

# 3. Mortality

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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 the health of a community. Consistent monitoring of mortality is key to knowing whether or not our interventions and programs are working. By examining the leading causes of mortality, we can identify new threats to health and well-being and focus limited resources. Comparing mortality across geography, gender and age groups shows us which populations are facing the greatest challenges, and allows us to identify areas of success that can be shared with others.

Nationally, the mortality rate for AI/AN is 964.4 per 100,000<sup>1</sup>. This is about 19% higher than the national rate for whites. In Idaho, the all-cause mortality rate for AI/AN was 936.9, which was lower than the rate for AI/AN elsewhere in our region but still 11% higher than the rate among NHW in Idaho. Heart disease, cancer, unintentional injury and diabetes 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 Idaho. Some of the highest unintentional injury rates, as well as the greatest disparities, were seen among Idaho AI/AN under the age of 30.

Across the state, the highest AI/AN mortality rates occurred in the North Central region (Latah, Clearwater, Nez Perce, Lewis, and Idaho counties). The lowest rates were seen in Central Idaho (Valley, Boise, Ada and Elmore counties).

The statistics reported here show only the numbers; what they fail to capture is the profound impact each preventable or early death has on tribal communities. The loss of each young person who will never have the opportunity to grow into the leader he or she could have become is a tragedy. 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, of course, the premature passing of every elder results in a loss of the history, language and knowledge of their Tribe.

The following section provides detailed information on mortality rates and leading causes of death, as well as life expectancy estimates. Mortality rates for each specific topic area are presented throughout the report.

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 Idaho. Both AI/AN and NHW shared the same top two causes of death, heart disease and cancer. These leading two causes accounted for a larger proportion of deaths among NHW (45%) than AI/AN (35%). Unintentional injury was the third leading cause for AI/AN, accounting for proportionally nearly twice as many deaths as among NHW. Chronic liver disease and diabetes were the fourth and fifth 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.

**Table 3.1: Top ten causes of death by race, Idaho, 2006-2012.**

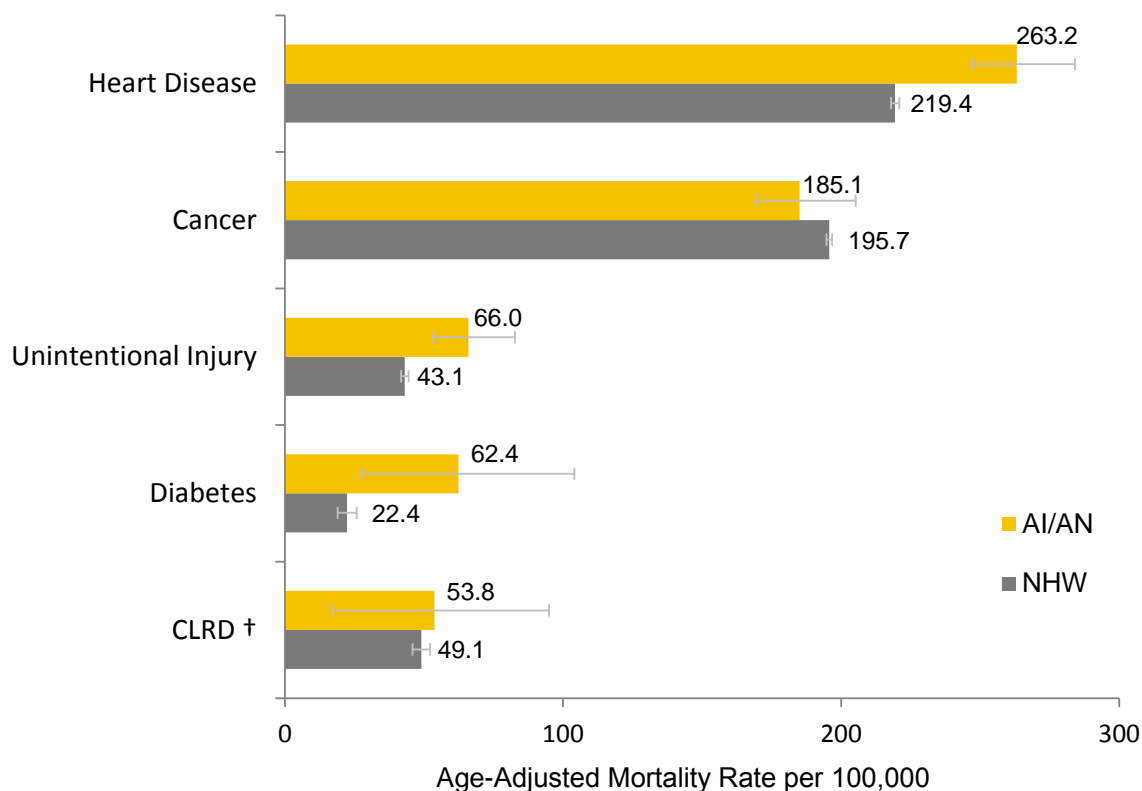
Rank	AI/AN	(%) N <sup>†</sup>	NHW	(%) N <sup>†</sup>
1	Heart disease	17.5% (176)	Cancer	22.4% (16,548)
2	Cancer	17.0% (171)	Heart Disease	22.1% (16,332)
3	Unintentional injury	11.3% (114)	Chronic lower respiratory disease	6.7% (4,929)
4	Liver disease	7.8% (79)	Stroke	5.7% (4,234)
5	Diabetes	6.6% (66)	Unintentional injury	5.5% (4,093)
6	Suicide	4.8% (48)	Alzheimer's disease	3.6% (2,676)
7	Chronic lower respiratory disease	4.4% (44)	Diabetes	3.1% (2,268)
8	Stroke	4.2% (42)	Suicide	2.3% (1,722)
9	Influenza & pneumonia	2.3% (23)	Influenza & Pneumonia	1.9% (1,415)
10	Nephritis	1.6% (16)	Nephritis	1.4% (1,050)
<b>Total deaths</b>		<b>1,007 (100%)</b>		<b>73,846 (100%)</b>

<sup>†</sup> N = number of deaths

# Mortality Rates

Throughout the seven year period, all-cause mortality rates for AI/AN were 1.3 times that of NHW. Figure 3.1 shows the five highest age-adjusted death rates. AI/AN rates were higher than NHW for all but cancer, which was just about the same between the two races. AI/AN rates of death due to liver disease (not shown) and diabetes are notable for particularly large disparities – 5.5 times higher for liver disease and 2.8 times for diabetes.

**Figure 3.1: Top five age-adjusted mortality rates for AI/AN, Idaho, 2006-2012.**



† CLRD = Chronic Lower Respiratory Disease

*Data Source: Idaho 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.*

# Life Expectancy at Birth

Figure 3.2 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 II 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 Idaho AI/AN was 74.5 years, which was about three years longer than Washington AI/AN and very similar to Oregon AI/AN.

Across the Northwest, female AI/AN had a life expectancy 3.7 years longer than male AI/AN. The gender gap was smallest among the Idaho population at 1.9 years.

Compared with their NHW counterparts, life expectancy at birth was 5 years lower for Idaho AI/AN. The gap between races was greater for females than males: AI/AN females had a life expectancy 6.1 years shorter than their NHW counterparts, versus 3.9 years for males.

*Data Source: Idaho 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 Idaho state death certificate data. AI/AN includes all deaths with any mention of AI/AN race in either the Idaho state death certificate data or the Northwest Tribal Registry.*

**Figure 3.2: Life expectancy at birth by race and sex, Idaho, 2008-2010.**