic and other cognitive disorders), 5.5 (developmental disorders), 5.6 (disorders usually diagnosed in infancy, childhood, or adolescence), 5.7 (impulse control disorders not elsewhere classified), 5.8 (mood disorders), 5.9 (personality disorders), 5.10 (schizophrenia and other psychotic disorders), 5.13 (suicide and intentional self-inflicted injury), and 5.15 (miscellaneous mental disorders).

Table 8.1: Inpatient hospital discharges for mental health disorders by race and sex, Oregon, 2010-2011.

Sex	AI/AN N† (%)	NHW N† (%)
Male	335 (7.3%)	10,816 (4.8%)
Female	269 (3.8%)	11,632 (3.8%)
Both Sexes	604 (5.2%)	22,448 (4.2%)

† 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 8.4: Age-adjusted hospital discharge rates for mental health disorders by race and sex, Oregon, 2010-2011.



Suicide Hospitalizations

In 2010-2011, 1.1% of AI/AN hospitalizations in Oregon were suicide-related (Table 8.2). This was higher than the percentage of suicide-related hospitalizations for NHW (0.8%). Compared to males, females of both races had a higher proportion of suicide-related hospitalizations and higher age-adjusted hospitalization rates (Figure 8.5) This is the opposite pattern observed for suicide mortality, which points to differences in mechanism, causing more successful suicide attempts among males.

Data Source: Oregon state hospital discharge data (Oregon Office for Health Policy and Research), 2010-2011, corrected for misclassified AI/AN race by the IDEA-NW Project.

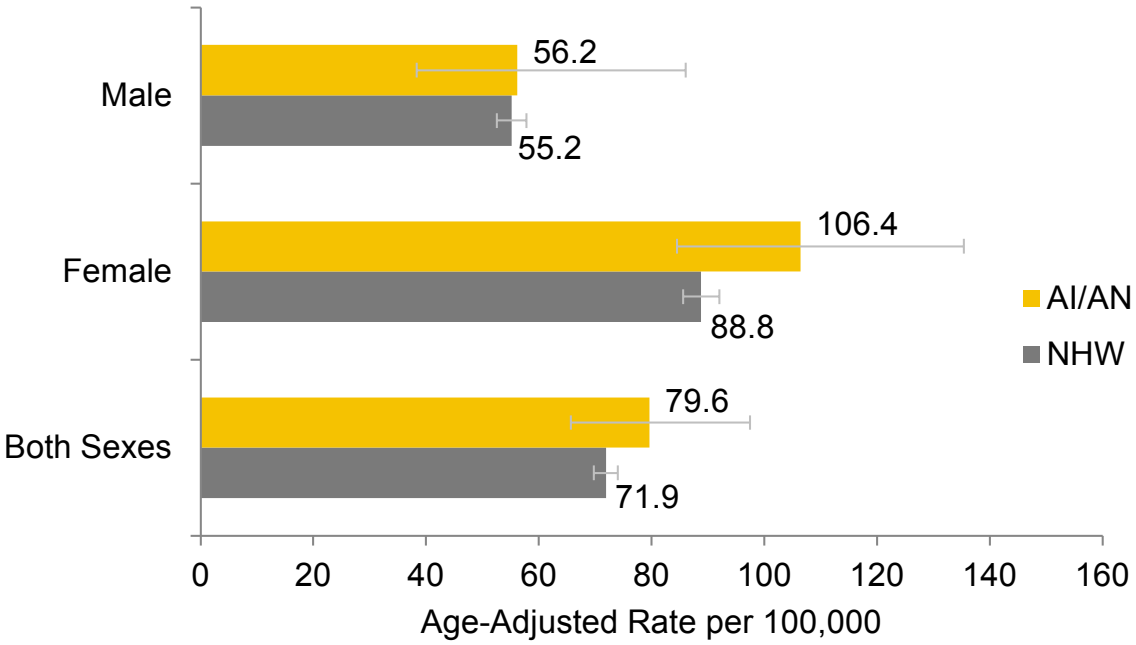
Data Notes: Injury manner and intent were determined using the External Cause of Injury Matrix developed for ICD-9 external cause codes, from the Centers for Disease Control and Prevention (CDC). ("ICD Injury Matrices," 2009)

Table 8.2: Inpatient hospital discharges for suicide by race and sex, Oregon, 2010-2011.

Sex	AI/AN N† (%)	NHW N† (%)
Male	42 (0.9%)	1,658 (0.7%)
Female	85 (1.2%)	2,611 (0.9%)
Both Sexes	127 (1.1%)	4,269 (0.8%)

† 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 8.5: Age-adjusted hospital discharge rates for suicide by race and sex, Oregon, 2010-2011.



Suicide Mortality

Suicide is the eighth leading cause of death among Oregon AI/AN. Figure 8.6 shows the age-adjusted death rates for suicide among AI/AN and NHW in Oregon. Male AI/AN were almost three times more likely to die from suicide than females. While the rates of completed suicides were much higher for males, it should be noted that several studies have found that females are more likely to attempt suicide than males; however, females are less likely to choose a violent mechanism and so are more likely to survive the attempt[1,2].There was very little difference in suicide rates between the races in Oregon, and AI/AN in this state had the lowest rates of suicide in the Northwest region.

[1] Dorgan BL. The Tragedy of Native American Youth Suicide. Psychological Services 2010;7(3):213-218.
[2] Alcantara C, Gone JP. Reviewing Suicide in Native American Communities: Situating Risk and Protective Factors within a Transactional-Ecological Framework. Death Studies 2007;31:457-477.

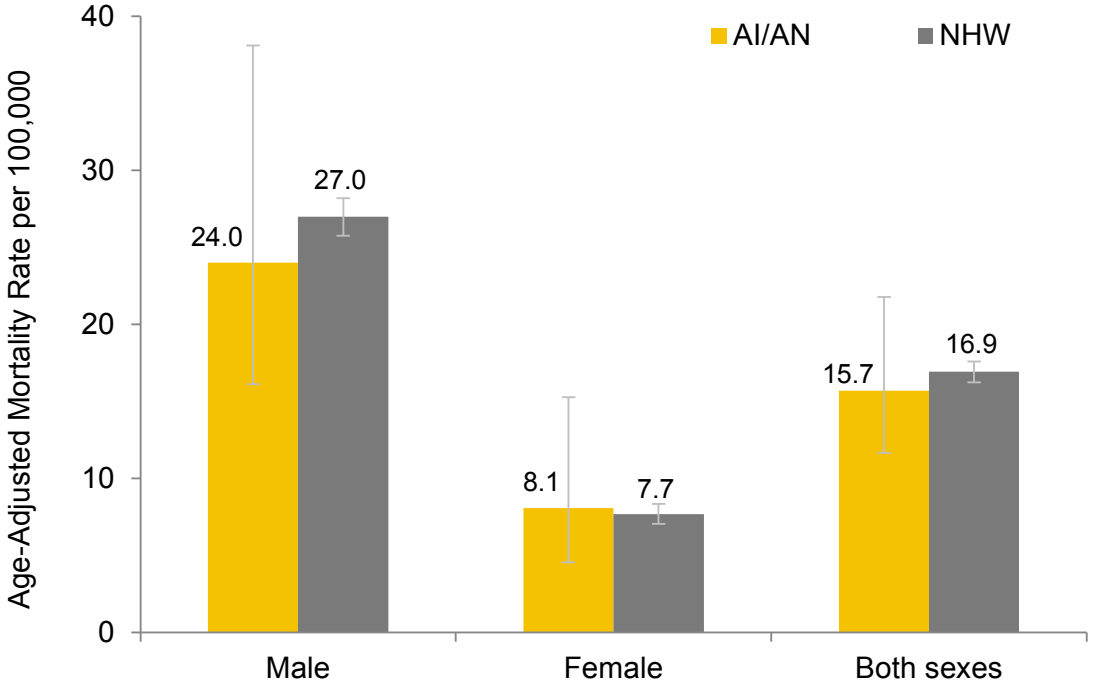
Data Source: Oregon state death certificates, 2006-2010, corrected for misclassified AI/AN race by the IDEA-NW Project.

Table 8.3: Age-adjusted suicide 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	24.0 (16.1, 38.1)	27.0 (25.8, 28.2)	0.9 (0.7, 1.2)
Female	8.1 (4.6, 15.3)	7.7 (7.1, 8.3)	1.1 (0.6, 1.7)
Both Sexes	15.7 (11.7, 21.8)	16.9 (16.3, 17.6)	0.9 (0.7, 1.2)

CI = confidence interval

Figure 8.6: Age-adjusted suicide mortality rates by race and sex, Oregon, 2006-2010.

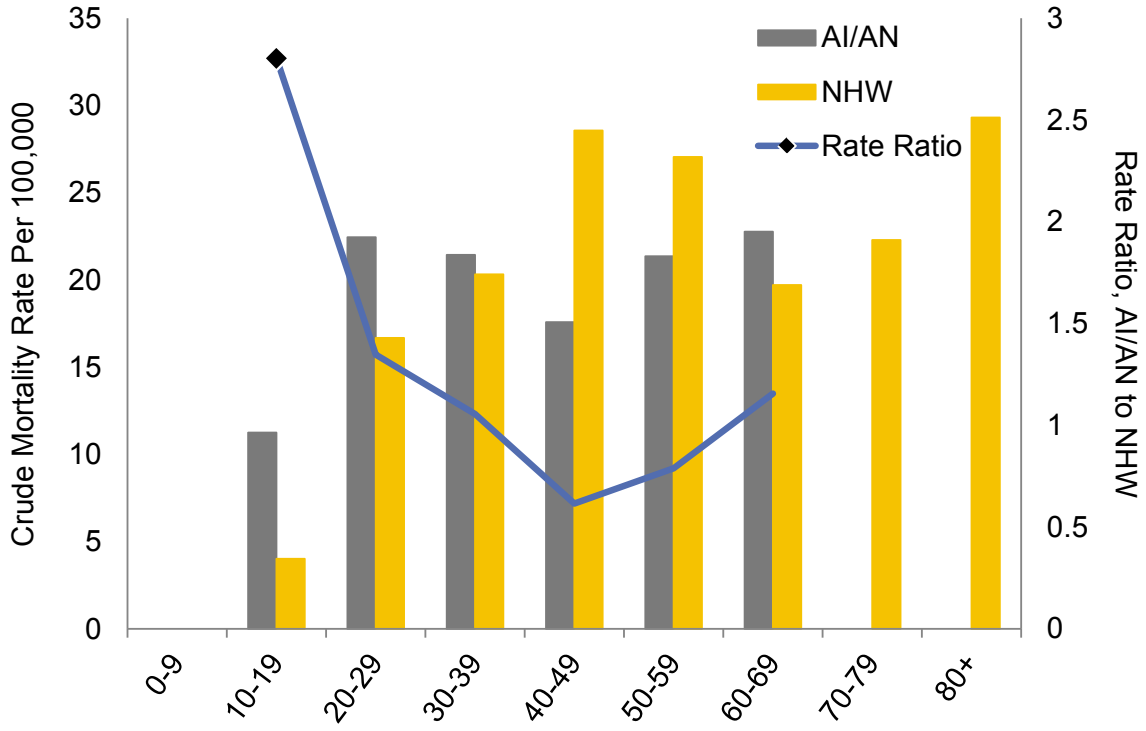


Suicide Mortality Across the Life Span

Figure 8.7 shows age-specific suicide mortality rates (columns) for AI/AN and NHW in Oregon from 2006-2010. The line shows the rate ratio comparing the two populations. While the majority of Oregon AI/AN suicides occurred between 20-39 years of age, the largest disparity between AI/AN and NHW was seen among youth. Rates of suicide among AI/AN 10-19 years old were 2.8 times higher than those seen among NHW youth in the same age range.

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

Figure 8.7: Age-specific suicide mortality rates by race, Oregon, 2006-2010.



Note: Rate Ratio is a comparison of AI/AN to NHW rates; a value above 1 indicates AI/AN rates are higher than NHW. Black markers are shown for age groups in which the AI/AN rates are statistically significantly higher than NHW rates. Categories for which AI/AN had fewer than 5 deaths are not shown (0 - 9 years, 70+ years).

Program Spotlight: THRIVE

Tribal Health: Reaching Out InVolves Everyone

Suicide is a sensitive issue, but one that is of great concern to many AI/AN communities. While the data on suicide among Northwest AI/AN is sobering, there are many factors that can protect against suicide, including:

- Connecting to family and friends
- Connecting to culture and spirituality
- Good emotional and physical health
- Positive communication with family or friends
- Restricted access to lethal means
- Access to mental health care
- Problem solving skills

Since 2009, NPAIHB's THRIVE program has assisted Northwest tribes in implementing culturally appropriate suicide prevention programs and media campaigns.

For more information, contact:
Colbie Caughlan, Project Manager
ccaughlan@npaihb.org
503-416-3284
http://www.npaihb.org/epicenter/project/thrive

THRIVE's activities are directed by three priority goals:

1. Increase knowledge and awareness about suicide among Tribal community members.
2. Improve intertribal and interagency communication about suicide prevention and treatment.
3. Increase the capacity of Tribal health programs to track, prevent, and treat suicide.

THRIVE works with other NPAIHB projects to convene the *NW Native Adolescent Health Alliance,* which is an inclusive, multi-functional group that meets in OR, WA, and ID to discuss cross-cutting planning and prevention strategies targeting AI/AN teens and young adults.

9. Substance Abuse

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

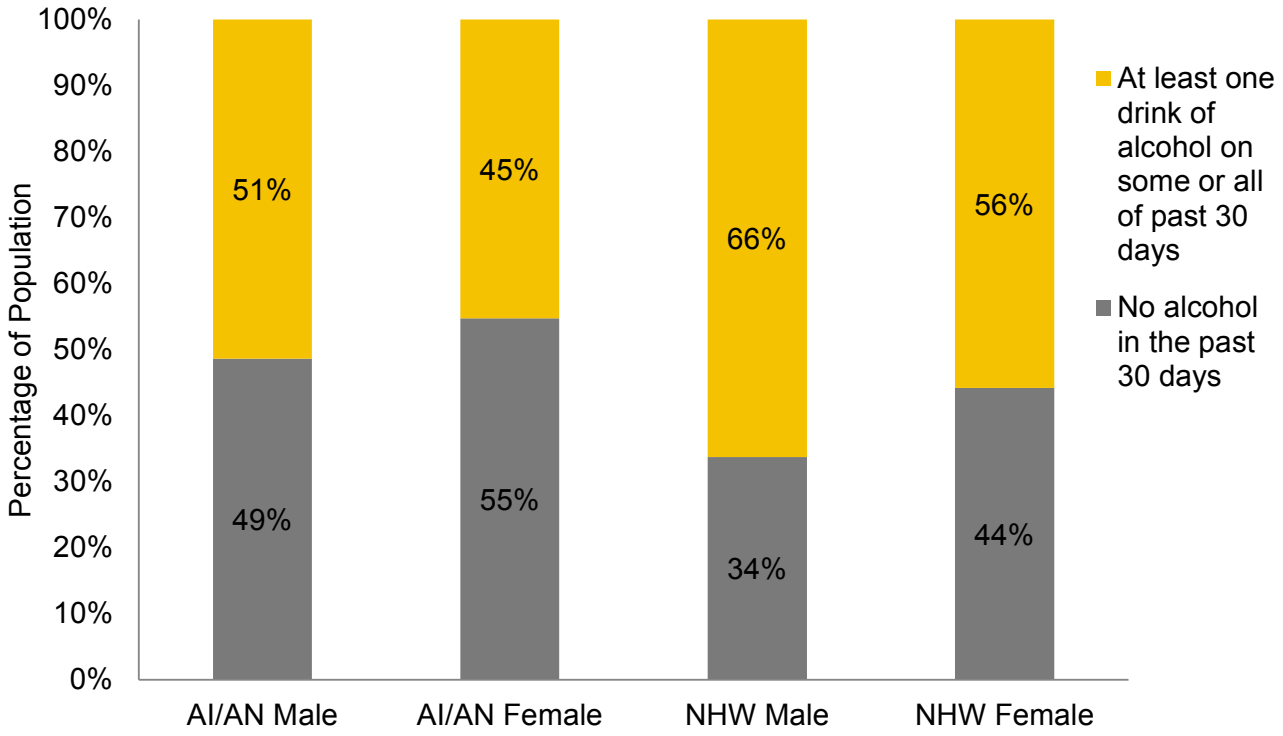
Self-Reported Alcohol Consumption

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.

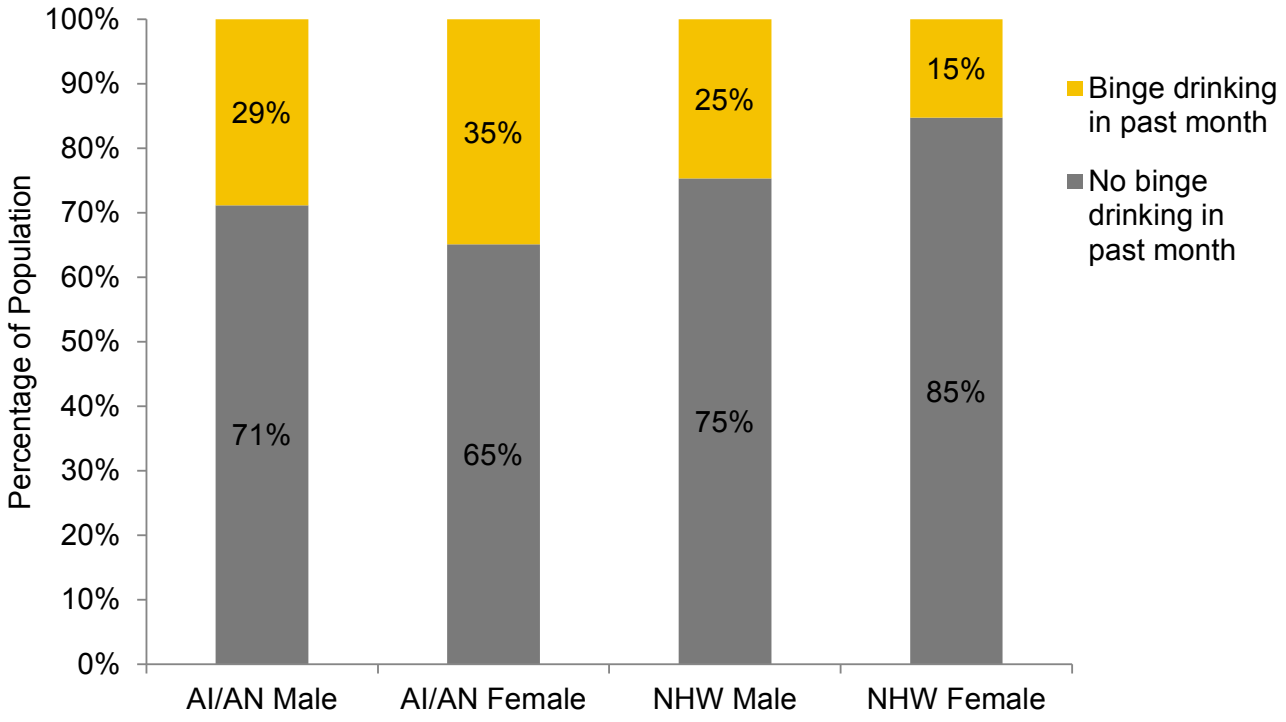
Self-Reported Binge Drinking

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.

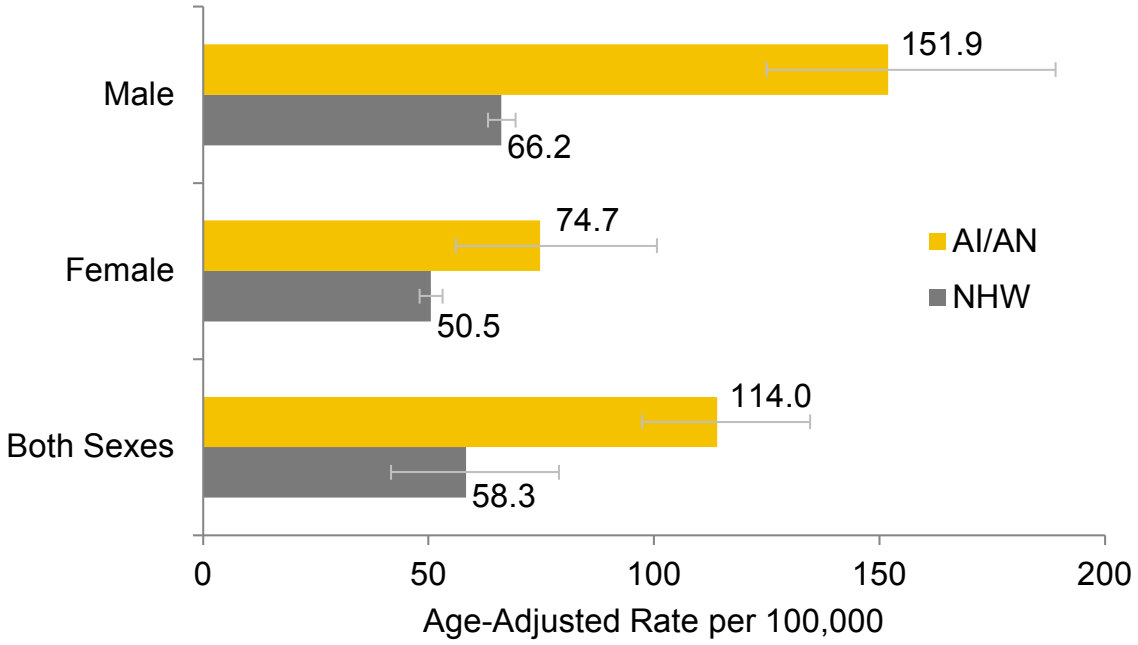
Data Notes: Principal diagnosis codes were categorized using the Agency for Healthcare Research and Quality's Clinical Classification Software. The following level-2 principal diagnosis codes were included: 5.11 (alcohol-related disorders) and 5.12 (substance-related disorders).

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.

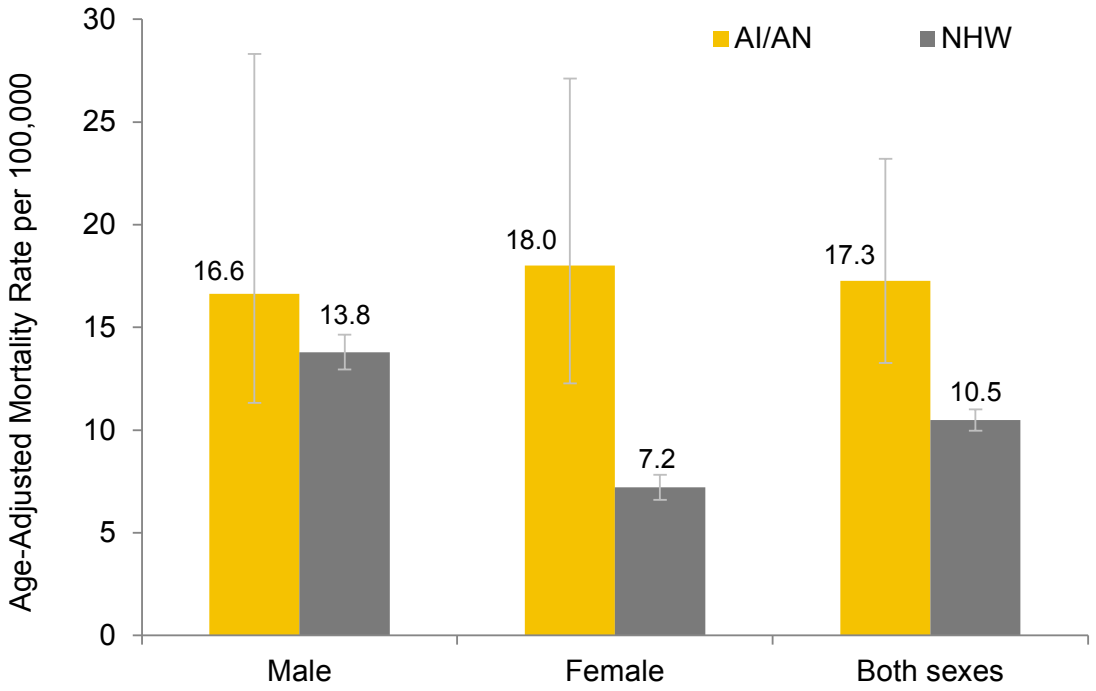
Data Source: Oregon state death certificates, 2006-2010, corrected for misclassified AI/AN by the IDEA-NW Project.

