

GREAT LAKES INTER-TRIBAL EPIDEMIOLOGY CENTER

AMERICAN INDIAN/ALASKA NATIVE ELDER HEALTH

IN MICHIGAN, MINNESOTA, AND WISCONSIN 2018

"The grandfathers and the grandmothers are in the grandchildren; teach them well." -Anishinaabe proverb



ABOUT THIS REPORT

This report was prepared by Meghan Porter, Alexandra Cirillo Lilli, Chalyse Schellinger, and Patricia Bickner. The Great Lakes Inter-Tribal Epidemiology Center (GLITEC) would like to acknowledge Genelle Monger and Hawi Teizazu. Nature photography by Meghan Porter.

GLITEC staff welcomes discussion with Bemidji Area communities' health staff in the use of this report to support assessment, planning, and evaluation functions. Please contact us to discuss how GLITEC may support your community in addressing elder health.



Great Lakes Inter-Tribal Council, Inc.
2932 Highway 47 N.
P.O. Box 9
Lac du Flambeau, WI 54538
glitc.org/epicenter

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EXECUTIVE SUMMARY

Elders hold a unique place in American Indian/Alaska Native communities, serving as mentors, spiritual leaders, and wisdom keepers. There is no standard definition of an elder.

American Indian/Alaska Native people nationwide have lower life expectancies than the general population. In 2015, in the three-state area of Michigan, Minnesota, and Wisconsin, a smaller proportion of the American Indian/Alaska Native population was age 55 or older (19%) than within the all-races population (28%). Less than half a percent of American Indian/Alaska Natives in the three-state area were over age 85, as compared to 2.1% for all-races. The poverty rate was over twice as high for American Indian/Alaska Natives in the three-state area as for all races, with nearly one out of every five older Natives living in poverty. Many older American Indian/Alaska Natives live with children. About 20% reported living with at least one child under the age of 18, and many American Indian/Alaska Native grandparents were the primary caregiver

for their grandchildren. About two-thirds of American Indian/Alaska Native elders reported living with family.

In the United States, 43% of the all-races population aged 55 or older reported that their health was either “excellent” or “very good” as compared to 27% of American Indian/Alaska Natives in this age group in the three-state area. About 7% perceived their health to be poor, similar to U.S. all-races elders (8%). Forty-four percent of American Indian/Alaska Natives aged 50 or older in the three-state area reported being limited in activities because of physical, mental, or emotional problems compared to about 30% for all races in the three-state area. American Indian/Alaska Natives reported ever being told they had chronic conditions at higher



rates than the all-races population. Almost three-quarters of American Indian/Alaska Natives reported ever smoking while about half of the all races population had ever been a smoker; about 60% of older American Indian/Alaska Natives who ever smoked no longer do so. Fewer older American Indian/Alaska Natives than all-races individuals reported drinking any alcohol in the last 30 days.

American Indian/Alaska Natives over age 55 in the three-state area had higher mortality rates than whites overall as well as for chronic liver disease and cirrhosis; chronic lower respiratory disease (CLRD); diabetes mellitus; heart disease; influenza and pneumonia; malignant neoplasm (cancer); nephritis, nephrotic syndrome, and nephrosis; and septicemia. Heart disease was the leading cause of death for three-state area American Indian/Alaska Natives. Among American Indian/Alaska Natives 55 years old or older in the three-state area, there were higher mortality rates among men than among women, and among residents of rural areas compared

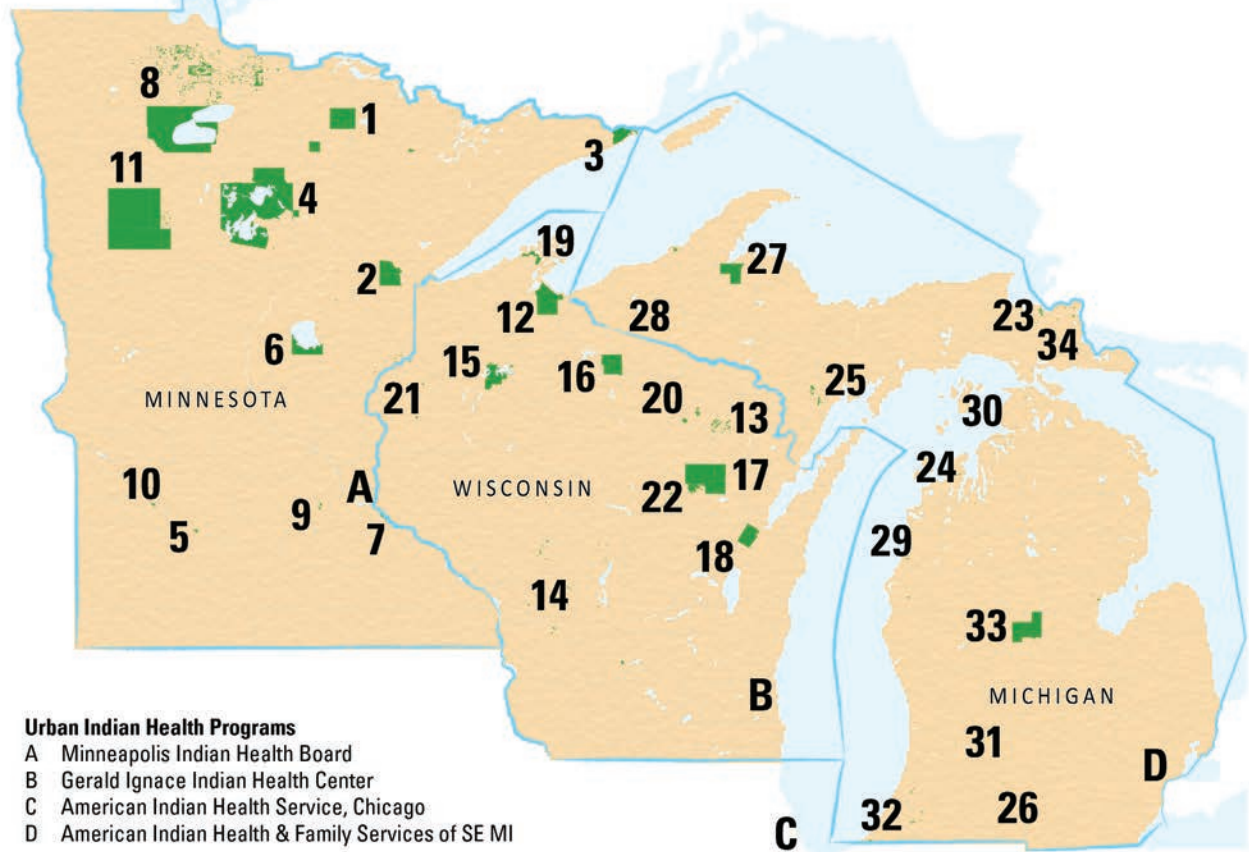
to urban residents. Unintentional injury was the cause of death that contributed most to early death—that is, deaths to people under age 65.

