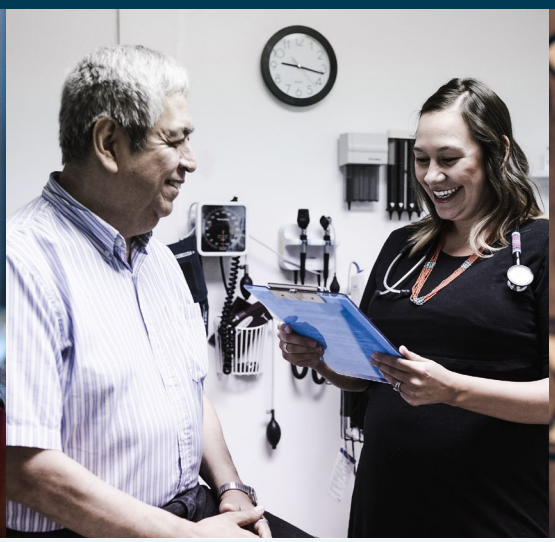
Safeguarding the Health of Our Elders

A Community Health Profile of
Urban American Indian and Alaska Native Elders



Urban Indian Health Institute
A Division of the Seattle Indian Health Board

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A note about language

We recognize that Elders can be differently defined by tribes and communities in their own way. Age alone is not always the determining factor for designating who is an Elder, and Elders are sometimes selected from the community. For this report, we use the term Elder to describe individuals 55 years and older, with respect for all cultural and traditional definitions.

The authors use the terms “Native”, “Indigenous”, “Indian”, and “American Indian and Alaska Native” (AI/AN) interchangeably throughout this report.

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CONTENTS

EXECUTIVE SUMMARY

Elders are highly respected in American Indian and Alaska Native (AI/AN) communities because of the knowledge and wisdom they hold. Through the generations, Native Elders have been key role models in teaching and practicing their traditions, culture, and language. Therefore, safeguarding their health is of the highest priority.

Urban Native Elders have thrived and continue to stay resilient. Many of them have found a sense of community and pride in urban settings where they share in the teaching of cultures and traditions through language programs, storytelling, songs, art, prayers, and ceremonies. Urban Native Elders are strong, active, and hard-working with an active role in their health and well-being, including becoming leaders and advocates for improving the health and well-being of all Native Elders in urban settings.

However, some urban Native Elders experience poor overall health, physical or mental health distress, and significant health issues, like arthritis, diabetes, asthma, and cancer. Additionally, some urban Native Elders are unable to access necessary medical care, are unable to work, and have difficulties completing daily living activities due to physical, mental, and emotional problems or limitations. Additionally, historical trauma, genocide, colonialism, and systemic racism continue to perpetuate health disparities for urban Native Elders and contribute to poor health outcomes.

Safeguarding and improving the health of urban Native Elders will require continued expansion of knowledge and understanding of the experiences, strengths, and needs of Native people living in urban areas. This should include focused research like community-based quantitative and qualitative studies and continued development or adaptation of research instruments relevant to urban-residing Native Elders. Moreover, health equity for urban Native Elders can be successfully achieved through efforts grounded in culture and traditional knowledge systems, revitalizing Indigenous values, and focusing on communal strengths.

This report is the first Community Health Profile (CHP) published by Urban Indian Health Institute (UIHI) devoted to measuring the health status of Native Elders residing in urban areas (i.e., counties or metropolitan areas) in order to understand their health assets and needs. Improving urban Native Elder health through effective planning and decision making requires accurate information about the factors that influence health. This report highlights the strengths and positive health outcomes and behaviors of this population while examining the distribution and magnitude of disease experienced by them as measured by the health conditions that most significantly contribute to their morbidity and mortality. As a result, this report seeks to provide valuable insight to advocates, health programs, and providers about the unique health needs and experiences of urban Native Elders.

KEY FINDINGS

Elders 55 years of age and older represent approximately one-fifth of the Native population living in the service areas of 45 Urban Indian Organizations (19.1%), and Elders over 75 years of age represent 2.9% of that population based on US census data from the 2013–2017 American Community Survey.

Urban Native Elders continue to be resilient in the face of adversity and work to reclaim and practice healthy ways of living.

Over three-quarters of urban AI/AN Elders (77.5%) had a physical exam within the past year.
Nearly two-thirds of urban AI/AN Elders (62.9%) participated in a physical activity in the past month.
Half of urban AI/AN women ages 50–74 years (50.8%) received a mammogram in the past year.
Half of urban AI/AN Elders 50-75 years (51.1%) reported up-to-date colorectal cancer screening.
More than half of urban AI/AN Elders (56.5%) had a dental visit within the past year.
A third of urban AI/AN Elders (35.4%) were former smokers who had quit smoking cigarettes.
Two thirds of urban AI/AN Elders (61.4%) who currently smoked had attempted quitting in the past year.
Nearly half of urban AI/AN Elders (49.5%) received a flu vaccine in the past year.
Over two-thirds of urban AI/AN Elders (67.4%) had ever received a pneumonia shot or pneumococcal vaccine.
A third of urban AI/AN Elders (35.8%) had ever been tested for HIV.

Historical trauma, genocide, colonialism, and systemic racism continue to perpetuate health disparities for urban Native Elders and contribute to poor health outcomes.

Over half of urban AI/AN Elders (53.1%) made less than $25,000 per year.
Approximately 1 in 5 urban AI/AN Elders (19.8%) were unable to work.
Nearly 17% of urban AI/AN Elders could not see a doctor because of cost.
More than two-fifths of urban AI/AN Elders (44.9%) reported fair or poor health.
Almost a fifth of urban AI/AN Elders (19.3%) experienced more than 14 days of mental health distress in the past month, and 26.8% of urban AI/AN Elders experienced more than 14 days of physical health distress in the past month.
One-tenth of urban AI/AN Elders (10.0%) binge drank alcohol in the past month.

A third of urban AI/AN Elders (33.3%) experienced one or more falls in the past year with almost half of those experiencing a fall-related injury (49.4%).

Health conditions that urban AI/AN Elders reported ever being diagnosed with:

- **arthritis (50.3%)**
- **diabetes (30.8%)**
- **current asthma (17.3%)**
- **cancer (12.6%)**
- **COPD, emphysema, or chronic bronchitis (12.3%)**
- **heart attack (12.1%)**
- **stroke (8.1%)**
- **kidney disease (7.2%)**
- **borderline or prediabetes (3.7%)**

Daily living activities that urban AI/AN Elders reported difficulties with:

- **limited daily activities due to physical, mental, or emotional problems (41.1%)**
- **difficulty walking or climbing stairs (38.6%)**
- **difficulty doing errands alone due to physical, mental, or emotional condition (17.6%)**
- **difficulty dressing or bathing (11.7%)**

Leading causes of death among urban AI/AN Elders was heart disease, cancer, diabetes mellitus, chronic lower respiratory disease, and accidents.

Leading causes of cancer death among urban AI/AN Elders was from tracheal, bronchial, or lung cancer; colon, rectal, or anal cancer; pancreatic cancer; and bladder cancer.

Health equity will only be achieved when efforts are grounded in culture and traditional knowledge systems and Indigenous values are centered with a focus on communal strengths. Additionally, efforts to improve and safeguard health should partner with urban Native Elders as active collaborators, advocates, and experts for their own health and well-being.

INTRODUCTION

Urban Indian Health Institute's mission is to decolonize data, for Indigenous people, by Indigenous people.

Urban Indian Health Institute (UIHI), a division of Seattle Indian Health Board, is one of 12 Tribal Epidemiology Centers (TEC) in the United States funded by the Indian Health Service (IHS). UIHI is the only TEC that serves Urban Indian Organizations (UIOs) and American Indians and Alaska Natives (AI/AN) residing in urban settings across the nation. UIHI uniquely utilizes the strengths of western science and traditional Indigenous methods to conduct surveillance, research, and evaluation. Through this work, UIHI reclaims research, data, and evaluation as Indigenous values.

Purpose

This report is the first Community Health Profile (CHP) published by UIHI devoted to measuring the health status of Native Elders residing in urban areas (i.e., counties or metropolitan areas) and is meant to complement existing CHPs published by UIHI and act as a stand-alone report. The term "Elders" in this report refers to individuals aged 55 and older.

This report presents health data from 2012–2017 on American Indian and Alaska Native Elders residing in urban counties or metropolitan areas served by the Urban Indian Health Network, which is made up of more than 70 health, social service, and faith-based organizations that provide services to urban Native communities. It highlights the strengths and positive health outcomes and behaviors of urban Native Elders. It also examines the distribution and magnitude of disease experienced by urban Native Elders as measured by the health conditions that most significantly contribute to morbidity and mortality.

How to use this report

Improving urban Native Elder health through effective planning and decision making requires accurate information about the factors that influence health. While limited in scope and restricted to available and usable data, this report provides valuable insight to advocates, health programs, and providers about the unique health needs and experiences of urban Native Elders.

The information provided here is intended to supplement other local health data available. Not all issues important to the health of urban Native Elders are included in this report. Locally collected data may provide additional information about the health of urban Native Elders living in specific service areas. Data presented in this report may be most useful when combined with stories about patients and community members and local surveillance or survey data when available.

Planning public health programs

Data in this report can be used by Urban Indian Organizations to identify health priorities, allocate resources, and guide the development of innovative programs.

Applying for funding opportunities

Data and figures help tell the story of existing health disparities in the urban Native Elder population compared to non-Hispanic White elders. This report may be useful to include as information for research proposals, grant applications, and other funding opportunities and can also be cited as a reference.

Identifying gaps in data

This report may reveal the need to close current gaps in nationally collected data. For example, providers may want to consider pushing state health departments to improve data quality through linkage to other relevant data and address racial and ethnic misclassification to correctly classify Native individuals in death records. In addition, national surveillance systems can further improve data collection by oversampling Native individuals in national surveys to have enough statistical power to provide reliable findings.

Conducting research

Data in this report can be used to generate additional hypotheses for future studies, evaluations, or assessments.

Background

Today, approximately 76% of Native individuals live in urban settings for educational opportunities, employment, and health care needs, resulting in an Indigenous urban population that is enormously diverse and inter-tribal.[1] Urban Native Elders face significant health issues. According to 2001 and 2002 Behavioral Risk Factor Surveillance System (BRFSS) data, urban Native Elders (age 55 and older) were at greater risk than urban non-Hispanic White (NHW) elders for cigarette smoking, physical inactivity, obesity, diabetes, and lower general health status.[2] Moreover, Native Elders were significantly more likely to have difficulties with eating, getting out of bed, walking, and maintaining self-care such as bathing/showering, dressing, and using the bathroom because of a health problem.[3]

Yet, estimates of the current socioeconomic, demographic, morbidity, and mortality status of urban Native Elders has not been measured comprehensively. This report aims to provide aggregated, national estimates for a range of health indicators specific to Native Elders residing within urban areas (i.e., counties or metropolitan areas) for the years 2012–2017.

METHODS AND DATA

Definitions

Throughout this report, the acronym “AI/AN” refers to the American Indian and Alaska Native population, and the authors use the terms “Native”, “Indigenous”, “Indian”, and “American Indian and Alaska Native” (AI/AN) interchangeably. The AI/AN population is defined as individuals identifying as AI/AN only or AI/AN in combination with other races and ethnicities, depending on the data source. The “NHW” population is defined as individuals identifying as non-Hispanic White unless otherwise specified. For example, in the Behavioral Risk Factor Surveillance Survey (BRFSS), the “White” population is defined as individuals whom self-identify as White regardless of ethnicity.

The term “Elders” refers to individuals aged 55 and older. The age of 65 years and older is typically used for analysis of aging populations in the United States, as this is the Medicare eligibility age. However, many Indigenous cultural traditions designate someone as an Elder at an earlier age. Additionally, a community needs assessment conducted by Urban Indian Health Institute (UIHI) revealed that members of the Indigenous population in general often experience certain health concerns at an earlier age than all other races.[2–4]

The “urban” status of an individual was defined using geographic indicators available in the selected data source that matched the geographic area (27 states, 131 counties) of the Urban Indian Organizations (UIO) and Urban Indian Health Network (UIHN). However, if geographic areas did not match, alternative approaches were used. Therefore, “urban” is not defined the same across data sources.

American Community Survey census data included all urban areas defined by the 2013 National Center for Health Statistics (NCHS) Urban-Rural Classification Scheme for Counties as well as the county Federal Information Processing Standards (FIPS) codes of UIO/UIHN service areas. While not mutually exclusive, these two classification schemes are collectively exhaustive and capture the largest possible number of urban areas contained within the data used for these estimates. BRFSS data included metropolitan and micropolitan statistical area (MMSA) codes as defined by the Office of Management and Budget (see Appendix 1 for MMSA areas) that best matched UIO/UIHN service areas. MMSA are comprised of metropolitan statistical areas, micropolitan statistical areas, and metropolitan divisions, which encompass a group of counties that contain at least one urbanized area or urban cluster of people. Lastly, mortality data included county FIPS codes (see Appendix 1 for state and county areas) that matched UIO/UIHN service areas.

THIS REPORT INCLUDES INFORMATION FROM THE FOLLOWING DATA SOURCES:

- **American Community Survey, 2013–2017**
- **National Center for Health Statistics, 2013–2017**
- **Behavioral Risk Factor Surveillance System, 2012–2017**

Data sources were inclusive of the 2012 to 2017 measurement period unless otherwise specified.

Data sources

American Community Survey

The American Community Survey (ACS) is a nationwide, continuous survey that collects demographic, housing, social, and economic data every year. To provide reliable estimates for small counties, neighborhoods, and population groups, the ACS provides 1-, 3-, and 5-year aggregate estimates. Estimates for this report are aggregated data from 2013–2017. Race is self-reported in ACS with similar race categories as the U.S. Census. However, some ACS data are not easily accessible for multi-racial groups. Therefore, ACS data are reported for individuals identifying as AI/AN alone in this report. ACS estimates in this profile are not adjusted for age. Observed differences in estimates may be due to a true difference in rates or due to differences in age distribution in the population. The ACS data used for this report was for the 2013–2017 measurement period.

For more information about the ACS, visit: www.census.gov/acs

National Center for Health Statistics

The National Center for Health Statistics is a public health agency that oversees the National Vital Statistics System (NVSS), which is responsible for the collection of vital records for the United States. Vital records include death certificate data, which served as the primary source of demographic, geographic, and cause-of-death information among persons dying each year. This report used NVSS multiple-cause of death (MCD) data files for mortality statistics in the 2013–2017 measurement period.

For more information about Vital Statistics, visit: http://www.cdc.gov/nchs/nvss.htm

Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) is the nation's premier system of health-related telephone surveys that collect state-level data about U.S. residents regarding their health-related risk behaviors, chronic health conditions, and use of preventive services. Established in 1984 with 15 states, BRFSS now collects data in all 50 states as well as the District of Columbia and three U.S. territories.

BRFSS completes more than 400,000 adult interviews each year, making it the largest continuously conducted health survey system in the world. This report used BRFSS MMSA (metropolitan and micropolitan statistical area) data files for 2012–2017 measurement period. These six years of data provide enough statistical power to analyze indicators collected every other year, e.g., cancer screening behaviors and disability needs.

For more information about BRFSS, visit: https://www.cdc.gov/brfss/index.html

Indicator selection

The determinants, distribution, and prevalence of disease among urban Native Elders were organized into three general themes: sociodemographic, morbidity and health behaviors, and mortality. Indicators for each of these sections were selected based on a literature review of aging and health amongst U.S. Elders as well as the frequency and period prevalence of disease within the urban Native Elder population.

Analysis

Each data source across the three themes required different approaches for analysis. The following subsections highlight each approach.

Sociodemographic and morbidity analysis

Prevalence: Period prevalence, the number of both new and existing cases of a given disease, condition, or indicator over a defined population for a specific measurement period, was calculated for the AI/AN population regardless of ethnicity and compared to the NHW population. Throughout this report, prevalence is expressed as a percentage of the stated population who has a disease, health condition, or determinant unless otherwise stated.

Age categories and sex: American Indian and Alaska Native and NHW populations were stratified into age categories. The ACS data were stratified into four age groups: 55–64, 65–74, 75–84, and 85+ years old. The BRFSS data were categorized into four age groups: 55–64, 65–74, 75–79, and 80+ years old. In some cases, populations were further examined by sex. Sex was defined as male and female only. However, these categories may include members of both populations who identify as non-binary or outside the gender binary categories.

Statistical tests: Proportional differences between and within groups were analyzed for statistical significance using Chi-square tests of independence or Fisher's exact test for indicators that had less than 30 total responses.

Mortality analysis

Cause of death: Cause-specific mortality was measured using the NCHS multiple-cause of death 113 (MCD-113) cause-specific list. The MCD-113 list organizes death into 113 underlying causes and their associated conditions. Underlying causes of death are classified by the World Health Organization (WHO) as the underlying disease or injury that initiated the cascade of events that led directly to death or the circumstance of accident or injury that resulted in death. The MCD-113 list classifies deaths using ICD-10 codes and is both mutually exclusive and collectively exhaustive.

Ranking leading cause of death: Numbers of deaths for each cause were computed and ranked from highest to lowest to determine the leading causes of death.

Age-adjusted mortality rates: The definition of a mortality rate is the number of persons dying during a specified period over a specified population. The mortality rate is expressed as deaths per 100,000. Given that the AI/AN population has a different population age distribution—and for reasons of comparability—mortality rates presented in this report were age-adjusted using the direct method and the U.S. 2000 standard population. Using the age-adjusted death rates, rate ratios (RRs) were calculated for AI/AN populations regardless of ethnicity using NHW rates for comparison.

Years of potential life lost: Years of potential life lost (YPLL) is a measure of premature death due to disease or injury.[5] YPLL estimates the average years a person would have lived if they had not died prematurely. YPLL is calculated for each individual and added together for the total population.[5] The life expectancy of the AI/AN population used in this calculation was 79 years old, which was the life expectancy of the NHW population.[6] The YPLL rate is expressed as potential life lost per 100,000.

Overall Analysis

For overall statistical tests, confidence intervals (CIs) were calculated and used to show differences in outcomes for specific indicators displayed in bar graphs. CIs provide a range of values that are likely to include the true population value with a certain degree of confidence. Differences were considered significant at a p-value <0.05 when the 95% confidence intervals did not overlap between groups. The 95% CI means that 95 times out of 100 the CI captures the true value for the population. Analyses were limited to cell sizes greater than 30 among AI/AN and NHW persons to produce reliable estimates. Throughout this report, comparisons are made between both the urban AI/AN population and the NHW comparison population as well as between sex and age categories where applicable.

Additionally, 95% CIs capture the direction and magnitude of statistically significant differences for a point estimate such as a prevalence odds ratio (POR). A POR is defined as the ratio of the odds of a condition or event prevalent in one group (study group) to the odds of it prevalent in another group (comparison group). It explains the likelihood or probability of a condition or event being prevalent. A POR of 1 indicates that the condition or event under study is equally likely to be prevalent in both study and comparison groups. A POR greater than 1 indicates that the condition or event is more likely to be prevalent in the study group than the comparison group. A POR less than 1 indicates that the condition or event is less likely to be prevalent in the study group than the comparison group.

P-values represent the probability of obtaining results equal to or more precise than those observed. A p-value less than 0.05 suggests a statistically significant difference between groups and indicates a low probability that observed differences were due to random error. Nevertheless, p-values are not definitive and are meant to act as a guide for further inquiry into the presence of an association, effect, or correlation between indicators or groups.

Data analysis and visualizations were conducted using R (version 1.1.463), Tableau (version 12.2), and SAS 9.4.

Limitations

Although data analysis and assessment of results were conducted for all indicators, data limitations were observed and experienced during the selection and analyses of these indicators and their estimates. In some instances, a small sample size impacted the analysis and prevented or limited the reporting of results. Frequently, data was only available for individuals who identified as AI/AN alone and was not inclusive of AI/AN individuals who also identify with another race or ethnicity. Thus, the estimates provided in this report may be an underestimation of the true value of the outcome or behavior for any indicator analyzed in this report.

Another factor affecting and limiting the analysis of data is racial misclassification, particularly for demographic and mortality data. Racial misclassification is defined as incorrect coding of an individual's race or ethnicity in public records. This can greatly underestimate the true rate of disease, risk factor, or outcome. American Indian and Alaska Native individuals are especially likely to experience problems of incorrect classification on death certificates making true mortality rates among AI/AN individuals assumed to be higher than reported numbers suggest.[7] Because mortality data are extracted from death certificates, the race/ethnicity category is not self-reported and is often completed by a funeral director based on personal observation or information received from a family member. Based on documented racial misclassification of AI/AN individuals in surveillance data, any of the health disparities presented in these estimates could be larger than reported.

SOCIODEMOGRAPHICS

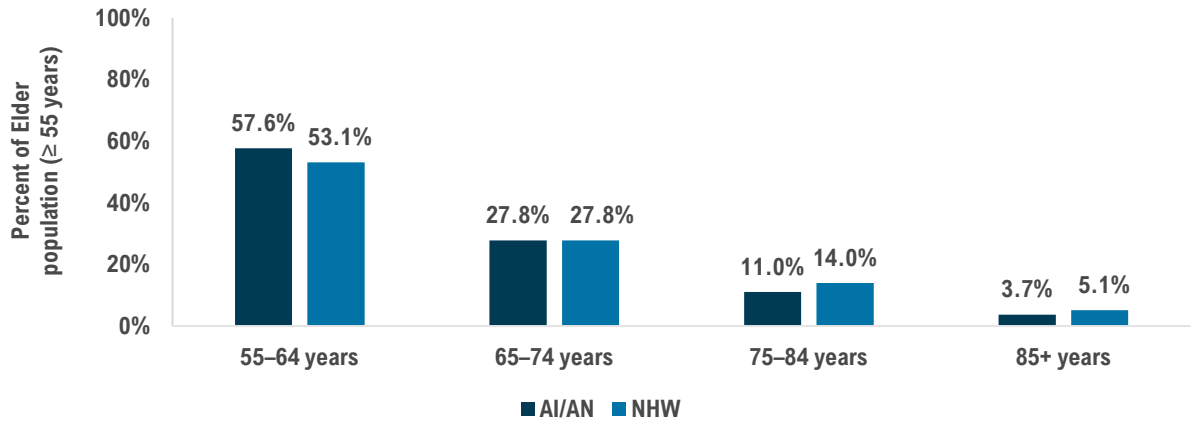
The health of individuals and populations is greatly influenced by social determinants—the conditions in which people live, learn, work, and play. Evidence from decades of research on the relationship between key social determinants and health outcomes overwhelmingly suggests that greater socioeconomic disadvantage leads to poorer health and extensive inequities within and between populations.[8,9] These social determinants of health include race and ethnicity, gender, lack of access to education or employment, poverty, poor-quality health care, and lack of adequate housing. This section presents data on measures of demographics and social determinants of health to illustrate differences between urban AI/AN Elders and NHW elders that may contribute to overall health disparities and inequities. The indicators examined in this section include income level, educational attainment, employment status, social and cultural interaction, housing, and health insurance.

Demographics

Age and race

Nationwide, there was a higher proportion of the AI/AN population that were aged 55–64 and a lower proportion of the AI/AN population that were 75 years old and older compared to the NHW population (Figure 1). These differences may indicate that the general Indigenous population is younger than the NHW population. In addition, it is likely that the proportions are lower in the older age groups because the Indigenous population is experiencing higher mortality at a younger age.

Figure 1. Urban Elder population by age category and race, 2013–2017

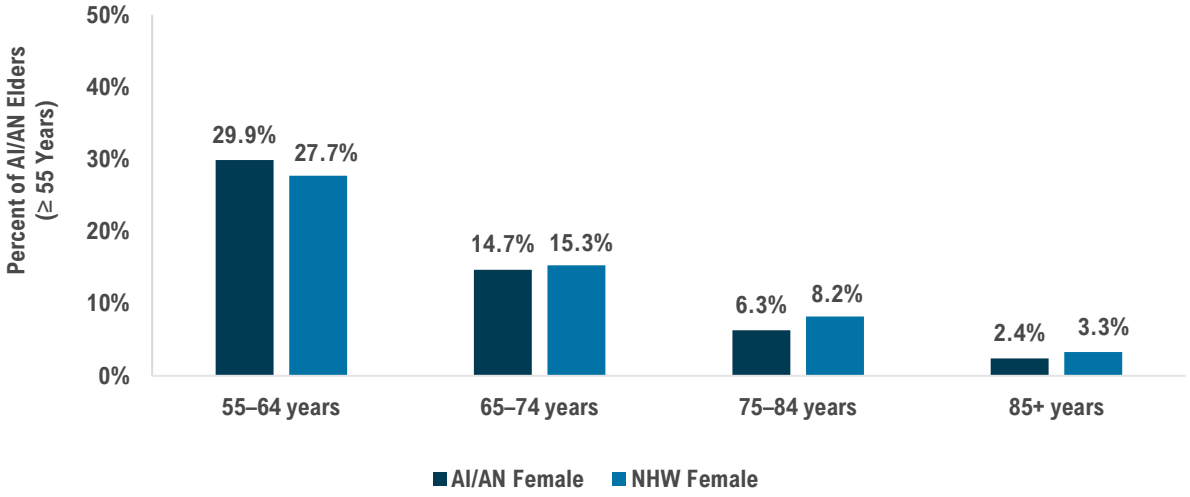


Source: American Community Survey, 2013–2017; Urban defined by 2013 National Center for Health Statistics (NCHS) Urban-Rural Classification Scheme for Counties and UIO/UIHN service counties from Federal Information Processing Standards (FIPS) codes.