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 deaths[2]	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 deaths[6]	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/

For more information, contact:
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http://www.npaihb.org/epicenter/project/thrive

10. Communicable Diseases

Among communicable diseases, sexually transmitted infections (STI) have perhaps received the most attention in recent years. The primary STIs include chlamydia, gonorrhea and human immunodeficiency virus (HIV). Because each of these conditions can be spread by people unaware that they have acquired the disease, efforts to increase screening of asymptomatic patients have been recommended by CDC and the US Preventive Services Task Force. Current screening guidelines recommend screening all women ages 15 to 25 annually for chlamydia. For HIV, the recommendations are to screen all pregnant women and to offer HIV testing at least once to every patient between the ages of 13 and 64, regardless of any risk factors that may or may not be present

The importance of these conditions cannot be overemphasized. Chlamydia and gonorrhea are the primary causes of pelvic inflammatory disease in women which can lead to tubo-ovarian abscess and scarring of the fallopian tubes, which in turn can result in infertility and ectopic pregnancy. If left untreated, these diseases can result in unnecessary morbidity and even death. Antibiotic resistance in recent years has been a significant development complicating the effective treatment of infections caused by gonorrhea.

HIV infection is a life-long infection which progresses to Acquired Immune Deficiency Syndrome (AIDS) if not treated. Fortunately, effective treatments for HIV have been developed and are available in the US. AI/AN are among those who qualify for reduced or free medications to treat HIV. Unfortunately, because of stigma and a lack of awareness, many AI/AN do not know their HIV status and do not receive appropriate care until they have advanced disease. Because an estimated 50% of new HIV infections are caused by approximately 20% of HIV positive individuals who are infected but unaware, there has been increased effort to screen everyone between the ages of 13 and 64 who might otherwise not be recognized by healthcare providers as potentially infected. Making HIV screening a part of routine preventive health care helps reduce the stigma and barriers to testing.

In Oregon, chlamydia diagnoses increased from 2000 to 2012, while gonorrhea diagnoses showed no significant trend. The prenatal HIV screening rate for Oregon IHS clnics increased from 2009 to 2013, and the rate of HIV diagnoses stayed similar to whites in the state.

Chlamydia Diagnoses

AI/AN women in Oregon have consistently had higher rates of chlamydia than AI/AN men and whites of both sexes (Figure 10.1). Chlamydia diagnosis rates for AI/AN females rose sharply from 2000-2004, decreased through 2007, and steadily increased through 2012. In 2012, the chlamydia diagnosis rate for AI/AN females in Oregon was 3 times higher than the rate for AI/AN males, and twice as high as the rate for White females.

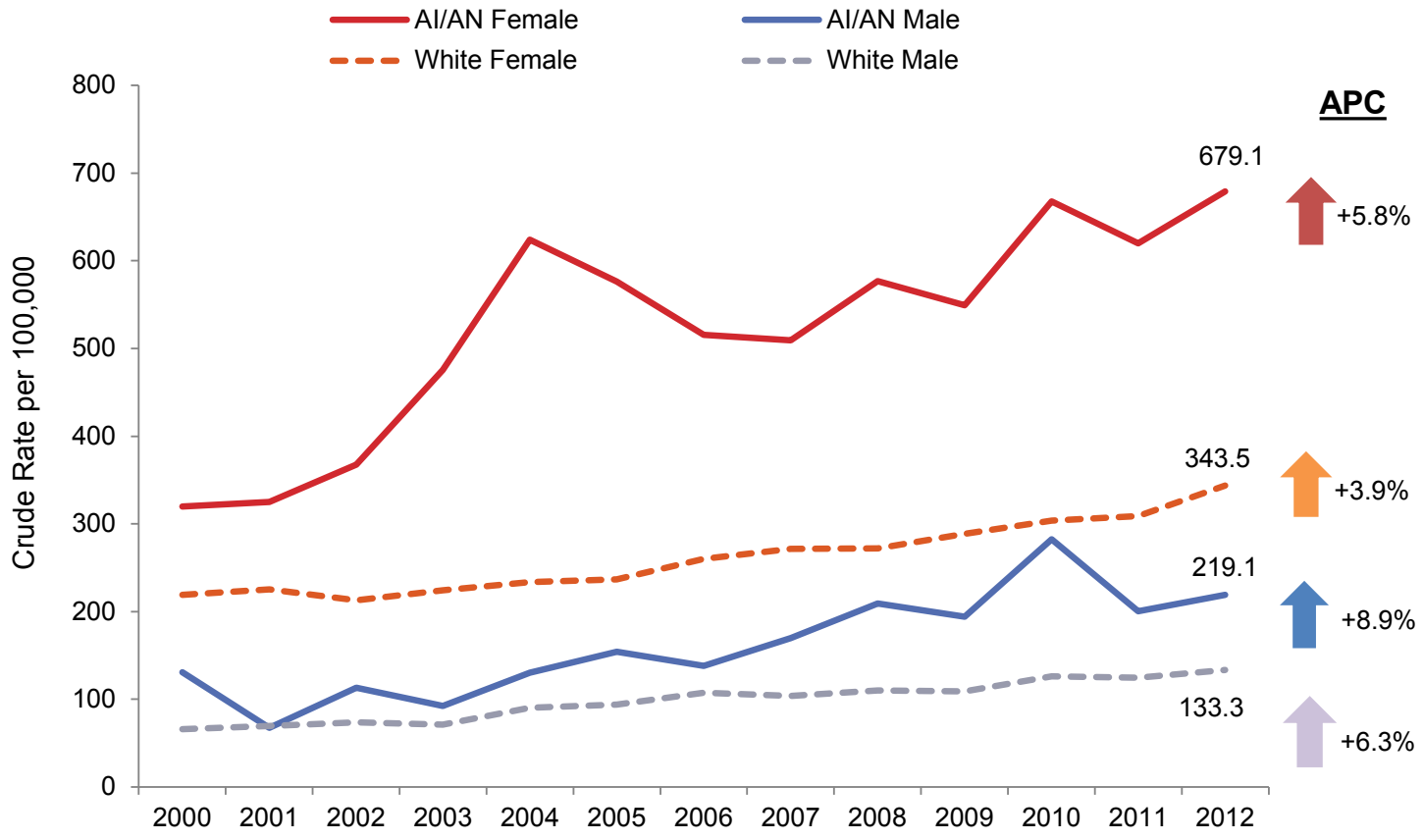
Chlamydia diagnosis rates for AI/AN males and whites of both sexes have also increased since 2000. Chlamydia diagnosis rates for males have increased more rapidly than rates for females, though the overall rates for males are still lower than rates for females. The average annual percentage change in rates from 2000 to 2012 was 8.9% for AI/AN males and 6.3% for white males.

Trends in sexually transmitted diseases (STDs) may reflect changes in diagnosis and reporting practices instead of actual changes in disease incidence rates over time, and should be interpreted with caution.

Data Source: Center for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) Atlas. http://gis.cdc.gov/GRASP/NCHHSTPAtlas/main.html.

Data Notes: Rates based on confirmed diagnoses during the year. Crude rates do not take into account the age differences between the AI/AN and NHW populations. AI/AN race not corrected for misclassification.

Figure 10.1: Chlamydia diagnosis rates by race, sex, and year, Oregon, 2000-2012.



APC = Annual Percentage Change.

Gonorrhea Diagnoses

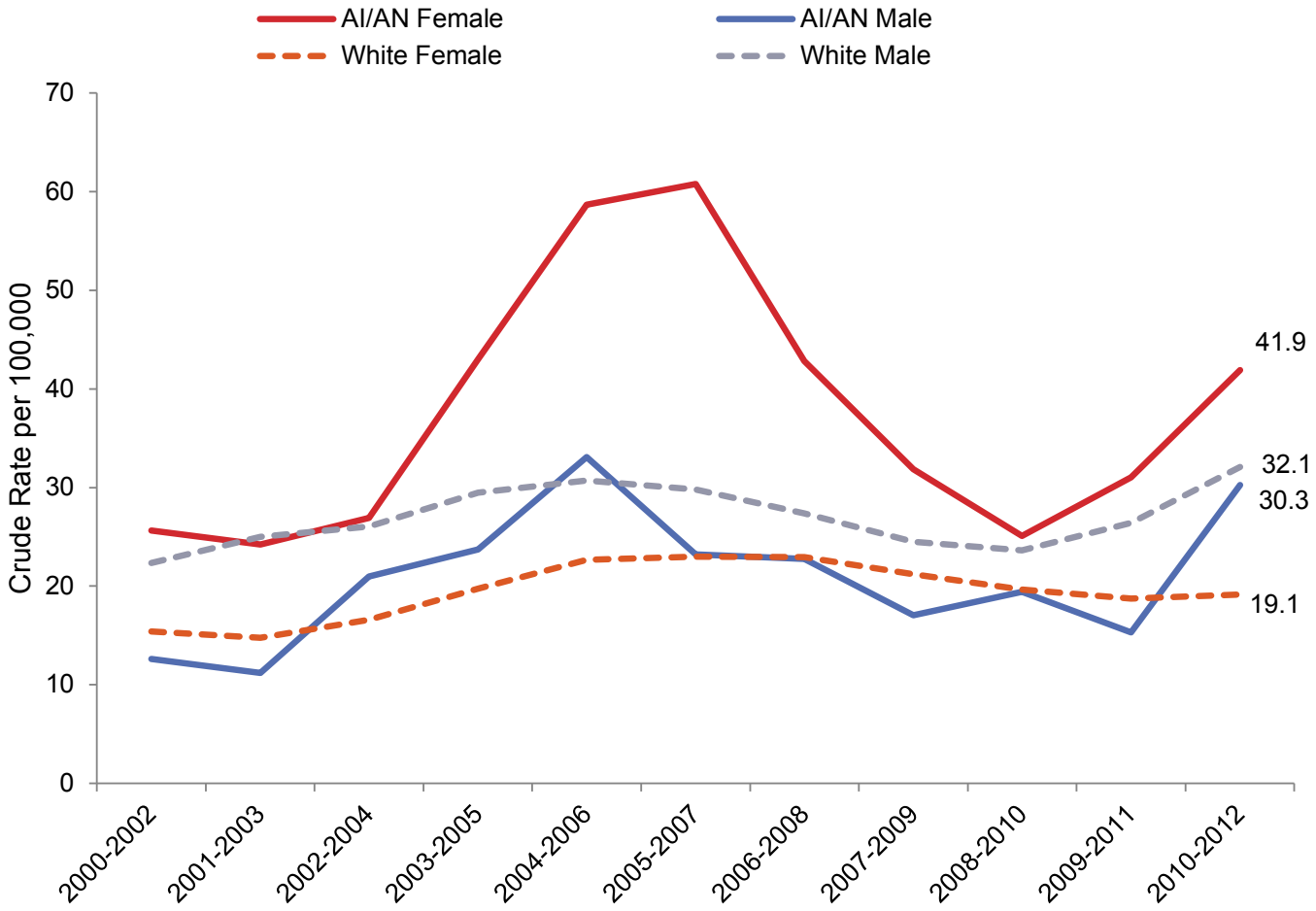
AI/AN females in Oregon have consistently had higher rates of gonorrhea than AI/AN males, though this gap has narrowed in recent years (Figure 10.2). The gonorrhea diagnosis rate for AI/AN women increased sharply from 2000 to 2005 before decreasing through 2008. The rate for AI/AN males showed a similar pattern, though the changes were less dramatic than those seen for AI/AN females. In 2012, the gonorrhea diagnosis rates for AI/AN females and males were 41.9 and 30.3 cases per 100,000, respectively. For whites, males have consistently had higher gonorrhea diagnosis rates than females, and have also had higher rates than AI/AN males for many of the years shown in Figure 10.2.

Trends in STDs may reflect changes in diagnosis and reporting practices instead of actual changes in disease incidence rates over time, and should be interpreted with caution.

Data Source: Center for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) Atlas. http://gis.cdc.gov/GRASP/NCHHSTPAtlas/main.html.

Data Notes: Rates based on confirmed diagnoses during the year. Crude rates do not take into account the age differences between the AI/AN and NHW populations. AI/AN race not corrected for misclassification.

Figure 10.2: Gonorrhea diagnosis rates, three-year rolling averages, by race and sex, Oregon, 2000-2012.



HIV Screening in Pregnancy

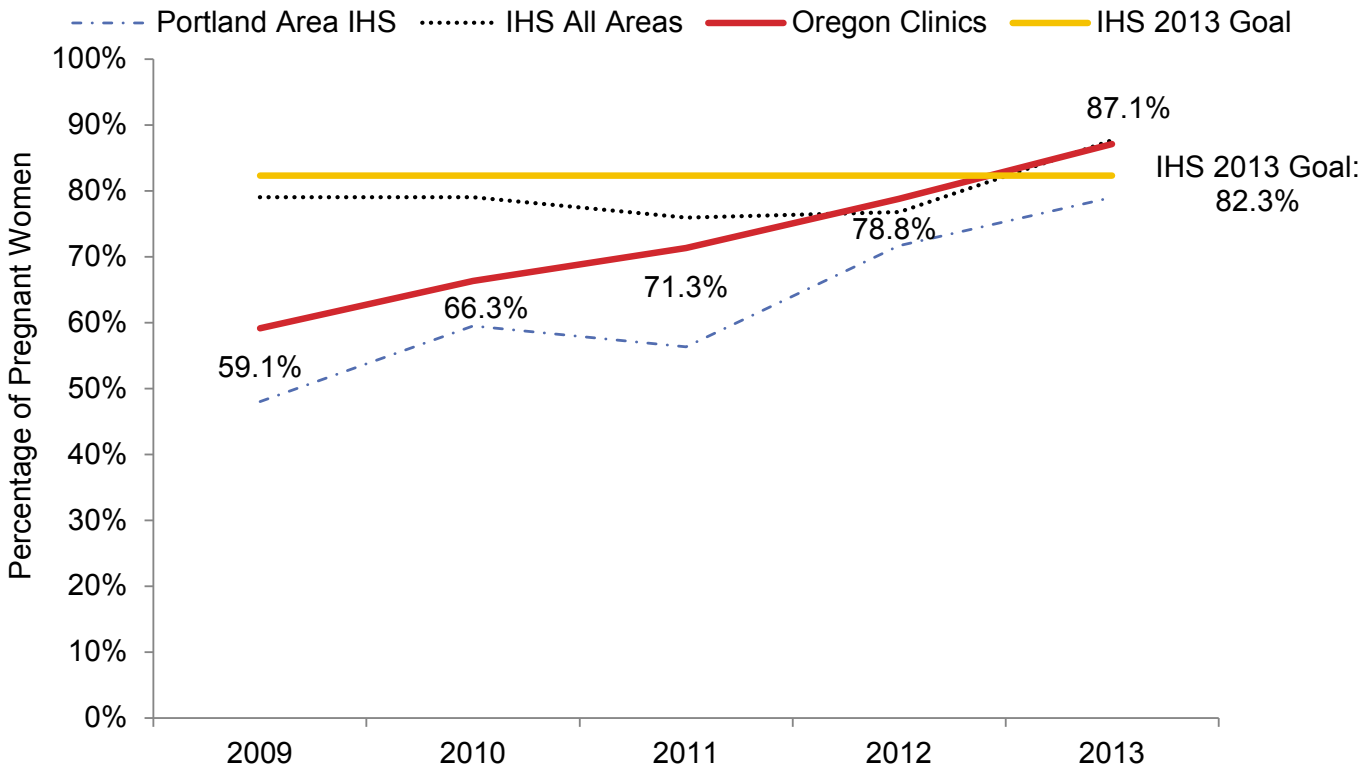
HIV screening during pregnancy can identify women who are at risk for infecting their newborns. HIV-positive mothers who receive treatment during their pregnancy can reduce the risk that their newborns will also be infected with HIV. The U.S. Healthy People 2020 goal is 74.1% of women ages 15-44 who were pregnant in the past year to have an HIV test as part of their prenatal care. IHS tracks the percentage of pregnant AI/AN women who were tested for HIV during their pregnancy. The 2013 goal for this measure was 82.3%.

The prenatal HIV screening rate for Oregon clinics increased from 59.1% in 2009 to 87.1% in 2013. (Figure 10.3) The screening rate for Oregon clinics exceeded the Portland IHS rates for all years, and was above the national goal of 82.3% in 2013.

Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Oregon clinics. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 10.3: HIV screening rates for pregnant AI/AN women seen at IHS facilities, 2009-2013.



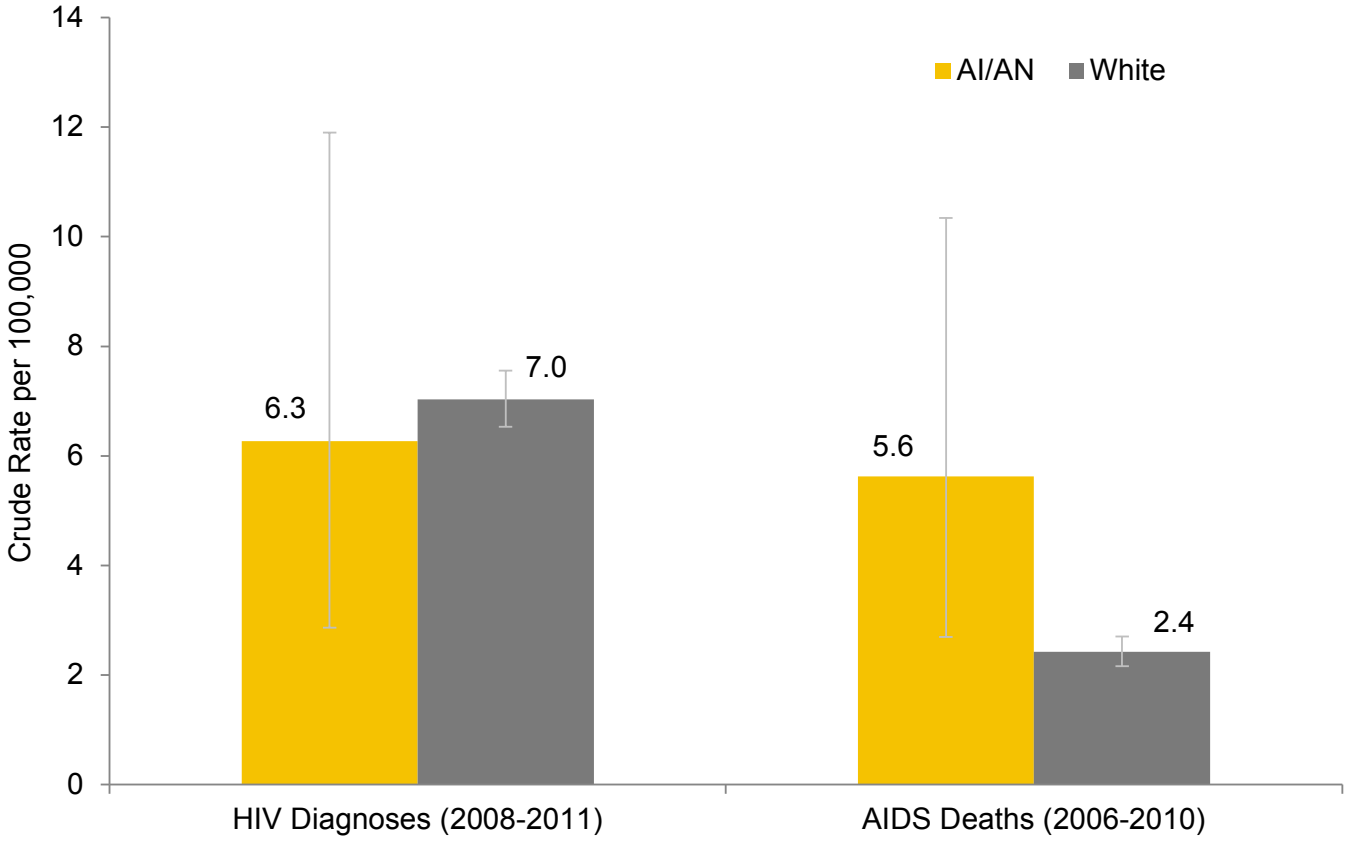
HIV Diagnoses and AIDS Deaths

From 2008 to 2011, the estimated rate of HIV diagnoses for AI/AN in Oregon was similar to the rate for whites in the state (6.3 vs. 7.0 diagnoses per 100,000 population). From 2006-2010, the death rate for AI/AN with AIDS was 2.3 times higher than the rate for whites. Neither of these findings was statistically significant. Because of small numbers for AI/AN, there is considerable uncertainty in these estimates, as demonstrated by the wide confidence intervals around the AI/AN rates. Further, the comparisons are based on unadjusted rates and do not take into account the age differences in the AI/AN and white populations.

Data Source: Center for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) Atlas. http://gis.cdc.gov/GRASP/NCHHSTPAtlas/main.html.

Data Notes: Data on HIV infections likely underestimate the true number of HIV diagnoses due to underreporting to state surveillance systems and because not all infected individuals are tested. Death data include deaths of persons with diagnosed HIV/AIDS from any cause (not just AIDS-related deaths). AI/AN race not corrected for misclassification.

Figure 10.4: Rates of HIV diagnoses (2008-2011) and AIDS deaths (2006-2010) by race, Oregon.



Program Spotlight: Project Red Talon

Project Red Talon (PRT) has provided training and technical assistance to tribes and tribal organizations throughout the U.S. on implementing and evaluating culturally appropriate sexual health and STD/HIV prevention programs since 1988. Project Red Talon works to delay sexual initiation, reduce sexual risk-taking, reduce STD/HIV infections and disparities, and achieve a more coordinated national and regional response to STDs and HIV. PRT's activities include:

We R Native: We R Native is a multimedia health resource for Native teens and young adults (http://www.wernative.org). Special features include monthly contests, community service grants, an "Ask Auntie" Q&A service, discussion boards, and medically accurate information reviewed by experts in public health, mental health, community engagement, and activism.

Native VOICES: The Native VOICES project is an initiative to develop an evidence-based sexual health video for AI/AN teens and young adults (15-24 years old) to reduce the incidence of HIV/STD and teen pregnancy. The video provides accurate risk information, corrects misconceptions, and demonstrates culturally-specific strategies for encouraging condom use and enhancing partner communication.