By addressing unintentional injury and other causes like heart disease or cancer that also contribute heavily to early death, a greater number of American Indian/Alaska Native people will live into their older years. Other important aspects of elder health and wellbeing relate to opportunities for socializing with others, connecting to culture, as well as having adequate housing and income for living expenses.

SERVICE AREA MAP

Great Lakes Inter-Tribal Epidemiology Center Service Area

Indian Health Service Bemidji Area



Urban Indian Health Programs

- A Minneapolis Indian Health Board
- B Gerald Ignace Indian Health Center
- C American Indian Health Service, Chicago
- D American Indian Health & Family Services of SE MI

Minnesota

- 1 Bois Forte Band of Chippewa
- 2 Fond du Lac Band of Lake Superior Chippewa
- 3 Grand Portage Band of Lake Superior Chippewa
- 4 Leech Lake Band of Ojibwe
- 5 Lower Sioux Indian Community
- 6 Mille Lacs Band of Ojibwe
- 7 Prairie Island Indian Community
- 8 Red Lake Nation
- 9 Shakopee Mdewakanton Sioux Community
- 10 Upper Sioux Indian Community
- 11 White Earth Nation

Wisconsin

- 12 Bad River Band of Lake Superior Chippewa
- 13 Forest County Potawatomi
- 14 Ho-Chunk Nation
- 15 Lac Courte Oreilles Band of Lake Superior Chippewa
- 16 Lac du Flambeau Band of Lake Superior Chippewa
- 17 Menominee Nation
- 18 Oneida Nation
- 19 Red Cliff Band of Lake Superior Chippewa
- 20 Sokaogon Chippewa Community
- 21 St Croix Chippewa Indians of Wisconsin
- 22 Stockbridge-Munsee Band of Mohican Indians

Michigan

- 23 Bay Mills Indian Community
- 24 Grand Traverse Band of Ottawa/Chippewa
- 25 Hannahville Indian Community
- 26 Nottawaseppi Huron Band of the Potawatomi
- 27 Keweenaw Bay Indian Community
- 28 Lac Vieux Desert Band of Lake Superior Chippewa
- 29 Little River Band of Ottawa Indians
- 30 Little Traverse Bay Band of Odawa Indians
- 31 Match-e-be-nash-she-wish (Gun Lake) Band of Pottawatomi
- 32 Pokagon Band of Potawatomi Indians
- 33 Saginaw Chippewa Indian Tribe
- 34 Sault Ste. Marie Tribe of Chippewa Indians

BACKGROUND

While all people age, the meaning assigned to different points in the life course vary by culture. Aging has a different meaning in American Indian/Alaska Native communities than it does within other groups.

The United Nations Declaration on the Rights of Indigenous Peoples recognizes the importance of elders in Indigenous communities. For example, Article 22. states “Particular attention shall be paid to the rights and special needs of Indigenous elders, women, youth, children and persons with disabilities in the implementation of this Declaration.”¹ In mainstream America, a person is considered a “senior citizen” when they reach a certain age (although this age can vary by organization or government agency). In American Indian/Alaska Native communities, however, there is often more to becoming an elder than having lived a certain number of years.