Age, sex, and race

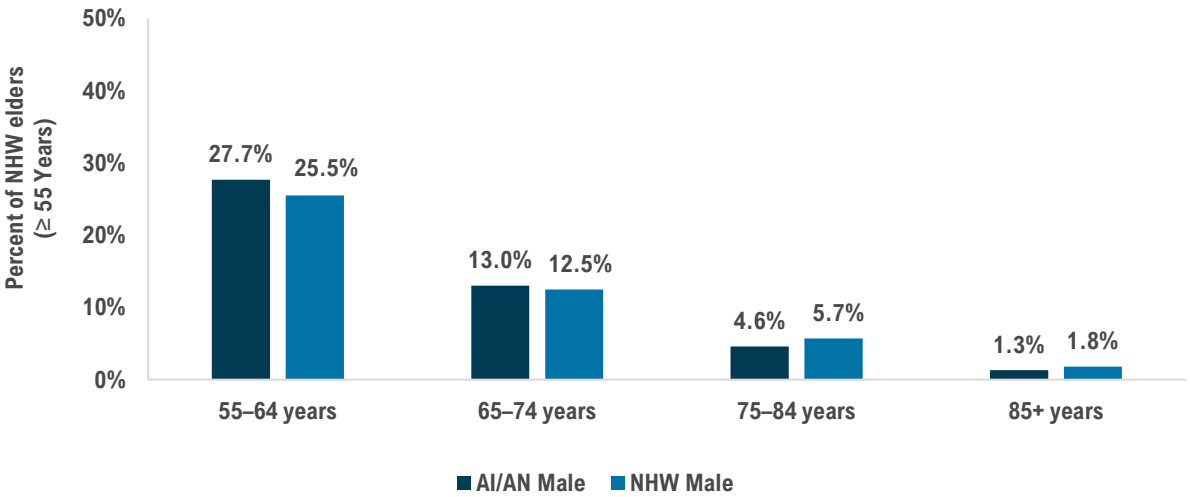
Nationwide, there was a higher proportion of both AI/AN females and males aged 55–64 compared to the NHW population for the same age category. While there was no difference between AI/AN Elders and NHW elders aged 65–74, there were lower proportions of AI/AN females and males aged 75 and older compared to NHW elders for the same age category (Figures 2 and 3).

Figure 2. Urban female Elder population by age category, 2013–2017



Source: American Community Survey, 2013–2017; Urban defined by 2013 National Center for Health Statistics (NCHS) Urban-Rural Classification Scheme for Counties and UIO/UIHN service counties from Federal Information Processing Standards (FIPS) codes.

Figure 3. Urban male Elder population by age category, 2013–2017



Source: American Community Survey, 2013–2017; Urban defined by 2013 National Center for Health Statistics (NCHS) Urban-Rural Classification Scheme for Counties and UIO/UIHN service counties from Federal Information Processing Standards (FIPS) codes.

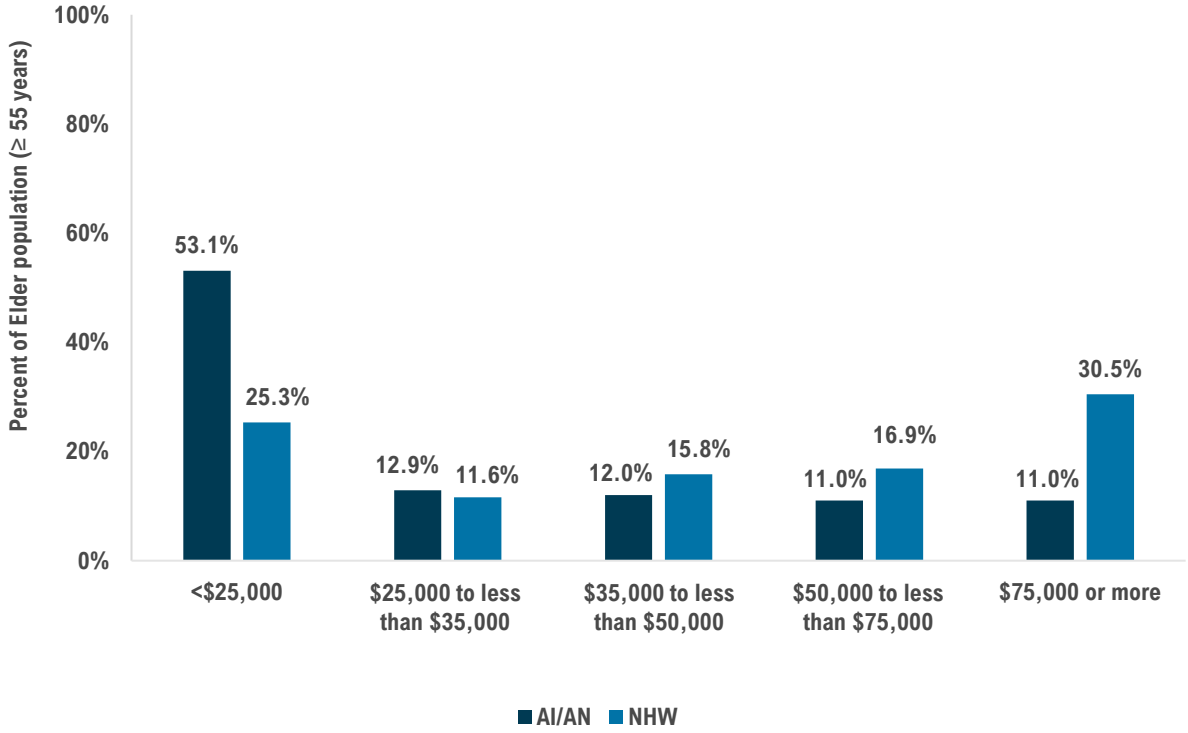
Social determinants of health

Income

Income is a key component of socioeconomic status (SES). There is a well-established link between higher SES and better health where people with higher SES tend to live longer and experience fewer health problems throughout their lives.

There was a higher proportion of AI/AN Elders who made less than $25,000 per year (53.1%) compared to NHW elders (25.3%; Figure 4). Likewise, just 11.0% of AI/ANs made $75,000 per year or more compared to 30.5% of NHWs. There were no differences between AI/ANs and NHWs who made between $25,000 and less than $75,000.

Figure 4. Urban Elder population by individual income level and race, 2013–2017



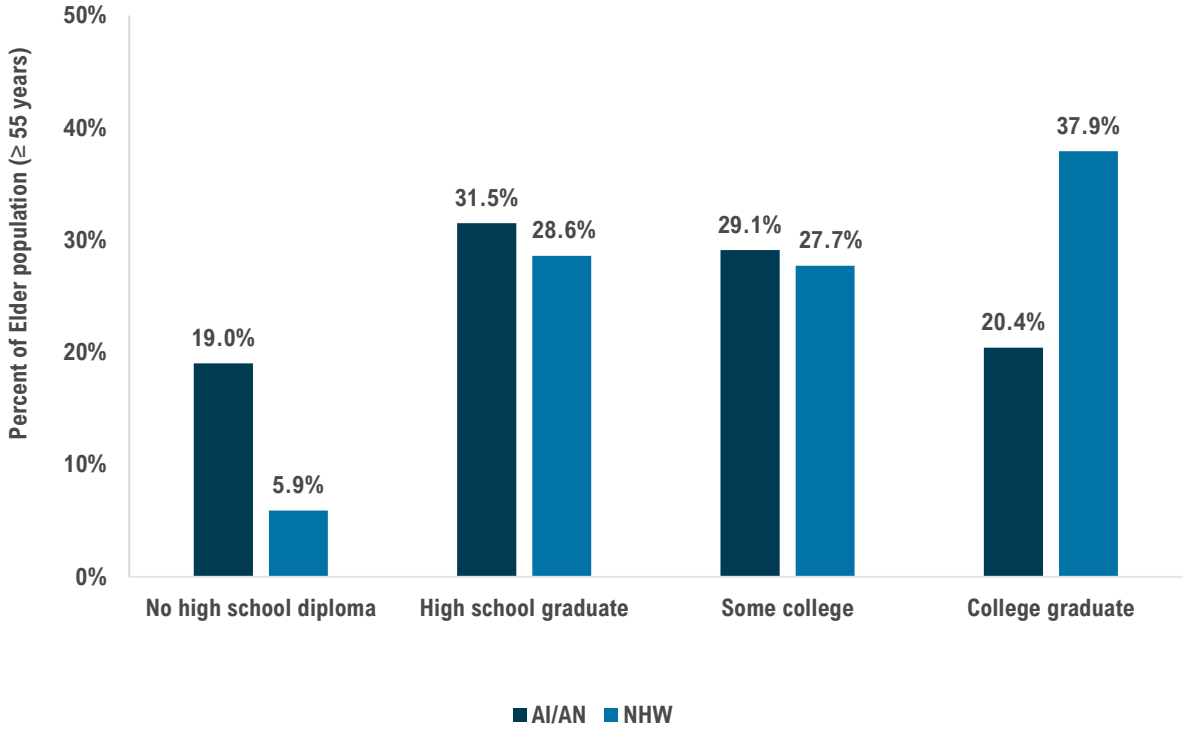
Source: American Community Survey, 2013–2017; Urban defined by 2013 National Center for Health Statistics (NCHS) Urban-Rural Classification Scheme for Counties and UIO/UIHN service counties from Federal Information Processing Standards (FIPS) codes.

Education

The relationship between education and health—the health-education gradient—is well documented.[10,11] Not only does median income increase with educational attainment, but higher education levels can also improve the skills essential to acquire employment, income, and an understanding of health information and services needed to make health decisions.

A higher percentage of AI/AN Elders had not completed high school (19.0%) compared with the NHW elder population (5.9%; Figure 5). A lower percentage of AI/ANs reported having completed college (20.4%) compared to NHWs (37.9%).

Figure 5. Urban Elder population by education level and race, 2013–2017



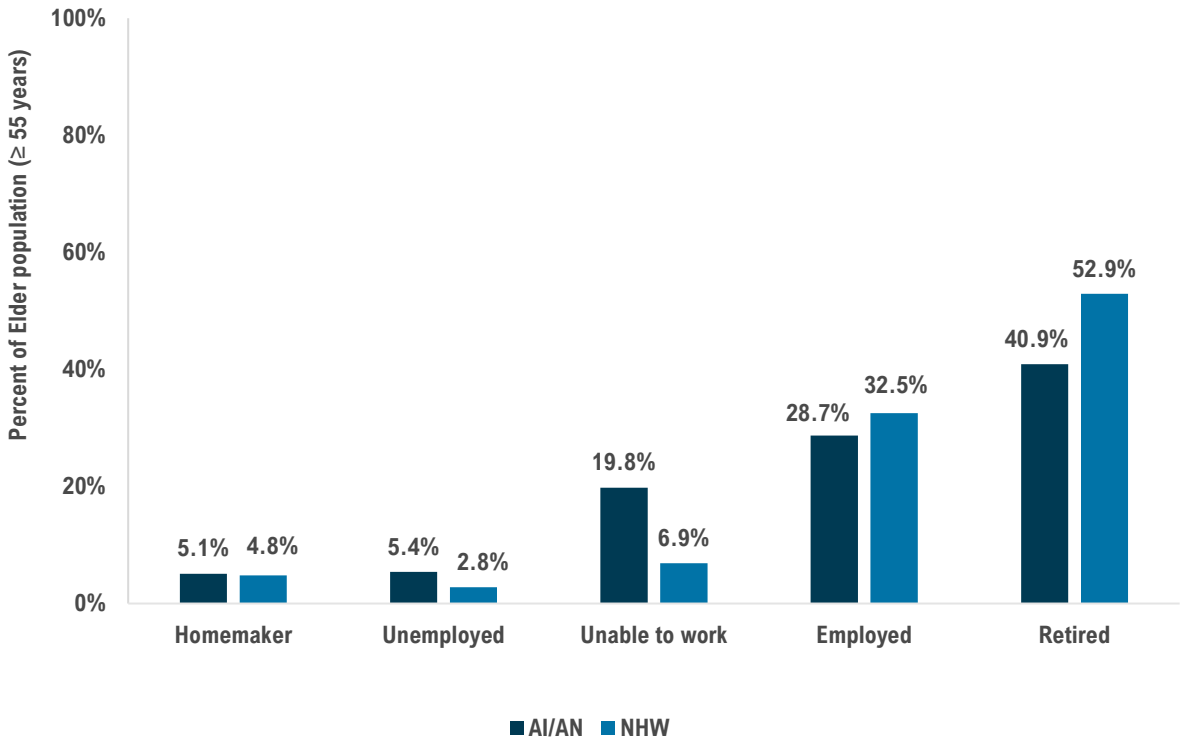
Source: American Community Survey, 2013–2017; Urban defined by 2013 National Center for Health Statistics (NCHS) Urban-Rural Classification Scheme for Counties and UIO/UIHN service counties from Federal Information Processing Standards (FIPS) codes.

Employment

Native people continue to suffer economically, and rates of employment remain low. Studies have shown that unemployment and underemployment negatively impact health where individuals may experience financial insecurity, social isolation, lower self-esteem, and lack health insurance coverage.[12]

While AI/AN Elders and NHW elders had similar proportions of being employed, a higher proportion of AI/ANs reported not being able to work (19.8%) compared to NHWs (6.9%; Figure 6). Moreover, a lower proportion of AI/AN Elders were retired (40.9%) compared to NHW elders (52.9%).

Figure 6. Urban Elder population by employment status and race, 2013–2017



Source: American Community Survey, 2013–2017; Urban defined by 2013 National Center for Health Statistics (NCHS) Urban-Rural Classification Scheme for Counties and UIO/UIHN service counties from Federal Information Processing Standards (FIPS) codes.

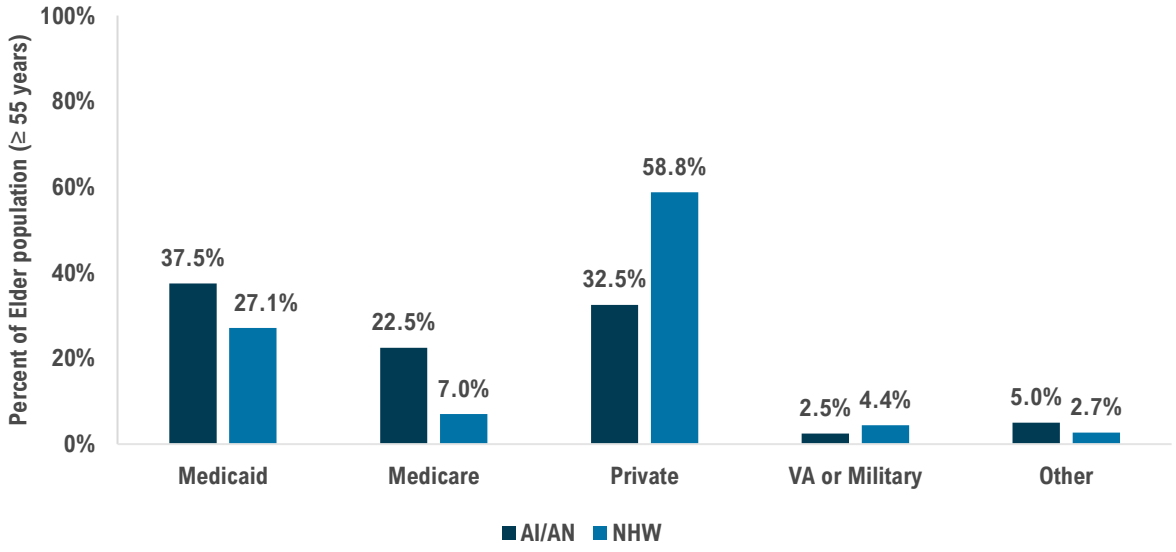
Health insurance and healthcare access

Although members of federally recognized tribes are entitled to healthcare as a treaty right, Native people, in general, are more likely to go without health insurance and access to healthcare. Not having health insurance greatly influences the health and quality of life of Native Elders. Moreover, Native Elders with insurance face challenges and barriers in utilizing health services for reasons due to difficulties in using insurance, scheduling appointments, communicating with healthcare professionals, accessing services, and obtaining reliable transportation. This is compounded by limited availability of culturally relevant services for Elders and external factors such as the high cost of transportation and long distances to obtain healthcare.[13]

A higher portion of AI/AN Elders reported using Medicaid (37.5%) or Medicare (22.5%) compared to NHW elders (27.1% and 7.0% respectively; Figure 7). Conversely, a lower portion of AI/ANs reported having private insurance (32.5%) compared to NHWs (58.8%). In addition, 16.9% of AI/ANs reported they could not see a doctor because of cost (Figure 8). This proportion was 2.64 (95% CI: 2.16–3.23) times the proportion of Whites (7.1%).

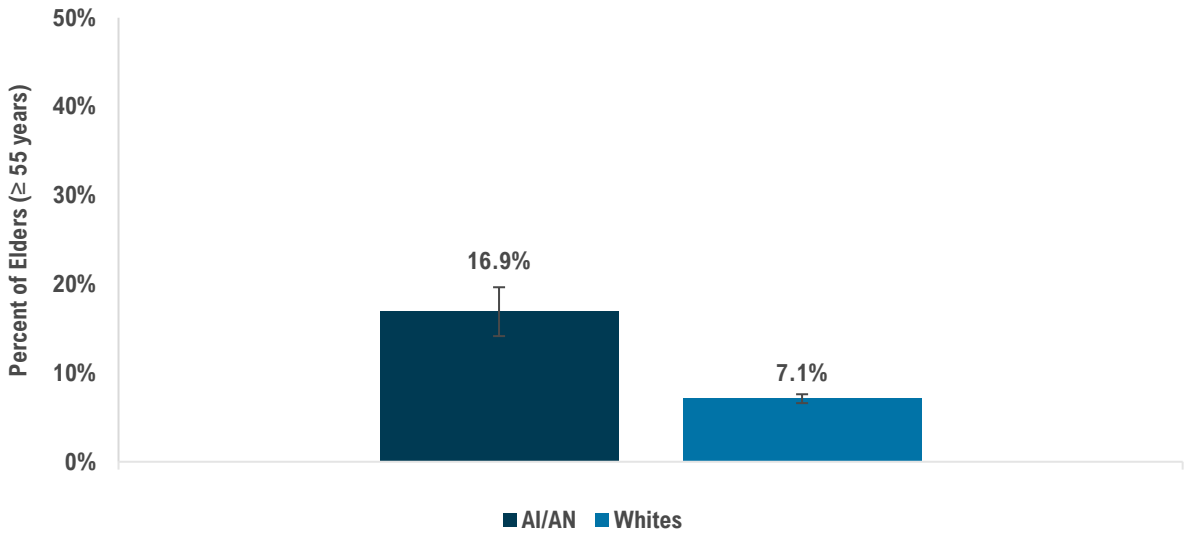
When examined by gender, a higher portion of AI/AN Elder males used Medicaid (46.7%) compared to AI/AN Elder females (32.0%), while the converse was true for Medicare usage: 6.7% for AI/AN Elder males compared to 32.0% for AI/AN Elder females (not shown). Also, a higher portion of AI/AN Elder males reported having private insurance (40.0%) compared to AI/AN Elder females (28.0%; not shown).

Figure 7. Urban Elder population by health insurance coverage and race, 2013–2017



Source: American Community Survey, 2013–2017; Urban defined by 2013 National Center for Health Statistics (NCHS) Urban-Rural Classification Scheme for Counties and UIO/UIHN service counties from Federal Information Processing Standards (FIPS) codes.

Figure 8. Urban Elders who could not see a doctor because of cost by race, 2012–2017



Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

MORBIDITY AND HEALTH BEHAVIORS

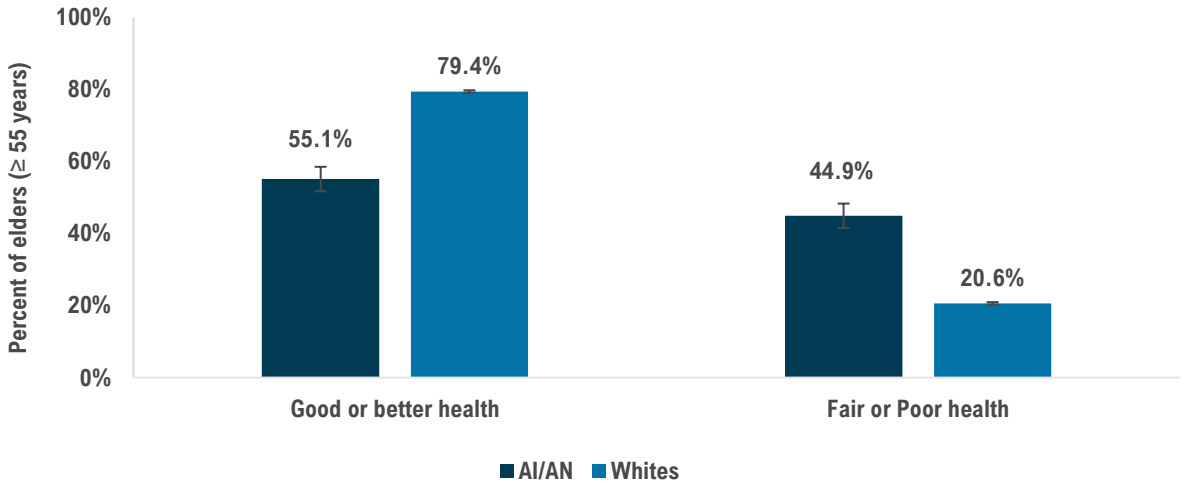
Many Elders have more than one health condition. A national survey of Native Elders in 2011–2014 found that 89.7% had been diagnosed with at least one chronic condition, 69.8% had two or more conditions, and 45.2% had three or more.[14] As Native individuals are living longer, exposure to factors that contribute to injury, disability, and chronic diseases like Type II diabetes, heart disease, and cancer increases. The link between certain health behaviors and chronic disease can further heighten the risk for additional health conditions or interfere with improvements to health. Therefore, examining diseases and health behaviors in the Elder population is important because they impact physical abilities and mental health and can lead to early death.

To better understand the health status of Native Elders, we examined the prevalence and magnitude of diseases and influential health behaviors using population-based survey data drawn from the Behavioral Risk Factor Surveillance System (BRFSS).

General health status

Over half of AI/AN Elders (55.1%) said their general health was "good or better." However, this prevalence was significantly lower than White elders (79.4%; Figure 9). The proportion of reported "fair or poor" health in AI/ANs was 3.13 (95% CI: 2.74–3.60) times the proportion reported in Whites.

