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## Patterns in Life Expectancy — Alaska, 1990–2015

### Background

Over the past 25 years, life expectancy (LE) in the United States has been increasing across all racial categories. Despite this promise, important disparities exist between different racial/ethnic groups. For example, in 2014, U.S. non-Hispanic Whites had considerably higher LE than U.S. non-Hispanic Blacks (78.8 years and 75.2 years, respectively).<sup>1</sup> This *Bulletin* examines racial disparities in LE and contributing causes of death in Alaska from 1990 to 2015 in American Indian/Alaska Native (AI/AN) people and non-AI/AN people.

### Methods

We calculated life tables using standard age-groups to examine LE at birth for AI/AN and non-AI/AN Alaska residents from 1990–2015,<sup>2</sup> and 3-year rolling averages (i.e., 1990–1992, 1991–1993, 1992–1994, etc.) to obtain larger population sizes and more stable estimates. We used the period life table method, which assumes people born during a given period had the same rate of death at each age throughout life as the rate during the time in which they were born.<sup>2</sup>

We then examined the effect of removing each of the top 15 leading causes of death among all Alaskans on LE during 2013–2015. This was done by omitting people who died of each cause of death (one cause at a time) from the LE calculation, leaving the population denominator unchanged.<sup>3</sup> We then calculated the absolute difference in LE, by race, for each cause of death. Mortality and demographic data were obtained from State of Alaska death certificates.

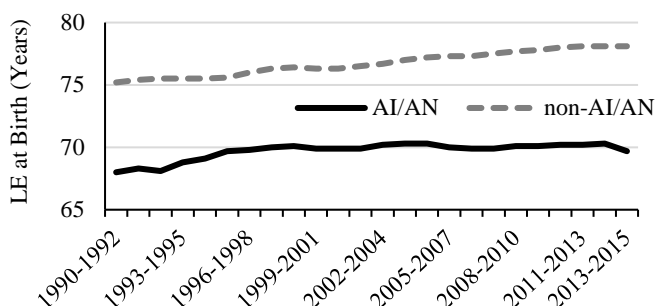
### Results

A slow but steady increase in LE was observed for all races in Alaska during 1990–2015 (from 72.9 to 76.4 years). The LE for non-AI/AN people increased from 75.2 to 78.1 years (an increase of 2.9 years), while the LE for AI/AN people increased from 68.0 to 69.7 years (an increase of 1.7 years). The difference in LE between AI/AN and non-AI/AN people increased during this time period (from 7.0 to 8.4 years;  $p < 0.05$ ; Figure 1). A small decline in LE for AI/AN people was seen for the most recent time period; this drop was not statistically significant ( $p = 0.81$ ).

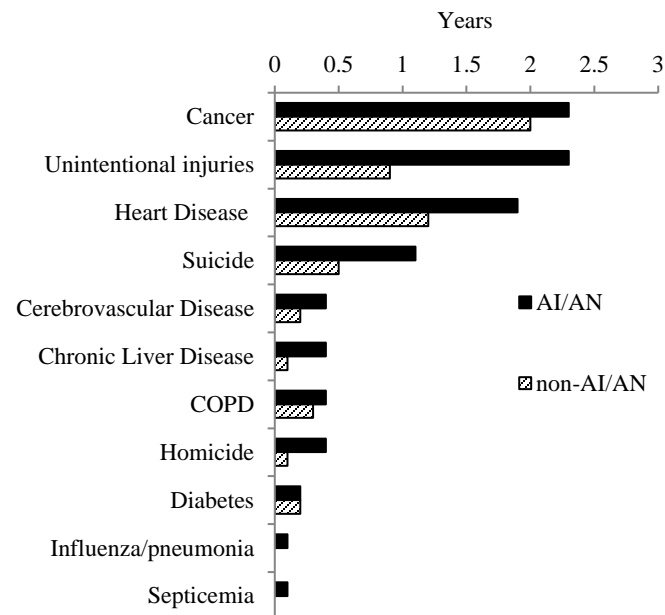
During 2013–2015, 11 of the 15 leading causes of death contributed to a decrease in LE in AI/AN people and 9 of 15 contributed to a decrease in LE in non-AI/AN people (Figure 2). Cancer and heart disease had the largest effect on the LE in non-AI/AN people, and unintentional injuries and cancer had the largest effect on the LE of AI/AN people (Figure 2).

During 2013–2015, the largest contributors to the LE gap between the two race groups were unintentional injury, yielding a decrease in the gap between the groups by 1.4 years (from 8.4 to 7.0 years); heart disease, yielding a decrease the gap by 0.7 years (from 8.4 to 7.7 years); and suicide, yielding a decrease in the gap by 0.7 years (from 8.4 to 7.7 years).

**Figure 1. Life Expectancy (in Years) at Birth by Race — Alaska, 1990–1992 to 2013–2015**



**Figure 2. Change in Life Expectancy (in Years) after Removal of Selected Causes of Death, by Race — Alaska, 2013–2015**



### Discussion

While LE has increased for both non-AI/AN and AI/AN people since 1990, the disparity in LE between the two groups has increased. The recent decline in LE among AI/AN people was not statistically significant, and may be due to year-to-year variation seen in small populations.

Unintentional injury, heart disease, and suicide had the largest effect on the LE gap between AI/AN and non-AI/AN people. Unintentional injury and suicide combined added 2.1 years to the LE gap between the two groups. During 2009–2013, AI/AN men aged 15–29 years had disproportionately higher mortality rates from both injury and suicide than any other age/sex combinations in Alaska.<sup>4</sup>

Unintentional injury and suicide prevention efforts that assist the AI/AN population would aid in decreasing mortality rates and closing the LE gap within Alaska. The Alaska Native Tribal Health Consortium (ANTHC) has several programs and activities focused on accomplishing this goal, including an Injury Prevention Program (see: <https://anthc.org/what-we-do/wellness/injury-prevention/>) and statewide suicide prevention activities (see: <https://anthc.org/what-we-do/behavioral-health/>).

Efforts aimed at reducing cancer and heart disease mortality among all Alaskans could close the gap in LE between Alaska residents and U.S. Whites. The State of Alaska has a Comprehensive Cancer Control Program (see: <http://dhss.alaska.gov/dph/Chronic/Pages/Cancer/comprehensive.aspx>) and other programs aimed at reducing chronic diseases. These programs are designed to help all Alaskans in leading longer, more healthy lives.

### References

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