It is important to remember that “elder” is an English word and its use is reductive, reflecting Western ideas that may not be relevant to Indigenous worldviews. A Métis elder, Tom McCallum, said, “Other people talk about what is an Elder? The way we describe an Elder in our language is that there cannot be one person who encompasses everything. In English, they are trying to lump everything into one person and that is where the confusion comes in. In our community, there are different leaders who have different talents. In the circle, everyone is equal. Everyone has a gift to bring to the circle. We have to go back to our roots; we have to go back to who we are. The whole concept

of spirituality is understood from an English language perspective. When you say the term in the Cree language, we say it is the gifts that were given to us as the four-directions people.”²

Within American Indian/Alaska Native communities, the definition of what it means to be an elder varies for administrative versus cultural purposes. For administrative purposes, the criteria that allow a person to be considered an elder and thus eligible for Tribal-provided services is based simply on a person’s age in years, as in the United States in general. Through the Older Americans Act, individual Tribes may determine the age at which a person is eligible for a service.³ This age may or may not correspond with the culturally-held definition of elder status in that community. For example, the Métis say that a person does not need to be very old before they become an elder—other methods besides age alone may confer that right.²

Culturally, an individual may be considered an elder as a result of typical things associated with getting old: his or her age, the appearance of grey hair, or having a grandchild. However, an individual may possess these characteristics, but still not be viewed as an elder, because becoming an elder doesn’t only result from the process of aging.

When a person is identified as an elder, it also signifies a certain level of personal development and the possession of a lifetime's worth of knowledge and skills. A person may be an elder because they have the knowledge to be an elder—community members come to them for their wisdom and their ability to provide advice.⁴ Therefore, a person doesn't declare themselves to be an elder nor is this status awarded automatically: it's a recognition agreed up on by their community.⁴

Oftentimes, elders hold and share knowledge that can build healthy futures for generations. Their life stories hold rich lessons and foundational knowledge that can be key to developing positive life skills. Elders today see storytelling as connecting the generations: it connects them to their grandparents, and it also connects them to modern youth. This storytelling is connected to community resilience.⁵

Commonly, elders are distinguished by their emotional well-being, community engagement, spirituality, and the respect they receive from the community. This respect goes beyond simple etiquette. In many communities, they are considered the wisdom keepers and are considered a precious part of the community. They serve as protectors, mentors, teachers, and support-givers, making them invaluable in the survival of Tribal communities against attempts at assimilation.⁶

Cultural and spiritual knowledge are valued skills held by many elders. For example, among the Ojibwe, language, culture, and spirituality are intertwined, and many believe that the Ojibwe language must be used for ceremonies. Because few non-elder Ojibwe in the U.S. are fluent, this means that elders play a central role in the continuation of spiritual practices.⁶ In particular, elders have an important role in naming

ceremonies, and often special connections form between the person giving the name and the person receiving the name.⁶

Among the Ojibwe, terms for a grandmother or grandfather are used with all members of one's grandparents' generation, even those who are not directly related. Additionally, other-than-human persons, such as spirits, collectively have been referred to as "our grandfathers." Among the Ojibwe, the life cycle reflects processes of the universe, and the place of elders in society reflects this understanding.⁶ Among the Anishinaabe, there is a belief that respect for elders could not be separated from a respect for others, both human and non-human: the plants, animals, weather, rocks, ancestors, and spirits.⁶

Ojibwe children and elders, especially grandchildren and grandparents, have a unique relationship. Grandparents and elders are the traditional teachers; contemporary elders relay that their "real education" came from their grandparents.⁷ This education could take many forms: involving youth in practicing traditional life skills (such as ricing or making cedar mats), through storytelling, or by demonstrating proper spiritual practices like the use of traditional tobacco.

Elders have traditionally played a key role in the education of the young. Elders taught children about many things: songs and stories; how to use the land; how to pray; responsibility through chores; language; and gender roles.^{2,5} Elders' traditional role as educators of culture and tradition is further evidenced by how, as the U.S. government worked to assimilate Native people, the government cut the young off from those who would teach them their culture. Boarding schools are well-recognized as one of these mechanisms. However, other



practices, such as the Commissioner of Indian Affairs' recommendation to forbid anyone under the age of 50 from participating in or attending "Indian dances" is another.⁶

Elders demonstrate power by having survived to older years—living a long time is evidence of intelligence, resilience, and resourcefulness. Among the Northern Arapaho, it has been said that as a person ages, "they become more and more 'human' and thus more Arapaho."⁶ While traditionally, Ojibwe elders were associated with a sense of moral accomplishment or spiritual prowess, now they are also seen as knowledgeable and experienced in challenges associated with the modern world: skilled at navigating a racist society and finding employment and working in a discriminatory job market.⁶

Even as Native communities have taken on Westernized structures, elders have continued their role as educators and providers of advice for and within organizations. For example, organizations may employ cultural advisors or elders-in-residence, or there may be elders' councils who provide guidance or oversight over programs.



ABOUT THIS REPORT

The purpose of this report is to provide population-level information about the health of American Indian/Alaska Native elders in Michigan, Minnesota, Wisconsin, and the three-state area combined.

Few reports on older American Indian/Alaska Native health exist. According to the National Congress of American Indians, the lack of knowledge about the specific health needs and concerns of elders is due to a lack of research on this population; this contributes to health disparities, maltreatment, and other health issues as well as gaps in services for elders.⁸ Although not research, public health data sources can provide some understanding about the health statuses of elders. It is hoped that this report will increase access to data related to elders, and will assist Bemidji Area American Indian/Alaska Native communities as they work to support and improve the health of this important population.