Figure 9. General health status of urban Elders by race, 2012–2017



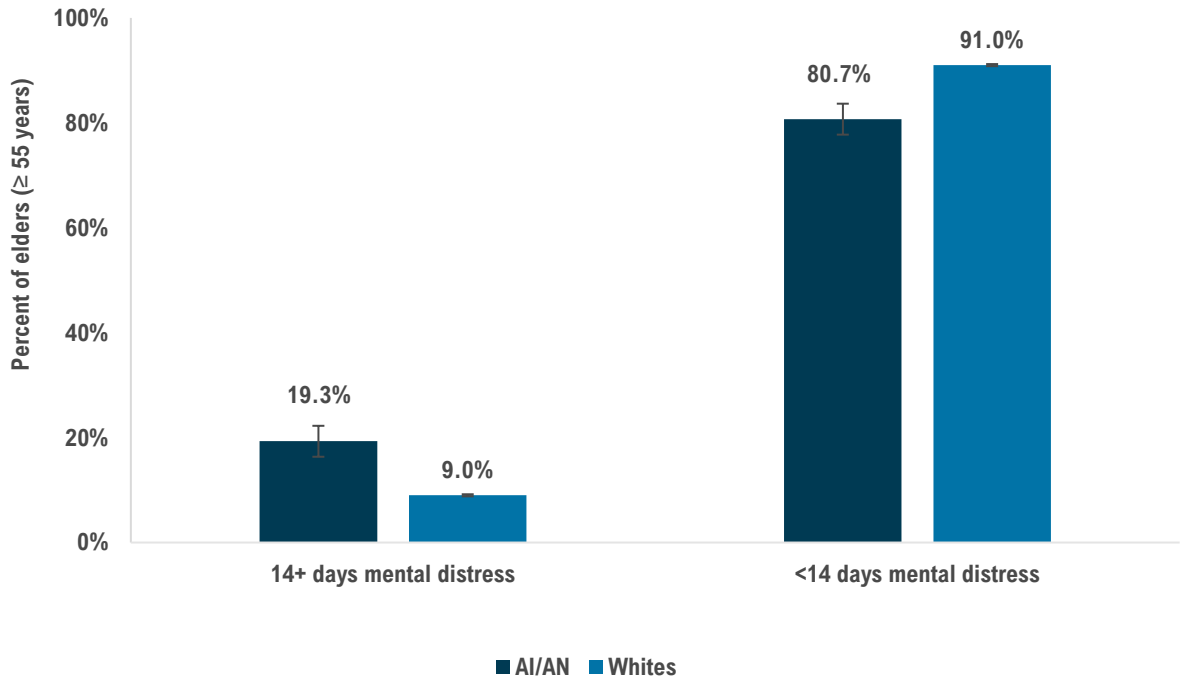
Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Mental health distress

Mental health distress is a measure of quality of life. In the BRFSS survey, the measure of mental health distress is determined as 14 days or more of stress, depression, and problems with emotions in the past month. The 14 days or more cutoff has been demonstrated in research to be strongly associated with mental health outcomes.[15]

Based on BRFSS, the proportion of reported 14 days or more of mental distress in AI/AN Elders (19.3%) was 2.41 (95% CI: 1.99–2.92) times the proportion reported in White elders (9.0%; Figure 10).

Figure 10. Days of mental health distress in past month among urban Elders by race, 2012–2017



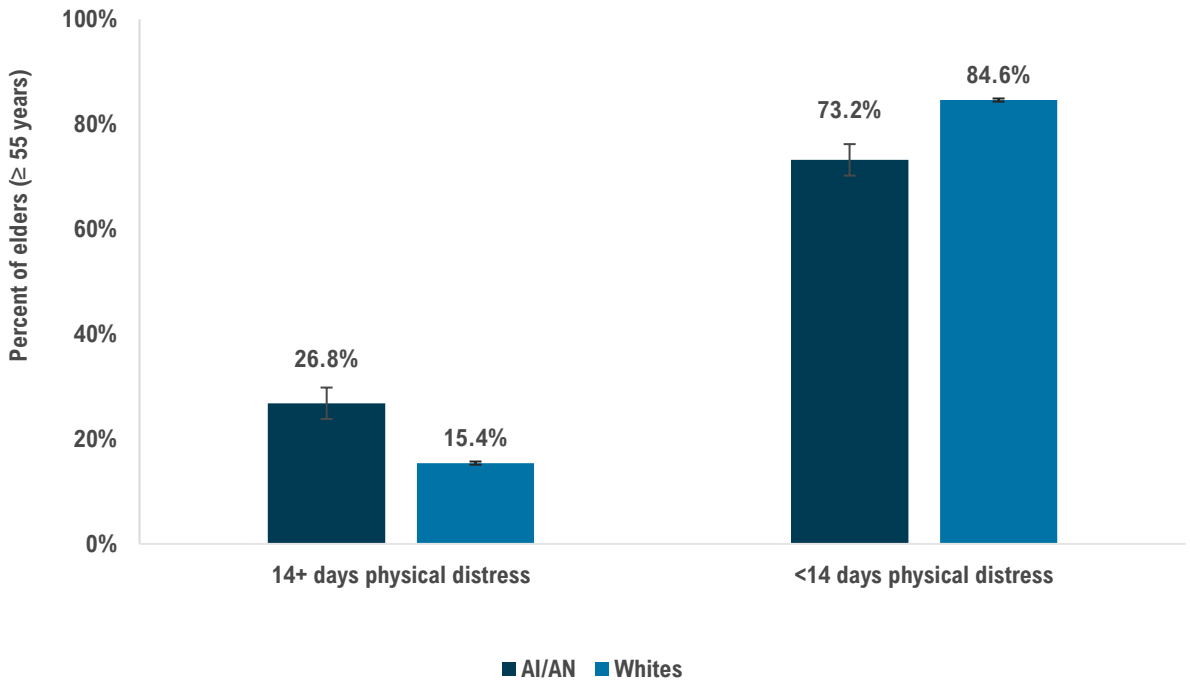
Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Physical health distress

Like mental health distress, physical health distress is another measure of the quality of life. The BRFSS survey defines physical health distress as 14 days or more of poor physical health due to physical illness or injury in the past month.

About 27% (26.8%) of AI/AN Elders reported 14 days or more of physical health distress during the past month, which was 2.00 (95% CI: 1.72–2.35) times the proportion of White elders (15.4%; Figure 11).

Figure 11. Days of physical health distress in past month among urban Elders by race, 2012–2017

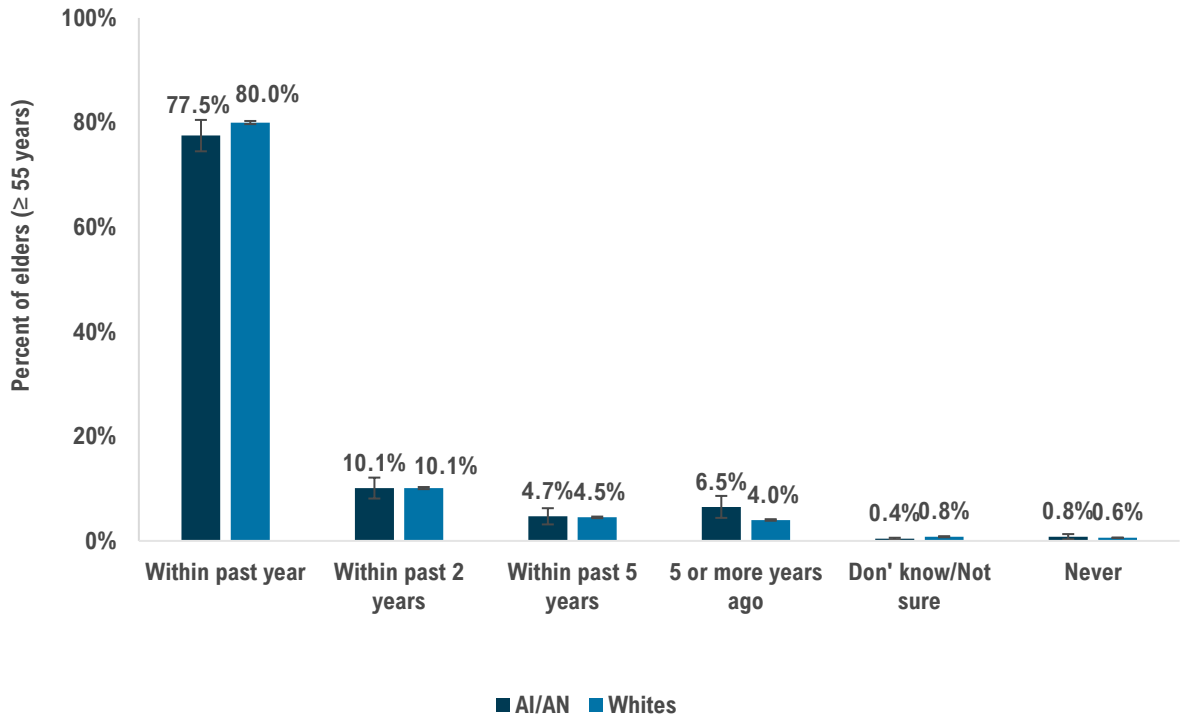


Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Routine physical exam

Routine medical checkups in the elderly are critical for maintaining good health. Physical exams allow Elders to discuss their medications, recommended vaccinations, health concerns, and routine health screenings with providers. The majority (77.5%) of AI/ANs reported having a routine physical exam within the past year, which was comparable to Whites (80.0%; Figure 12).

Figure 12. Time since last physical exam among urban Elders by race, 2012–2017



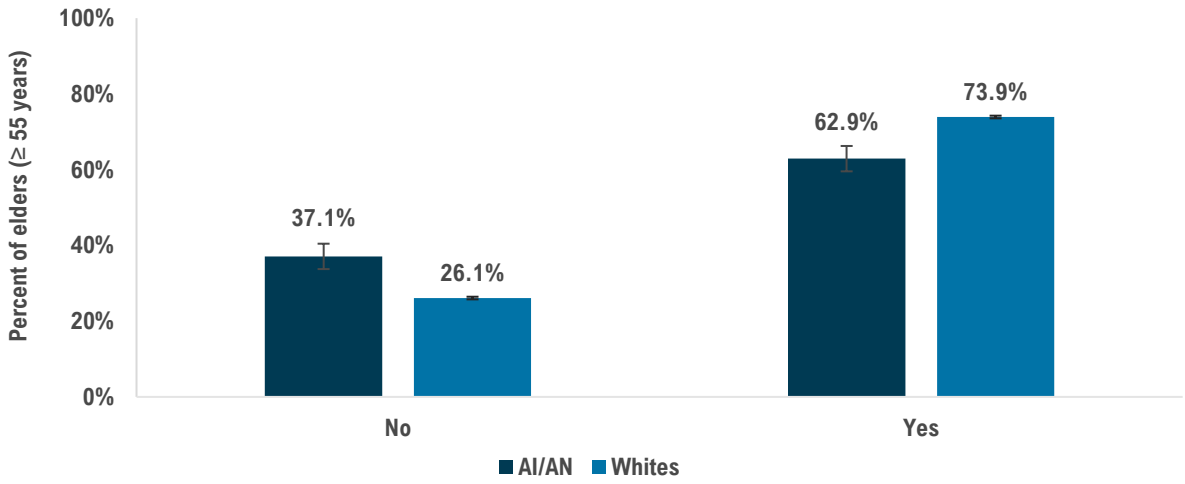
Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Physical activity

Physical activity provides important health benefits to Elders through aerobic activity, muscle-strengthening activity, and balance training. Elders engaged in physical activity benefit from a reduction in falls, fractured bones, and chronic diseases like high blood pressure and diabetes.

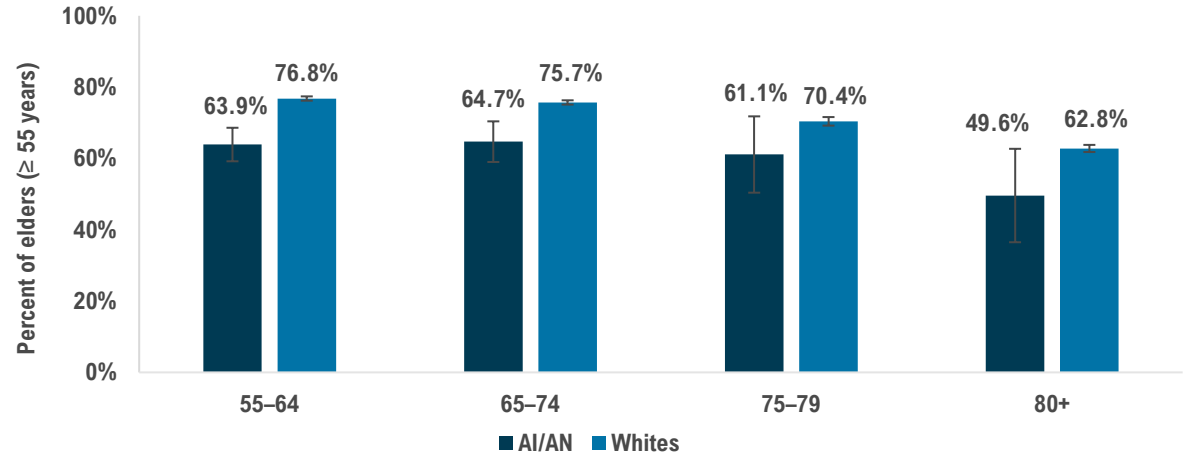
A high percentage of AI/AN Elders (62.9%) reported doing physical activity in the past month (Figure 13). American Indian and Alaska Natives of the 55–64 (63.9%) and 65–74 (64.7%) age groups reported significantly less physical activity in the past month than Whites of the same age groups (Figure 14).

Figure 13. Physical activity in past month among urban Elders by race, 2012–2017



Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Figure 14. Physical activity in past month among urban Elders by age category and race, 2012–2017



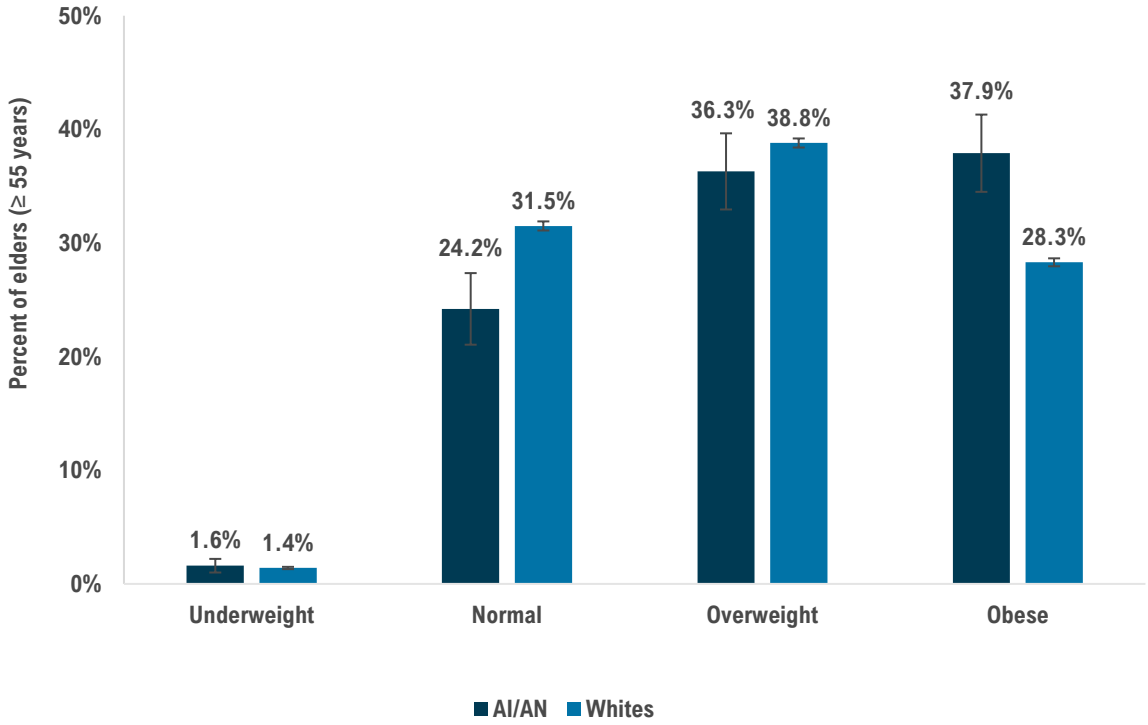
Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Body mass index

Contrary to body mass index (BMI) recommendations for the younger population, research indicates that being overweight is beneficial for Elders compared to being underweight or obese.[16–19] To achieve a healthy BMI, Elders should consult with their healthcare providers.

According to BMI, 74.2% of AI/AN Elders were considered overweight or obese, which was much higher than 67.1% in White elders (Figure 15). The proportion of obesity in AI/ANs was 1.34 (95% CI: 1.23–1.47) times the proportion in Whites (37.9% and 28.3%, respectively).

Figure 15. BMI categories among urban Elders by race, 2012–2017



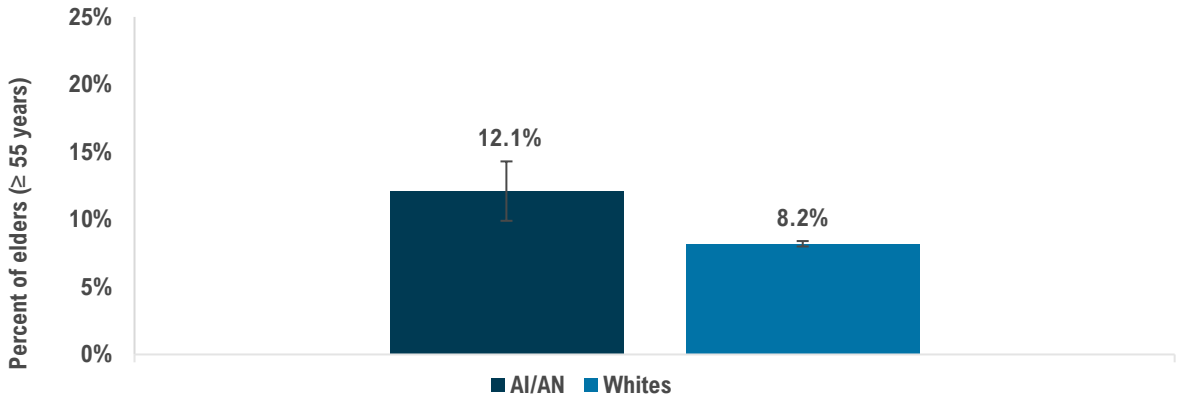
Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas. BMI categories defined: Underweight BMI <18.5; Normal BMI 18.5–24.9; Overweight BMI 25.0–29.0; Obese BMI >30.0.

Heart attack

A heart attack is the blockage of blood flow to the heart that can damage or destroy heart muscle.[20] In the BRFSS survey, Elders self-reported their experience with ever being told by their provider they had experienced a heart attack.

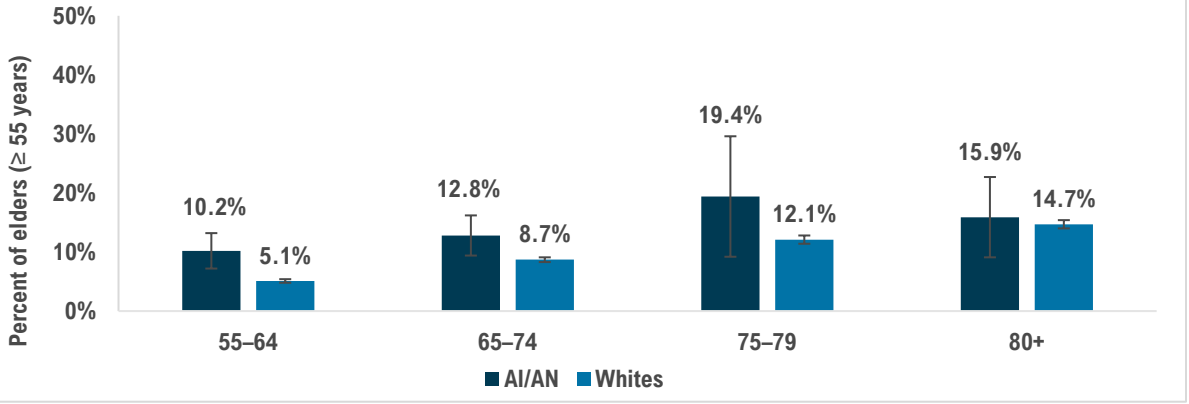
A significantly higher proportion of AI/AN Elders (12.1%) reported ever being diagnosed with a heart attack compared to White elders (8.2%; Figure 16). When examined by sex, the proportion of reported heart attacks in AI/AN Elder men (15.0%) was 1.65 (95% CI: 1.16–2.38) times the proportion in AI/AN Elder women (9.1%, 95% CI: 6.5–11.6, not shown). However, AI/AN Elder women reported a significantly higher proportion of a heart attack (9.1%, 95% CI: 6.5–11.6) than White elder women (5.4%, 95% CI: 5.2–5.6; not shown). AI/ANs ages 55–74 years old reported significantly higher proportions of ever being diagnosed with a heart attack compared to their White counterparts of the same age group (Figure 17).

Figure 16. Urban Elders ever diagnosed with a heart attack by race, 2012–2017



Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Figure 17. Urban Elders ever diagnosed with a heart attack by age category and race, 2012–2017



Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

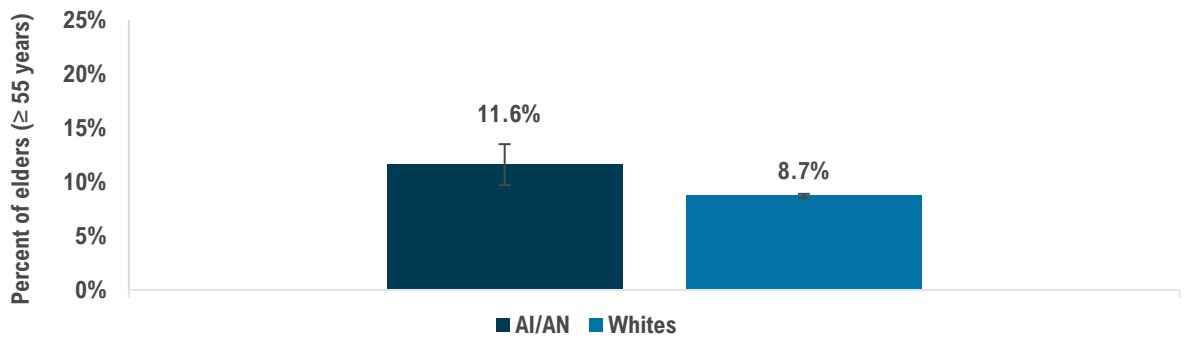
Coronary heart disease or angina

Coronary heart disease (CHD) is a condition where the coronary arteries become narrow by a gradual buildup of fatty material within the coronary walls.[21] Angina is a type of chest pain caused by reduced blood flow to the heart.[22] In the BRFSS survey, Elders self-reported their experience with ever being diagnosed with CHD or angina.

American Indian and Alaska Native Elders reported higher diagnoses of CHD or angina in comparison to White elders (11.6% vs. 8.7%; Figure 18). The proportion of reported diagnoses with angina or coronary heart disease in AI/ANs was 1.33 (95% CI: 1.13–1.57) times the proportion in Whites.

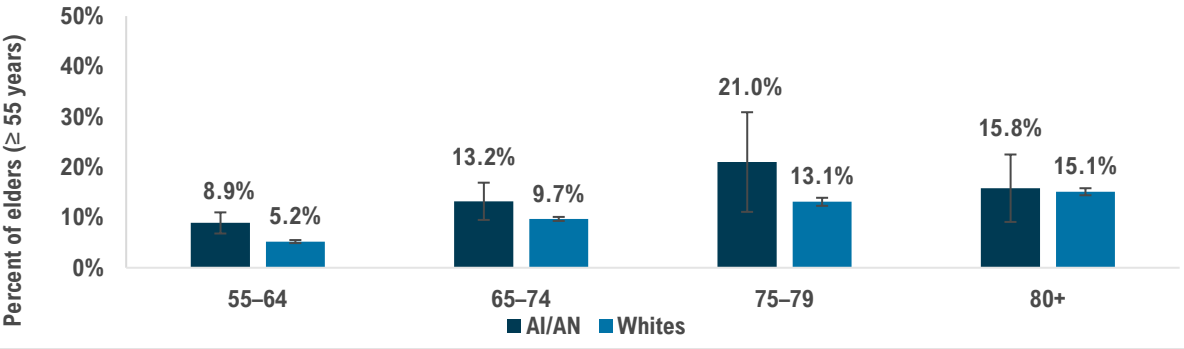
Among Natives, the proportion of reported diagnoses of CHD or angina in AI/AN Elder men was 1.74 (95% CI: 1.28–2.38) times the proportion in AI/AN Elder women (not shown). Examined by age, a significantly higher proportion (8.9%) of AI/ANs aged 55–64 years old reported CHD or angina than Whites (5.2%; Figure 19). However, there were no significant differences in the prevalence of reported diagnoses of angina or CHD between AI/ANs and Whites aged 65+ years old (Figure 19).