Native It's Your Game (IYG): Native IYG is a multimedia sexual health curriculum for middle school aged youth (12-14 years). IYG teaches about healthy relationships, life skills, communication, and refusal skills. It emphasizes abstinence, but also teaches students how to protect themselves from pregnancy and sexually transmitted infections using medically accurate information.

STD/HIV Quality Improvement: PRT staff collaborate with the IHS STD and HIV Programs to improve STD, HIV, and Hepatitis C screening measures at Indian Health Service/Tribal/Urban (I/T/U) clinics nationwide. The project works to address organizational, cultural, and individual factors that prevent AI/AN from being screened for STDS, HIV, and Hepatitis C. The project provides training and technical assistance to assist clinics in improving screening rates and clinical sexual health measures.

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

11. Healthy Lifestyles, Healthy Environments

Maintaining a healthy lifestyle throughout the course of life is essential for overall wellbeing. A healthy lifestyle incorporates everything from eating a balanced diet, being physically active, avoiding unhealthy behaviors like smoking, getting preventive care and screening tests, and developing strong social support systems within families and communities. Adopting a healthy lifestyle early in life can set a person on a course toward good health for years to come. Our environment also plays an important role in our health and wellbeing. There are many environmental factors that affect health, including the quality of the water we drink, the air we breathe, and the food we eat.

This section provides data on several indicators related to healthy lifestyles and environment for AI/AN in Oregon. Over 60% of AI/AN adults in Oregon are overweight or obese, and approximately one quarter of AI/AN children (ages 2-5) seen in Oregon Indian health clinics are obese. Nearly 30% of AI/AN males and 46% of AI/AN females reported exercising in the past month, and the majority of AI/AN reported always wearing a seat belt. Over 20% of AI/AN report smoking every day, which is higher than the smoking rate for NHW in the state. Over 30% of tobacco-using patients at Oregon Indian health clinics received a tobacco cessation intervention from 2009 to 2013, which was lower than the average across all IHS areas.

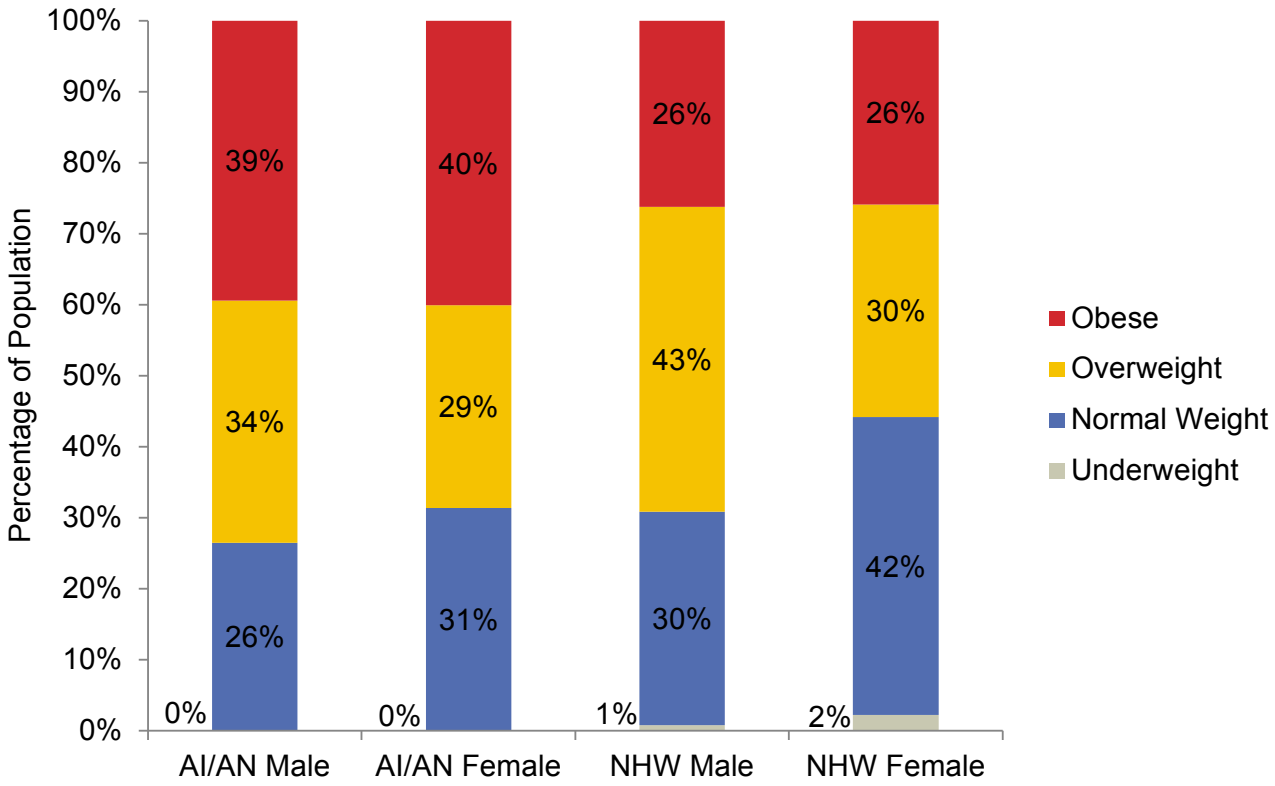
Body Mass Index (BMI)

From 2006-2012, AI/AN males and females in Oregon were more likely to be overweight or obese than their white counterparts in the state (Figure 11.1). Over 60% of AI/AN males and females had a BMI in the overweight or obese range. Compared to AI/AN males, a lower percentage of AI/AN females were overweight (29% vs. 34%); however, AI/AN females had the highest percentage in the obese category (40%).

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 11.1: Body mass index (BMI) by race and sex, Oregon, 2006-2012.



BMI categories (in kg/m^2): Underweight: <18.5; Normal weight: 18.5 - 24.9; Overweight: 25.0 - 29.9; Obese: >30.0

Sample sizes (n): AI/AN males=150; AI/AN females=207; NHW males=12,893; NHW females=18,202.

Childhood Weight Control (BMI Percentile)

Children with a BMI that is at or above the 95th percentile for their age group are considered obese. The U.S.goal is for no more than 9.6% of children ages 2-5 to be considered obese (Healthy People 2020).

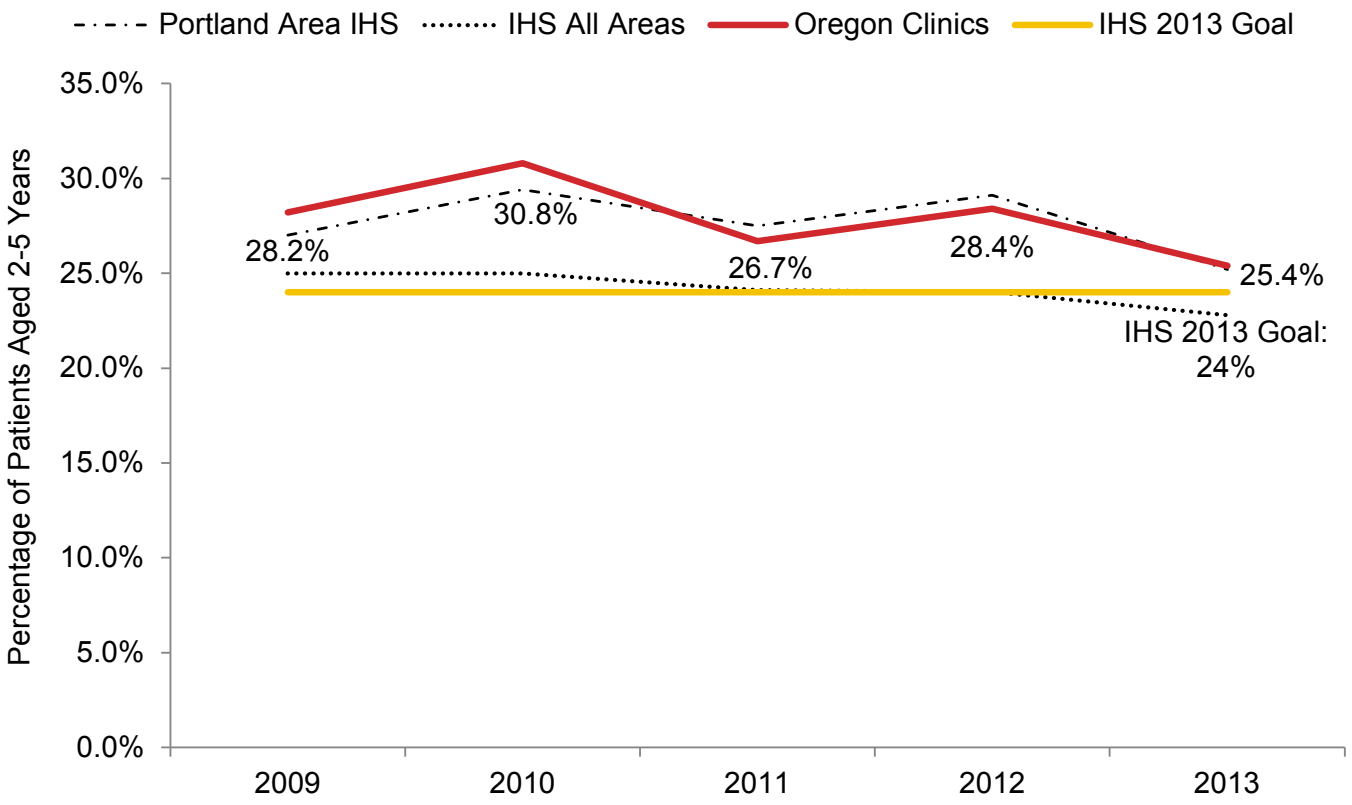
IHS tracks the percentage of AI/AN children (ages 2-5) with a BMI in the 95th percentile range. In 2013, the IHS goal for childhood obesity was 24%. Having a lower score means better performance (i.e., fewer overweight children) for this measure.

The percentage of IHS AI/AN children with an overweight BMI has decreased at the national IHS level since 2009 (Figure 11.2). In 2013, the national IHS average for this measure (22.8%) was below the 2013 goal of 24%. The prevalence of childhood obesity for Oregon clinics and the Portland Area IHS has fluctuated since 2009, and has not shown a consistent upward or downward trend. In 2013, the prevalence of childhood obesity for Oregon clinics (25.4%) was higher than the 2013 goal.

Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Oregon clinics. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 11.2: Percentage of IHS patients ages 2 to 5 years old considered obese, 2009-2013.



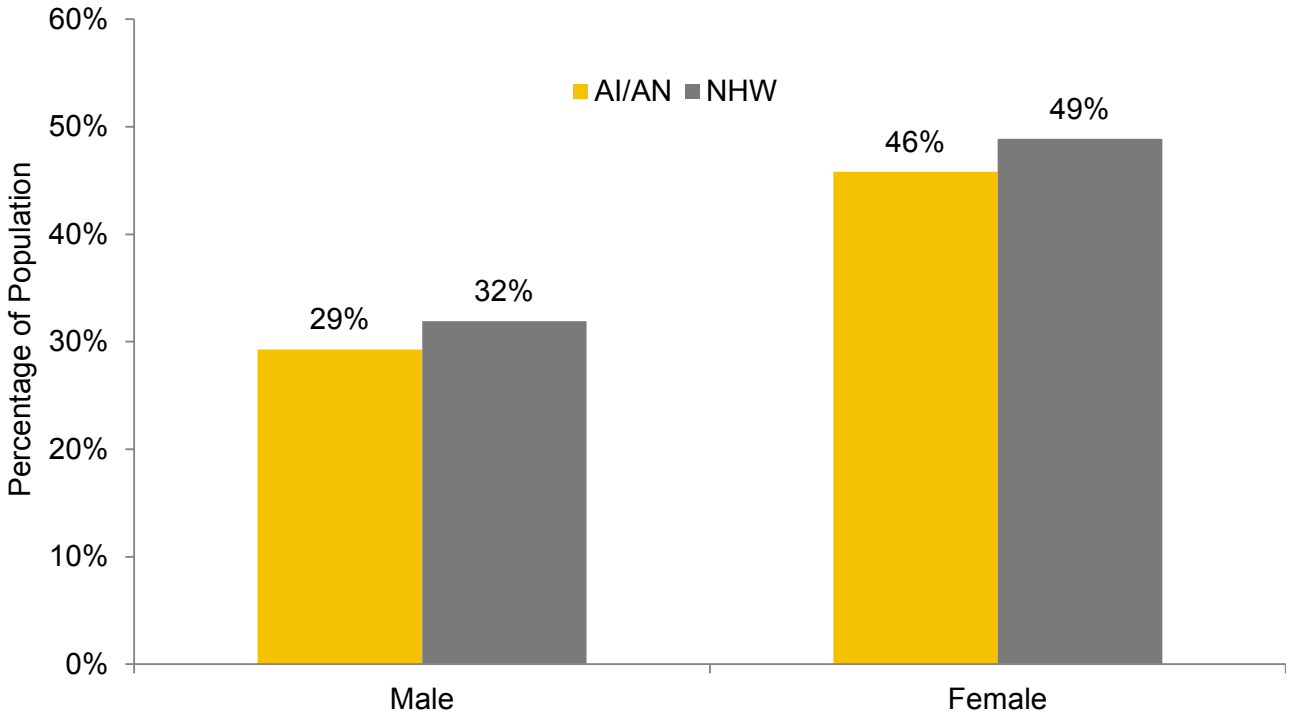
Exercise

From 2006-2012, 29% of AI/AN males and 46% of AI/AN females in Oregon reported having exercised in the past month (Figure 11.3). For both genders, the percentage reporting physical activity in the past month was lower for AI/AN than for NHW (29% vs. 32% for males, 46% vs. 49% for 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 11.3: Percentage of population who exercised in the past month, by race and sex, Oregon, 2006-2012.



Sample sizes (n): AI/AN males=408; AI/AN females=594; NHW males=30,687; NHW females=48,127.

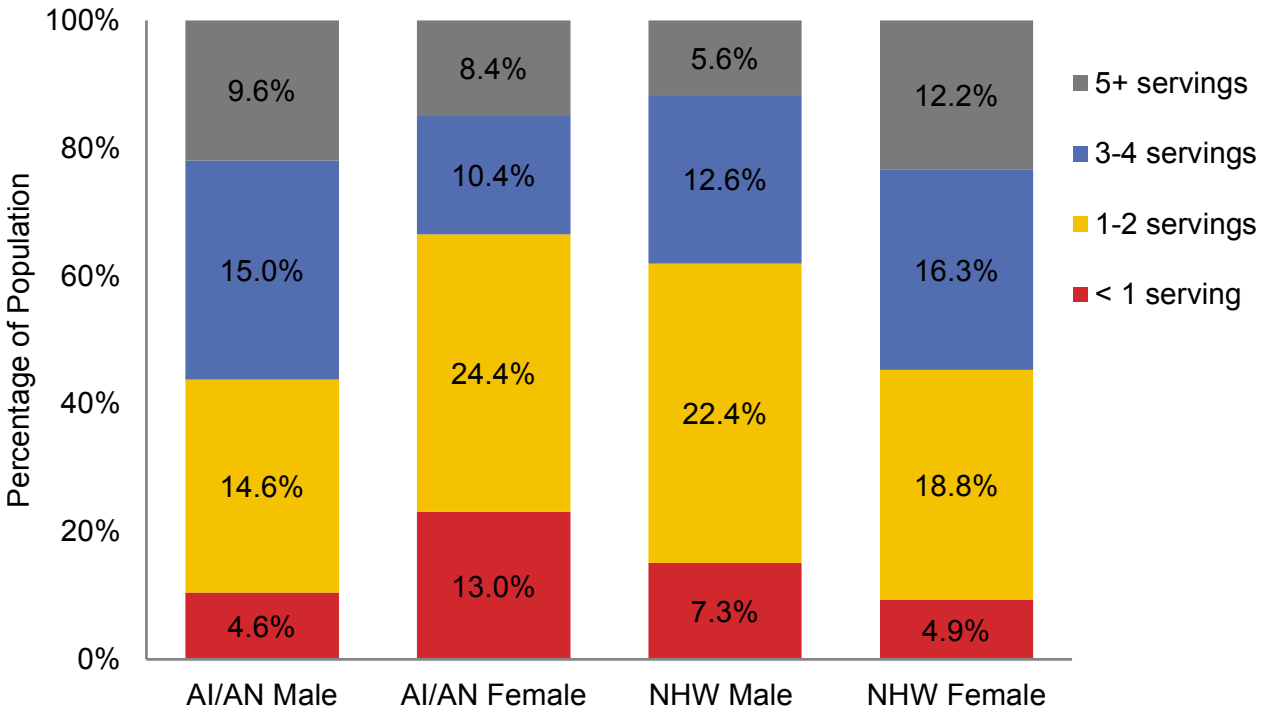
Fruit and Vegetable Consumption

Figure 11.4 shows the number of fruit and vegetable servings eaten per day for AI/AN and NHW in Oregon. About 5% of AI/AN males and 13% of AI/AN females reported eating less than 1 serving of fruit or vegetables per day. Approximately 15% of AI/AN males and 24% of AI/AN females ate 1-2 servings per day. Only 25% of AI/AN males and 19% of AI/AN females reported eating three or more fruits or vegetables per day.

Data Source: CDC Behavioral Risk Factor Surveillance System (BRFSS), 2007, 2009, 2011.

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 11.4: Daily fruit and vegetable consumption by race, Oregon, 2007-2011.



Sample sizes (n): AI/AN males=18; AI/AN females=30; NHW males=2,177; NHW females=3,218.

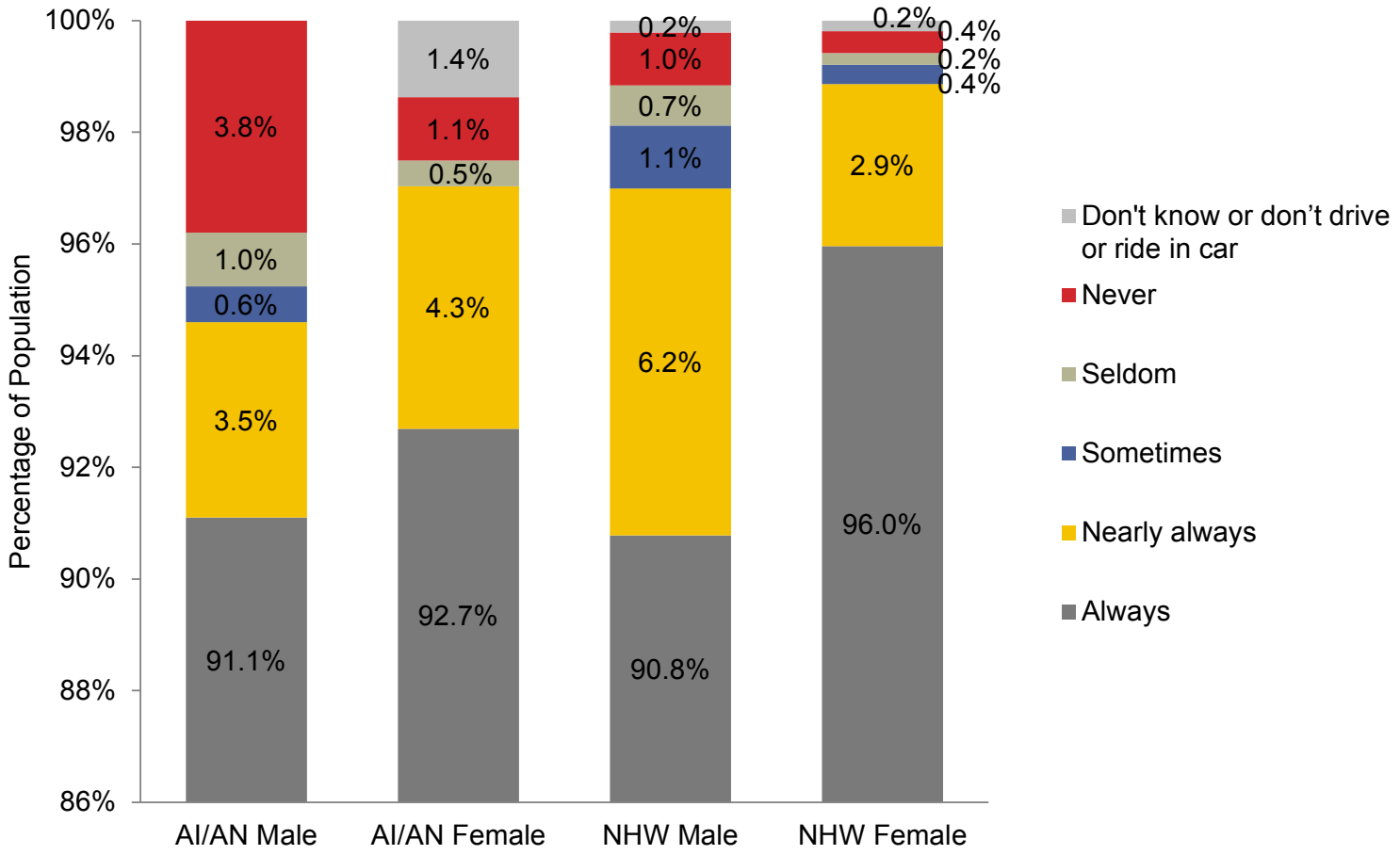
Seatbelt Use

Among AI/AN and NHW in Oregon, women were more likely than men to report always wearing a seatbelt (Figure 11.5). The majority (96%) of NHW women always wore seatbelts, while 93% of AI/AN women always wore seatbelts. Approximately 5% percent of AI/AN men and 2% of NHW men reported that they seldom or never wore seatbelts.

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 11.5: Self-reported seatbelt use by race and sex, Oregon, 2006-2012.



Sample sizes (n): AI/AN males=314; AI/AN females=438; NHW males=23,182; NHW females=36,076.