TYPES OF DATA

The data available and included in this report vary by the type of data. Data are often less available, and may be of lower quality, for American Indian/Alaska Native populations than for other race or ethnic groups. Where possible, comparisons to the general, all-races population and/or white population are made. Due to limitations of the data sources, it was not possible to use the same age definition of elder consistently across all data sources. For a more in-depth discussion of the data, please see the technical notes (Appendix 2).

Demographics

Demographic data describe populations. Examples of this kind of data include race and ethnicity, age, educational attainment, and income. Because certain segments of the population are more vulnerable to different health issues, understanding the demographics of a community can provide insight into risks and potential prevention activities. Most demographic data in this report come from the Census Bureau, although housing data come

from the *Identifying Our Needs: A Survey of Elders VI* survey.

The information in this report that originates in the Census Bureau uses data for individuals who identified their race as American Indian/Alaska Native alone, meaning that people who self-reported as being American Indian/Alaska Native in addition to another race were not counted as American Indian/Alaska Native. While the American Indian/Alaska Native population increases substantially when those who identify as American Indian/Alaska Native in combination with other races are included, this report is limited by how the data sources report race. The *Identifying Our Needs: A Survey of Elders VI* data includes information from individuals who self-identified as American Indian/Alaska Native.

Behavioral Health

Behavioral health data in this report come from the Behavioral Risk Factor Surveillance System (BRFSS) and *Identifying Our Needs: A Survey of Elders VI*. BRFSS is a telephone-based survey of civilian, non-institutionalized adults aged 18 and older about health-related risk behaviors, chronic health conditions, and use of health services. Relatively small numbers of American Indian/Alaska Natives are sampled by the BRFSS each year in Michigan, Minnesota, and Wisconsin. *Identifying Our Needs: A Survey of Elders VI* sampled 2,723 elders aged 55 and older via convenience methods in 2014-2017.

Immunization

National Indian Health Service (IHS) and Bemidji Area immunization data were received from the National Indian Health Service Immunization Program Quarterly Reports. IHS, Tribal, and Urban Indian health centers submit immunization reports to the Immunization

Program. Immunization data are reported here by the federal fiscal year (October to September), by quarter, for patients over age 65.

Mortality

Mortality data are important for several reasons. Death records are one of the only sources of data that are comparable across many different geographies and racial groups, and have been collected for a long period of time.⁹ Understanding mortality rates and related factors allows governments and communities to monitor and understand what is affecting the health of the population, make plans, and interpret the results of programs intended to reduce mortality.^{10,11}

Age-adjusted mortality rates are presented for most mortality rates included in this report. By adjusting the rates to a standard age distribution, age-adjusted rates allow for comparisons between groups that have different age distributions, thereby preventing the distortion that may occur when certain causes of death affect some age groups more than others. Racial misclassification is a serious issue that limits the quality of mortality data for American Indian/Alaska Natives. Racial misclassification on death certificates occurs when a medical professional does not correctly identify the race of the deceased. Studies of this issue have found varying rates of misclassification. For example, a study by the National Center for Health Statistics found that mortality rates for American Indian/Alaska Natives were underreported nationally by about 21%.¹² Other estimates for underreporting of mortality was lower; for example, one 2014 study placed misclassification prevalence at 14%.¹³ Another study reported 16.1% misclassification for the Bemidji Area specifically (Michigan, Minnesota, and Wisconsin).¹⁴

In some cases, mortality disparity ratios are included in this report. A disparity ratio is the ratio of the rates of two different population groups and indicates the degree of disparity between the two groups. The reference group's rate is placed in the denominator, so that a ratio of less than one indicates that the population of interest has a lower mortality rate than the reference population, while a ratio of greater than one shows that the population of interest has a higher mortality rate than the reference population. In the disparity ratios here, the white population is always the reference population. In addition, when the ratio is subtracted from one and multiplied by 100%, the degree to which the disparity exists can be identified.

Years of Potential Life Lost (YPLL)

Years of Potential Life Lost (YPLL) is a measure that is used to describe the magnitude of early death. YPLL is included in this report to provide information about why people may not live long enough to reach elder status. In contrast to typical mortality measures, YPLL emphasizes the processes that impact premature death. YPLL is calculated by subtracting the age of an individual at the time of death from an age that people are "expected" to live until; in this report, this age is 65 years of age (a commonly-used age for this measure). For example, if someone died when they were one year of age, they would have a YPLL of 64 ($65-1=64$). If someone died at age 64, they would have one YPLL ($65-64=1$). Therefore, YPLL is strongly affected by the age at which a person died, and so causes for which people tend to die very young will contribute a large amount of YPLL. For a population, the total YPLL is determined by adding together all the YPLL for all people in the population. YPLL is just one method of measuring the impact of early death.



Kwalihó·ta



SECTION 1: DEMOGRAPHICS

This section details demographic information for American Indian/Alaska Native elders in Michigan, Minnesota, and Wisconsin. Demographics describe the socioeconomic characteristics of a population, and these factors aid in understanding the social issues that impact the health of populations. Because some segments of the population are more vulnerable to certain health conditions, understanding the demographics of a community can also provide insight into risks and potential prevention activities.