Figure 18. Urban Elders ever diagnosed with angina or coronary heart disease by race, 2012–2017



Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Figure 19. Urban Elders ever diagnosed with angina or coronary heart disease by age category and race, 2012–2017



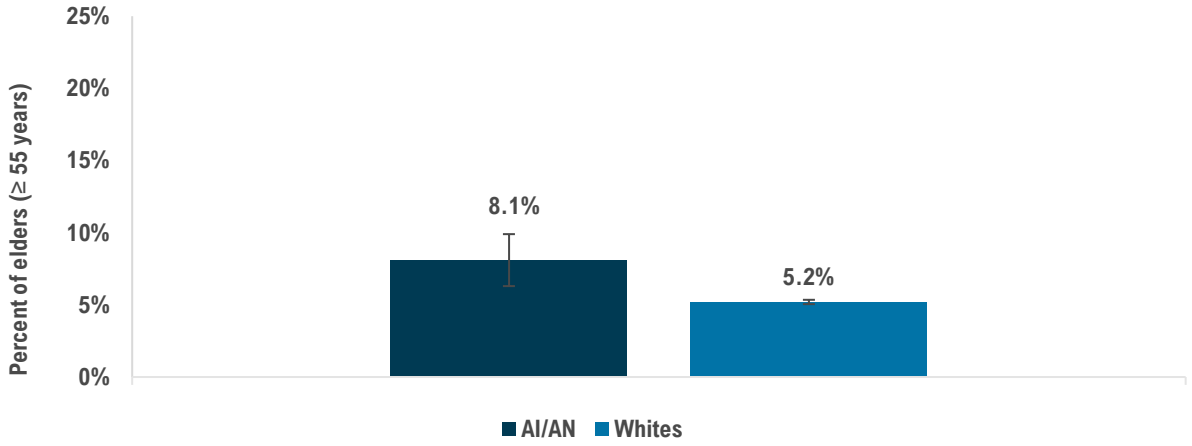
Source: Behavioral Risk Factor Surveillance Survey, 2012-2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO / UIHN service areas.

Stroke

A stroke occurs when the blood supply to the brain is cut off. Deprivation of oxygen to the brain can lead to vision loss, speech impairment, and paralysis of the face, arms, and legs.[23]

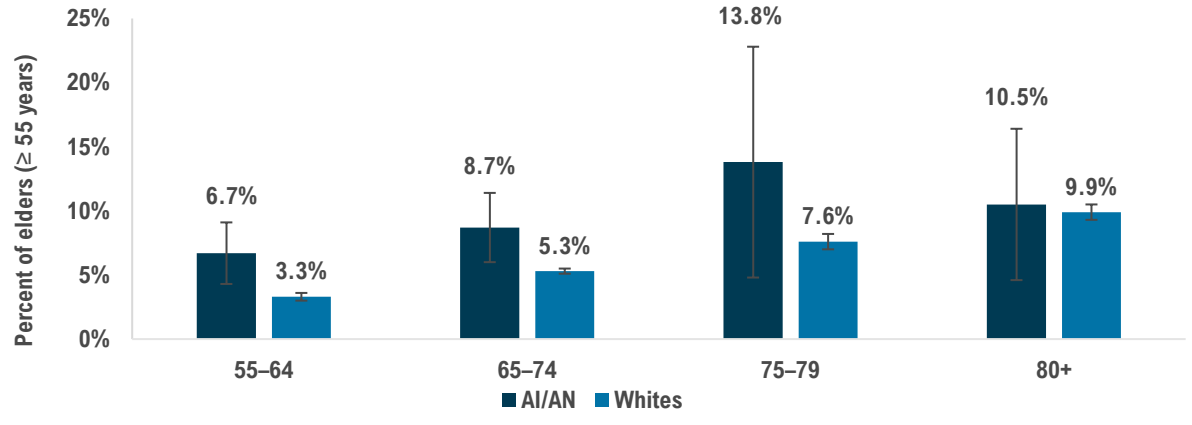
The proportion of reported diagnosis with a stroke in AI/AN Elders was 1.60 (95% CI: 1.25–2.03) times the proportion in White elders (8.1% vs 5.2%; Figure 20). The proportion of reported diagnosis with a stroke in AI/ANs aged 55–64 and 64–74 years old was 2.13 (95% CI: 1.44–3.15) times and 1.68 (95% CI: 1.20–2.36) times the proportion in Whites of the same age groups, respectively (Figure 21). There was no significant difference in the prevalence of reported diagnosis of a stroke between AI/ANs and Whites within the 75+ age group (Figure 21).

Figure 20. Urban Elders ever diagnosed with a stroke by race, 2012–2017



Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Figure 21. Urban Elders ever diagnosed with a stroke by age category and race, 2012–2017



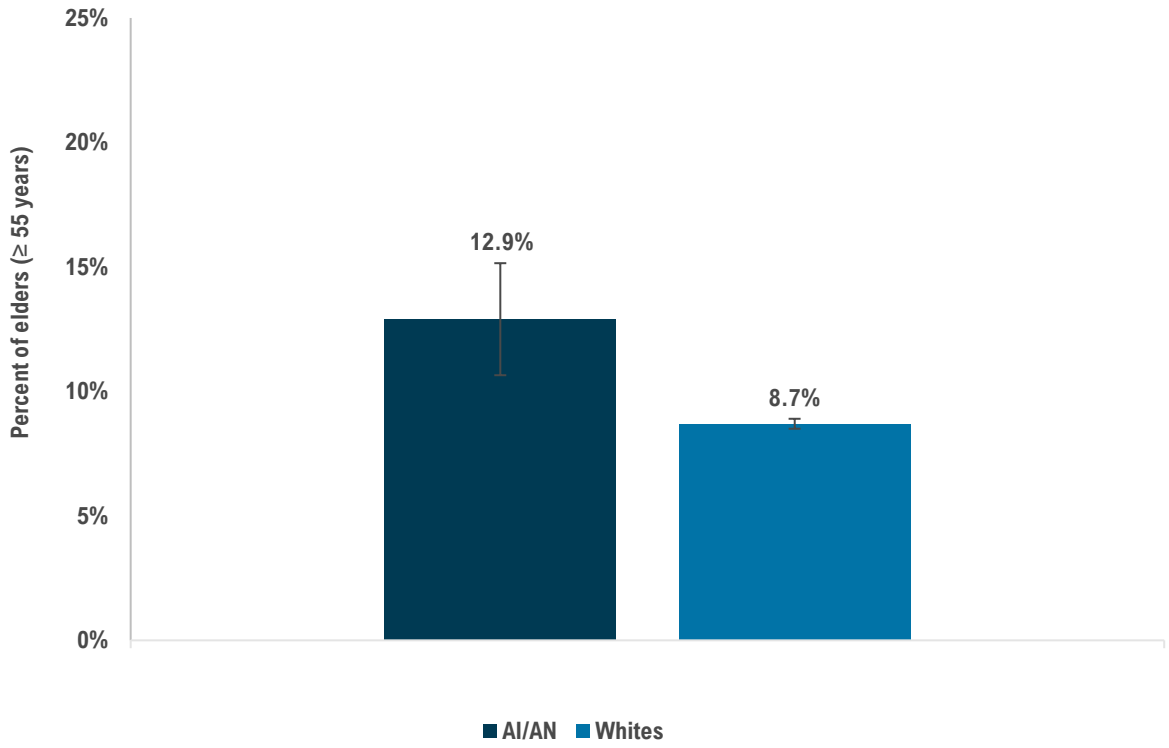
Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Asthma

Asthma is a lung condition that causes inflammation in the main passageways to the lungs, making it difficult to breathe.[24] Asthma can be mild to life-threatening but can be managed with reduced exposure to irritant allergens, activity reduction, and medications.[25] In BRFSS data, people were considered to have asthma if they were ever told by a health professional they had asthma and currently have asthma.

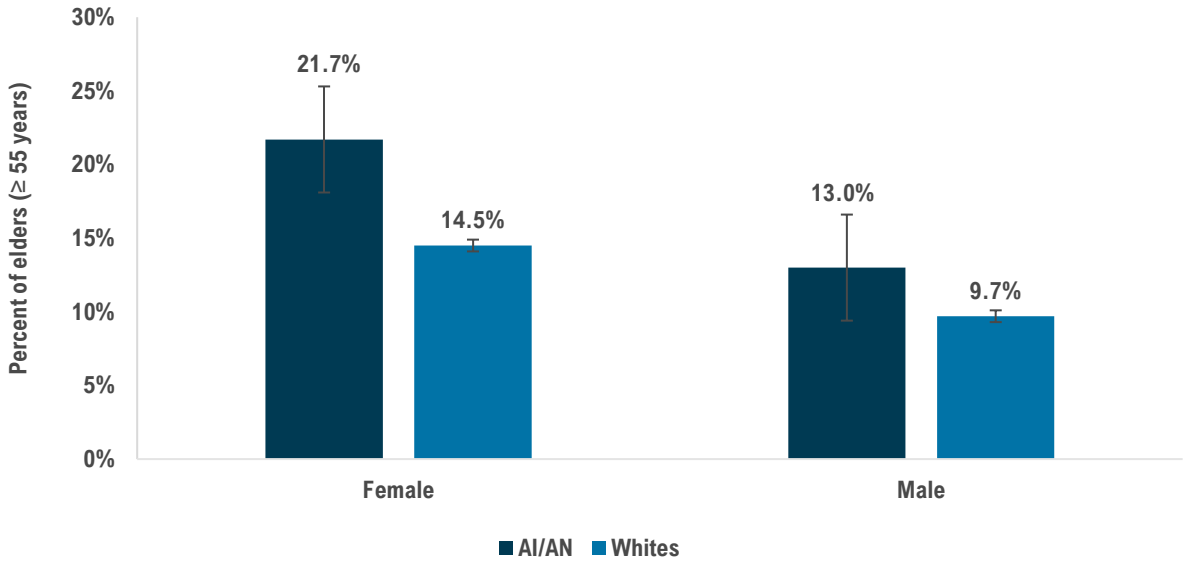
Approximately 13% (12.9%) of AI/AN Elders reported current asthma, which was significantly higher than White elders (8.7%; Figure 22). American Indian and Alaska Native Elder women reported current asthma at a significantly higher proportion than White elder women (21.7% and 14.5%, respectively; Figure 23). AI/AN Elder men also had a higher proportion of reported current asthma than White elder men (13.0% and 9.7%, respectively). Within the 55–64 and 65–74 age groups, AI/ANs reported a significantly higher proportion of current asthma than Whites of the same age groups (Figure 24).

Figure 22. Urban Elders who currently have asthma by race, 2012–2017



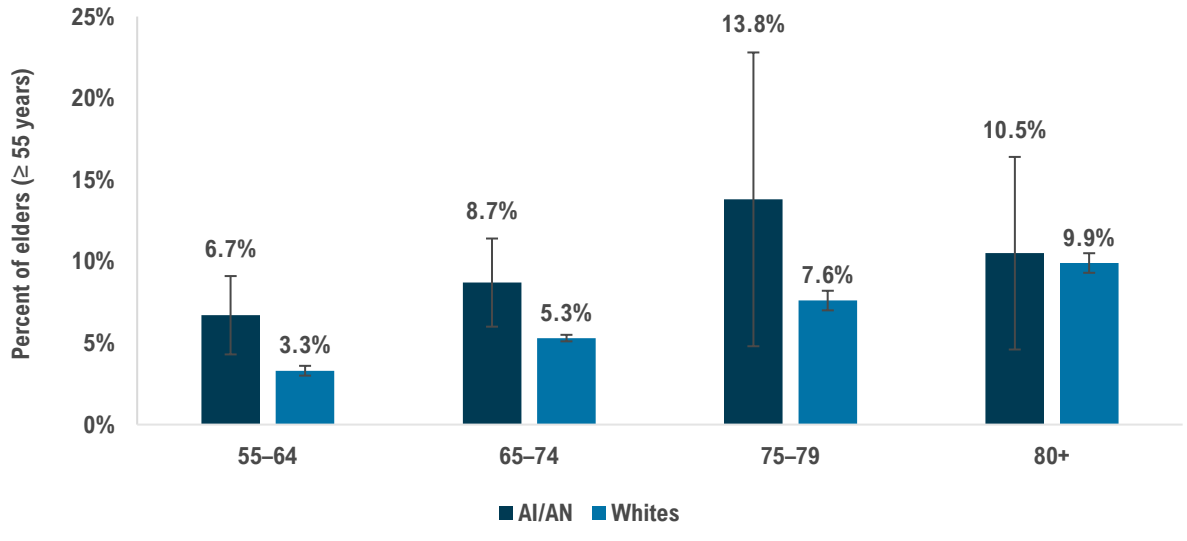
Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Figure 23. Urban Elders who currently have asthma by race and sex, 2012–2017



Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Figure 24. Urban Elders who currently have asthma by age category and race, 2012–2017



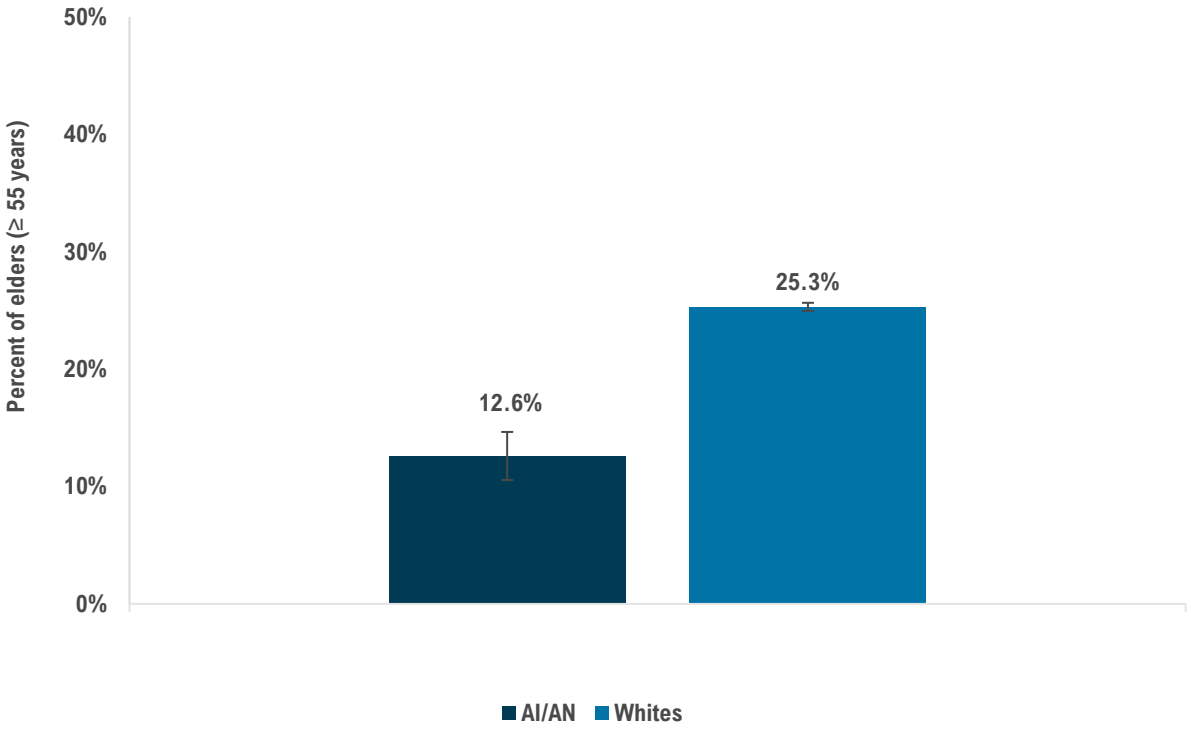
Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Cancer

Cancer includes a group of diseases involving abnormal cell growth in tissues that can remain localized to the tissue site or spread to other parts of the body.[26] The five most common types of cancers among AI/AN Elder men were prostate, lung, colon and rectum, kidney, bladder, and liver cancers.[27] In AI/AN Elder women, the five most common types of cancer were breast, lung, colon and rectum, uterus, and kidney cancers.[27]

Compared to Whites, AI/ANs reported significantly lower proportions of ever being diagnosed with cancer (25.3% and 12.6%, respectively; Figure 25).

Figure 25. Urban Elders ever diagnosed with cancer by race, 2012–2017



Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

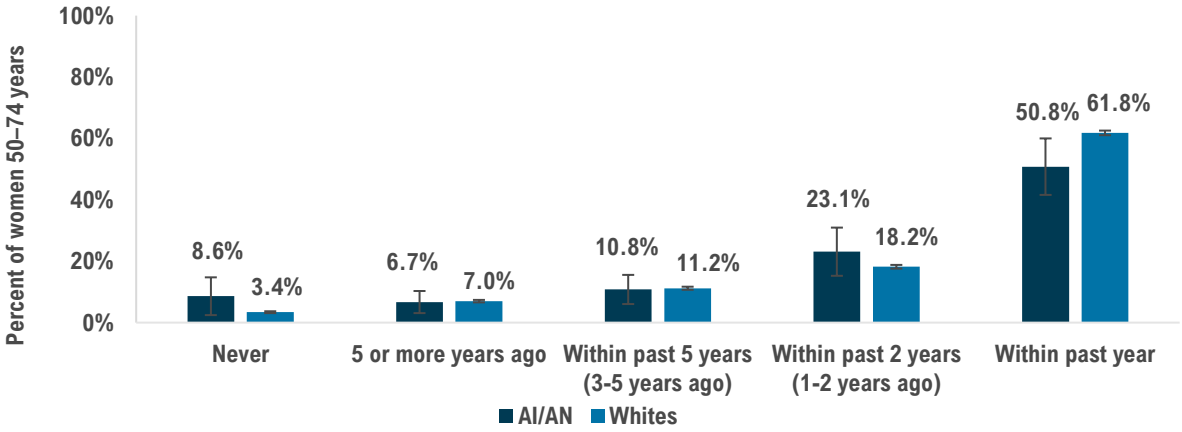
Cancer screening

Cancer screening is an important health practice that allows health providers to detect and treat cancers early. The U.S. Preventative Services Task Force (USPSTF) screening recommendations for breast, cervical, and colorectal cancers are:

- Women with average cancer risk aged 50–74 are recommended for mammography screening to detect breast cancer every two years.[28]
- Women with average cancer risk aged 30–65 are recommended for a Papanicolaou (Pap) test to detect cervical cancer every three years.[29]
- For men and women aged 50–75, screening recommendations for colorectal cancer vary by screening method.
  - For people at average risk, the USPSTF recommends a blood stool test every year, sigmoidoscopy every five years, and colonoscopy every 10 years.[30] However, people at increased risk for colorectal cancer due to a family history of colorectal cancer may need to get a colonoscopy more often and may possibly start screening before the age of 45.[31]

Based on recommendations for mammography screening in women 50–74 years old, 73.9% (95% CI: 66.1–81.7) of AI/AN women had a mammogram within the past two years, which was not statistically different than in White women (80.0%, 95% CI: 78.5–79.8; Figure 26).

Figure 26. Time since last mammogram (urban women 50–74 years old) by race, 2012–2016

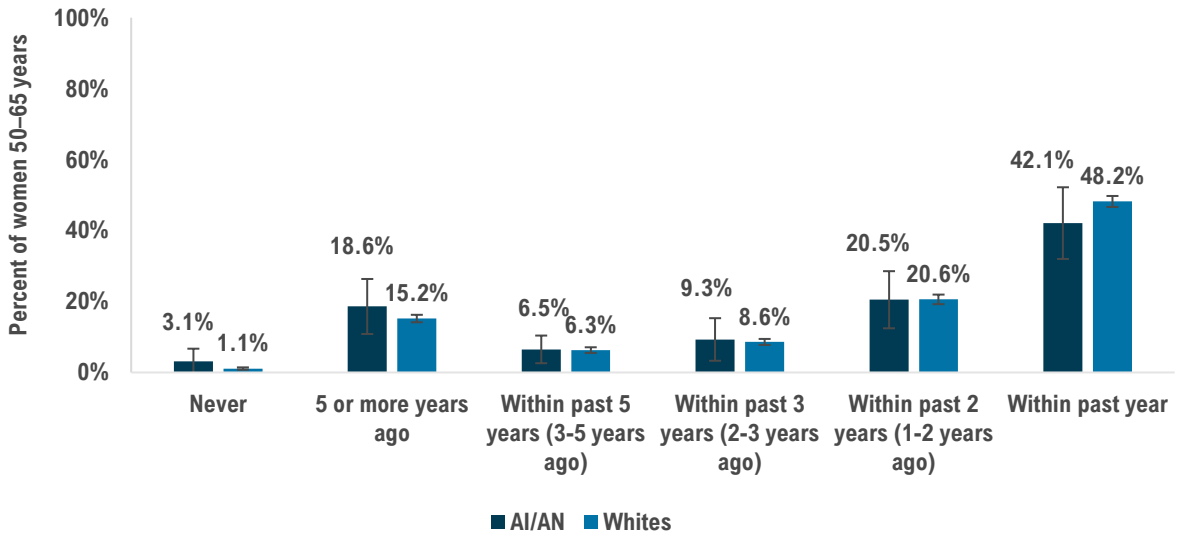


Source: Behavioral Risk Factor Surveillance Survey, 2012–2016; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Among AI/AN women 50–65 years old, 71.9% (95% CI: 63.0–80.7) reported having a Pap test within the past three years (Figure 27). This prevalence was not statistically different than in White women (77.4%, 95% CI: 76.2–78.7).

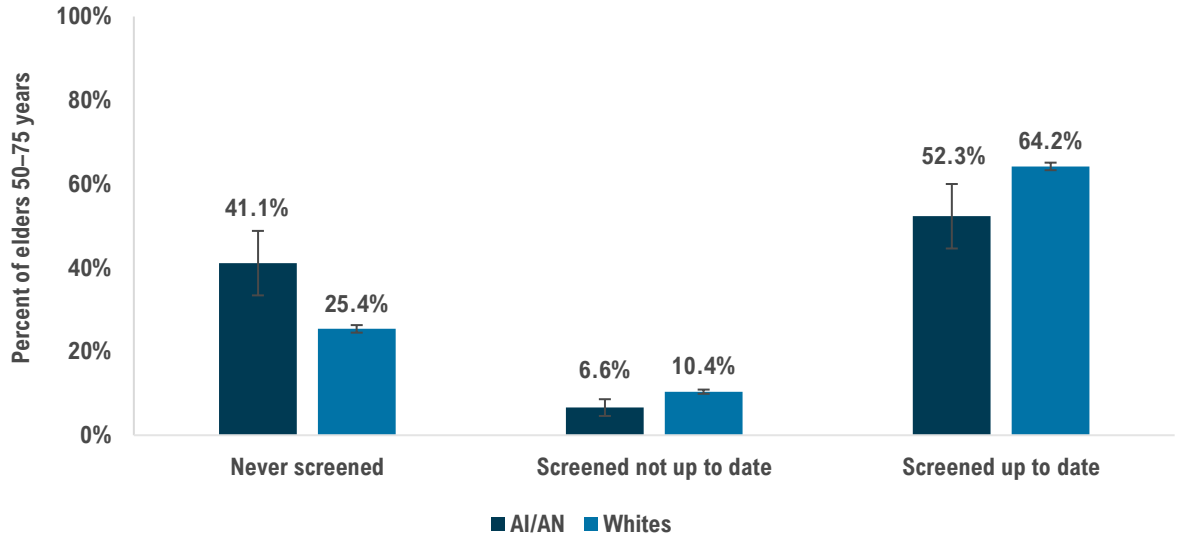
For men and women 50–75 years old, about half (52.3%, 95% CI: 44.6–60.0) of AI/AN Elders had a colorectal screening that was up to date. This prevalence was significantly lower in AI/ANs than their White counterparts (64.2%, 95% CI: 63.3–65.1; Figure 28). Notably, the proportion of AI/ANs to never be screened for colorectal cancer (41.4%) was 1.62 (95% CI: 1.34–1.96) times the proportion of Whites (25.4%; Figure 28).