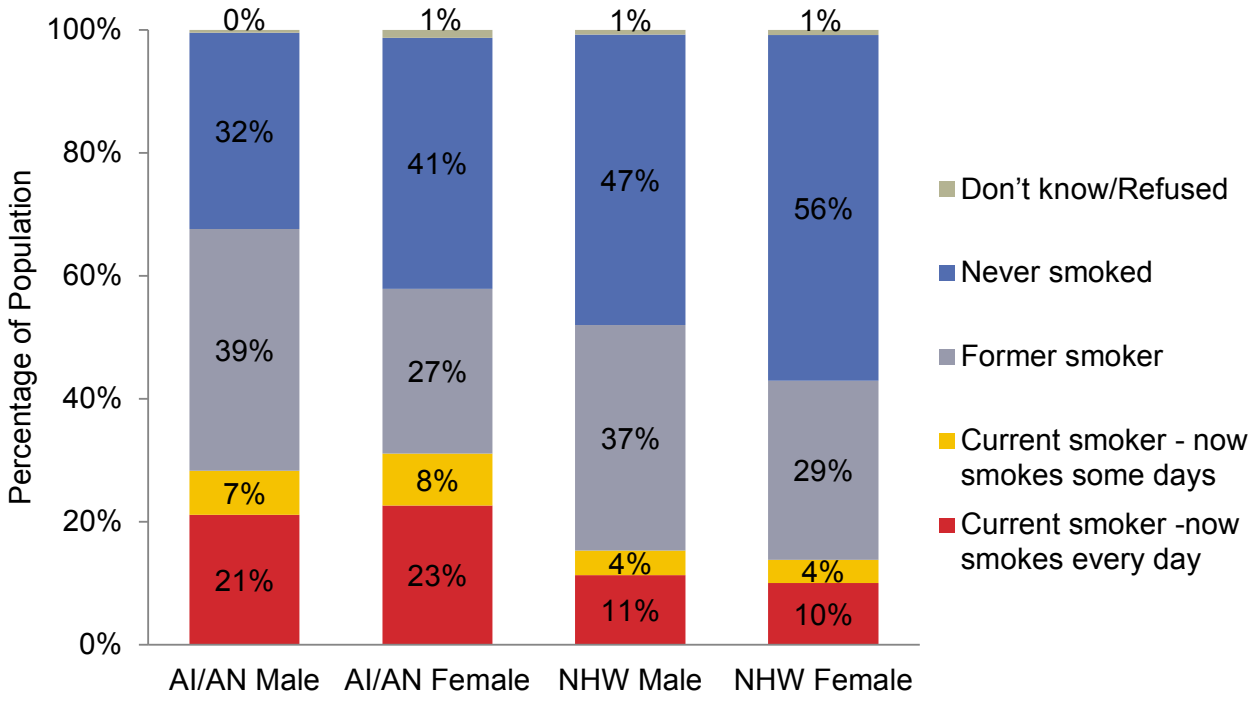
Smoking Status

AI/AN males and females in Oregon were more likely to report being current smokers than NHW in the state. From 2006-2012, over 20% of AI/AN males and females reported smoking every day, and 7% of AI/AN males and 8% of AI/AN females reported smoking some days (Figure 11.6). AI/AN females were more likely to be current smokers than AI/AN males (31% vs. 28%). A lower percentage of AI/AN males (32%) had never smoked compared to AI/AN females (41%), NHW males (47%), and NHW females (56%).

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 11.6: Smoking status by race and sex, Oregon, 2006-2012.



Sample sizes (n): AI/AN males=783; AI/AN females=1,148; NHW males=49,342; NHW females=77,177.

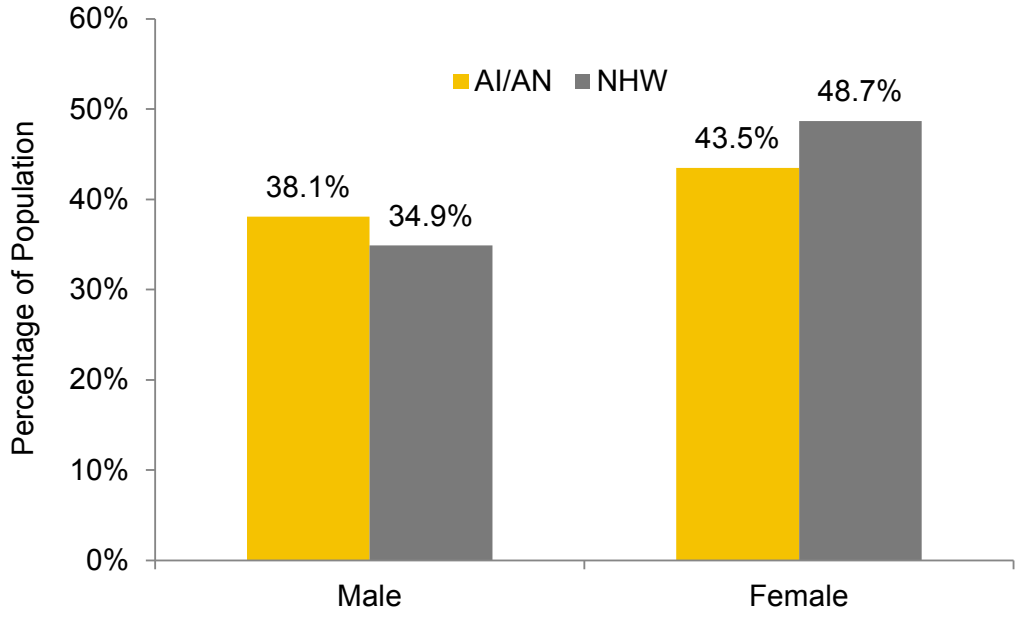
Asthma Prevalence

Smoking and exposure to second-hand smoke are triggers for asthma in children and adults. Nearly 45% of AI/AN females reported having asthma during their lifetime. This was higher when compared to AI/AN males (38%), NHW males (35%), and was 49% higher than NHW females (44%).

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 11.7: Lifetime asthma prevalence by race and sex, Oregon, 2006-2012.



Sample sizes (n): AI/AN males=170; AI/AN females=221; NHW males=13,060; NHW females=19,475.

Tobacco Cessation

Tobacco use increases the risk for many diseases, including lung cancer, cardiovascular diseases, and respiratory diseases. The U.S. Healthy People 2020 goal is for 80% of adult smokers to attempt to stop smoking in the past 12 months.

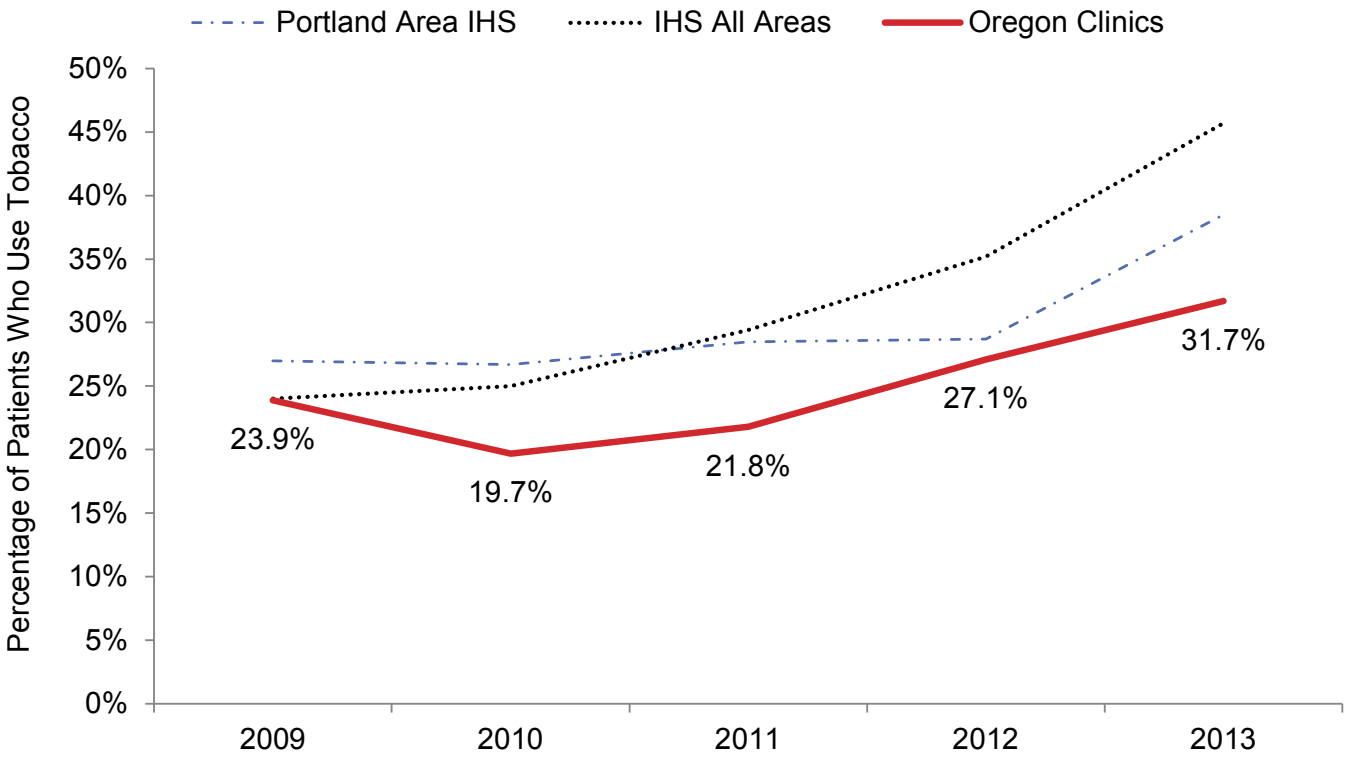
IHS tracks the percentage of tobacco-using patients who have received a tobacco cessation intervention (such as tobacco cessation counseling) in the past year. The 2012 goal for this measure was 30%. IHS is using 2013 rates to establish a new baseline for this measure, and did not set a 2013 goal.

The tobacco cessation counseling rate for Oregon clinics fluctuated between 19-32% between 2009 and 2013, and was below Portland Area and national IHS rates for all years. All three areas have shown an upward trend for this measure since 2010, with a sharper increase for the national IHS. In 2012, Oregon clinics and the Portland Area IHS were below the national goal of 30%.

Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Oregon clinics. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 11.8: Tobacco cessation counseling rates for IHS patients, 2009-2013.



Environmental Health: Air Quality

The U.S. Environmental Protection Agency (EPA) has national air quality standards for six key air pollutants: ozone, sulfur dioxide, carbon monoxide (CO), particulate matter (PM-2.5 and PM-10), lead, and nitrogen dioxide . Non-attainment areas are geographic areas where air pollution levels are consistently higher than these national standards. The EPA requires local and state governments to take actions to reduce air pollution in non-attainment areas. If a non-attainment area meets and maintains air quality standards, it can be re-designated as a maintenance area.

Oregon has three non-attainment areas in the state (Figure 11.9): Eugene-Springfield (PM-10), Klamath Falls (PM-2.5), and Oakridge (PM 2.5 and PM-10). PM 2.5 are small particles generated from smoke (especially from wood-burning stoves), vehicle exhaust, and industrial processes. PM-10 are larger particles (such as dust) that become airborne due to wind and human activities. Exposure to PM-2.5 and PM-10 in the air can increase risks for respiratory illnesses, cardiovascular disease, and premature death.

Oregon has several air quality maintenance areas for CO, ozone, and PM-10. These areas currently meet air quality standards, but exceeded them in the past.

None of the federally recognized tribes in Oregon have lands within Oregon's air quality nonattainment or maintenance areas. However, AI/AN living in urban areas could be affected by local air quality conditions.

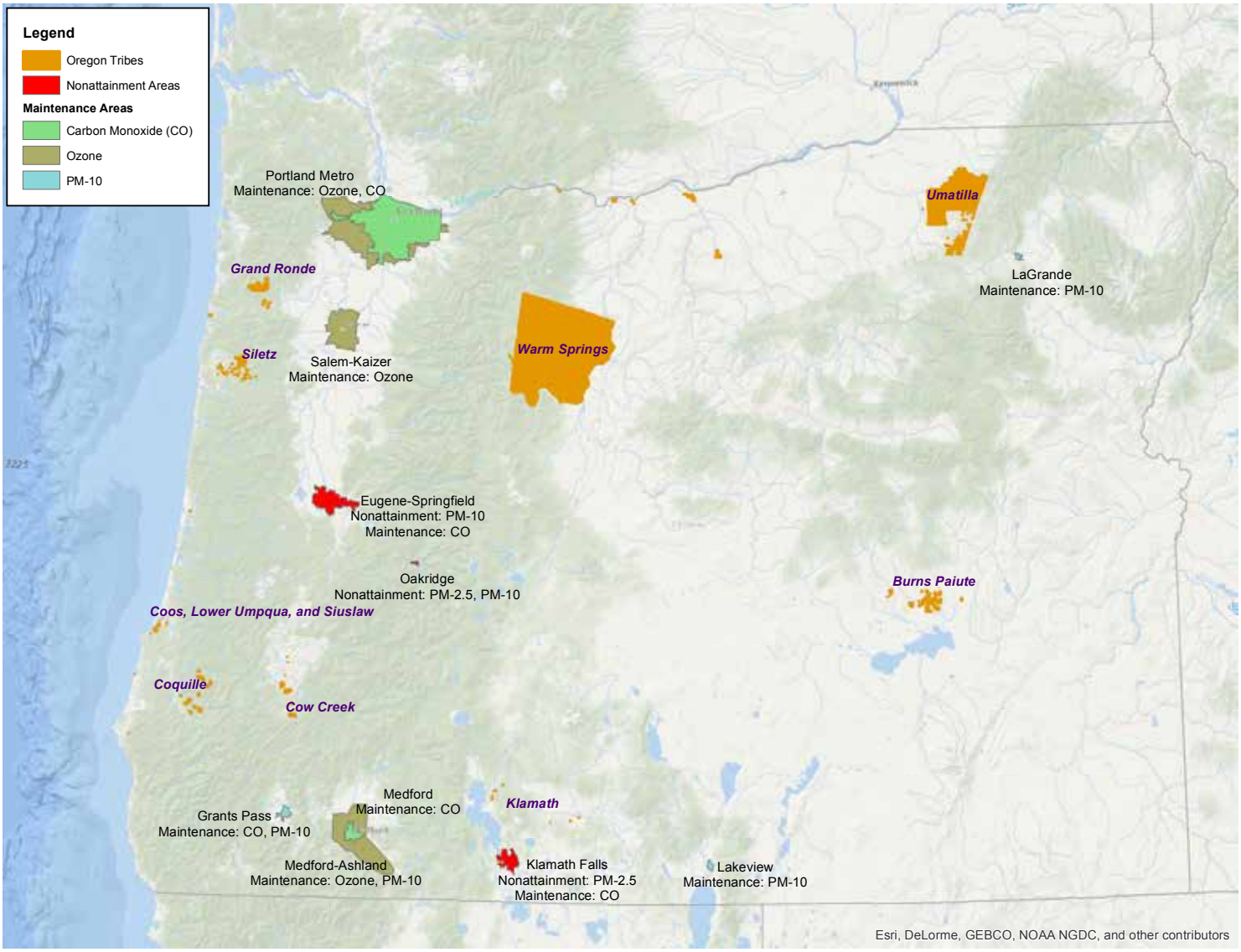
[1] http://www.epa.gov/air/criteria.html

Data Source: Oregon Department of Environmental Quality.

Air Quality Website: http://www.deq.state.or.us/aq/planning/index.htm.

Data Notes: The air quality information presented in this report is current as of September 2014. For up-to-date information on air quality in Oregon, visit: http://www.deq.state.or.us/aq/planning/index.htm.

Figure 11.9: Air quality non-attainment and maintenance areas in Oregon.



Environmental Health: Fish Consumption Advisories

Fish are important to many Northwest Tribes' culture, traditions, and history. Fish are also an important dietary source of healthy fats, protein, and essential nutrients. However, fish can become contaminated with chemicals in the environment. Exposure to these chemicals can potentially pose health risks to people who eat contaminated fish. Women of childbearing age, pregnant women, nursing mothers, and young children are particularly vulnerable to chemical exposures, but can also benefit from the healthful nutrients in fish.

The State of Oregon has issued fish consumption advisories for several water bodies in Oregon (Figure 11.10 and Table 11.1). These advisories help people make healthy choices when eating fish caught from contaminated water bodies in Oregon. Oregon also has guidance for choosing fish from grocery stores and restaurants (available at: http://public.health.oregon.gov/HealthyEnvironments/Recreation/FishConsumption/Pages/seafood-shellfish.aspx)

Data Source: Oregon Public Health Division, Environmental Public Health.

Data Notes: Table adapted from Oregon's fish advisory program website. The fish advisory information presented in this report is current as of September 2014. For up-to-date information on fish advisories in Oregon, visit: http://public.health.oregon.gov/HealthyEnvironments/Recreation/FishConsumption/Pages/index.aspx.

Figure 11.10: Map of fish consumption advisories in Oregon, 2014.

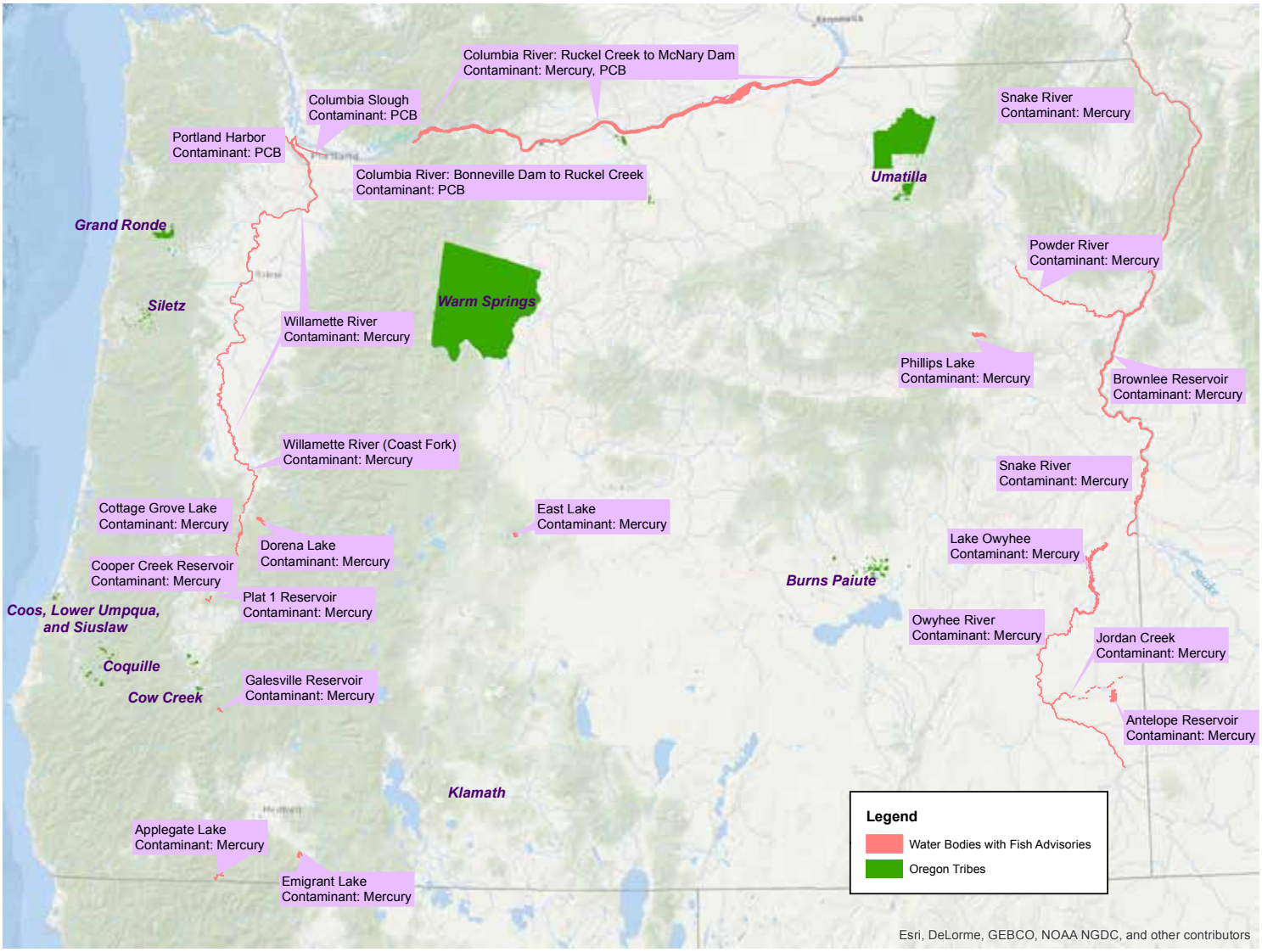


Table 11.1: Fish consumption advisories in Oregon.

Water Body	Contaminants	Affected Fish Species	Meals per month	
			Vulnerable Populations*	Everyone Else
Antelope Reservoir	Mercury	All resident fish	0	1
Applegate Lake	Mercury	Large and small mouth bass, yellow perch Bluefish and crappie	2 4	5 13
Columbia River: Bonneville Dam to Ruckel Creek (1 mile upstream)	PCB	All resident fish	0	0
Columbia River: Ruckel Creek to McNary Dam (150 miles upstream from Bonneville)	Mercury, PCB	All resident fish	4	4
Columbia Slough	PCB	All resident fish	2	2
Cooper Creek Reservoir	Mercury	All resident fish	1	4
Cottage Grove Reservoirs	Mercury	All resident fish except stocked, fin-clipped rainbow trout (12 inches or less)	0	1
Dorena Reservoirs	Mercury	All resident fish except stocked, fin-clipped rainbow trout (12 inches or less)	1	4
East Lake	Mercury	All resident fish, brown trout (16 inches or longer)	1 0	3 1
Emigrant Reservoir	Mercury	All resident fish except rainbow trout	1	3
Galesville Reservoir	Mercury	All resident fish	1	4
Jordan Creek	Mercury	All resident fish	0	1
Owyhee Reservoir	Mercury	All resident fish	1	3
Owyhee River upstream to Three Forks	Mercury	All resident fish	2	6
Phillips Reservoir	Mercury	Yellow perch	2	5
Plat 1 Reservoir	Mercury	All resident fish	2	6
Portland Harbor (Lower Willamette River and Multnomah Channel)	PCB	All resident fish; avoid eating carp, bass and catfish	0	1
Snake River including Brownlee Reservoir and Powder River	Mercury	All resident fish	3	8
Willamette River (including Coast Fork)	Mercury	All resident fish	1	4

PCB = Polychlorinated biphenyls
*Vulnerable populations include women of childbearing age, children under 6, and people with thyroid or immune system problems.

PCBs = Polychlorinated biphenyls; DDT = dichlorodiphenyltrichloroethane; PBDEs = Polybrominated diphenyl ethers

Program Spotlight: Comprehensive Cancer Tribal BRFSS Project

AI/AN are a diverse population representing hundreds of tribes with a variety of cultural beliefs and customs. Disease incidence rates and risk factors within the AI/AN population also vary by region. However, there is little tribe-specific information on the factors that could increase (or decrease) risks for cancer and chronic diseases. These factors include tobacco use, obesity, physical activity, diet, and getting preventive health screenings. While states collect information on health behaviors and risk factors through the Behavioral Risk Factor Surveillance System (BRFSS), AI/AN populations are not well-represented in state-level BRFSS data.

NPAIHB's Comprehensive Cancer Tribal BRFSS Project is one of seven tribal sites that receive funding for comprehensive cancer control activities through the National Comprehensive Cancer Control Program (NCCCP). The Project is working with other NCCCP tribal programs to improve cancer and other health risk factor surveillance by conducting BRFSS-type health surveys within tribal communities or working with states to obtain a more representative sample of AI/AN through the traditional BRFSS. These activities will provide local-level data on risk factors and build tribes' capacity to implement health surveys within their communities. The Comprehensive Cancer Tribal BRFSS Project is funded through the Centers of Disease Control and Prevention through a contract with the Indian Health Service.

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

12. Access to Care

Having good access to healthcare means that patients can find affordable and quality care close to home. This care includes having access to primary, preventative, specialty, mental health, and dental care providers. Having private health insurance or coverage through public programs is an important factor in making healthcare affordable for most people. Prior to 2012, approximately 46 million people in the U.S. (15% of the population) did not have health insurance coverage. Of the 5 million AI/AN living in the U.S. in 2012, 23.3% did not have health coverage through private or public sources.[1] Members of federally-recognized tribes who utilize IHS, Tribal and Urban (I/T/U) clinics for primary care often have limited access to specialty, dental, and behavioral health care. This is due to chronic underfunding of the Indian health system which limits referral care, and long travel distances to reach providers of these services.