LIFE EXPECTANCY

As calculated by the IHS, American Indian/Alaska Natives have a lower life expectancy than many others in the nation. For the years 2007-2009, life expectancy at birth for American Indian/Alaska Natives nationwide was 73.7 years, compared to 78.1 for all races nationally. In the Bemidji Area, the life expectancy for American Indian/Alaska Natives was 70.6 years—only three IHS areas had lower life expectancies.¹⁵

For individuals who were aged 60 to 64, American Indian/Alaska Natives in the Bemidji Area were estimated to have the fewest years of life remaining of all IHS areas; they could expect to live another 19.3 years on average. Nationally, American Indian/Alaska Natives could expect to live 22.6 more years, and across all races nationwide, people in this age group had 21.5 years of life remaining.¹⁵

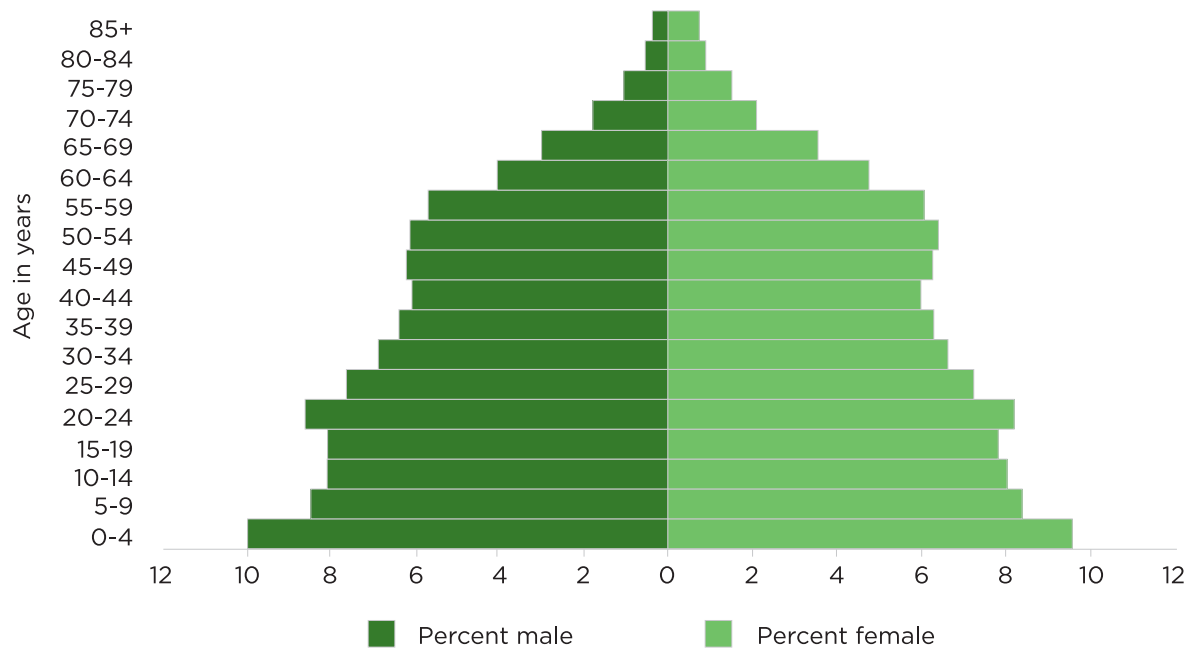
AGE

The American Indian/Alaska Native populations are younger in each of the three states and the three-state area combined than the all-races populations. As seen in Figures 1.1 and 1.2, the age pyramid for American Indian/Alaska Natives has a much wider base and a narrower top than the all-races age pyramid, visually representing how fewer American Indian/Alaska Natives are in their elder years. In addition, as seen in Map 1.1 and 1.2, the same pattern can be seen nationally—for many states across the country, a much higher percentage of the all-races population than the American Indian/Alaska Native population were age 55 or older in 2015. Two things contribute to this younger population: the lower life expectancy and the higher birth rate for American Indian/Alaska Natives. Together, these two factors contribute to a smaller proportion of elders.

In Michigan, Minnesota, and Wisconsin combined, American Indian/Alaska Natives over age 55 made up 19% of the population, while 28% were above age 55 in the general population in 2015 (Figure 1.3, Table 1.4). Among the very oldest individuals, those over 85 years old, the proportion within the respective total populations were over four times higher for all races than for American Indian/Alaska Natives. This disparity was most notable in Minnesota, where the proportion of people 85 or older was over six times greater for all races than American Indian/Alaska Natives. In the three states combined, there were only 772 American Indian/Alaska Native elders 85 years old or older.