Figure 27. Time since last pap test (urban women 50–65 years old) by race, 2012–2016



Source: Behavioral Risk Factor Surveillance Survey, 2012–2016; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Figure 28. Colorectal cancer screening status (urban Elders 50–75 years old) by race, 2012–2016



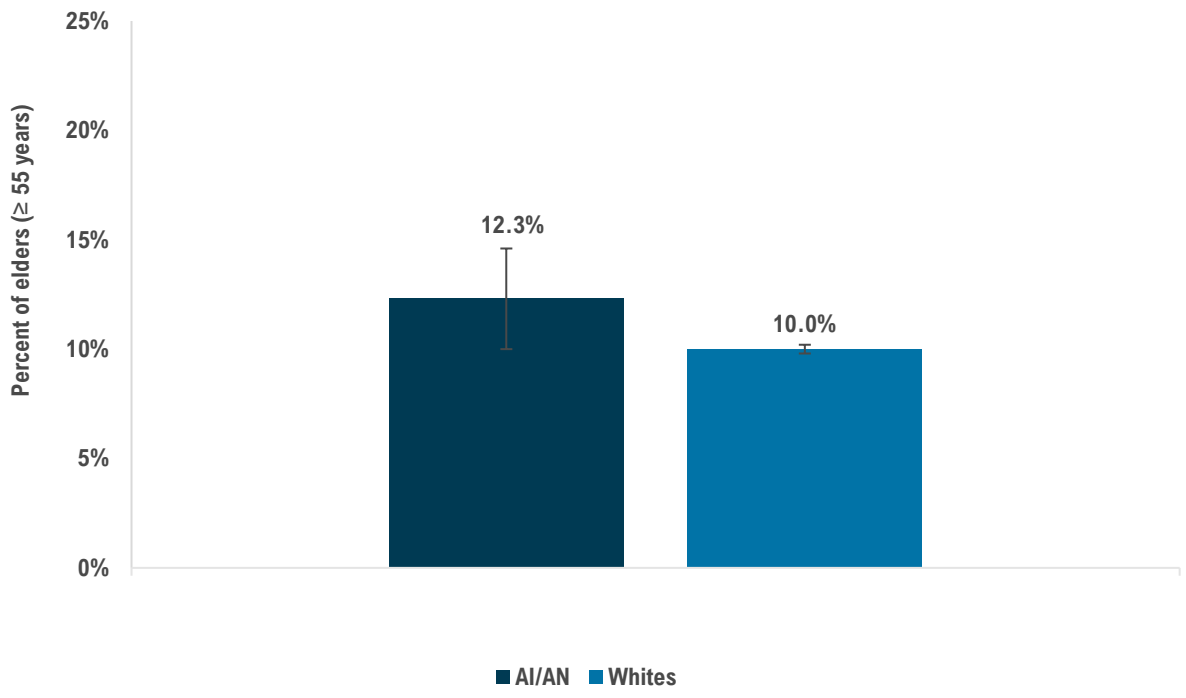
Source: Behavioral Risk Factor Surveillance Survey, 2012–2016; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas. Note: "Screened up to date" indicates Elders aged 50–75 who have fully met the USPSTF recommendations.

Chronic obstructive pulmonary disease (COPD), emphysema, and chronic bronchitis

COPD is a chronic inflammatory lung disease that causes obstructed airflow from the lungs.[32] COPD is related to long-term exposure to irritant gases, particulate matter, and cigarette smoking.[32]

About 12% of AI/AN Elders report ever being diagnosed with COPD, emphysema, or chronic bronchitis (Figure 29). The proportion of individuals diagnosed with COPD, emphysema, or chronic bronchitis in AI/ANs was 1.26 (95% CI: 1.01–1.57) times that of Whites.

Figure 29. Urban Elders ever diagnosed with COPD, emphysema, or chronic bronchitis by race, 2012–2017



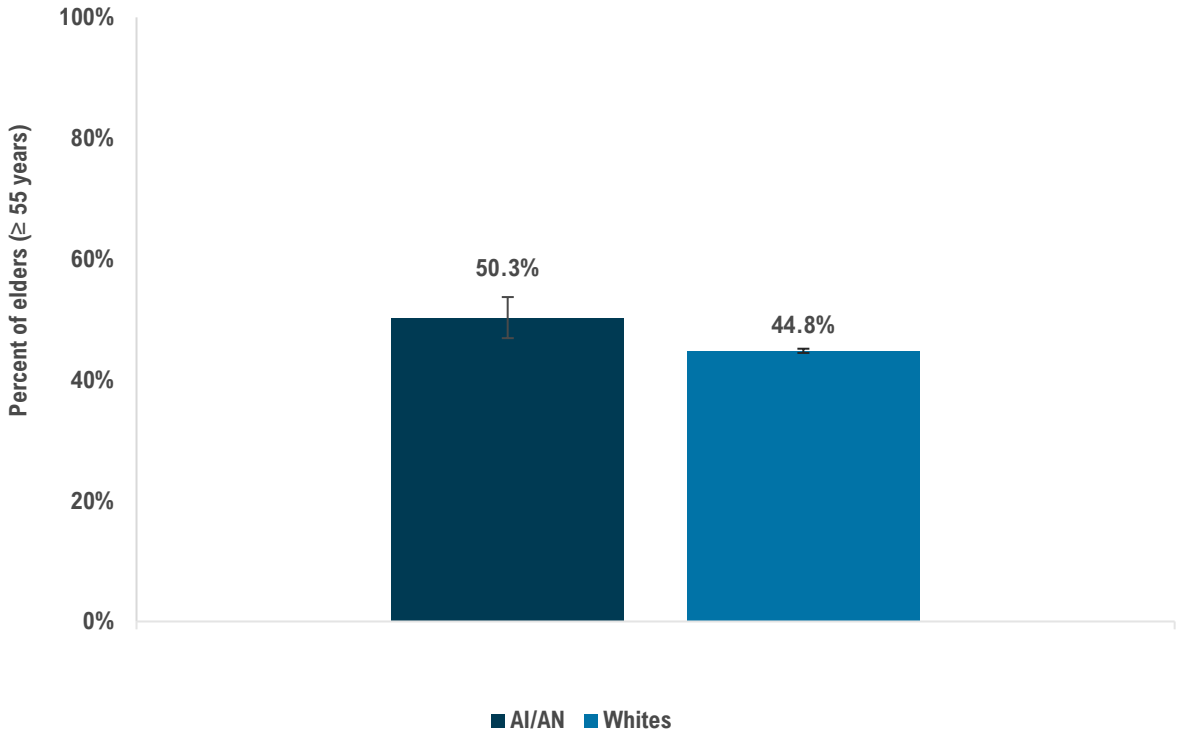
Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Arthritis

Inflammation to one or more joints is known to cause pain and stiffness in people with arthritis.[33] Some known factors that increase the chances of arthritis relate to being overweight or obese, smoking, or experiencing an injury to the joints.[33]

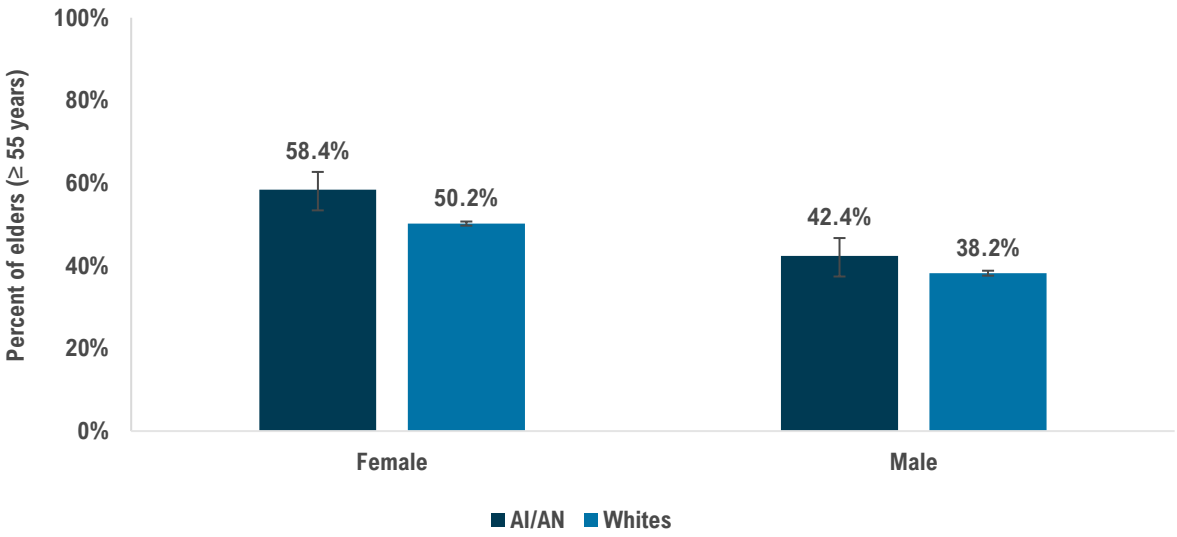
AI/AN Elders reported significantly higher proportions of ever being told they had arthritis (50.3%) compared to White elders (44.8%; Figure 30). Among Elder women, the proportion of reported arthritis in AI/AN women was 1.39 (95% CI: 1.17–1.66) times the proportion in White women (Figure 31). Moreover, the proportion of reported arthritis in AI/ANs of the 55–64 and 65–74 age groups was 1.48 (95% CI: 1.23–1.79) and 1.31 (95% CI: 1.03–1.67) times the proportion in Whites of the same age groups, respectively (Figure 32).

Figure 30. Urban Elders ever diagnosed with arthritis by race, 2012–2017



Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Figure 31. Urban Elders ever diagnosed with arthritis by sex and race, 2012–2017



Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Figure 32. Urban Elders ever diagnosed with athritis by age category and race, 2012–2017

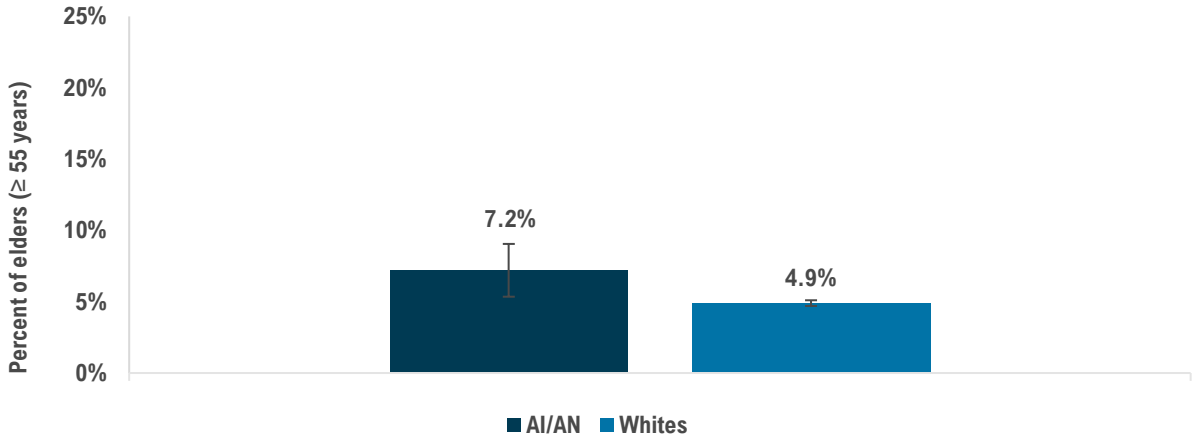
Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Kidney disease

Kidney disease involves damage to the kidneys and a loss in function to filter water and waste out of the blood.[34] Common causes of kidney disease are associated with diabetes and high blood pressure.[35]

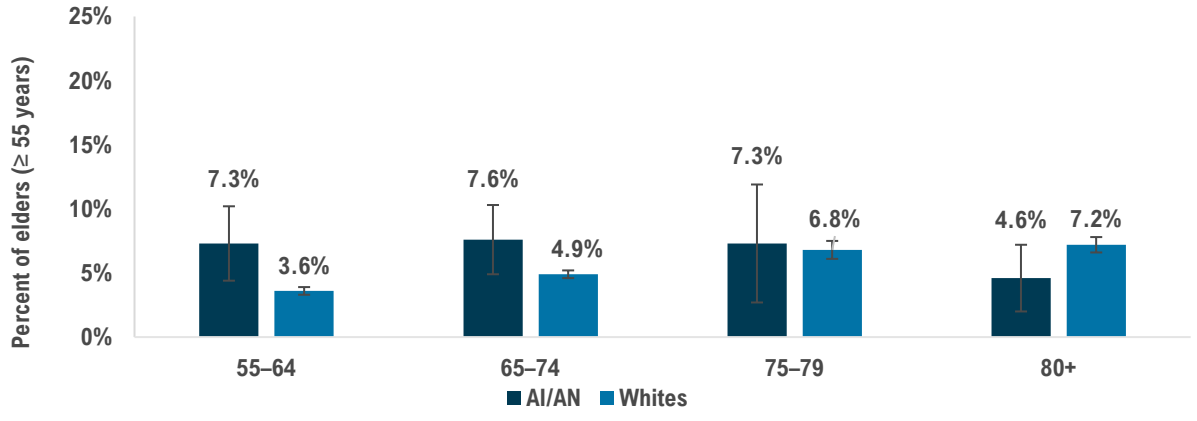
The proportion of reported kidney disease in AI/AN Elders (7.2%) was 1.54 (95% CI: 1.16–2.04) times the proportion in White elders (4.9%; Figure 33). The proportion of reported kidney disease in AI/AN Elder women (7.9%) was 1.75 (95% CI: 1.12–2.71) times the proportion in White elder women (4.9%; not shown). Moreover, the proportion of reported kidney disease in AI/ANs ages 55–64 years old was 2.12 (95% CI: 1.38–3.26) times the proportion in Whites of the same age group (Figure 34).

Figure 33. Urban Elders ever diagnosed with kidney disease by race, 2012–2017



Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Figure 34. Urban Elders ever diagnosed with kidney disease by age category and race, 2012–2017



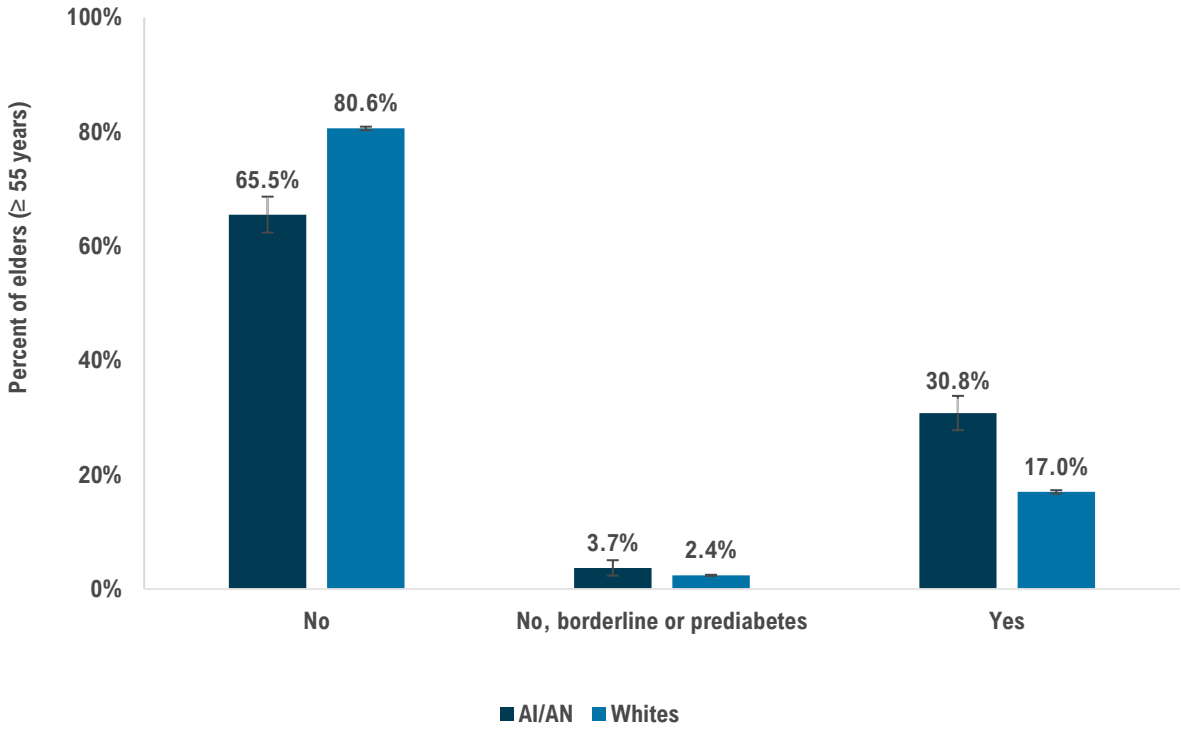
Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Diabetes

Diabetes is a condition that affects the body's ability to produce insulin due to genetic and lifestyle factors such as not exercising or eating an unhealthy diet.[36] There are two types of diabetes: type I and type II.[36] Type I diabetes is when the body does not produce insulin and is typically diagnosed in childhood.[36] Type II diabetes occurs in adulthood when the body does not produce insulin or does not use insulin properly.[36,37]

The prevalence of ever having diabetes was 30.8% in AI/AN Elders, which was 2.17 (95% CI: 1.88–2.51) times the prevalence in White elders (17.0%; Figure 35). Among Elder women, 29.9% of AI/AN women reported ever having diabetes, which was 2.04 (95% CI: 1.99–2.89) times the prevalence among NHW women (15.1%; not shown). Similarly, the prevalence of ever having diabetes in AI/AN Elder men (31.7%) was 1.94 (95% CI: 1.56–2.41) times the prevalence in White elder men (19.3%; not shown).

Figure 35. Urban Elders ever diagnosed with diabetes by race, 2012–2017



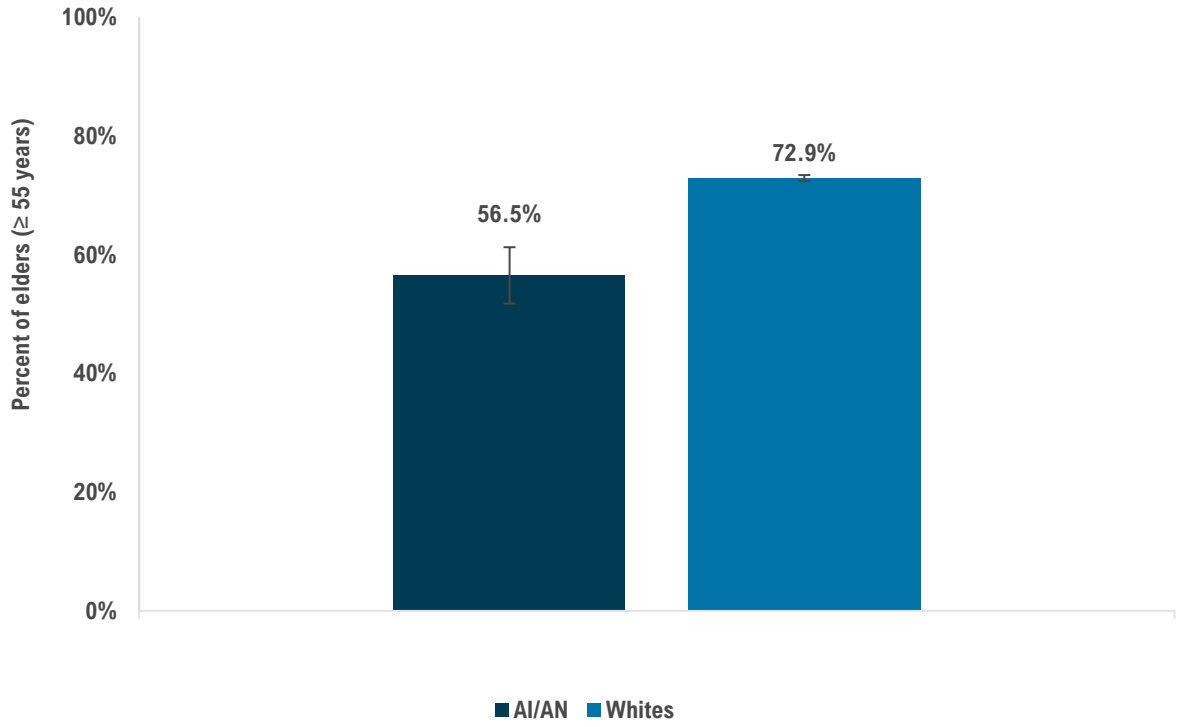
Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Oral health

Oral health in older adults is important for retaining natural teeth and overall health. Regular dental care such as brushing and flossing and visiting the dentist at least once a year helps reduce tooth decay, gum disease, and tooth loss.[38]

AI/AN Elders were significantly less likely than White elders to have visited a dentist in the past year (56.5% vs 72.9%; POR=0.48; 95% CI: 0.40–0.59; Figure 36).

Figure 36. Urban Elders with a dental visit within the past year by race, 2012–2017

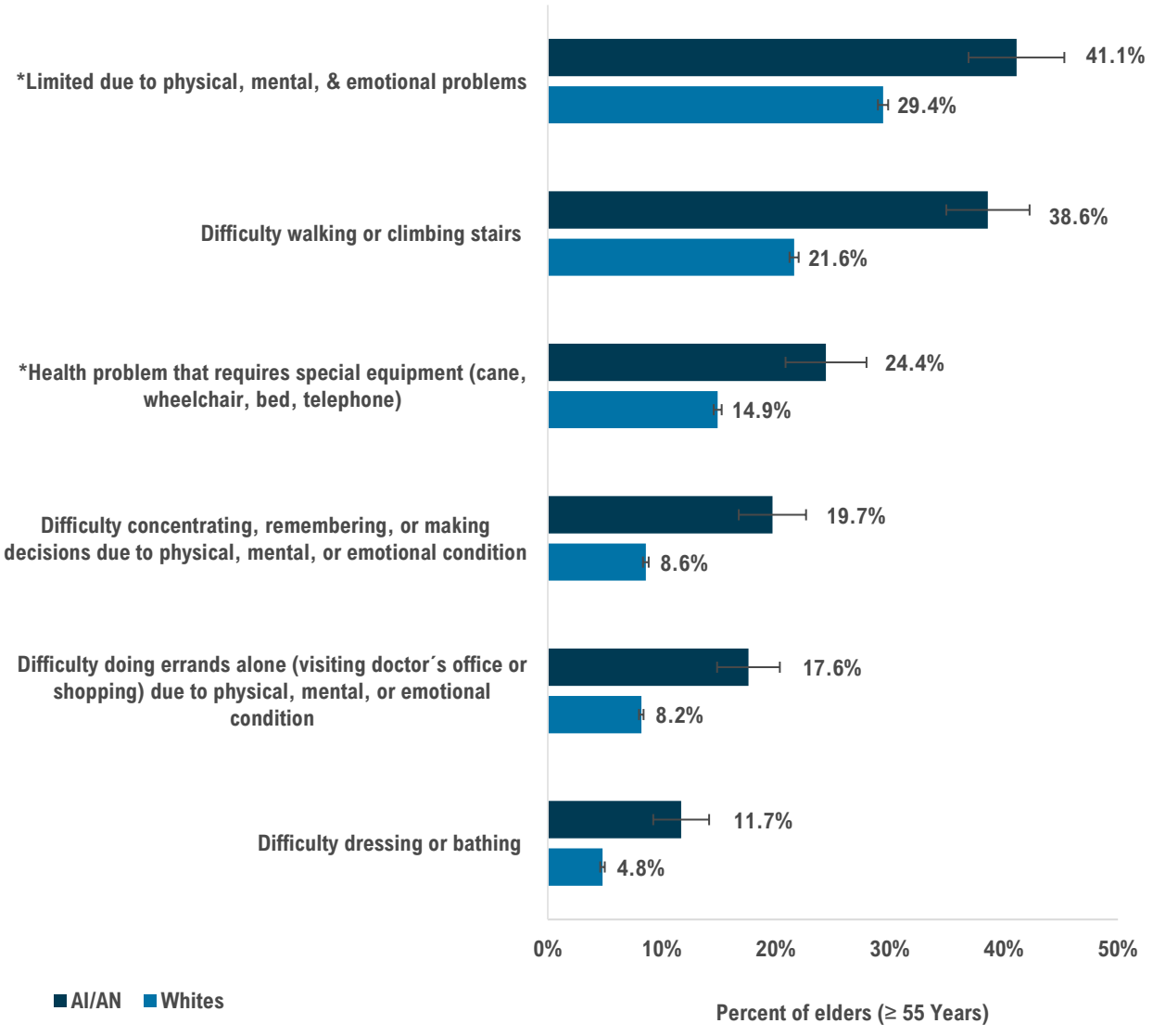


Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Daily living abilities

AI/AN Elders reported an array of limitations that impact daily life. These limitations were due to health problems and physical, mental, and emotional difficulties. Overall, AI/ANs reported a significantly higher prevalence of daily living limitations than Whites (Figure 37). For example, AI/AN Elders reported serious difficulty walking or climbing stairs, remembering or making decisions, visiting a doctor or shopping, dressing or bathing. AI/ANs also reported needing or using special equipment to get around.