The data in this section were collected before the major provisions of the Affordable Care Act (ACA) were implemented. These data should be viewed as "baseline" information that provides a picture of disparities in healthcare coverage and access prior to ACA implementation. In 2012, 36% of AI/AN males and 48% of AI/AN females in Oregon did not have healthcare coverage. Compared to NHW in the state, fewer AI/AN reported having a primary care provider or receiving dental care in the past year. In 2013, Oregon IHS clinics had childhood immunization rates on par with the IHS national average.

The ACA will provide much needed insurance coverage to AI/AN who do not utilize the I/T/U system for primary care, and will provide additional resources to provide referral care for those who do not qualify for Purchased and Referred Care. In addition, IHS is working to increase the capacity of I/T/U clinics to provide efficient, high quality, primary care services through the Improving Patient Care collaborative. The Improving Patient Care collaborative focuses on organizing clinical care and linking patients to primary care teams. This sets the foundation for sites to become accredited as State and National Patient-Centered Medical Home programs.

1. U.S. Census Bureau. Selected population profile in the United States. American Community Survey 3-year estimates, 2010-2012.

Health Insurance Coverage

From 2006-2012, 36% of AI/AN males and 48% of AI/AN females in Oregon reported not having health insurance (Figure 12.1). Compared to their NHW counterparts, the percentage with health insurance coverage was similar for males, and was slightly lower for females (48% of AI/AN females uninsured, versus 53% of NHW females).

Table 12.1: Health insurance coverage by race, Oregon, 2011-2013.

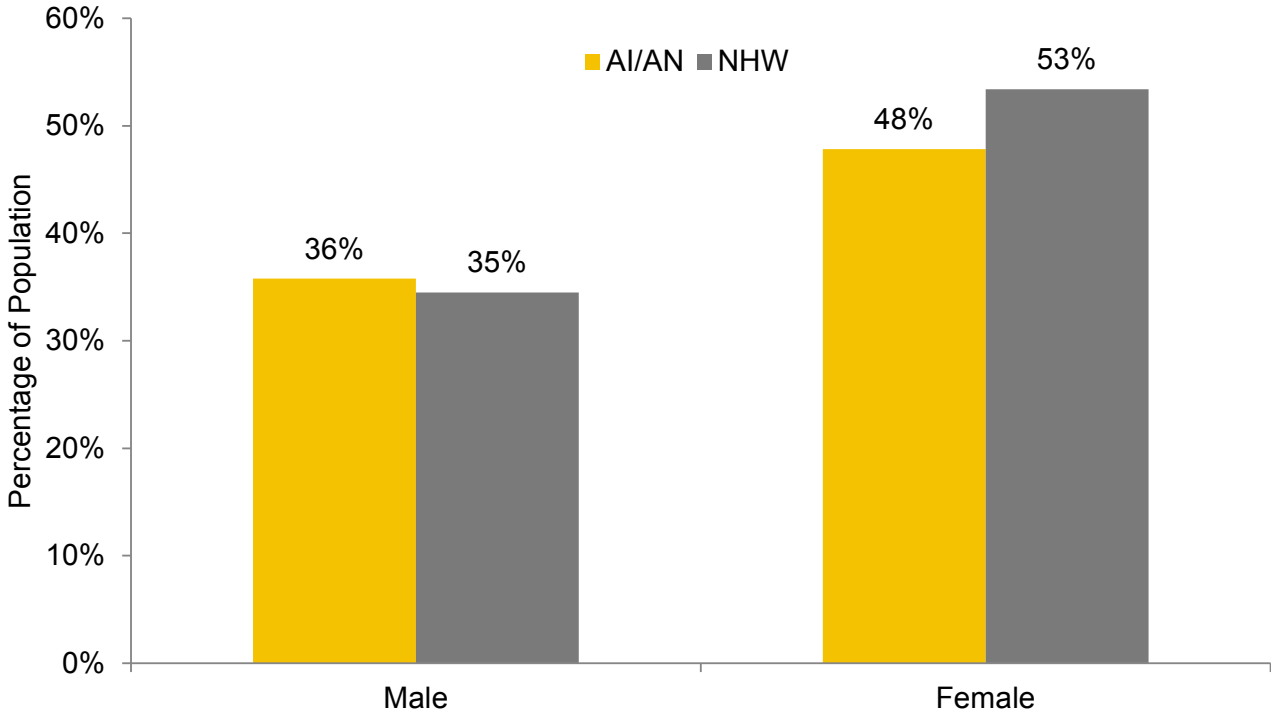
Coverage Status	AI/AN (N = 108,781) %	NHW (N = 3,002,118) %
Private Health Insurance	48.3%	70.0%
Public Coverage	39.9%	32.1%
No Health Insurance	21.3%	12.8%

N = Number (Civilian non-institutionalized population)
Note: Percentages do not add to 100% because people can have multiple sources of health insurance coverage.

Data Source: Table 12.1 – American Community Survey 3-Year Estimates, 2010-2012; Figure 12.1 – 2006 – 2012 CDC BRFSS

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

Figure 12.1: Percentage of population without health insurance by race and sex, Oregon, 2006-2012.



Sample sizes(n): AI/AN males=170; AI/AN females=221; NHW males=13,060; NHW females=19,476.

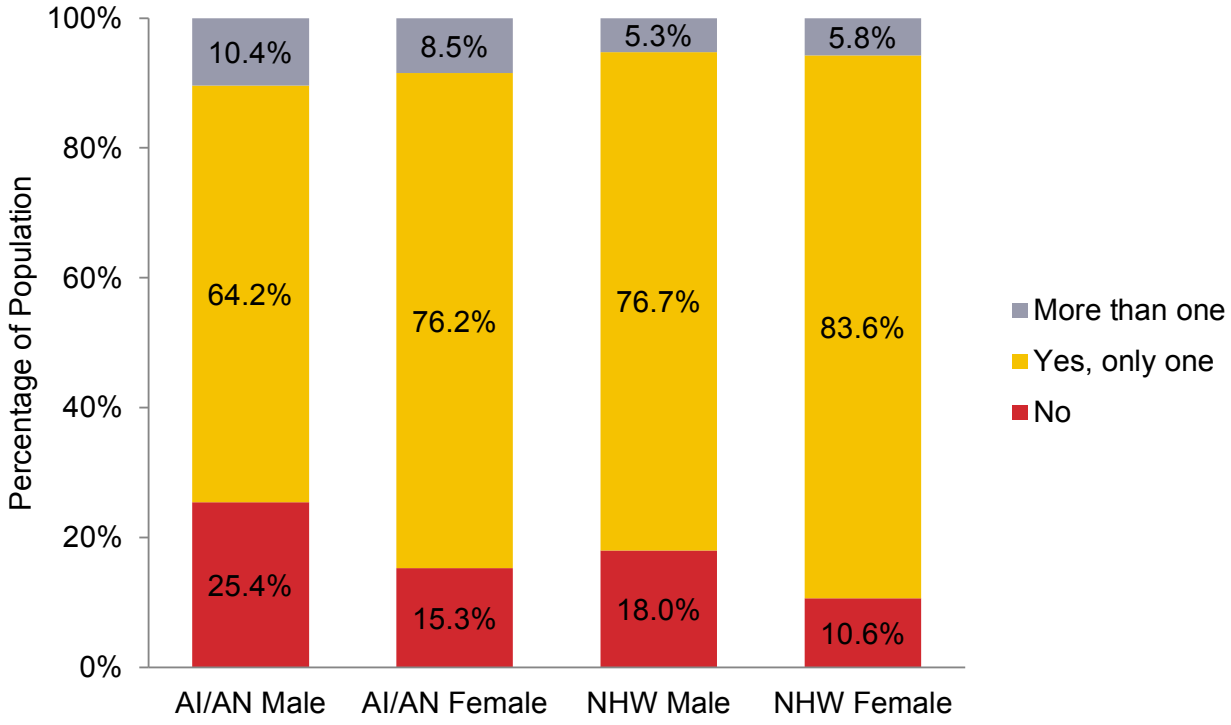
Primary Care Physician

Over 70% of AI/AN and NHW in Oregon reported having a primary care provider (Figure 12.2). However, when compared to NHW of the same sex, fewer AI/AN had a primary care provider. About 25% of AI/AN males and 18% of NHW males did not have a primary care provider. For females, 15% of AI/AN and 11% of NHW did not have a personal doctor. A small percentage of respondents reported having more than one primary care provider.

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 12.2: Percentage of population with a primary care provider by race and sex, Oregon, 2006-2012.



Sample sizes (n): AI/AN males=413; AI/AN females=614; NHW males=30,941; NHW females=48,453.

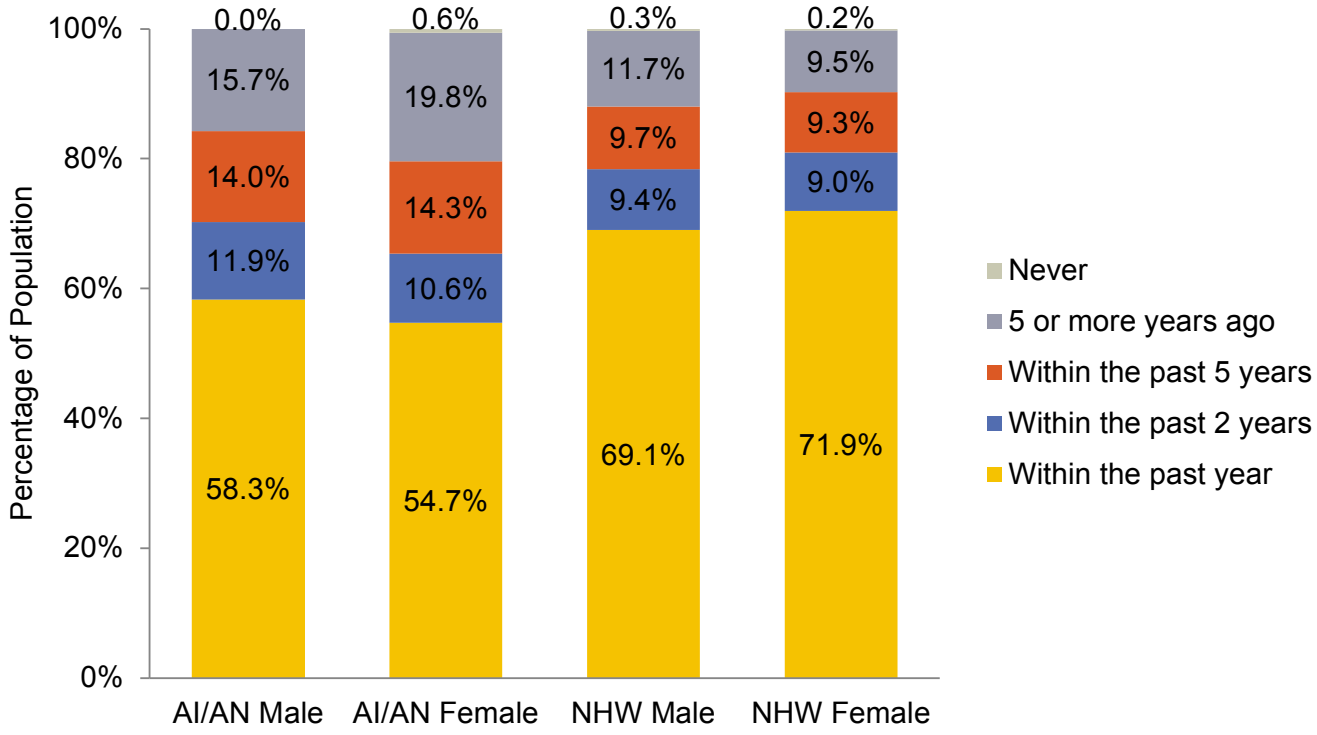
Access to Dental Care:
Time Since Last Dental Visit

From 2006-2012, fewer AI/AN in Oregon reported having a dental visit in the past year compared to NHW in the state (Figure 12.3). Among AI/AN males, 56% had a dental visit in the past year and 12% had a dental visit in the past two years; for NHW males, 68% had a visit in the past year and 9% had a visit in the past two years. Three percent of AI/AN men reported they had never had a dental visit. Among AI/AN females, 54% had a dental visit in the past year (vs. 71% of NHW females), and 11% had a dental visit in the past two years (vs. 9% of NHW females).

Data Source: CDC Behavioral Risk Factor Surveillance System (BRFSS), 2006, 2008, 2010, and 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 12.3: Time since last dental visit by race and sex, Oregon, 2006-2012.



Sample sizes (n): AI/AN males=235; AI/AN females=329; NHW males=16,785; NHW females=26,499.

Access to Dental Care:
Visit in Past Year

Regular dental check-ups can help prevent oral infections and tooth decay, and improve overall health and well-being. The U.S. goal is for 49% of people ages 2 and older to have had a dental visit in the past year (Healthy People 2020). IHS tracks the percentage of AI/AN patients who had a dental visit in the past year. In 2013, the IHS goal for dental visits was 26.9% of all patients. About 40% of patients seen in Oregon clinics and 36% of patients in the Portland Area IHS had a dental visit in the past year, which both exceeded the 2013 goal (Figure 12.4). Compared to the national IHS average, Oregon Clinics and the Portland Area IHS had a higher percentage of patients with a dental visit in the past year.

Program Spotlight: Northwest Tribal Dental Support Center

NPAIHB's Northwest Tribal Dental Support Center (NTDSC) works with 34 IHS and tribal dental programs to improve the oral health of AI/AN in the Northwest. NTDSC has a four-pronged approach to address the needs of the dental programs in the Portland Area: 1) clinical program support, 2) prevention program support, 3) implementation of a surveillance system to track oral health status, and 4) provision of continuing dental education opportunities.

The objectives of the NTDSC are to increase overall dental access, increase access for patients with diabetes, increase use of sealants, increase use of topical fluoride treatments, and prevent and treat periodontal diseases among diabetic patients. The NTDSC communicates with local dental programs via site visits, email groups, webinars, telephone consultation, and an annual Prevention Coordinators meeting.

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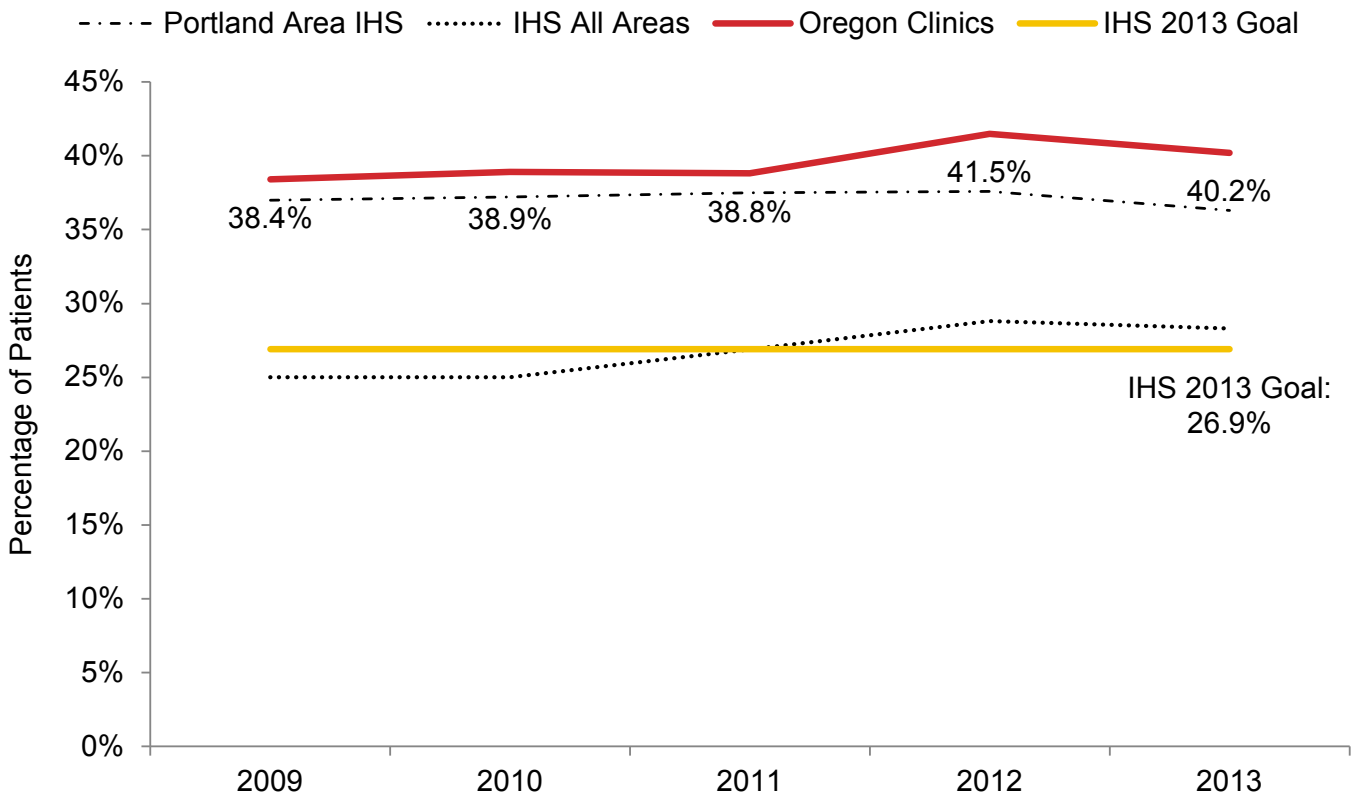
Figure 12.4: Percentage of IHS AI/AN patients who had a dental visit in the past year, 2009-2013.



Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Oregon clinics. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Childhood Immunizations

Vaccines help protect people from infectious diseases such as polio, measles, pertussis, and influenza. In order to be up-to-date on childhood immunizations, children between the ages of 19-35 months must receive all of the following vaccines: four doses of diphtheria, tetanus and pertussis (DTaP), three doses of polio, one dose of measles, mumps and rubella (MMR), three doses of Haemophilus influenzae B (HiB), three doses of hepatitis B, one dose of varicella, and four doses of pneumococcal. This series is abbreviated as 4:3:1:3:3:1:4.

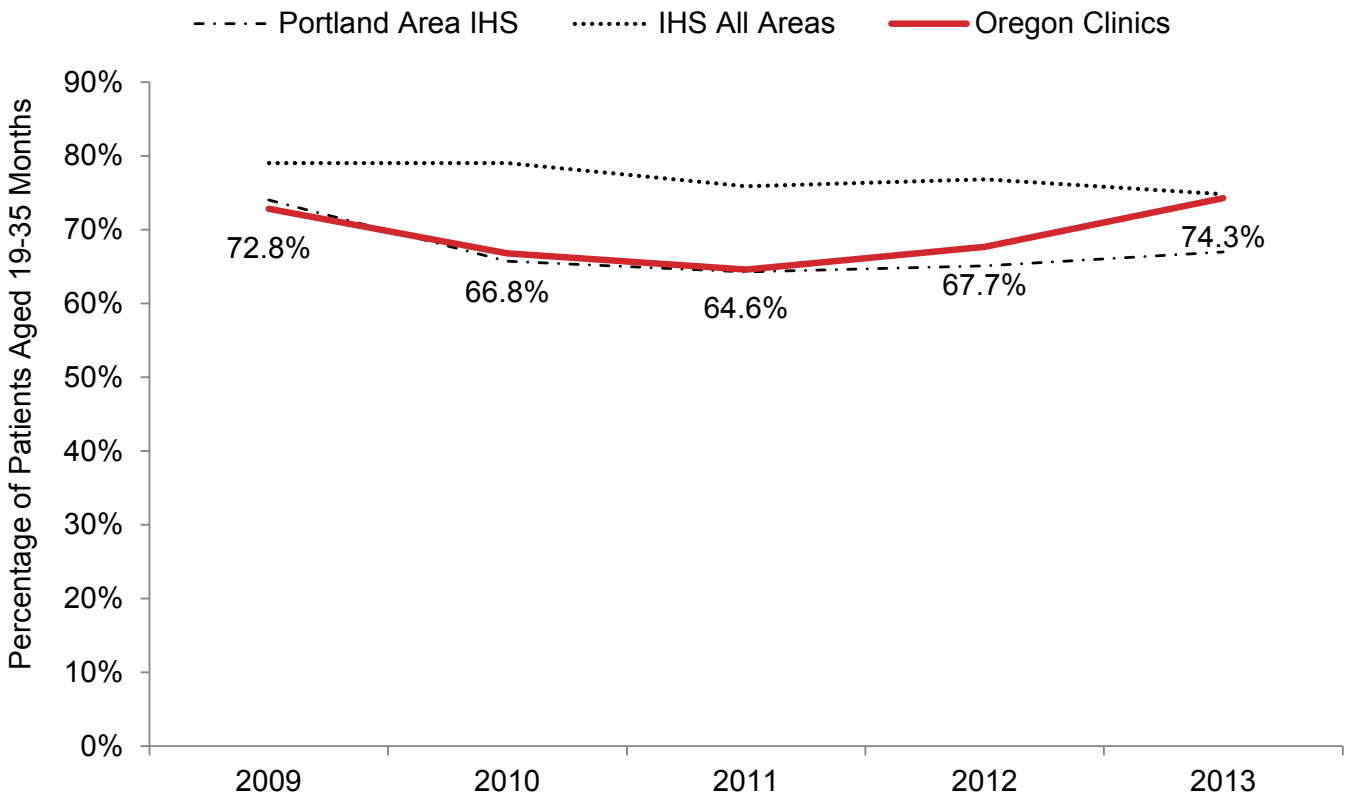
The U.S. goal is for at least 80% of children ages 19-35 months to be up-to-date on the above childhood immunizations (Healthy People 2020). IHS is using 2013 rates to establish a new baseline for this measure, and did not set a 2013 goal. The 2012 goal for this measure was 77.8%.

Childhood immunization rates for Oregon clinics and the Portland Area IHS decreased from 2009-2011 (Figure 12.5). While this trend continued for Portland Area IHS from 2011-2013, rates in Oregon clinics increased during this time period. In 2012, the childhood immunization rate for Oregon clinics (67.7%), the Portland Area IHS (65.1%), and the national IHS (76.8%) did not meet the 2012 goal of 77.8%. While Oregon clinics and the Portland Area IHS have consistently had lower childhood immunization rates than the national IHS average, in 2013 Oregon clinics were on par with the IHS national average.

Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Oregon clinics. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 12.5: Percentage of IHS AI/AN children (ages 19-35 months) who received the 4:3:1:3:3:1:4 immunization schedule, 2009-2013.



Adult Immunizations: Flu Vaccine

The influenza (or flu) vaccine is an effective way to prevent illnesses and deaths from the influenza virus. Flu vaccines are especially important for people who are at greatest risk of complications from the flu. These groups include people over 65 years of age, pregnant women, and people with diabetes, chronic lung disease, or other serious illnesses.