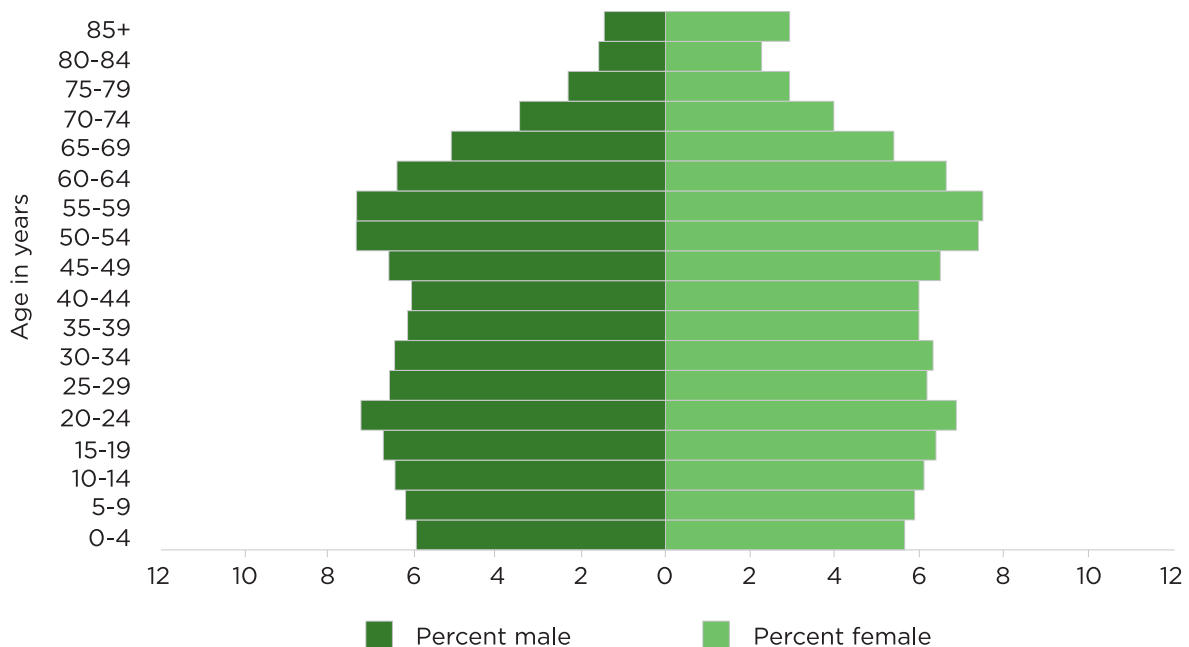


Figure 1.1: Age and Sex Distribution of American Indian/Alaska Natives, Michigan, Minnesota, and Wisconsin Combined, by Percent, 2015¹



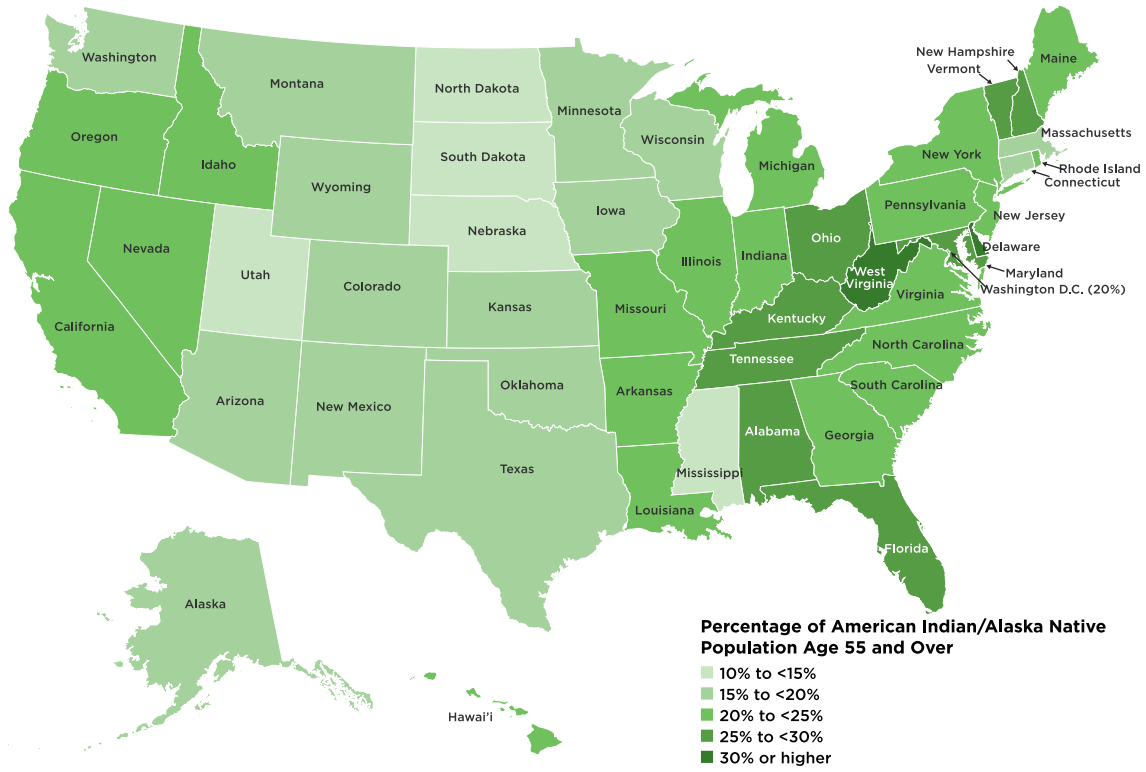
¹Race Alone, Inter-Censal Estimates, U.S. Census Bureau Annual State Resident Population Estimates for 6 Race Groups (5 Race Alone Groups and Two or More Races) by Age, Sex, and Hispanic Origin: April 1, 2010 to July 1, 2016

Figure 1.2: Age and Sex Distribution of All Races, Michigan, Minnesota, and Wisconsin Combined, by Percent, 2015¹