Figure 37. Daily living abilities of urban Elders by race, 2013–2017



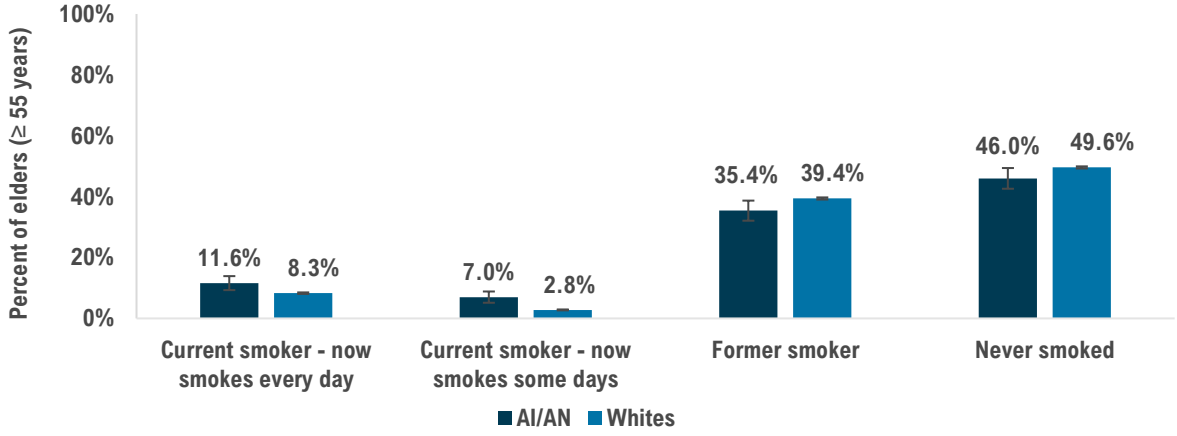
Source: Behavioral Risk Factor Surveillance Survey, 2013–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.
*Data are for 2012–2016.

Tobacco use

Unfortunately, like most national surveys, the BRFSS survey does not distinguish between traditional tobacco and commercial tobacco use. Traditional tobacco has been grown, gathered, and used for centuries in Native societies for ceremonial and medicinal purposes. Whereas commercial tobacco contains synthetic addictive substances such as nicotine that is of health consequence to Native communities. For BRFSS, the use of tobacco in AI/AN populations is likely overestimated.

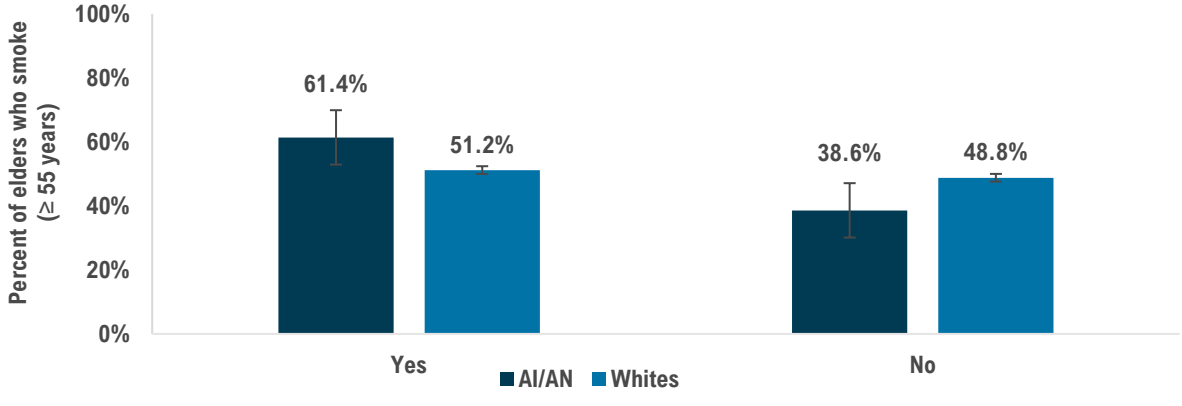
The prevalence of smoking every day among AI/AN Elders was 11.6% (95% CI: 9.35–13.9) and smoking some days was 7.0% (95% CI: 5.1–8.8), which was higher than among White elders (8.3% and 2.8%, respectively; Figure 38). Although smoking prevalence was higher in AI/ANs, the proportion of AI/ANs trying to quit smoking (61.4%) was 1.51 (95% CI: 1.05–2.18) times the proportion of Whites (51.2%; Figure 39).

Figure 38. Smoking status of urban Elders by race, 2012–2017



Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Figure 39. Urban Elders who have stopped smoking for one day or longer in past year by race, 2012–2017



Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

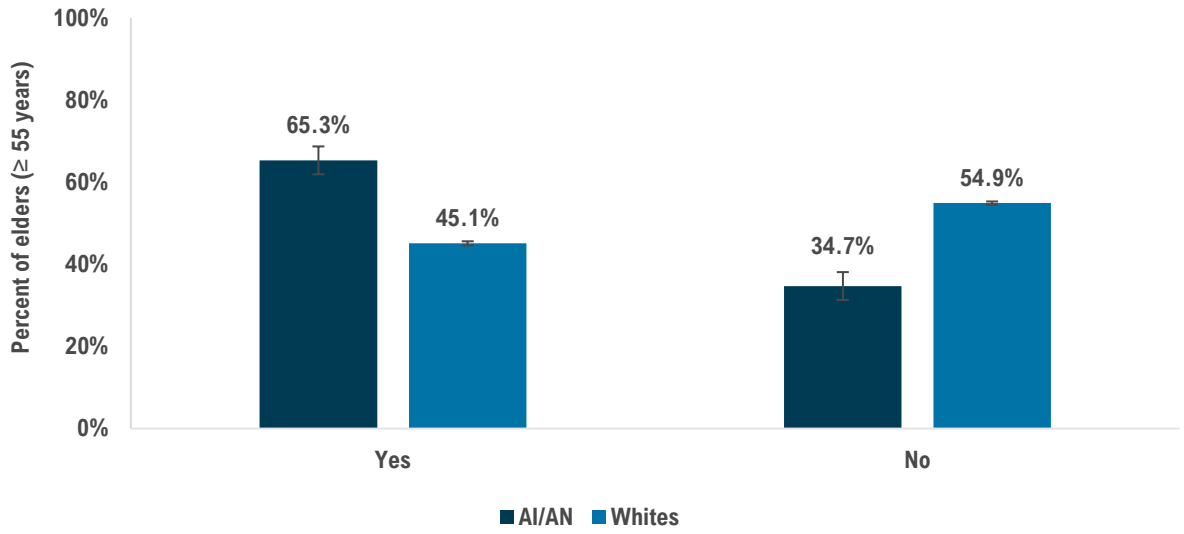
Alcohol consumption

Although AI/AN Elders report significantly higher proportions of having consumed at least one drink of alcohol in the past month compared to White elders (Figure 40), they report equivalent proportions of binge drinking and heavy drinking. About 65% (65.3%) of AI/ANs reported having at least one drink of alcohol in the past month, which was 2.29 (95% CI: 1.97–2.66) times greater than Whites (45.1%; Figure 40).

Binge drinking is a form of excessive alcohol drinking and is associated with several health conditions such as unintentional injuries, high blood pressure, heart disease, stroke, liver disease, and alcohol use disorder.[39] The percentage of binge drinking in the past month was not statistically different between AI/AN Elders (10.0%) and White elders (8.5%; Figure 41).

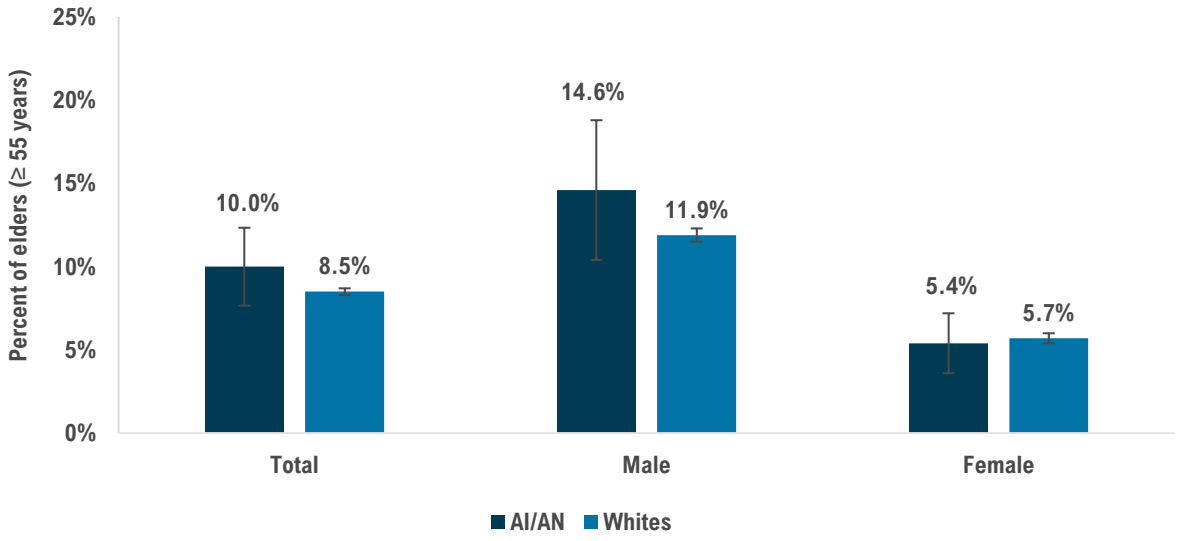
Heavy drinking (men having more than 14 drinks per week and women having more than 7 drinks per week) is another form of excessive alcohol consumption that can lead to alcohol-related diseases and death. Many alcohol-related chronic conditions have been associated with alcoholic liver diseases, liver cirrhosis, and pancreatitis.[40] Although heavy drinking prevalence was lower in AI/ANs (3.5%), it was not statistically different from Whites (5.7%; Figure 42).

Figure 40. Urban Elders who drank any alcohol in the past month by race, 2012–2017



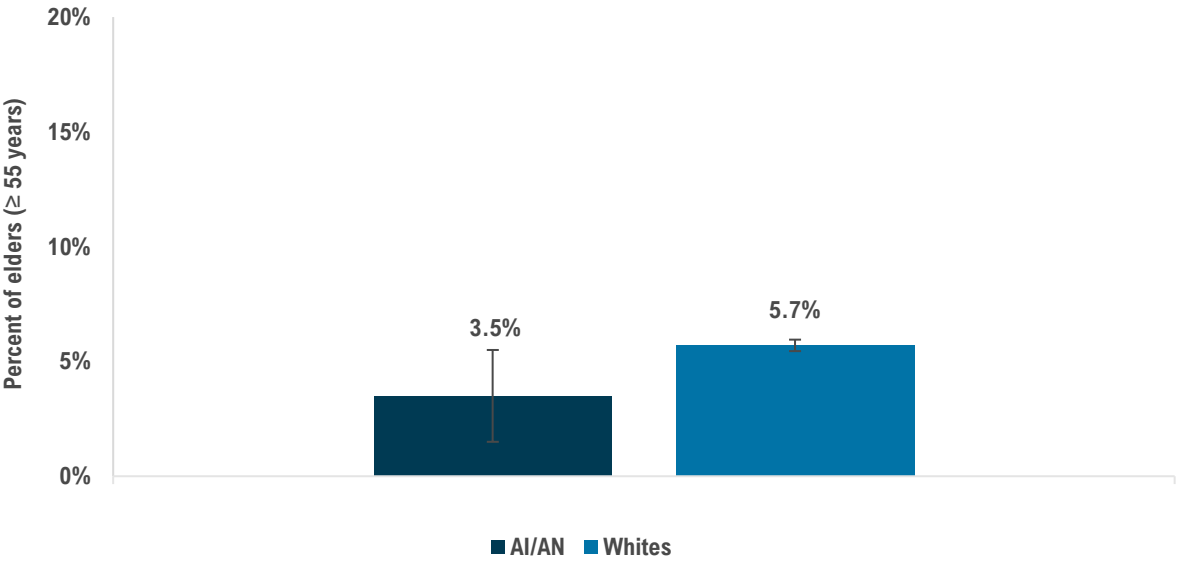
Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

Figure 41. Urban Elders who binge drank in the past month by race and sex, 2012–2017



Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas. Note: Binge drinking is defined as males having five or more drinks on one occasion, females having four or more drinks on one occasion.

Figure 42. Urban Elders with heaving drinking by race, 2012–2017



Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas. Note: Heavy drinking is defined as men having more than 14 drinks per week and women having more than 7 drinks per week.

Immunization

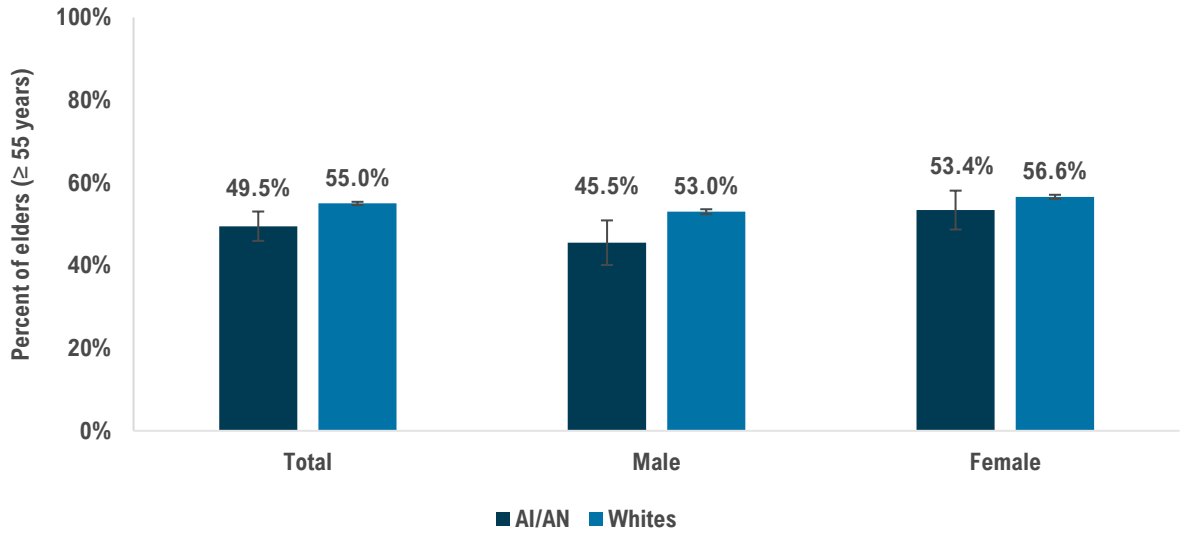
Obtaining routine vaccinations is important for older populations because as people age the immune system weakens and it can be more difficult to fight off infections such as the flu, pneumonia, and shingles.[41]

About half (49.5%) of AI/AN Elders reported that they had been immunized for the flu in the past year, which was not significantly different from the prevalence in White elders (55.0%; Figure 43). In addition, the proportions for receiving a flu shot in the past year were not significantly different between male and female AI/ANs; however, compared to White elder males, AI/AN Elder males had a significantly lower prevalence of receiving a flu shot in the past year (Figure 43).

Based on recommendations from the Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practices (ACIP), adults 65 years and older should receive two pneumonia vaccinations during their lifetime.[42] About 67% (67.4%) of AI/ANs 65 years and older reported ever getting a pneumonia shot, which was not significantly different to the proportion of Whites 65 years and older (73.4%; Figure 44).

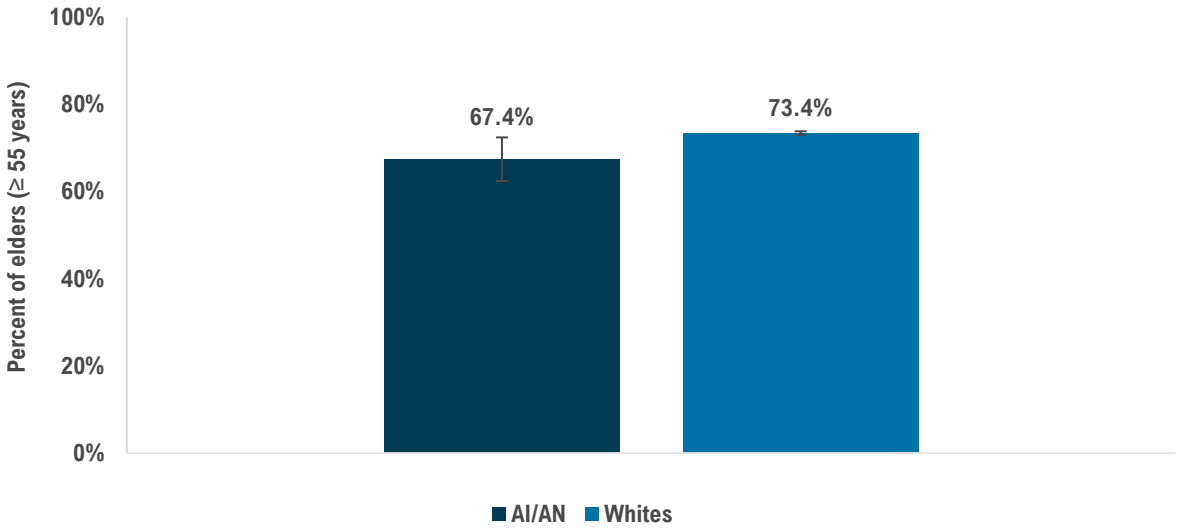
In addition, CDC ACIP recommends adults 50 years old and older receive a vaccination to prevent shingles, a viral infection that causes a painful rash on the body.[43] The prevalence of ever having had a shingles vaccine was significantly lower in AI/ANs 50 years and older compared to Whites in the same age group (19.5% vs. 28.0%; Figure 45).

Figure 43. Urban Elders who had a flu vaccine in the past year by sex and race, 2012–2017



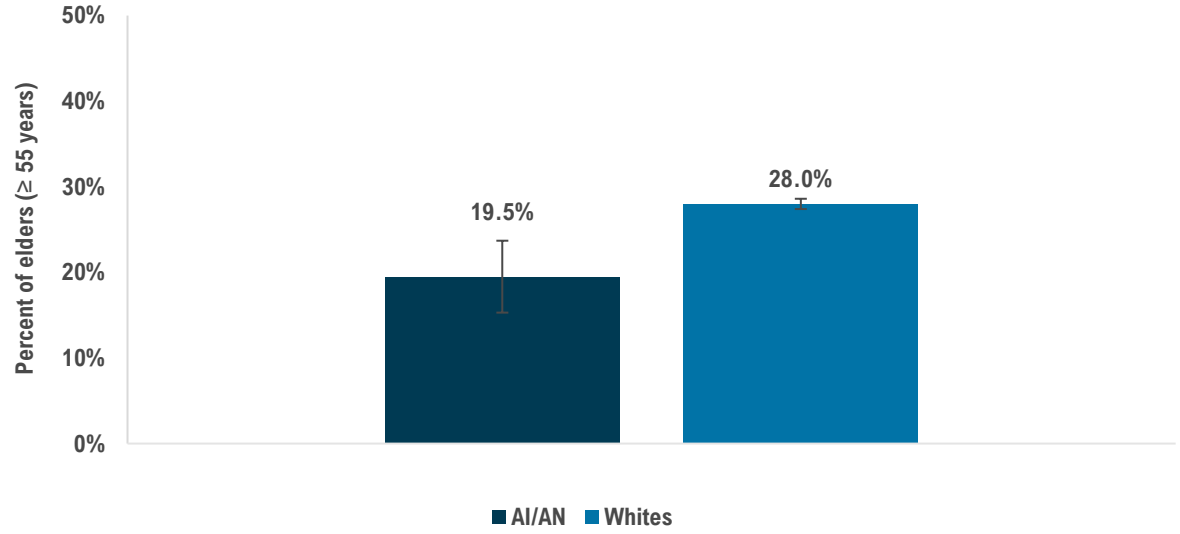
Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas. Note: Includes flu shots or flu vaccines sprayed in the nose.

Figure 44. Ever had a pneumonia or pneumococcal vaccine among urban Elders (≥ 65 years) by race, 2012–2017



Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas. Based on CDC ACIP recommendations for Elders 65+ years old.

Figure 45. Ever had the shingles vaccine among urban Elders (≥ 50 Years) by race, 2014–2017



Source: Behavioral Risk Factor Surveillance Survey, 2014–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas. Based on CDC ACIP recommendations for Elders 50+ years old.

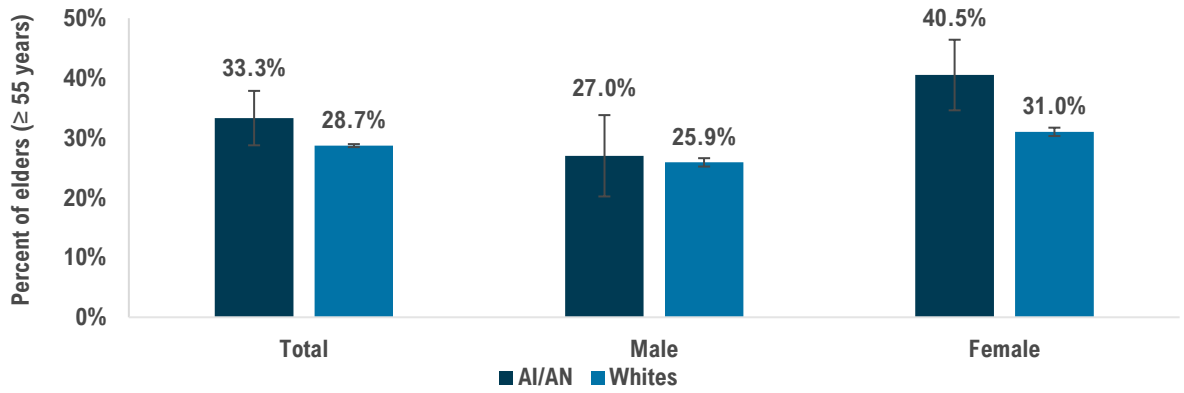
Falls

Falls are the leading cause of fatal and nonfatal injuries in the elderly. Falls can affect a person's quality of life by causing fear of falling and social isolation and restricting physical activity.[44]

The prevalence of falling more than once in the past year was not statistically different between AI/ANs and Whites (Figure 46). Among Elder women, the proportion of falling more than once in the past year in AI/AN women was 1.52 (95% CI: 1.18–1.94) times the proportion in NHW women (Figure 46).

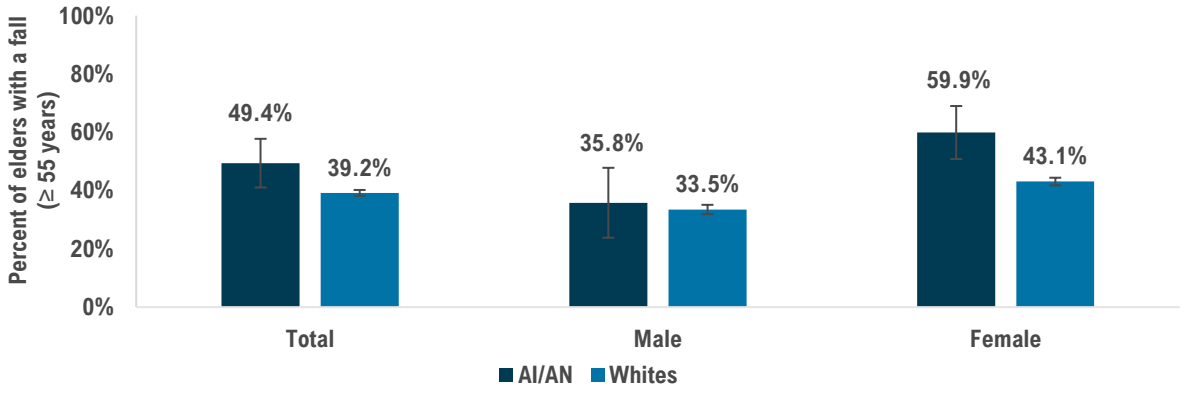
Among Elders who sustained a fall, a higher proportion of AI/ANs (49.4%) reported a fall-related injury compared to Whites (39.2%; Figure 47). Among Elder women, the proportion of reported fall-related injuries in AI/AN women was 1.97 (95% CI: 1.34–2.88) times higher than NHW women (Figure 47).

Figure 46. Urban Elders with a fall in the past year by sex and race, years: 2012, 2014, 2016



Source: Behavioral Risk Factor Surveillance Survey, 2012, 2014, 2016; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas. Note: Includes Elders with one or more fall in the past year.