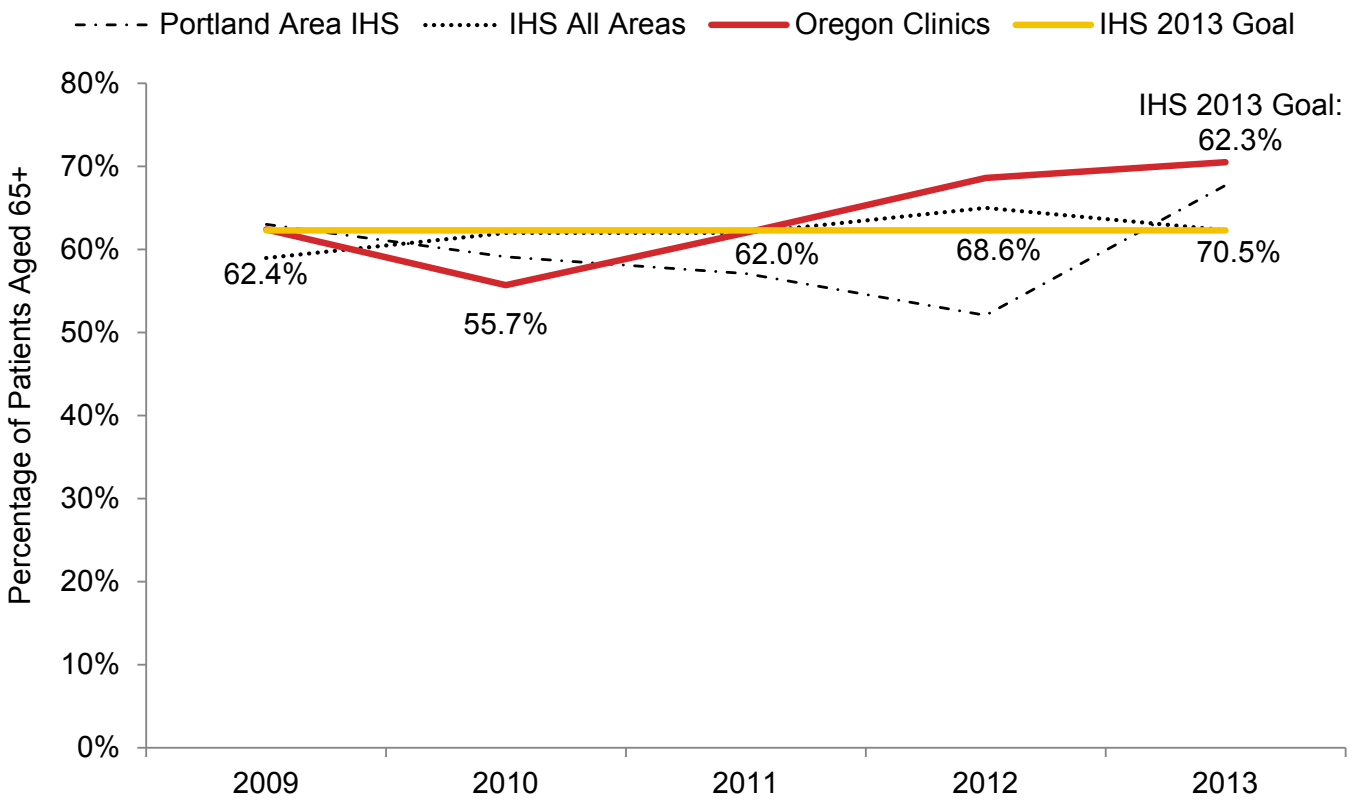
The U.S. goal is for 90% of non-institutionalized high-risk adults ages 65 and older to receive a seasonal flu vaccine each year (Healthy People 2020). IHS tracks the percentage of AI/AN patients ages 65 years and older who received the influenza vaccine in the past year. In 2013, the IHS goal for this measure was 62.3%.

The flu vaccination rate for Oregon clinics decreased from 2009 to 2010 before increasing to 70.5% in 2013 (Figure 12.6). The Portland Area IHS rate decreased from 2009 to 2012, but increased from 52.1% in 2012 to 67.7% in 2013. The national IHS average steadily increased from 2009 to 2012, and dropped slightly in 2013. All three areas met the 2013 goal for this measure.

Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Oregon clinics. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 12.6: Percentage of IHS AI/AN patients ages 65 years and older who received a flu vaccine in the past year, 2009-2013.



Adult Immunizations: Pneumococcal Vaccine

The pneumococcal vaccine can prevent illnesses such as pneumonia, meningitis, and bacteremia. This vaccine is especially important for people who may have weak immune systems, including people over the age of 65, those with diabetes or other serious illnesses and those who smoke tobacco.

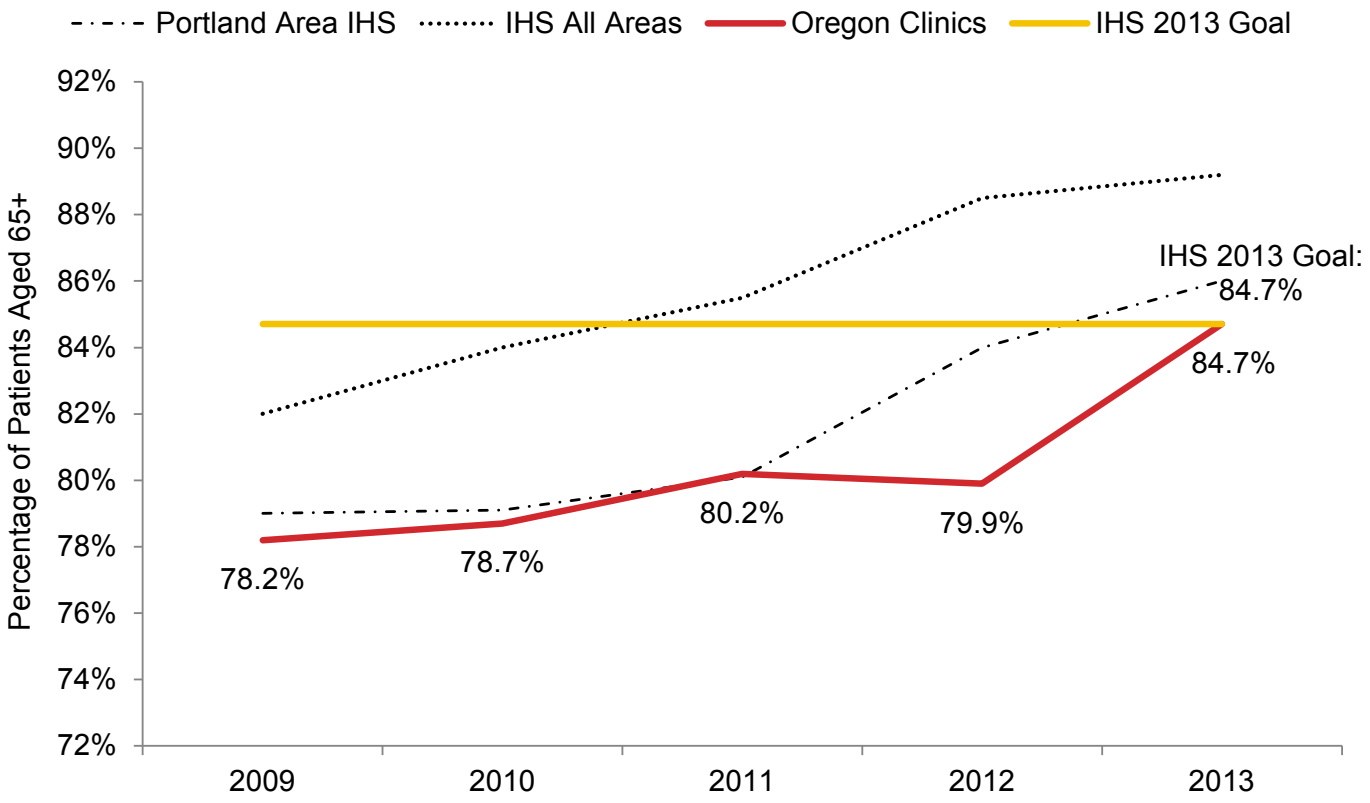
The U.S. goal is for 90% of adults ages 65 and older to receive a pneumococcal vaccination (Healthy People 2020). IHS tracks the percentage of AI/AN patients ages 65 years and older who received a pneumococcal vaccination once after age 65. The IHS 2013 goal for this measure was 84.7%.

Oregon clinics, the Portland Area IHS, and the national IHS all met or exceeded the 2013 goal for pneumococcal vaccinations (Figure 12.7). Pneumococcal vaccination rates across all three areas have steadily increased since 2009.

Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Oregon clinics. Oregon clinics include non-urban federal and tribal Indian health facilities in Oregon. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 12.7: Percentage of IHS AI/AN patients ages 65 years and older who ever received a pneumococcal vaccine, 2009-2013.



Program Spotlight: Northwest Tribal Immunization Project

Immunizations are a safe and effective means for preventing disease in children, adolescents, and adults. Although many vaccine-preventable childhood diseases are near record low levels, recent outbreaks of diseases such as pertussis and measles serve as a reminder that these diseases have not disappeared. Since 2008, NPAIHB's Immunization Program has focused on understanding and addressing the causes of low immunization coverage among AI/AN in the Pacific Northwest, especially among infants and young children. The program supports IHS and tribal clinics in reporting immunization coverage data for children, adolescents and adults on a quarterly basis. Additional reports are collected annually to monitor influenza vaccination rates for both patients and healthcare providers. These data have been useful in addressing recent epidemics of vaccine preventable diseases such as the influenza A H1N1 pandemic and the 2012 pertussis epidemic in Washington and parts of Idaho and Oregon.

The Immunization Program supports immunization coordinators from 33 clinical sites by sponsoring annual RPMS trainings and holding monthly calls. Program staff also serve as liaisons between clinical sites and State health departments, the IHS National Immunization Program and CDC, and assist sites with locating vaccine supplies, responding to vaccine recalls, and undertaking special projects to improve immunization coverage and immunization data exchange with State Immunization Information Systems. The program is funded by the Portland Area Indian Health Service.

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Summary

The data in this report can be viewed as a midpoint in Oregon Tribes' journey towards health and well-being for their communities. Tribes and tribal members have faced many historical injustices, and continue to experience inequities across many social and economic determinants of health. Despite these challenges, AI/AN in Oregon have made considerable progress on key health measures. Indian health clinics in Oregon continue to work toward improving patient care, and have shown improvements across many clinical screening and disease management indicators.

However, AI/AN in Oregon continue to face many health disparities. All-cause mortality rates for AI/AN are approximately 43% higher than the rates for NHW in the state. Heart disease, diabetes, and cancer pose heavy burdens for tribal communities. Unintentional injuries are also concerning, particularly among children and young adults. Motor vehicle crashes and accidental overdose are the leading contributors to unintentional injury deaths among AI/AN in Oregon. Rates of suicide, binge drinking, and drug and alcohol associated deaths are higher among AI/AN than NHW.

Many of these health conditions are preventable. Programs aimed at encouraging healthy lifestyles are the best approach for addressing many of the health disparities experienced by AI/AN in Oregon. Avoiding tobacco, getting regular physical exercise, eating a healthful diet, and maintaining a healthy body weight are key to preventing and managing heart disease and diabetes. These factors also protect against many types of cancer. Injury prevention efforts focused on motor vehicle safety and overdose prevention are particularly needed among youth. Mental health programs, including suicide prevention and campaigns targeting substance abuse, will have broad reaching effects across the spectrum of both community and personal health and well-being. Finally, being able to access affordable and quality healthcare close to home is key to maintaining good physical and mental health throughout life.

This report shows a baseline of where we stand today. It can also help Tribes plant the seeds for healthier AI/AN communities by showing the strong roots from which to grow, and uncovering the challenges that must be addressed.

Appendix I: Maps

The maps presented in this section show how mortality and hospitalization rates for AI/AN vary across the state of Oregon. Lighter color indicates a lower rate, and darker color higher rates. Rates are given for “health districts”, which are based on the healthcare/emergency preparedness regions designated by the state Office of Emergency Management, with some changes to better align with tribal areas.

Counties included in each district are:

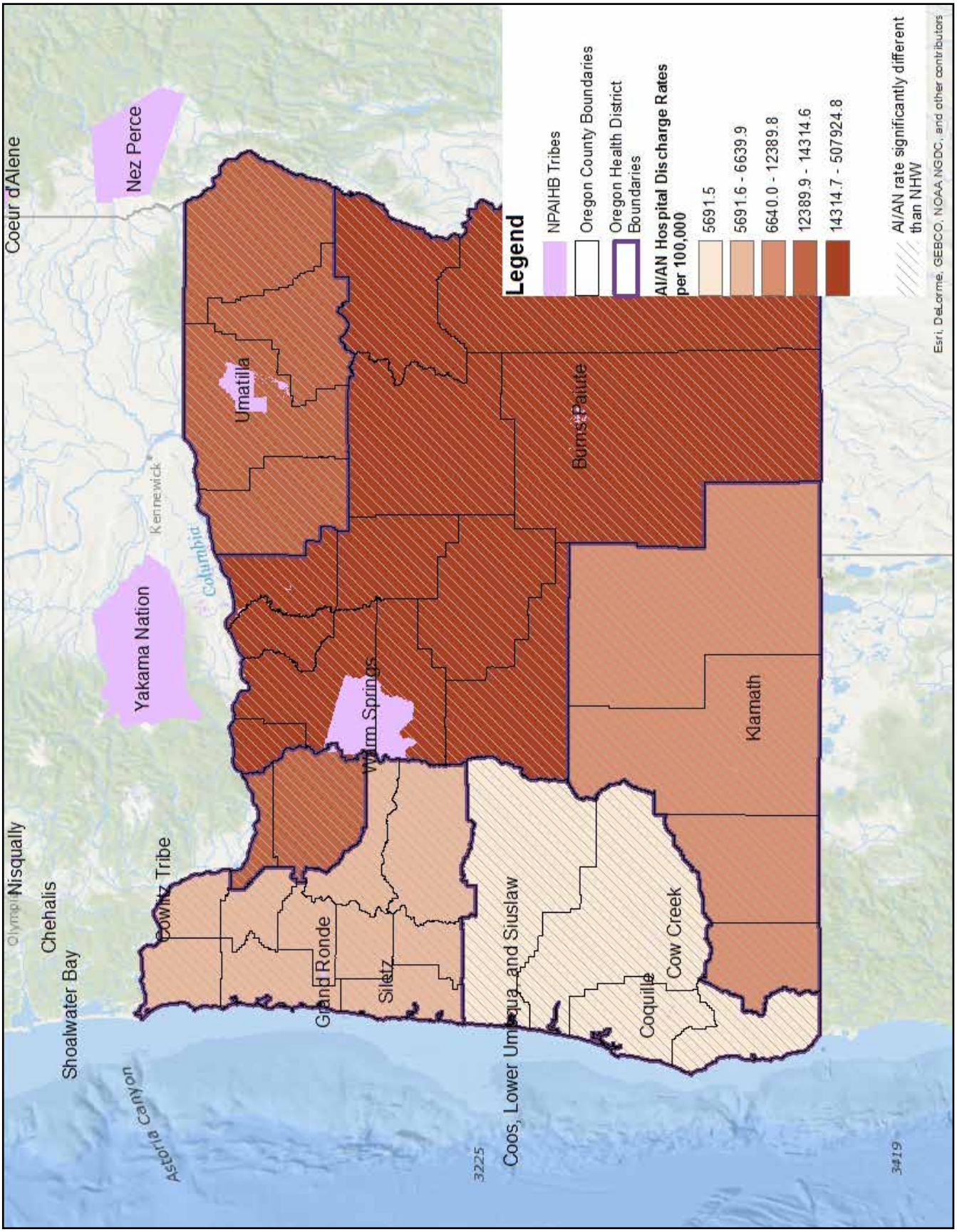
District 1 (Northwest): Clatsop, Tillamook, Yamhill, Polk, Marion, Lincoln, Benton, Linn, Columbia, Washington
District 2 (Portland): Multnomah, Clackamas
District 3 (Southwest): Lane, Douglas, Coos, Curry
District 4 (South): Josephine, Jackson, Klamath, Lake
District 5 (Central): Hood River, Wasco, Sherman, Gilliam, Wheeler, Grant, Jefferson, Crook, Deschutes, Harney, Baker, Malheur
District 6 (North East): Morrow, Umatilla, Union, Wallowa

Tribal lands are found in the following districts:

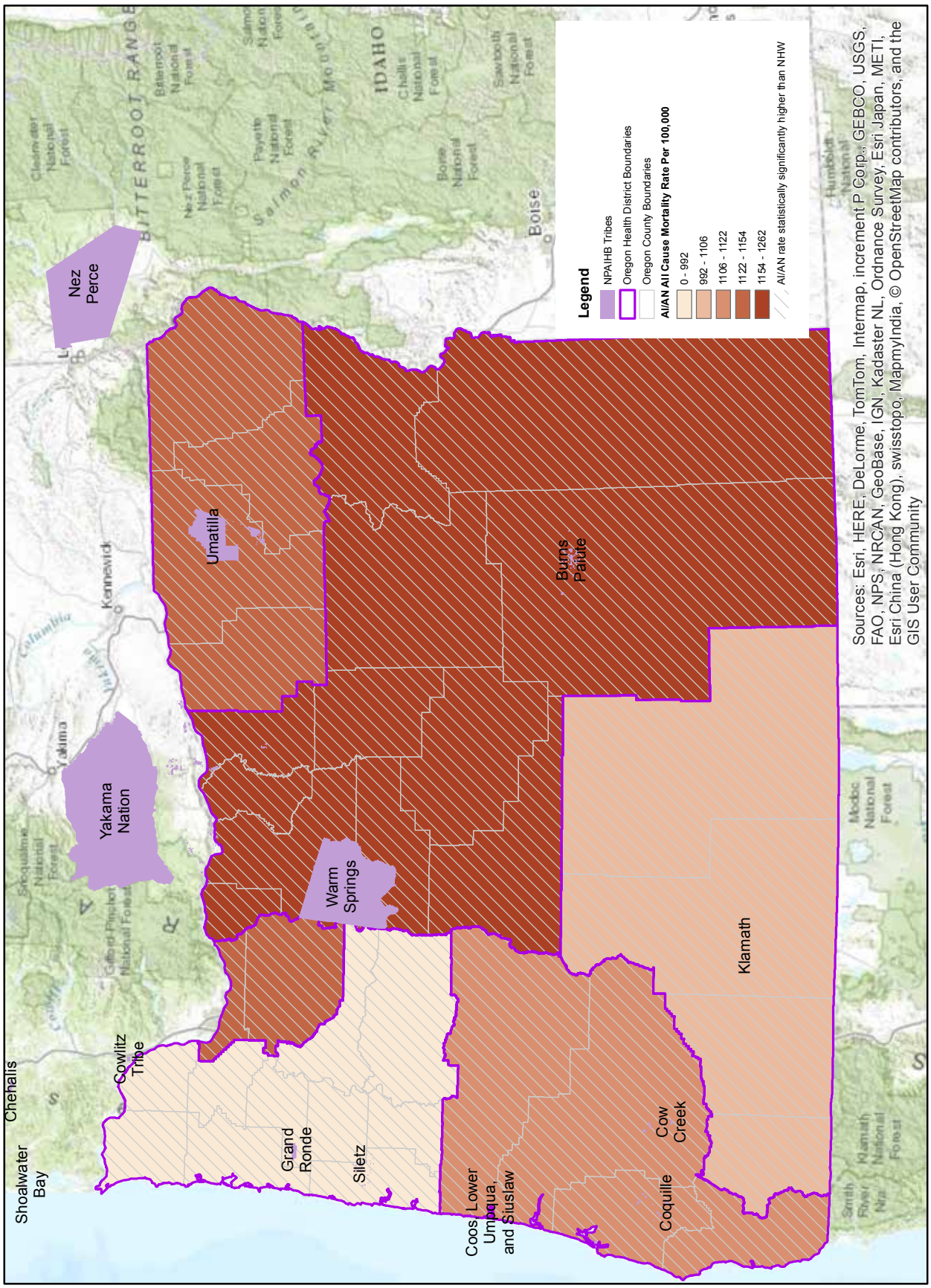
Confederated Tribes of Grand Ronde: District 1
Confederated Tribes of Siletz Indians: District 1
Coos, Lower Umpqua and Suislaw Tribes: District 3
Coquille Tribe: District 3
Cow Creek Band of Umpquas: District 3
Klamath Tribes: District 4
Confederated Tribes of Warm Springs: District 5
Burns Paiute Tribe: District 5
Confederated Tribes of the Umatilla Indian Reservation: District 6

Districts shown with diagonal lines across are those for which the AI/AN rate was statistically significantly higher than the NHW rate in the district. Districts show as plain white are those for which there were fewer than five AI/AN cases and thus the rates were not calculated.

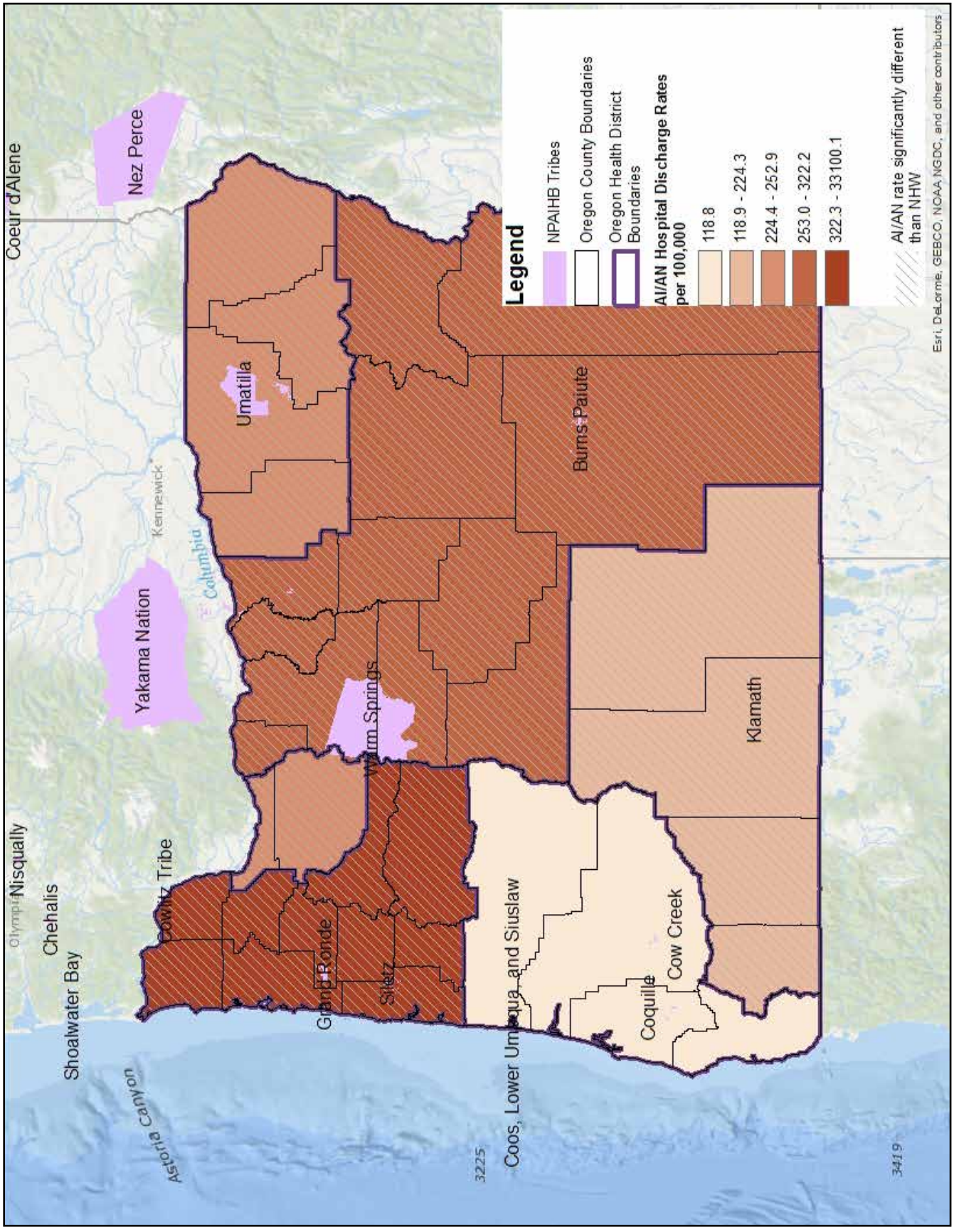
Map 1: AI/AN age-adjusted hospital discharge rates by health district, Oregon, 2010-2011.