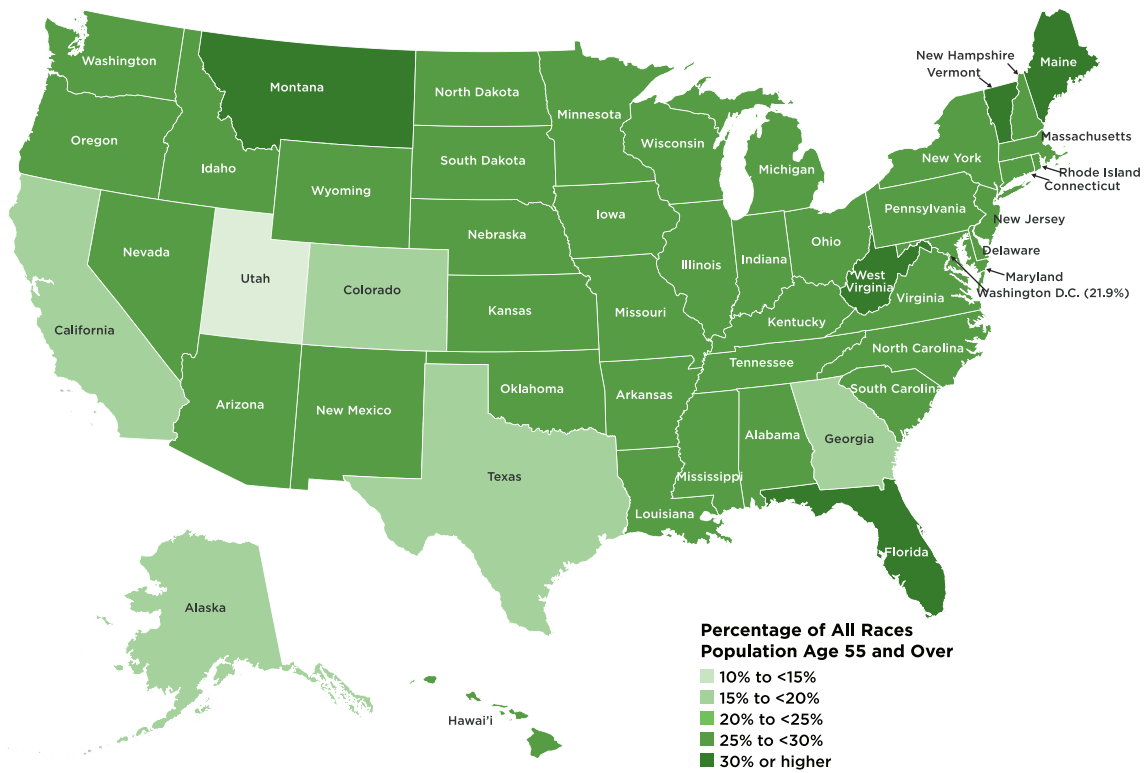
¹Race Alone, Inter-Censal Estimates, U.S. Census Bureau Annual State Resident Population Estimates for 6 Race Groups (5 Race Alone Groups and Two or More Races) by Age, Sex, and Hispanic Origin: April 1, 2010 to July 1, 2016

Map 1.1: Percent of Population Age 55 or Older, American Indian/Alaska Natives, United States, 2015



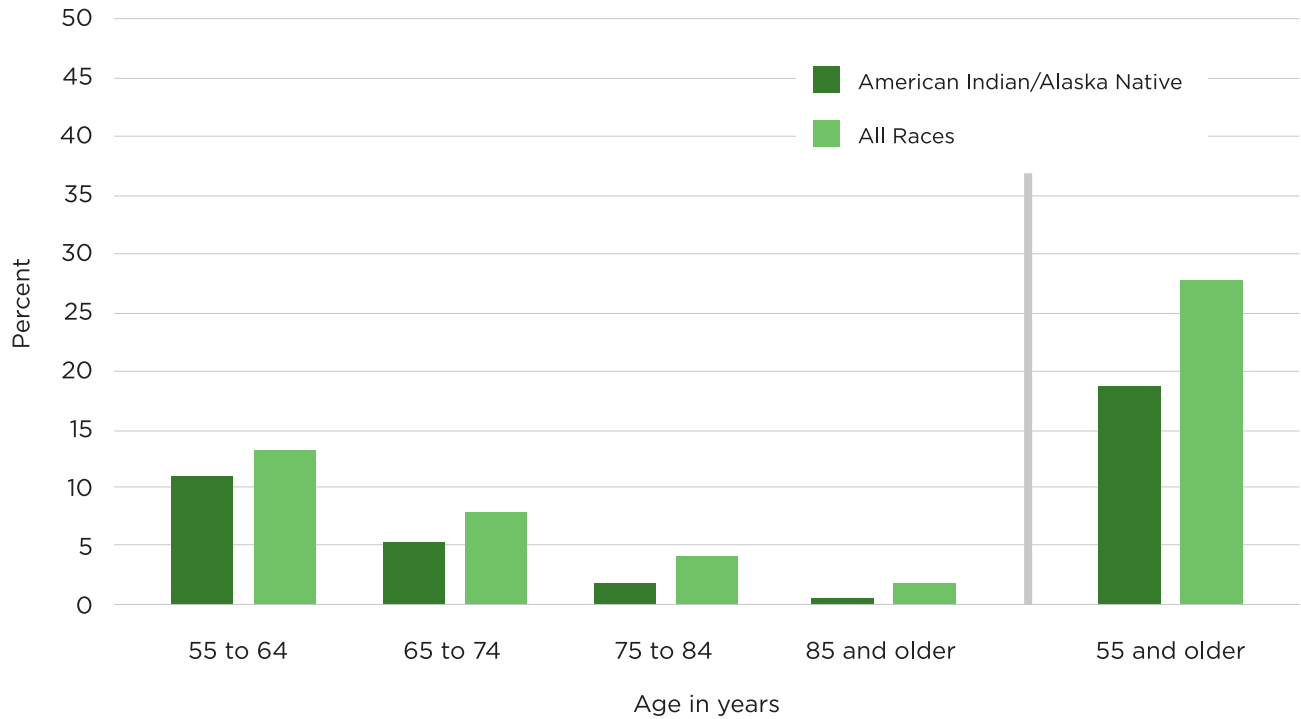
Base map © Free Vector Maps.com, modifications by Great Lakes Inter-Tribal Council, Inc.