Figure 47. Urban Elders with a fall-related injury in the past year by sex and race, years: 2012, 2014, 2016



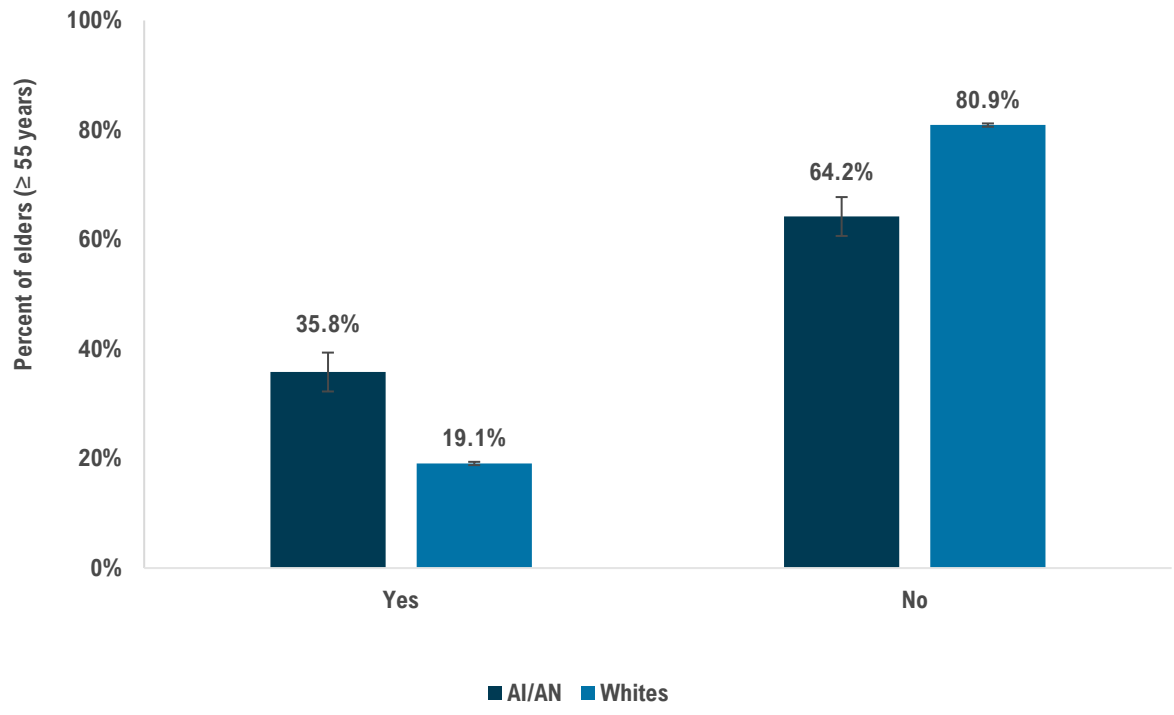
Source: Behavioral Risk Factor Surveillance Survey, 2012, 2014, 2016; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

HIV testing

Early detection of the Human Immunodeficiency Virus (HIV) is important for initiating early treatment. The Centers for Disease Control and Prevention recommends that everyone 13–64 years old get tested for HIV at least once as part of routine care and that people at higher risk get tested more often.[45]

A significantly higher proportion of AI/AN Elders (35.8%) were tested for HIV at least once in their lifetime, which was 2.35 (95% CI: 2.02–2.76) times the proportion of White elders (19.1%; Figure 48). An estimated 1.3% of AI/ANs reported that they engaged in high-risk activities (i.e., have used intravenous drugs in the past year, had been treated for a sexually transmitted or venereal disease in the past year, given or received money or drugs in exchange for sex in the past year, and/or had anal sex without a condom in the past year) that could expose them to HIV—this estimate was similar to the 1.2% prevalence in Whites (not shown).

Figure 48. Urban Elders ever tested for HIV by race, 2012–2017



Source: Behavioral Risk Factor Surveillance Survey, 2012–2017; Urban defined by OMB Metropolitan and Micropolitan Statistical Area (MMSA) codes matched to UIO/UIHN service areas.

MORTALITY

According to published research, the overall Native population has a lower life expectancy than other racial groups in the United States.[46] This disparity is likely due to lower socioeconomic status, as AI/ANs experience lower educational attainment, poverty, and discrimination in the access and delivery of health services.[47] Data analyzed in this report demonstrate that urban Native Elders experience these factors at a higher burden than White elders. Research has indicated that serious health conditions and injuries such as diabetes, chronic liver disease and cirrhosis, drug poisoning, and suicide occur at earlier ages among the Native population than in the NHW population.[48] This results in a cumulative burden of disease that manifests directly early in life and significantly increases the risk of premature death.

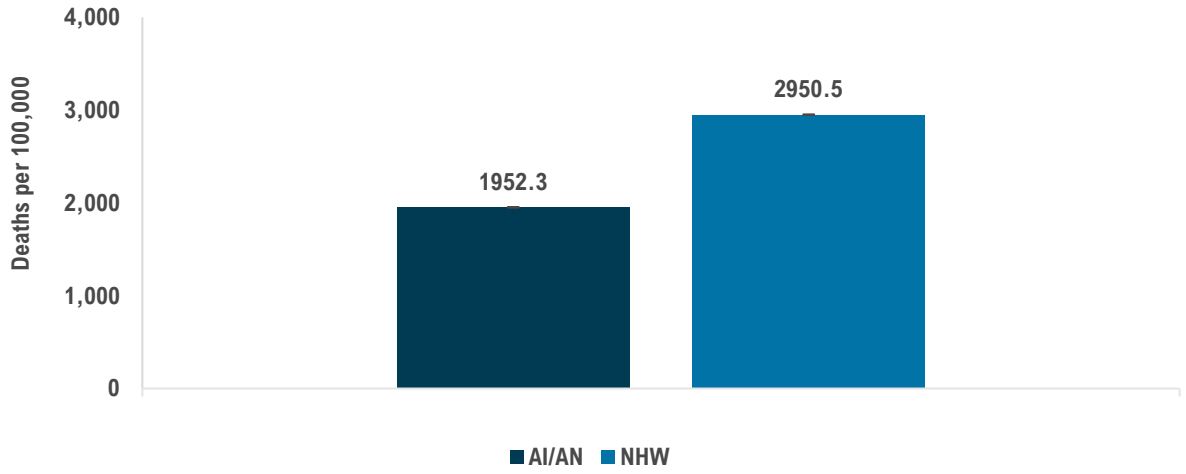
Using mortality data to calculate mortality rates allows us to estimate and track causes of death and risk for premature death in the Native Elder population. In addition, the understanding of these mortality rates may warrant further study into contributing factors such as environmental determinants, risk behaviors, disease epidemics, and/or socioeconomic status.

This section examines mortality by race, gender, age group, and specific causes. In using the age-adjusted death rates, rate ratios (RRs) were also calculated for the AI/AN population using NHW rates for comparison. Rate ratios give an indication of the strength of association between mortality and race. Years of potential life lost (YPLL) were further calculated using life expectancy at the age limit of 79 years to understand the impact of premature death of AI/AN individuals compared to NHW individuals. It is important to note that racial misclassification in mortality data can lead to an underestimation of mortality rates in AI/AN populations.[49,50] True mortality rates among the AI/AN population are therefore assumed to be higher than the rates presented in this section.

All-cause mortality

From 2013–2017, there were a total of 17,746 deaths among AI/AN Elders compared to 2,148,130 among NHW elders. The all-cause mortality rate of 1,952.3 deaths per 100,000 for AI/ANs (95% CI: 1,948.7–1,955.9) was significantly lower compared to 2,950.5 deaths per 100,000 for NHWs (95% CI: 2,946.1–2,954.9; Figure 49 and Table 1).

Figure 49. Age-adjusted all-cause mortality of urban Elders by race, 2013–2017



Source: U.S. Center for Health Statistics, Death Certifications and Bridge-race Population Estimates, 2013–2017; Urban defined by UIO/UIHN service counties from Federal Information Processing Standards (FIPS) codes.

Table 1. Mortality rates for all causes by race and sex, 2013–2017

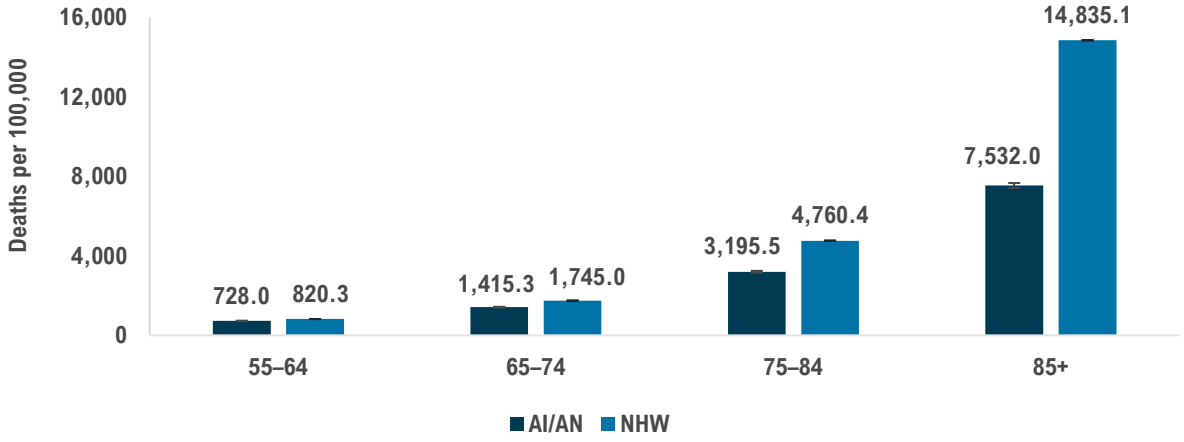
	Mortality rate[i] AI/AN (95% CI[ii])	Mortality rate[i] NHW (95% CI[ii])	AIAN:NHW RR[iii]
Total	1,952.3 (1,948.7–1,955.9)	2,950.5 (2,946.1–2,954.9)	0.66
Male	2,320.1 (2,316.2–2,324.0)	3,419.3 (3,414.6–3,424.0)	0.68
Female	1,682.0 (1,678.6–1,685.3)	2,587.2 (2,583.1–2,591.4)	0.65

Source: U.S. Center for Health Statistics, Death Certifications and Bridge-race Population Estimates, 2013-2017.

Notes: [i] Rates are per 100,000 people and were adjusted to the 2000 US standard population (11 age groups). [ii] CI: Confidence Interval. [iii] RR: rate ratio comparing the AI/AN rate to the NHW rate

When examined by age category, all-cause mortality rates were lower in each age group for AI/AN Elders compared to NHW elders (Figure 50). In addition, all-cause mortality rates were most disparate in the 75–84 and 85+ age groups.

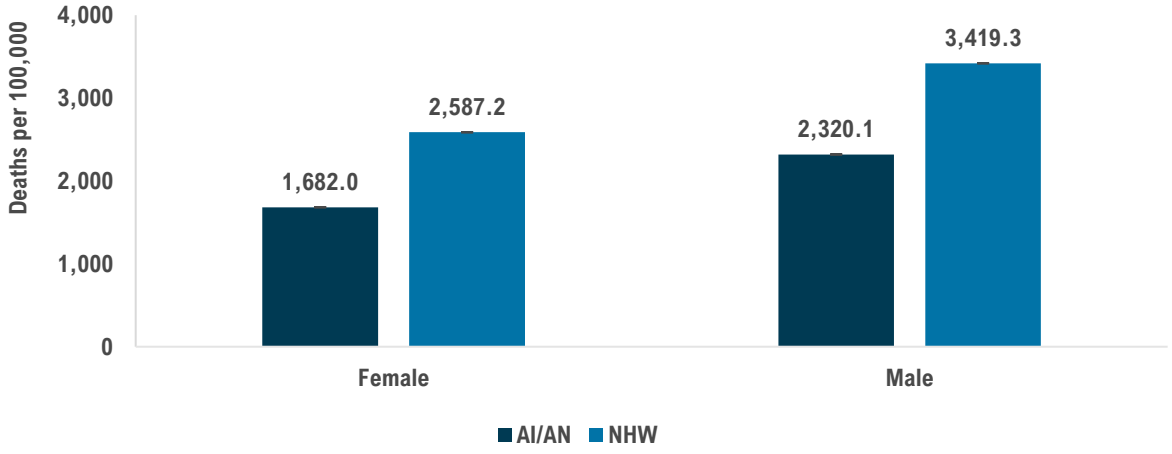
Figure 50. Age-adjusted all-cause mortality of urban Elders by race and age category, 2013-2017



Source: U.S. Center for Health Statistics, Death Certifications and Bridge-race Population Estimates, 2013–2017; Urban defined by UIO/UIHN service counties from Federal Information Processing Standards (FIPS) codes.

Based on sex, the age-adjusted all-cause mortality rate for AI/AN Elder women was lower than AI/AN Elder men: 1,682.0 deaths per 100,000 vs. 2,320.1 deaths per 100,000 (Figure 51). For both AI/AN Elder women and men, the all-cause mortality rate was significantly lower than NHW elder women and men.

Figure 51. Age-adjusted all-cause mortality of urban Elders by race and sex, 2013–2017



Source: U.S. Center for Health Statistics, Death Certifications and Bridge-race Population Estimates, 2013–2017; Urban defined by UIO/UIHN service counties from Federal Information Processing Standards (FIPS) codes. Rates are per 100,000 people and were adjusted to the 2000 US standard population (11 age groups).

Leading causes of death

Heart disease and cancer were the two leading causes of death for AI/ANs and NHWs (Table 2). Compared to NHW elders, AI/AN Elders had much lower death rates from heart disease, cancer, chronic lower respiratory disease, accidents, Alzheimer's disease, influenza and pneumonia, kidney disease, and suicide. However, death rates for AI/ANs were significantly higher from diabetes mellitus (1.3 times the rate for NHW elders), chronic liver disease (1.9 times), homicide (1.9 times), and HIV (1.5 times; Table 2).

Table 2. Rankings, mortality rates, and rate ratios of the top 12 leading causes of death for AI/AN Elders and NHW elders: overall, 2013–2017

Cause of death	Rank[i] AI/AN (NHW)	Rate[ii] AI/AN (NHW)	AI/AN:NHW RR[iii]
Heart disease	1 (1)	88.8 (199.7)	0.44
Cancer	2 (2)	64.5 (136.4)	0.47
Diabetes mellitus	3 (6)	19.5 (14.8)	1.32*
Chronic lower respiratory disease	4 (3)	17.8 (38.8)	0.46
Accidents	5 (5)	14.7 (19.0)	0.77
Chronic liver disease and cirrhosis	6 (9)	12.4 (6.5)	1.93*
Alzheimer's disease	7 (4)	9.3 (32.6)	0.28
Influenza and pneumonia	8 (7)	6.8 (13.7)	0.49
Kidney disease	9 (8)	5.8 (8.8)	0.65
Suicide	10 (10)	1.6 (4.7)	0.35
Homicide	11 (14)	0.9 (0.4)	1.98*
HIV	12 (13)	0.7 (0.5)	1.49*

Source: U.S. Center for Health Statistics, 2013–2017.

Notes: [i] Followed the 113 Causes of Death Standard Coding

Descriptors have been shortened for clarity: Heart disease (I00-I13, I20-I51, I60-I78); Cancer (C00-C97); Diabetes (E10-E14); Chronic lower respiratory disease (J40-J47); Accidents (V01, V05-V06,V09.1, V09.3-V09.9, V10-V11, V15-V18, V19.3, V19.8-V19.9, V80.0-V80.2, V80.6-V80.9, V81.2-V81.9, V82.2-V82.9, V87.9, V88.9, V89.1, V89.3, V89.9, V90-X59, Y40-Y86, Y88, V02-V04, V09.0, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2); Chronic liver disease and cirrhosis (K70, K73-K4); Alzheimer's disease (G30); Influenza and pneumonia (J10-J18); Kidney disease (N00-N07, N17-N19, N25-N27); Suicide (X60-X84, Y87.0); Homicide (X85-Y09, Y87.1); HIV (B20-B24).

[ii] Rates are per 100,000 people and were adjusted to the 2000 US standard population (11 age groups).

[iii] RR: rate ratio comparing the AI/AN rate to the NHW rate

*RR>1 for higher death rate in the AI/AN population than the NHW population

For AI/AN Elder men, the three main leading causes of death were from heart disease, cancer, and diabetes (Table 3). The death rates from diabetes, chronic liver disease and cirrhosis, homicide, and HIV were significantly higher in AI/ANs than NHWs; however, deaths from heart disease, cancer, accidents, chronic lower respiratory disease, influenza and pneumonia, Alzheimer's disease, kidney disease, and suicide were significantly lower among AI/ANs than NHWs.

Table 3. Rankings, mortality rates, and rate ratios of the top 10 leading causes of death for AI/AN Elders and NHW elders: males, 2013–2017

Cause of death	Rank[i] AI/AN (NHW)	Rate[ii] AI/AN (NHW)	AI/AN:NHW RR[iii]
Heart disease	1 (1)	102.6 (209.0)	0.49
Cancer	2 (2)	75.5 (152.4)	0.50
Diabetes mellitus	3 (6)	22.9 (17.8)	1.29*
Accidents	4 (3)	19.6 (37.0)	0.53
Chronic lower respiratory disease	5 (4)	18.9 (22.2)	0.85
Chronic liver disease and cirrhosis	6 (9)	14.6 (8.8)	1.66*
Influenza and pneumonia	7 (5)	7.5 (22.0)	0.34
Alzheimer's disease	8 (7)	6.6 (13.9)	0.47
Kidney disease	9 (8)	5.6 (9.8)	0.57
Suicide	10 (10)	2.5 (7.8)	0.32
Homicide	11 (12)	1.3 (0.6)	2.28*
HIV	12 (11)	1.1 (0.9)	1.28*

Source: U.S. Center for Health Statistics, 2013–2017.

Notes: i Followed the 113 Causes of Death Standard Coding.

Descriptors have been shortened for greater clarity: refer to ICD-10 codes in Table 2.

ii Rates are per 100,000 people and were adjusted to the 2000 U.S. standard population (11 age groups).

iii RR: rate ratio comparing the AI/AN rate to the NHW rate

*RR>1 for higher death rate in the AI/AN population than the NHW population

For AI/AN Elder women, the three leading causes of death were from heart disease, cancer, and chronic lower respiratory disease (Table 4). The death rates from diabetes, chronic liver disease, and cirrhosis were significantly higher in AI/ANs than NHWs; however, deaths from heart disease, cancer, chronic lower respiratory disease, Alzheimer's disease, accidents, influenza and pneumonia, kidney disease, and suicide were much lower in AI/ANs than NHWs.

Table 4. Rankings, mortality rates, and rate ratios of the top 10 leading causes of death for AI/AN Elders and NHW elders: females, 2013–2017

Cause of death	Rank[i] AI/AN (NHW)	Rate[ii] AI/AN (NHW)	AI/AN:NHW RR[iii]
Heart disease	1 (1)	77.3 (191.7)	0.40
Cancer	2 (2)	55.3 (122.6)	0.45
Chronic lower respiratory disease	3 (4)	16.9 (40.4)	0.42
Diabetes mellitus	4 (7)	16.7 (12.3)	1.36*
Alzheimer's disease	5 (3)	11.5 (41.7)	0.28
Chronic liver disease and cirrhosis	6 (9)	10.6 (4.4)	2.39*
Accidents	7 (5)	10.6 (16.3)	0.65
Influenza and pneumonia	8 (6)	6.1 (13.5)	0.45
Kidney disease	9 (8)	5.9 (8.0)	0.74
Suicide	10 (10)	0.9 (2.0)	0.44

Source: U.S. Center for Health Statistics, 2013–2017

Notes: i Followed d the 113 Causes of Death Standard Coding

Descriptors have been shortened for greater clarity: refer to ICD-10 codes in Table 2.

ii Rates are per 100,000 people and were adjusted to the 2000 US standard population (11 age groups).

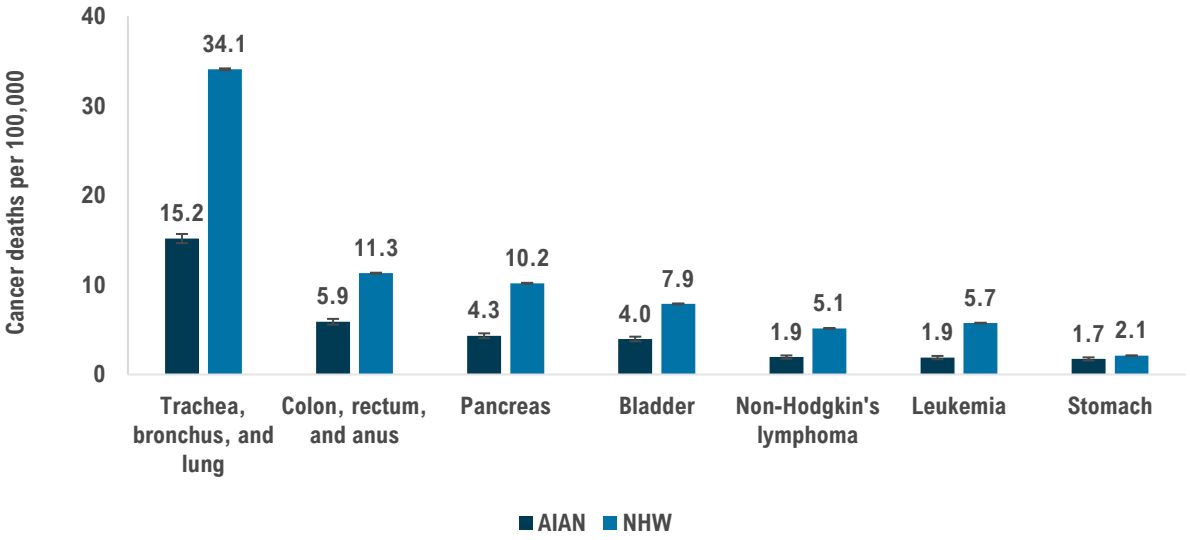
iii RR: rate ratio comparing the AI/AN rate to the NHW rate

*RR>1 for higher death rate in the AI/AN population than the NHW population

Cancer mortality

The leading cause of cancer deaths was from lung cancer followed by colorectal cancer, pancreas cancer, and bladder cancer. Compared to NHW elders, death rates of each cancer site were significantly lower among AI/AN Elders (Figure 52, Table 5).

Figure 52. Age-adjusted cancer mortality of urban Elders by cancer site and race, 2013–2017



Source: U.S. Center for Health Statistics, Death Certifications and Bridge-race Population Estimates, 2013–2017; Urban defined by UIO/UIHN service counties from Federal Information Processing Standards (FIPS) codes.

Table 5. Rankings, mortality rates, and rate ratios of cancer deaths for AI/AN Elders and NHW elders: overall, 2013–2017

Cancer site	Rank[i] AI/AN (NHW)	Rate[ii] AI/AN (NHW)	AI/AN:NHW RR[iii]
Trachea, bronchus, and lung cancer	1 (1)	15.2 (34.1)	0.45
Colon, rectum, and anus cancer	2 (2)	5.9 (11.3)	0.52
Pancreas cancer	3 (3)	4.3 (10.2)	0.42
Bladder cancer	4 (4)	4.0 (7.9)	0.50
Non-Hodgkin's Lymphoma	5 (6)	1.9 (5.1)	0.38
Leukemia	6 (5)	1.9 (5.7)	0.33
Stomach cancer	7 (7)	1.7 (2.1)	0.83

Source: U.S. Center for Health Statistics, 2013–2017.