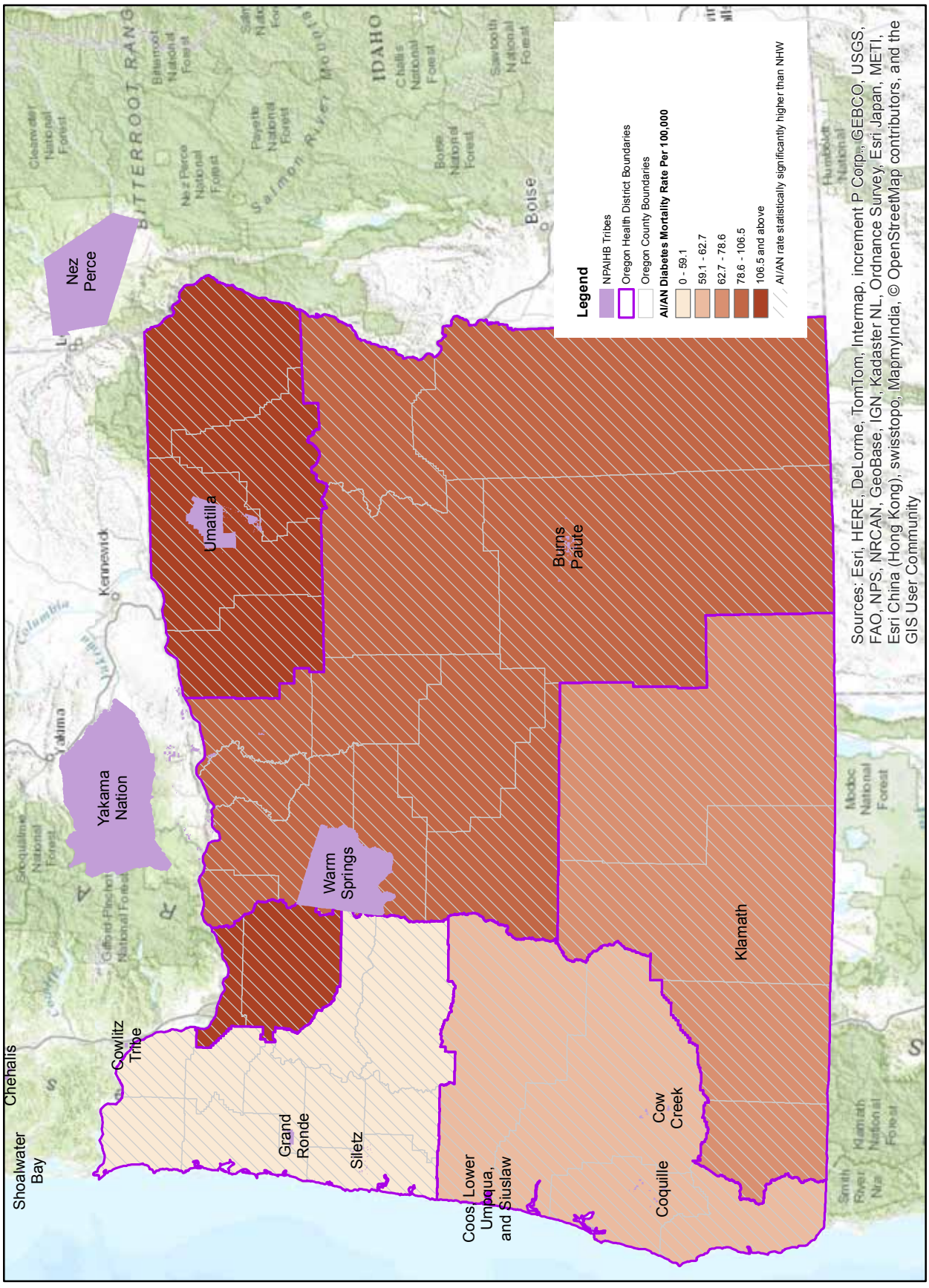
Map 2: AI/AN age-adjusted all-cause mortality rates by health district, Oregon, 2006-2010.



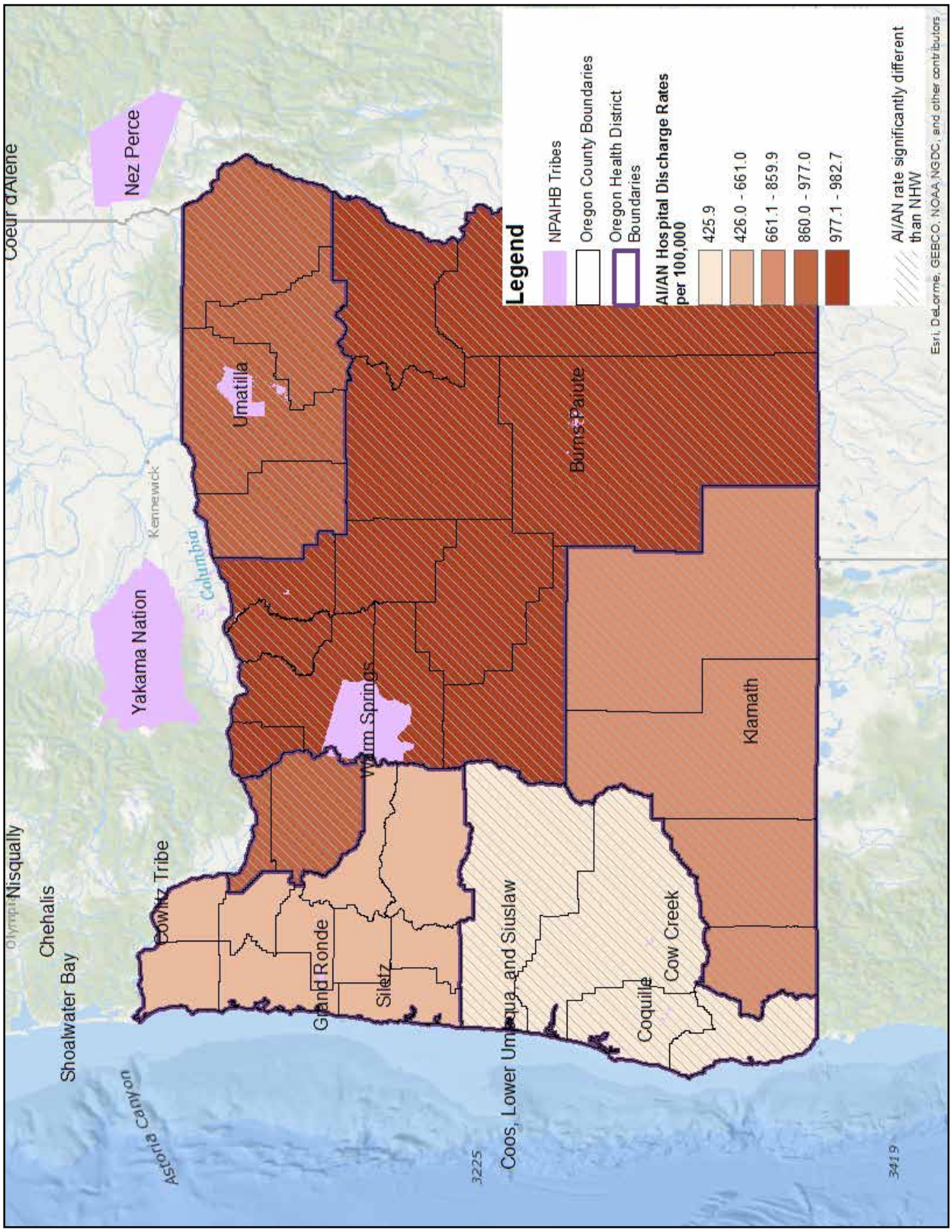
Map 3: AI/AN age-adjusted diabetes hospital discharge rates by health district, Oregon, 2010-2011.



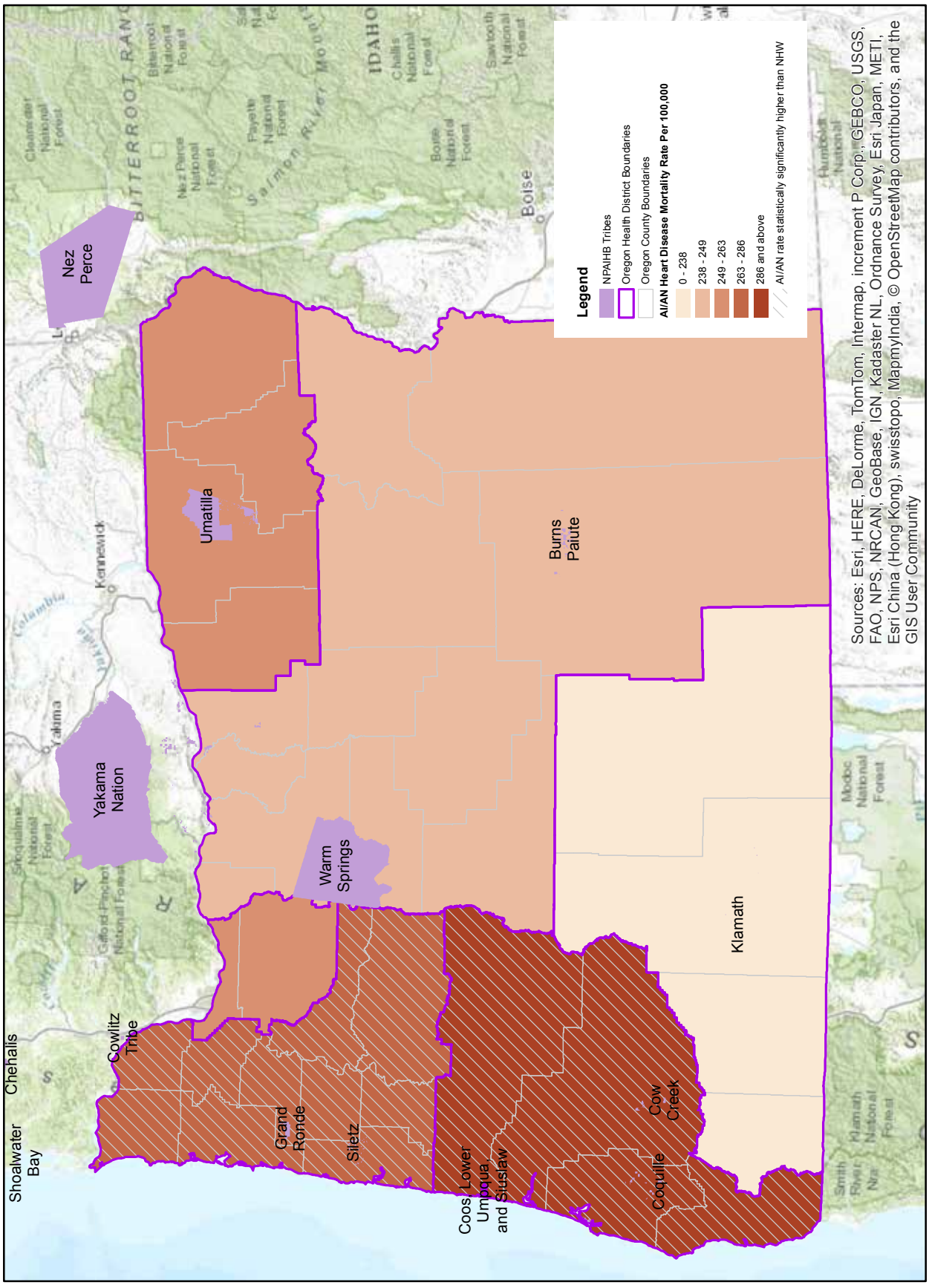
Map 4: AI/AN age-adjusted diabetes mortality rates by health district, Oregon, 2006-2010.



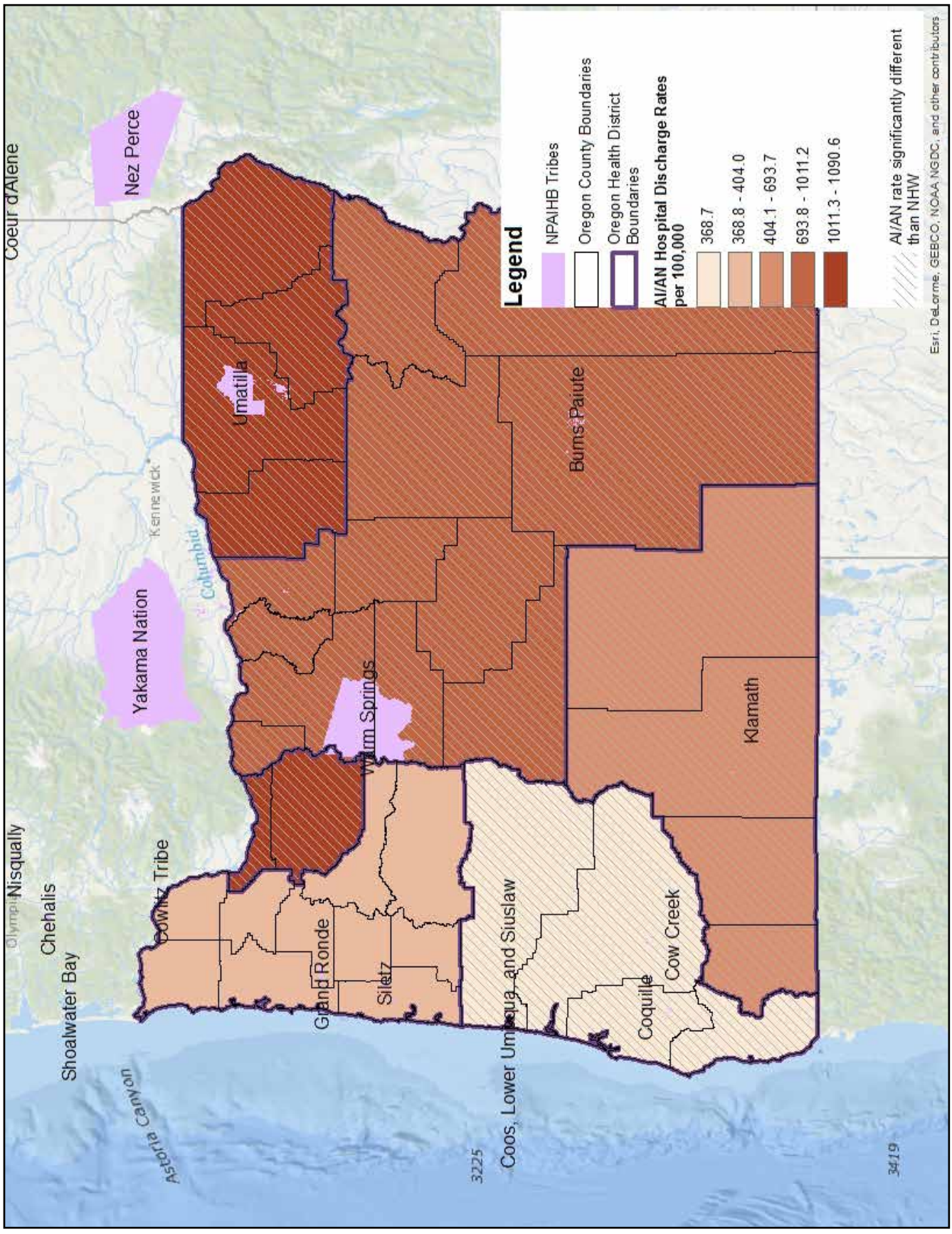
Map 5: AI/AN age-adjusted heart disease hospital discharge rates by health district, Oregon, 2010-2011.



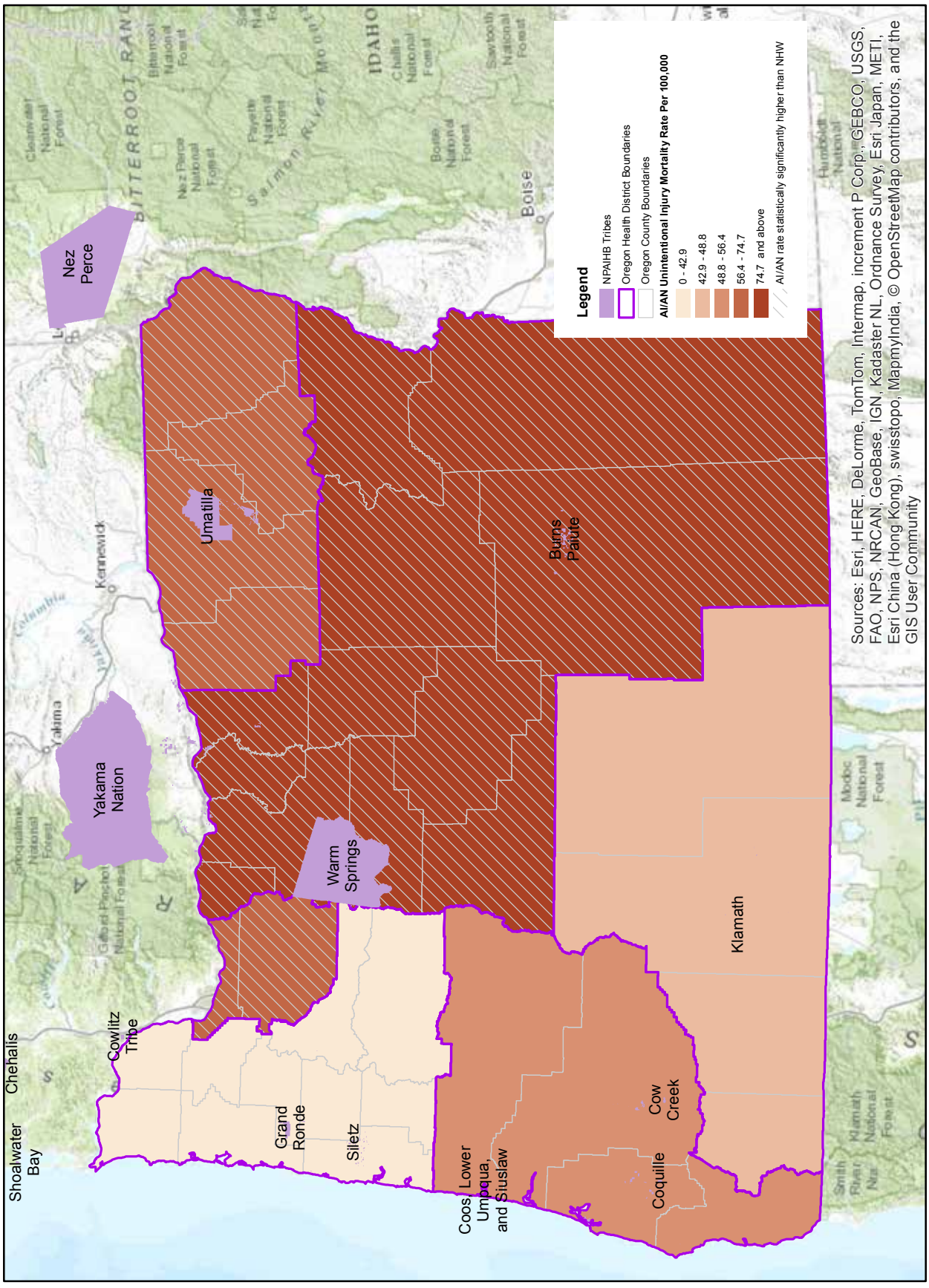
Map 6: AI/AN age-adjusted heart disease mortality rates by health district, Oregon, 2006-2010.



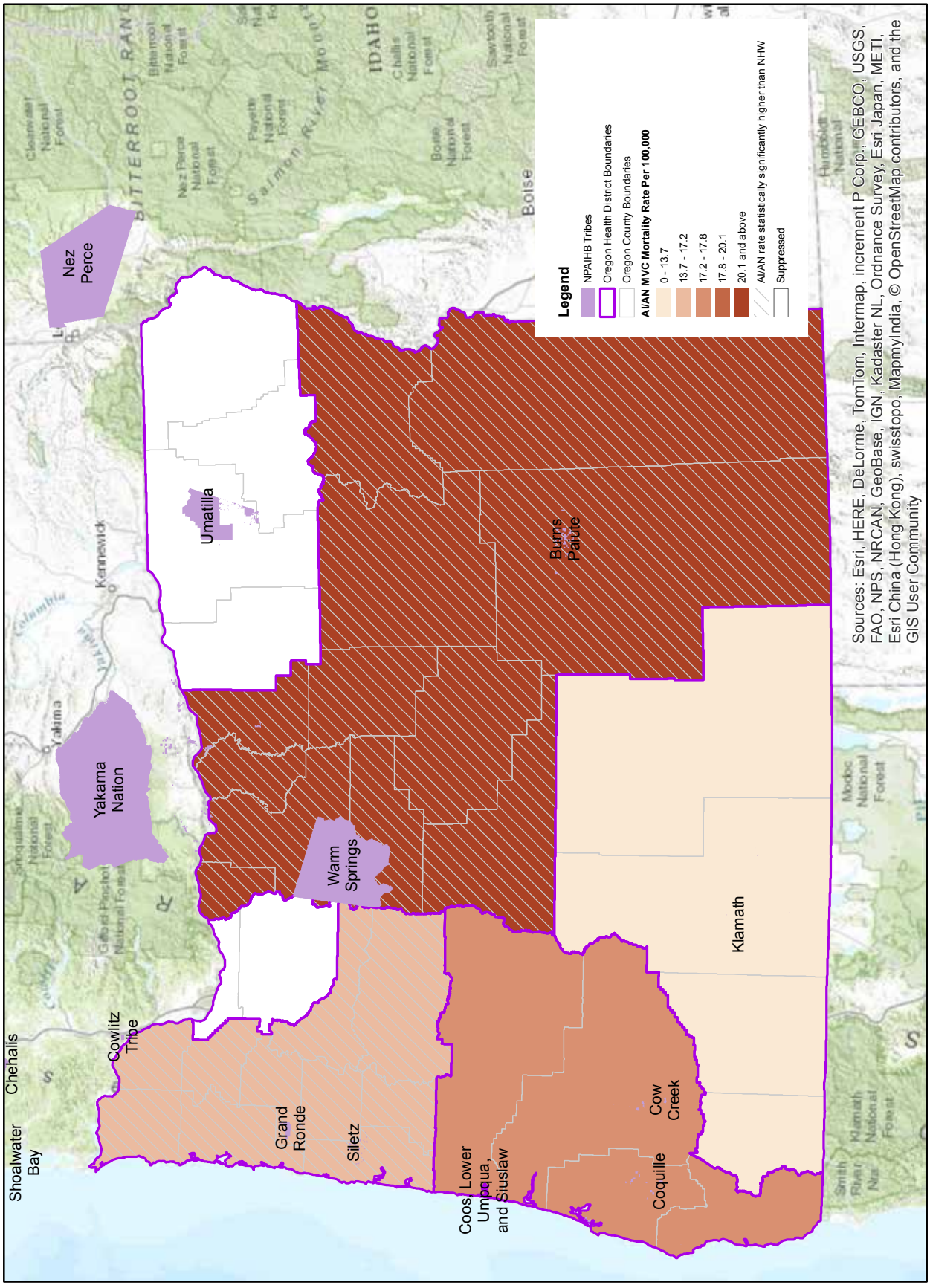
Map 7: AI/AN age-adjusted unintentional injury hospital discharge rates by health district, Oregon, 2010-2011.



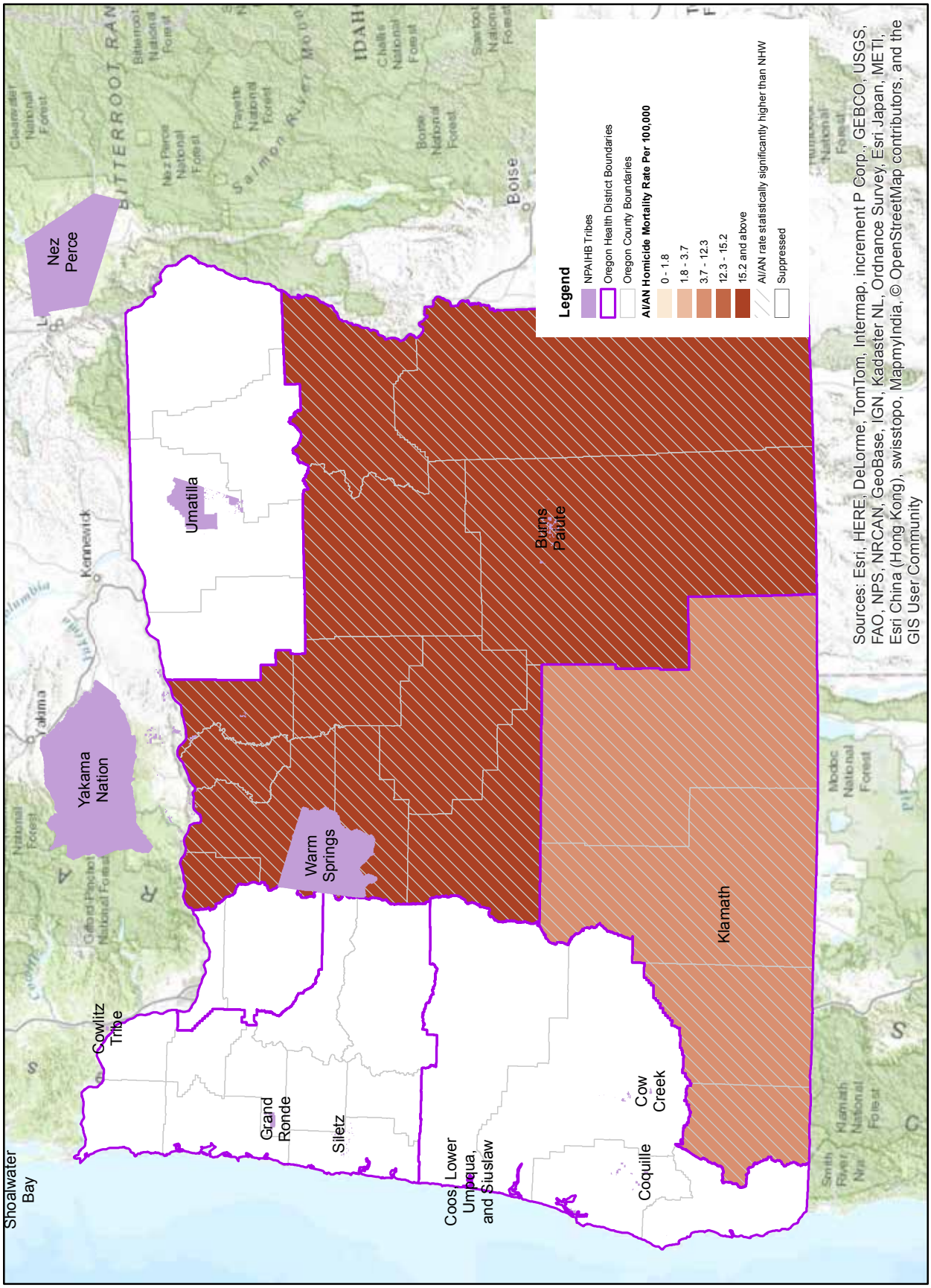
Map 8: AI/AN age-adjusted unintentional injury mortality rates by health district, Oregon, 2006-2010.



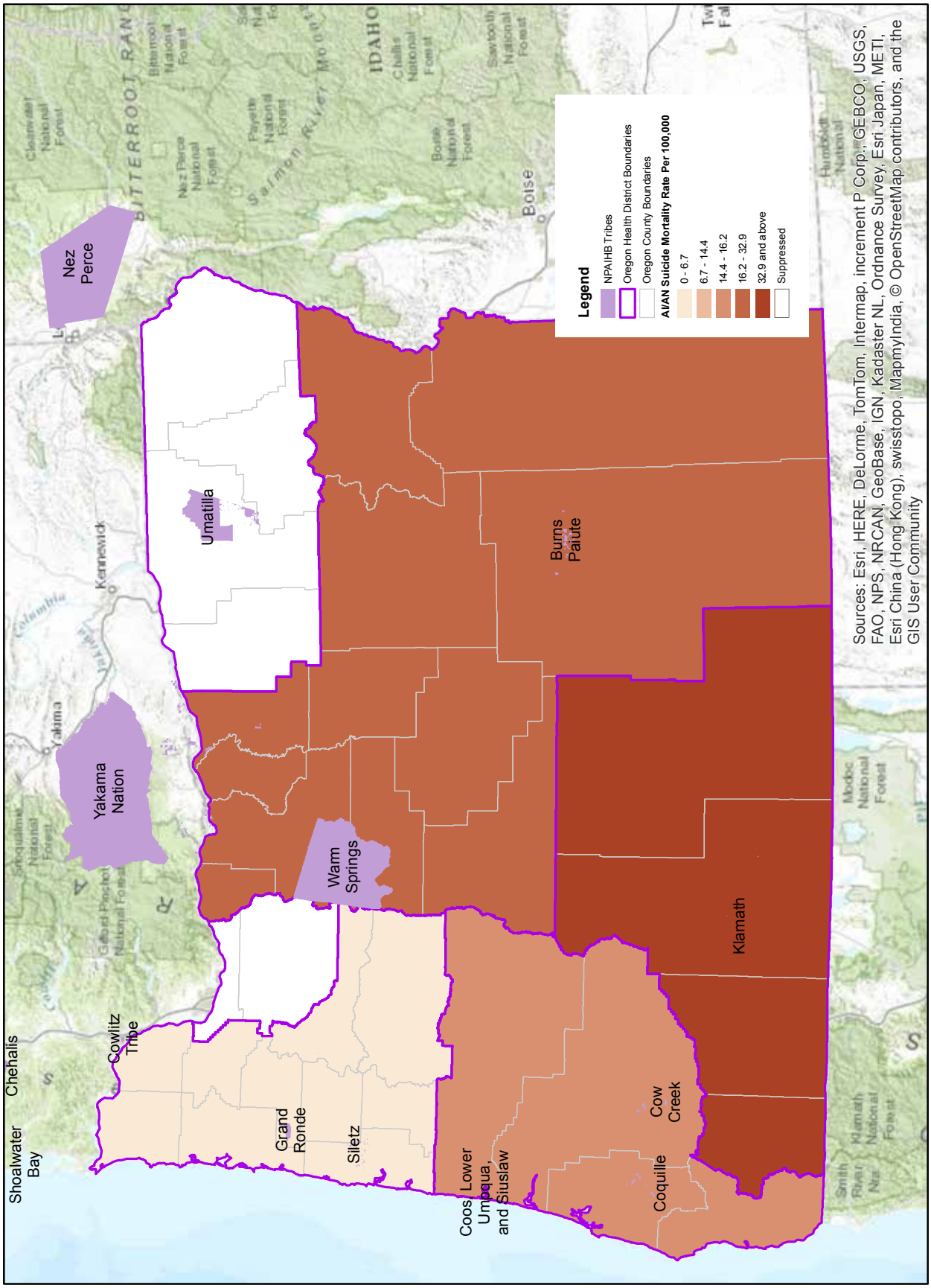
Map 9: AI/AN age-adjusted motor vehicle crash (MVC) mortality rates by health district, Oregon, 2006-2010.



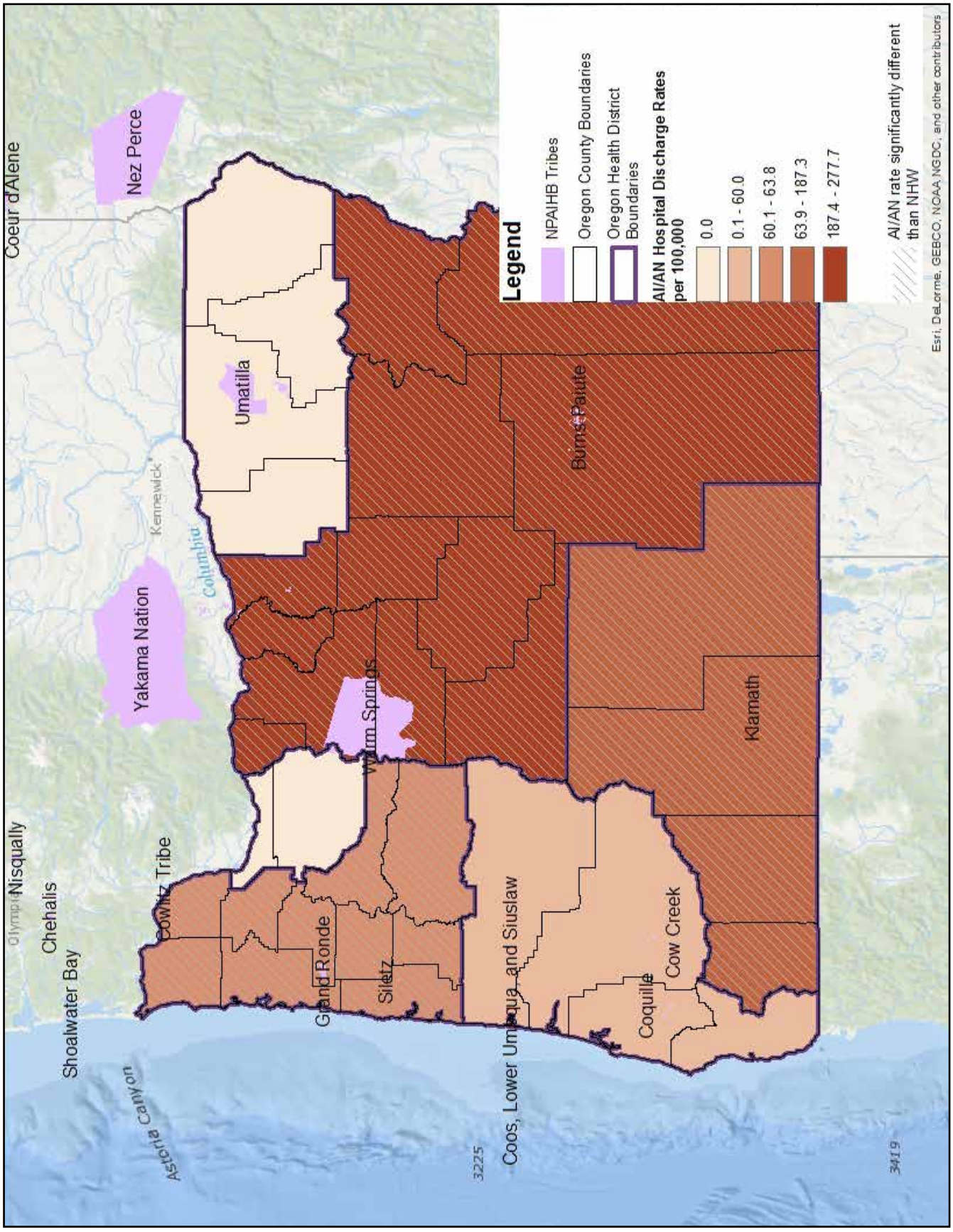
Map 10: AI/AN age-adjusted homicide mortality rates by health district, Oregon, 2006-2010.



Map 11: AI/AN age-adjusted suicide mortality rates by health district, Oregon, 2006-2010.



Map 12: AI/AN age-adjusted hospital discharge rates for alcohol and substance use disorders, by health district, Oregon, 2010-2011.



Abridged Life Tables for American Indians and Alaska Natives of Oregon, 2008-2010 (Both Sexes)

Age Interval	Mortality rate per 1,000 for x to x+n	Probablity of dying between ages x to x+n	Number surviving to age x	Number dying between ages x to x+n	Person-years lived between ages x to x+n	Total number of person-years lived above age x	Expectation of life at age x	Lower CI	Upper CI
x to x+n	**m\\x**	**q\\x**	**l\\x**	**d\\x**	**L\\x**	**T\\x**	**e\\x**		
Both Sexes, Oregon									
Birth to 1 year	4.76	0.0036	100,000	355	99,718	7,476,847	74.77	74.06	75.48
1-4	0.50	0.0020	99,645	196	398,040	7,377,129	74.03	73.34	74.73
5-9	0.24	0.0012	99,449	117	496,813	6,979,089	70.18	69.49	70.87
10-14	0.09	0.0005	99,331	47	496,611	6,482,276	65.26	64.57	65.94
15-19	0.85	0.0042	99,285	419	495,650	5,985,665	60.29	59.60	60.97
20-24	1.22	0.0062	98,866	610	493,046	5,490,015	55.53	54.85	56.21
25-29	1.25	0.0062	98,255	610	489,391	4,996,969	50.86	50.19	51.52
30-34	1.47	0.0073	97,646	711	486,463	4,507,578	46.16	45.51	46.81
35-39	2.21	0.0110	96,935	1,066	481,881	4,021,115	41.48	40.84	42.12
40-44	3.08	0.0153	95,869	1,470	475,900	3,539,233	36.92	36.29	37.54
45-49	4.44	0.0221	94,399	2,088	467,283	3,063,333	32.45	31.84	33.06
50-54	7.79	0.0384	92,311	3,548	453,448	2,596,050	28.12	27.53	28.72
55-59	10.78	0.0522	88,763	4,635	431,782	2,142,602	24.14	23.57	24.71
60-64	14.44	0.0714	84,128	6,003	407,057	1,710,820	20.34	19.80	20.87
65-59	19.14	0.0921	78,125	7,194	373,521	1,303,763	16.69	16.18	17.19
70-74	36.95	0.1726	70,931	12,243	326,657	930,242	13.11	12.65	13.58
75-79	57.96	0.2544	58,688	14,932	257,680	603,585	10.28	9.89	10.68
80-84	89.13	0.3685	43,756	16,123	180,270	345,905	7.91	7.59	8.22
85+	166.83	1.0000	27,633	27,633	165,635	165,635	5.99	5.75	6.24

CI = 95% confidence interval

Note that age-specific mortality rates are based on small numerators in some cases, and are not recommended for use in analyses without standard errors.

Abridged Life Tables for American Indians and Alaska Natives of Oregon 2008-2010 (Male)

Age Interval	Mortality rate per 1,000 for x to x+n	Probablity of dying between ages x to x+n	Number surviving to age x	Number dying between ages x to x+n	Person-years lived between ages x to x+n	Total number of person-years lived above age x	Expectation of life at age x	Lower CI	Upper CI
x to x+n	**m\\x**	**q\\x**	**l\\x**	**d\\x**	**L\\x**	**T\\x**	**e\\x**		
Male AI/AN, Oregon									
Birth to 1 year	6.52	0.004	100,000	355	99,718	7,301,225	73.01	72.05	73.97
1-4	0.60	0.002	99,645	235	397,906	7,201,507	72.27	71.34	73.20
5-9	0.29	0.001	99,410	140	496,516	6,803,601	68.44	67.52	69.36
10-14	0.09	0.000	99,270	47	496,327	6,307,085	63.53	62.62	64.45
15-19	1.29	0.006	99,223	623	495,288	5,810,758	58.56	57.65	59.47
20-24	1.88	0.009	98,600	925	490,975	5,315,470	53.91	53.02	54.80
25-29	1.36	0.007	97,675	661	486,375	4,824,495	49.39	48.53	50.26
30-34	2.06	0.010	97,014	995	482,419	4,338,121	44.72	43.87	45.57
35-39	2.66	0.013	96,019	1,277	476,899	3,855,701	40.16	39.33	40.98
40-44	3.14	0.016	94,741	1,493	470,360	3,378,802	35.66	34.86	36.47
45-49	4.16	0.021	93,249	1,950	461,201	2,908,443	31.19	30.41	31.97
50-54	8.59	0.043	91,299	3,882	448,210	2,447,242	26.80	26.05	27.56
55-59	13.24	0.064	87,417	5,577	422,085	1,999,031	22.87	22.15	23.59
60-64	15.33	0.076	81,840	6,218	395,994	1,576,947	19.27	18.60	19.94
65-59	21.45	0.103	75,621	7,806	360,671	1,180,953	15.62	15.00	16.24
70-74	39.33	0.187	67,816	12,678	311,741	820,282	12.10	11.54	12.65
75-79	68.30	0.307	55,138	16,902	239,702	508,541	9.22	8.76	9.69
80-84	103.45	0.425	38,236	16,246	154,177	268,839	7.03	6.67	7.39
85+	191.78	1.000	21,990	21,990	114,662	114,662	5.21	4.95	5.48

CI = 95% confidence interval

Note that age-specific mortality rates are based on small numerators in some cases, and are not recommended for use in analyses without standard errors.

Abridged Life Tables for American Indians and Alaska Natives of Oregon 2008-2010 (Female)

Age Interval	Mortality rate per 1,000 for x to x+n	Probablity of dying between ages x to x+n	Number surviving to age x	Number dying between ages x to x+n	Person-years lived between ages x to x+n	Total number of person-years lived above age x	Expectation of life at age x	Lower CI	Upper CI
x to x+n	**m\\x**	**q\\x**	**l\\x**	**d\\x**	**L\\x**	**T\\x**	**e\\x**		
Female AI/AN, Oregon									
Birth to 1 year	2.92	0.004	100,000	355	99,718	7,651,272	76.51	75.48	77.55
1-4	0.38	0.002	99,645	155	398,185	7,551,554	75.78	74.77	76.80
5-9	0.20	0.001	99,490	94	497,124	7,153,369	71.90	70.89	72.91
10-14	0.09	0.000	99,395	46	496,909	6,656,245	66.97	65.96	67.97
15-19	0.38	0.002	99,350	196	496,014	6,159,337	62.00	60.99	63.00
20-24	0.51	0.003	99,154	263	495,279	5,663,322	57.12	56.12	58.11
25-29	1.13	0.006	98,891	556	492,690	5,168,043	52.26	51.27	53.25
30-34	0.82	0.004	98,335	407	490,848	4,675,353	47.55	46.57	48.52
35-39	1.71	0.009	97,928	851	487,234	4,184,504	42.73	41.76	43.70
40-44	3.01	0.015	97,077	1,455	481,830	3,697,271	38.09	37.14	39.04
45-49	4.70	0.023	95,622	2,210	473,751	3,215,440	33.63	32.70	34.55
50-54	7.06	0.035	93,413	3,233	459,112	2,741,689	29.35	28.45	30.25
55-59	8.46	0.042	90,180	3,771	441,671	2,282,577	25.31	24.45	26.18
60-64	13.55	0.066	86,409	5,723	418,142	1,840,906	21.30	20.47	22.14
65-59	16.86	0.080	80,686	6,484	386,771	1,422,764	17.63	16.85	18.42
70-74	34.68	0.160	74,202	11,871	342,245	1,035,993	13.96	13.24	14.69
75-79	49.08	0.216	62,331	13,494	275,463	693,748	11.13	10.50	11.76
80-84	78.46	0.329	48,837	16,084	204,080	418,284	8.56	8.04	9.09
85+	152.91	1.000	32,753	32,753	214,204	214,204	6.54	6.12	6.96

CI = 95% confidence interval

Note that age-specific mortality rates are based on small numerators in some cases, and are not recommended for use in analyses without standard errors.

Appendix III: List of Figures and Tables

Tables

1. Demographics

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Appendix I: Maps

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Access to Care title page:
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Community Health Profile Feedback Questionnaire

We hope you found this report useful, but we know it isn't perfect! Your feedback is important to make sure future versions better meet your community's needs. Please take a moment to complete the following questionnaire. If you prefer, you can also complete the same survey online at www.surveymonkey.com/s/D38NS9G

To return the form you can mail it to NPAIHB at 2121 SW Broadway, Suite 300 Portland OR 97201. You can also fax it to 503-416-3265 or scan and email to ideanw@npaihb.org

Q1. How did you receive this report?
☐ Hard copy mailed or given to me from NPAIHB
☐ Hard copy given to me by someone else
☐ Electronic copy emailed directly to me from NPAIHB
☐ Electronic copy forwarded to me from someone else
☐ Downloaded from NPAIHB website
☐ Other (please specify):_____

Q2. Which best describes your position or role?
☐ Tribal council member or other tribal leader
☐ Tribal health director
☐ Clinic staff
☐ Grant writer
☐ Researcher
☐ Other (please specify):_____

Q3. Overall, how useful did you find this report?
☐ Not at all useful
☐ Somewhat useful
☐ Very useful
☐ Extremely useful

Q4. Which section did you find **the most** useful?
☐ Demographics
☐ Maternal & Child Health
☐ Mortality
☐ Diabetes
☐ Cardiovascular Disease & Stroke
☐ Cancer
☐ Injury & Violence
☐ Mental Health & Suicide
☐ Substance Abuse
☐ Communicable Diseases
☐ Healthy Lifestyles, Healthy Environments
☐ Access to Care

Q5. How easy or difficult was it for you to understand this report?
☐ Extremely difficult to understand
☐ Somewhat difficult to understand
☐ Somewhat easy to understand
☐ Extremely easy to understand

Q6. What would have made it easier to understand?
_____
_____
_____

Q7. How will you use the information in this report?
☐ Grants
☐ Program planning
☐ Financial allocation planning
☐ Presentations
☐ Manuscripts
☐ Advocacy
☐ Not sure
☐ Other (please specify):_____

Q8. Do you have any other comments or questions?
_____
_____
_____

If you would like a staff person to respond to your questions or comments, please share your contact information below:

Name _____

Job Position_____

Address_____

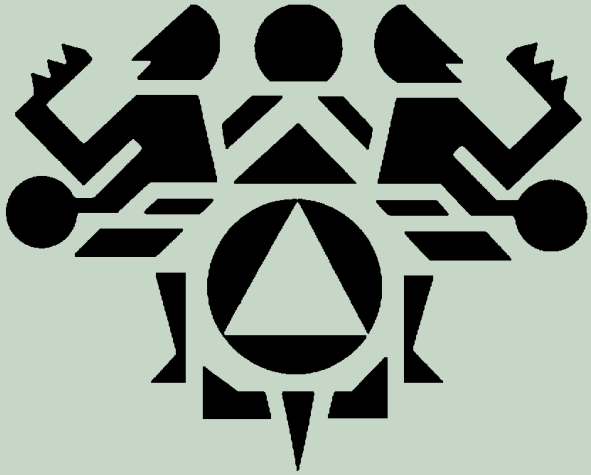
_____

Email_____

Phone_____ Fax_____

Do you prefer to be contacted by ☐ Email or ☐ Phone

Thank you for your feedback!



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