Notes: i Followed the 39 Causes of Death Standard Coding

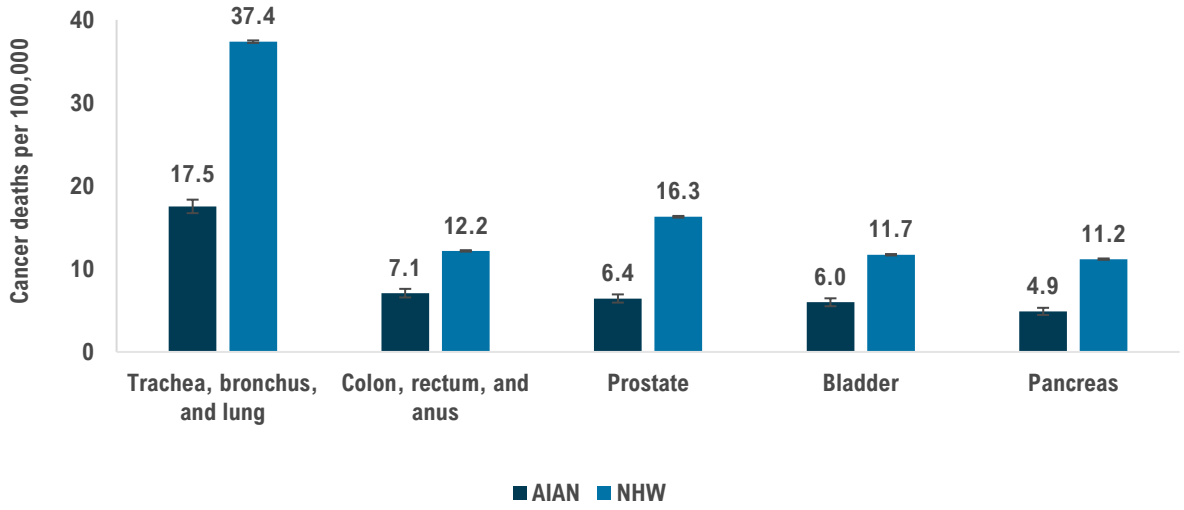
Descriptors have been shortened for greater clarity: Trachea, bronchus, and lung cancer (C33-C34); Colon, rectum, and anus cancer (C18-C21); Pancreas cancer (C25); Bladder cancer (C64-C68); Non-Hodgkin's Lymphoma (C82-C85); Leukemia (C91-C95); Stomach cancer (C16).

ii Rates are per 100,000 people and were adjusted to the 2000 US standard population (11 age groups).

iii RR: rate ratio comparing the AI/AN rate to the NHW rate

Among Elder men, the leading cause of cancer deaths was from lung cancer followed by colorectal cancer, prostate cancer, and bladder cancer. AI/AN males had lower death rates for lung, colorectal, prostate, bladder, and pancreatic cancers compared to NHW males (Figure 53, Table 6).

Figure 53. Age-adjusted cancer mortality by cancer site among urban male Elders, 2013–2017



Source: U.S. Center for Health Statistics, Death Certifications and Bridge-race Population Estimates, 2013–2017; Urban defined by UIO/UIHN service counties from Federal Information Processing Standards (FIPS) codes.

Table 6. Rankings, mortality rates, and rate ratios of cancer deaths for AI/AN Elders and NHW elders: males, 2013–2017

Cancer site	Rank[i] AI/AN (NHW)	Rate[ii] AI/AN (NHW)	AI/AN:NHW RR[iii]
Trachea, bronchus, and lung cancer	1 (1)	17.5 (37.4)	0.47
Colon, rectum, and anus cancer	2 (3)	7.1 (12.2)	0.58
Prostate cancer	3 (2)	6.4 (16.3)	0.40
Bladder cancer	4 (4)	6.0 (11.7)	0.51
Pancreas cancer	5 (5)	4.9 (11.2)	0.44

Source: U.S. Center for Health Statistics, 2013–2017.

Notes: i Followed the 39 Causes of Death Standard Coding

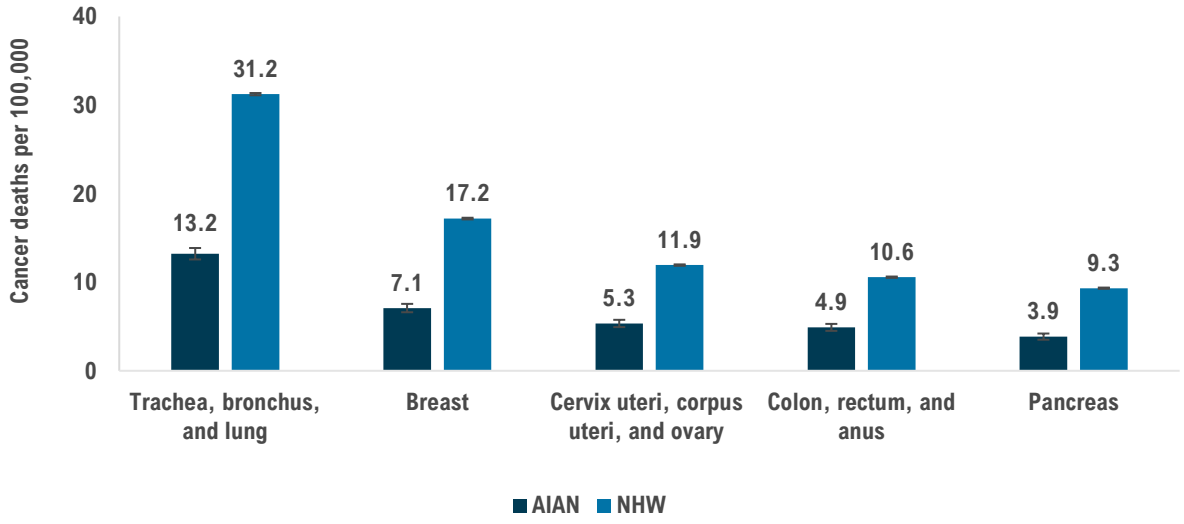
Descriptors have been shortened for greater clarity: Trachea, bronchus, and lung cancer (C33-C34); Colon, rectum, and anus cancer (C18-C21); Prostate cancer (C61); Bladder cancer (C64-C68); Pancreas cancer (C25).

ii Rates are per 100,000 people and were adjusted to the 2000 US standard population (11 age groups).

iii RR: rate ratio comparing the AI/AN rate to the NHW rate.

Among Elder women, the leading cause of cancer deaths was from lung cancer followed by breast cancer, cervical/ovarian cancer, and colorectal cancer. American Indian and Alaska Natives females had lower death rates for lung, breast, cervical/ovarian, colorectal, and pancreatic cancers compared to NHW females (Figure 54, Table 7).

Figure 54. Age-adjusted cancer mortality by cancer site among urban female Elders, 2013–2017



Source: U.S. Center for Health Statistics, Death Certifications and Bridge-race Population Estimates, 2013–2017; Urban defined by UIO/UIHN service counties from Federal Information Processing Standards (FIPS) codes.

Table 7. Rankings, mortality rates, and rate ratios of cancer deaths for AI/AN Elders and NHW elders: females, 2013–2017

Cancer site	Rank[i] AI/AN (NHW)	Rate[ii] AI/AN (NHW)	AI/AN:NHW RR[iii]i
Trachea, bronchus, and lung cancer	1 (1)	13.2 (31.2)	0.42
Breast cancer	2 (2)	7.1 (17.2)	0.41
Cervix uteri, corpus uteri, and ovary cancer	3 (3)	5.3 (11.9)	0.45
Colon, rectum, and anus cancer	4 (4)	4.9 (10.6)	0.46
Pancreas cancer	5 (5)	3.9 (9.3)	0.41

Source: U.S. Center for Health Statistics, 2013–2017.

Notes: i Followed the 39 Causes of Death Standard Coding. Descriptors have been shortened for greater clarity: Trachea, bronchus, and lung cancer (C33-C34); Breast cancer (C50); Cervix uteri, corpus uteri, and ovary cancer (C53-C56); Colon, rectum, and anus cancer (C18-C21); Pancreas cancer (C25).

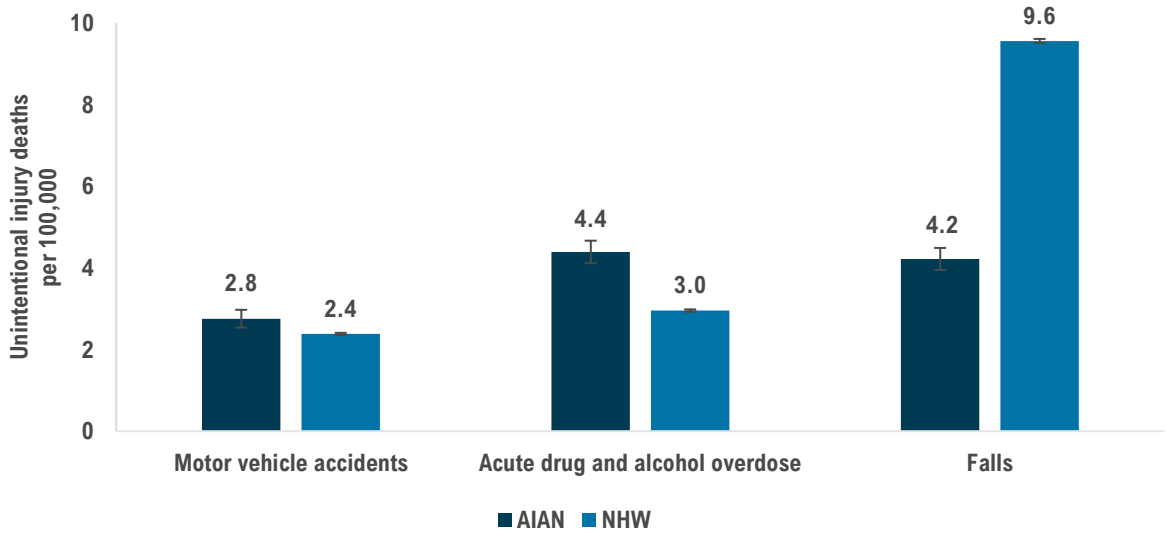
ii Rates are per 100,000 people and were adjusted to the 2000 US standard population (11 age groups).

iii RR: rate ratio comparing the AI/AN rate to the NHW rate

Unintentional injury mortality

American Indian and Alaska Natives had significantly higher death rates from motor vehicle accidents (2.8 deaths per 100,000; 1.2 times that of NHWs) and acute drug and alcohol overdose (4.4 deaths per 100,000; 1.5 times that of NHWs) compared to NHWs (2.4 and 3.0 per 100,000, respectively; Figure 54). American Indian and Alaska Native Elders had a 56% lower death rate from falls than NHW elders (4.2 deaths per 100,000 vs. 9.6 deaths per 100,000; Figure 55).

Figure 55. Age-adjusted uninteniontal injury mortality among urban Elders by race, 2013–2017



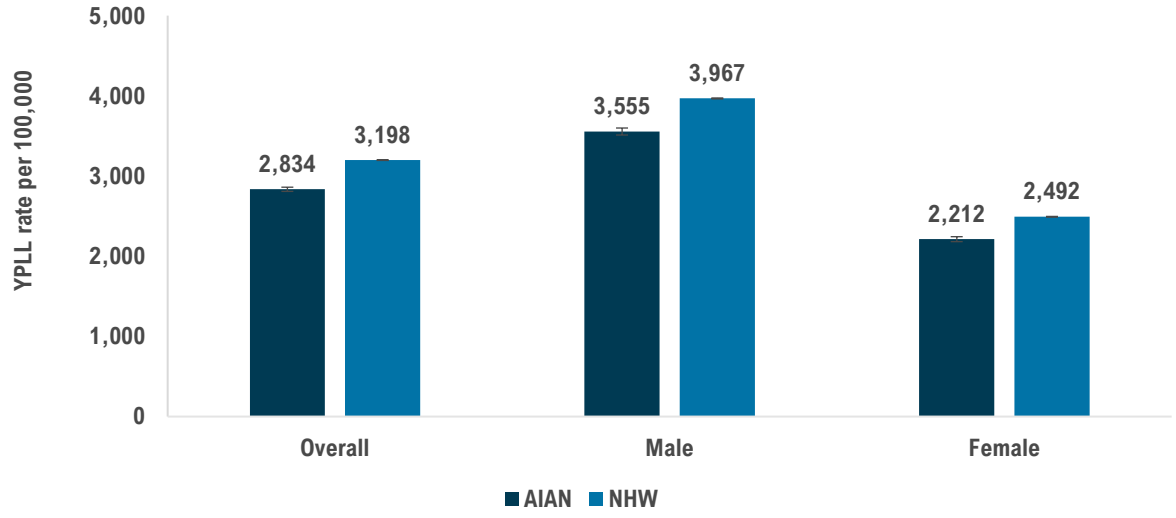
Source: U.S. Center for Health Statistics, Death Certifications and Bridge-race Population Estimates, 2013–2017; Urban defined by UIO/UIHN service counties from Federal Information Processing Standards (FIPS) codes.

Years of potential life lost

Years of potential life lost (YPLL) is a measure for estimating the years a person would have lived if they did not die prematurely.[5] Analyses of YPLL can assist with prioritizing the allocation of public health resources and evaluating the effectiveness of intervention programs.

For the years 2013–2017, AI/AN Elders experienced fewer years of potential life lost compared to NHW elders (Figure 56). In general, men had much higher rates of YPLL than women.

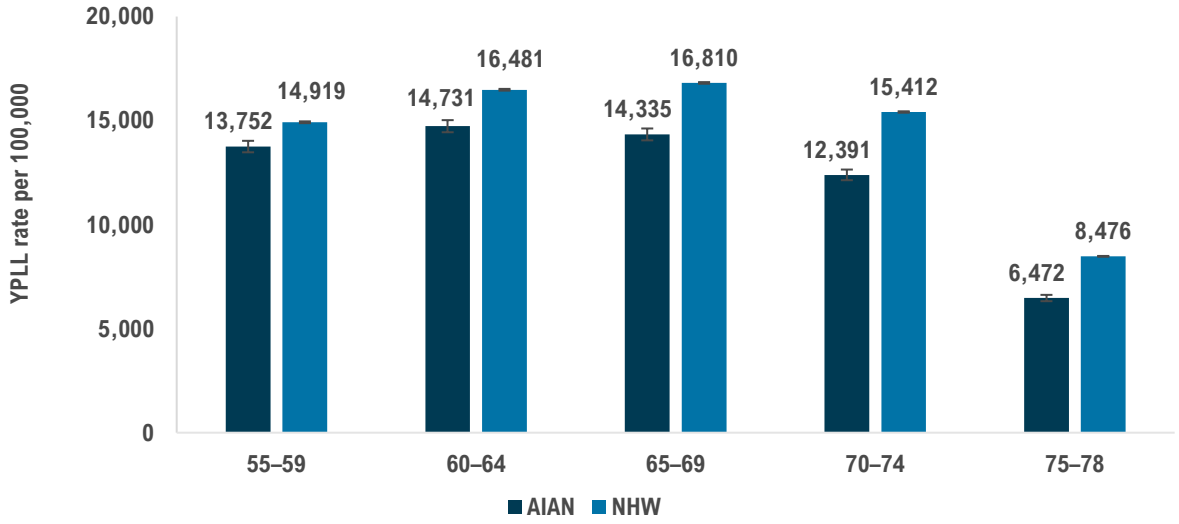
Figure 56. Rate of age-adjusted years of potential life lost before age 79 among urban Elders by sex and race, 2013-2017



Source: U.S. Center for Health Statistics, Death Certifications and Bridge-race Population Estimates, 2013–2017; Urban defined by UIO/UIHN service counties from Federal Information Processing Standards (FIPS) codes.

For each age group, the YPLL rates among AI/AN Elders were lower than NHW elders (Figure 57). The YPLL rate was highest among 60–64-year-old AI/ANs (14,731 YPLL per 100,000), whereas the YPLL rate was highest among 65–69-year-old NHWs (16,810 YPLL per 100,000).

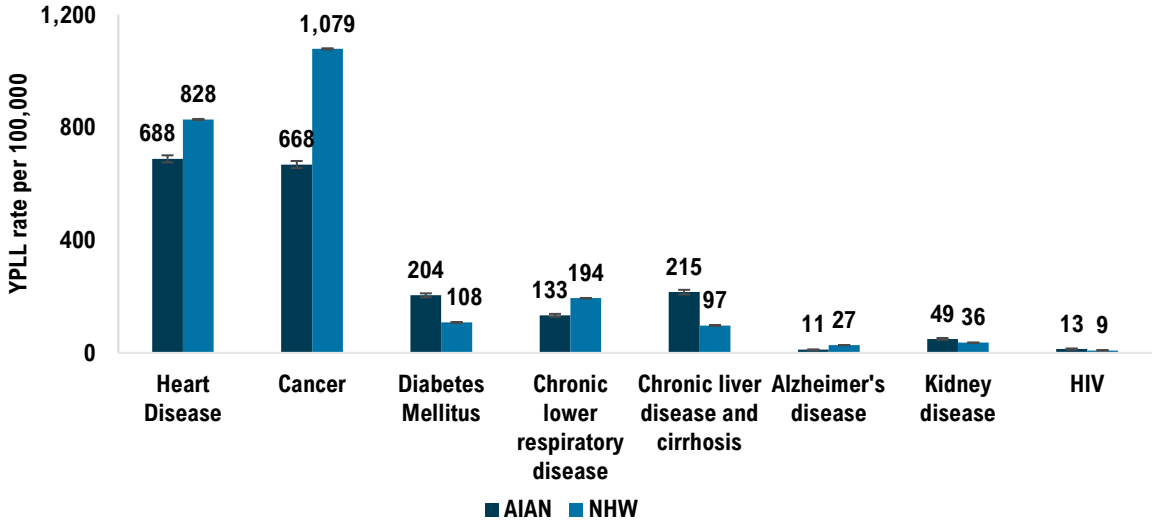
Figure 57. Rate of age-adjusted years of potential life lost before age 79 among urban Elders by age category and race, 2013–2017



Source: U.S. Center for Health Statistics, Death Certifications and Bridge-race Population Estimates, 2013–2017; Urban defined by UIO/UIHN service counties from Federal Information Processing Standards (FIPS) codes.

In looking at YPLL by chronic causes, YPLL rates were significantly higher in AI/AN Elders for diabetes, chronic liver disease and cirrhosis, kidney disease, and HIV compared to NHW elders (Figure 58). Conversely, NHWs had higher YPLL rates for heart disease, cancer, chronic lower respiratory disease, and Alzheimer's disease compared to AI/ANs (Figure 58).

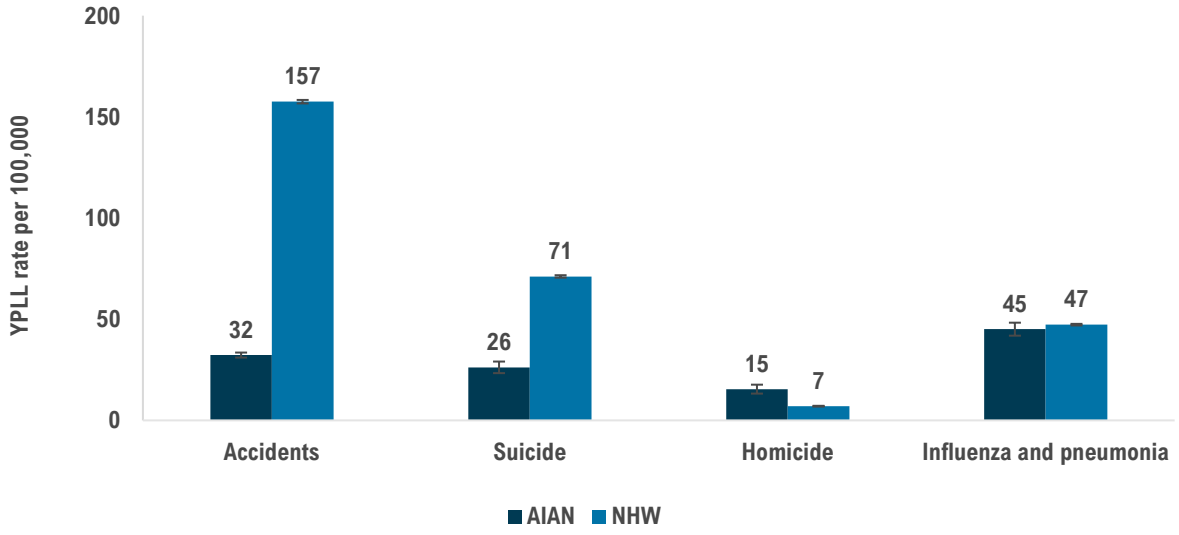
Figure 58. Rate of age-adjusted years of potential life lost before age 79 among urban Elders by race and chronic cause, 2013–2017



Source: U.S. Center for Health Statistics, Death Certifications and Bridge-race Population Estimates, 2013–2017; Urban defined by UIO/UIHN service counties from Federal Information Processing Standards (FIPS) codes.

For acute causes of death, the YPLL rate for homicide in AI/AN Elders was 2.1 times the rate in NHW elders (Figure 59). Conversely, NHWs had higher YPLL rates for accidents and suicide compared to AI/ANs. Additionally, both AI/ANs and NHWs had similar YPLL rates for influenza and pneumonia.

Figure 59. Rate of age-adjusted years of potential life lost before age 79 among urban Elders by race and acute cause, 2013–2017



Source: U.S. Center for Health Statistics, Death Certifications and Bridge-race Population Estimates, 2013–2017; Urban defined by UIO/UIHN service counties from Federal Information Processing Standards (FIPS) codes.

APPENDIX: GEOGRAPHIC AREAS

Data were classified according to the following geographic areas for morbidity and mortality health indicators.

Health Indicator	Geographic Area
Morbidity: Behavioral Risk Factor Surveillance System	Akron, OH Albuquerque, NM Anchorage, AK Baltimore–Columbia–Townson, MD Billings, MT Bismarck, ND Boston, MA Buffalo–Cheektowaga–Niagara Falls, NY Chicago–Naperville–Elgin, IL–IN–WI Dallas–Plano–Irving, TX Denver–Aurora–Lakewood, CO Indianapolis–Carmel–Anderson, IN Kansas City, MO–KS Lincoln, NE Los Angeles–Long Beach–Anaheim, CA Milwaukee–St. Paul–Bloomington, MN–WI New York–Jersey City–White Plains, NY–NJ Oakland–Hayward–Berkeley, CA Oklahoma City, OK Omaha–Council Bluffs, NE–IA Phoenix–Mesa–Scottsdale, AZ Portland–Vancouver–Hillsboro, OR–WA Reno, NV Riverside–San Bernardino–Ontario, CA Sacramento–Roseville–Arden–Arcade, CA San Francisco–Redwood City–South San Francisco, CA San Jose–Sunnyvale–Santa Clara, CA St. Louis, MO–IL Salt Lake City, UT San Antonio–New Braunfels, TX Seattle–Bellevue–Everett, WA Sioux City, IA–NE–SD Sioux Falls, SD Spokane–Spokane Valley, WA Tulsa, OK Wichita, KS

Health Indicator	Geographic Area
Mortality: U.S. Centers for Health Statistics, Bridge Population Estimates	Alaska: Anchorage County Arizona: Coconino, Maricopa, Pima counties California: Alameda, Contra Costa, Fresno, Kern, Los Angeles, Madera, Marin, Sacramento, San Diego, San Francisco, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Tulare, Ventura counties Colorado: Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Gilpin, Jefferson counties Illinois: Cook County Indiana: Marion County Iowa: Woodbury County Kansas: Butler, Reno, Sedgwick, Sumner counties Maryland: Anne Arundel, Baltimore City, Baltimore, Carroll, Howard, Prince George's counties Massachusetts: Essex, Middlesex, Norfolk, Plymouth, Suffolk counties, Michigan: Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, Wayne counties Minnesota: Hennepin, Ramsey counties Missouri: Cass, Clay, Jackson, Platte, St. Louis City, St. Louis counties Montana: Big Horn, Broadwater, Cascade, Jefferson, Lewis and Clark, Missoula, Silver Bow, Yellowstone counties Nebraska: Douglas, Lancaster, Sarpy, Washington counties Nevada: Carson City, Churchill, Douglas, Storey, Washoe counties New Mexico: Bernalillo, Sandoval counties New York: Bronx, Erie, Kings, New York, Niagara, Queens, Richmond counties North Dakota: Burleigh, Morton counties Ohio: Cuyahoga, Summit counties Oklahoma: Canadian, Cleveland, Oklahoma, Pottawatomie, Tulsa counties Oregon: Clackamas, Multnomah, Washington counties South Dakota: Brown, Hughes, Minnehaha, Stanley counties Texas: Bexar, Collin, Dallas, Denton, Ellis, Hood, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise counties Utah: Davis, Salt Lake, Tooele, Utah, Weber counties Washington: Clark, King, Spokane counties Wisconsin: Milwaukee, Waukesha counties

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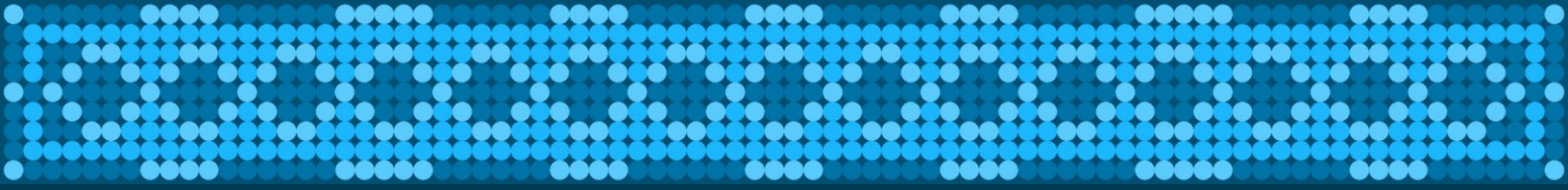

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