Map 1.2: Percent of Population Age 55 or Older, All Races, United States, 2015



Base map © Free Vector Maps.com, modifications by Great Lakes Inter-Tribal Council, Inc.

Figure 1.3: Age Distribution of American Indian/Alaska Natives¹ and All Races² Aged 55 Years and Older, Michigan, Minnesota, and Wisconsin Combined, 2015



¹ACS B01001C 5-year estimates; ²ACS B01001 5-year estimates

Table 1.1: Age Distribution of American Indian/Alaska Natives and All Races Aged 55 Years and Older, Michigan, 2015

	American Indian/Alaska Natives ¹		All Races ²	
	Number ³	Percent ³	Number ³	Percent ³
Younger than 55 years	42,256	78.32	7,071,533	71.43
55 years and older	11,695	21.68	2,829,038	28.57
55 to 64 years	6,744	12.50	1,346,173	13.60
65 to 74 years	3,420	6.34	831,394	8.40
75 to 84 years	1,242	2.30	449,692	4.54
85 years and older	289	0.54	201,779	2.04
Total population	53,951	100.00	9,900,571	100.00

¹ACS B01001C 5-year estimates; ²ACS B01001 5-year estimates; ³Values in the number and percent columns do not sum to the total population

Table 1.2: Age Distribution of American Indian/Alaska Natives and All Races Aged 55 Years and Older, Minnesota, 2015

	American Indian/Alaska Natives ¹		All Races ²	
	Number ³	Percent ³	Number ³	Percent ³
Younger than 55 years	47,324	83.67	3,970,272	73.26
55 years and older	9,237	16.33	1,448,899	26.74
55 to 64 years	5,540	9.79	695,370	12.83
65 to 74 years	2,626	4.64	410,949	7.58
75 to 84 years	888	1.57	231,431	4.27
85 years and older	183	0.32	111,149	2.05
Total population	56,561	100.00	5,419,171	100.00

¹ACS B01001C 5-year estimates; ²ACS B01001 5-year estimates; ³Values in the number and percent columns do not sum to the total population

Table 1.3: Age Distribution of American Indian/Alaska Natives and All Races Aged 55 Years and Older, Wisconsin, 2015

	American Indian/Alaska Natives ¹		All Races ²	
	Number ³	Percent ³	Number ³	Percent ³
Younger than 55 years	40,948	81.17	4,128,543	71.90
55 years and older	9,501	18.83	1,613,574	28.10
55 to 64 years	5,562	11.02	765,377	13.33
65 to 74 years	2,626	5.21	461,073	8.03
75 to 84 years	1,013	2.01	263,030	4.58
85 years and older	300	0.59	124,094	2.16
Total population	50,449	100.00	5,742,117	100.00

¹ACS B01001C 5-year estimates; ²ACS B01001 5-year estimates; ³Values in the number and percent columns do not sum to the total population

Table 1.4: Ages of American Indian/Alaska Natives and All Races Aged 55 Years and Older, Michigan, Minnesota, and Wisconsin Combined, 2015

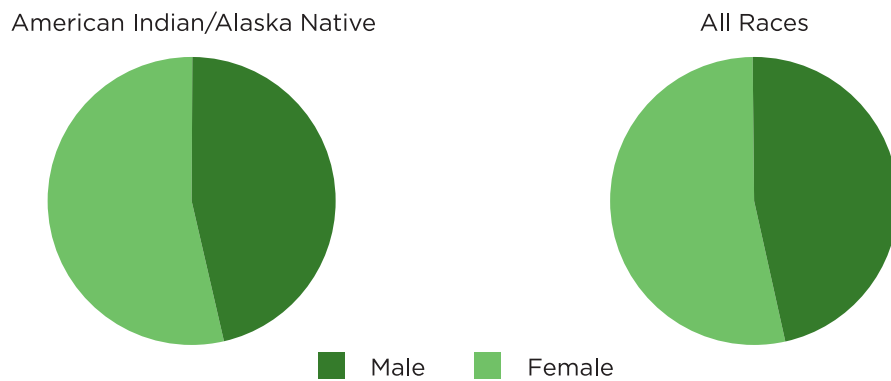
	American Indian/Alaska Natives ¹		All Races ²	
	Number ³	Percent ³	Number ³	Percent ³
Younger than 55 years	130,528	81.09	15,170,348	72.03
55 years and older	30,433	18.91	5,891,511	27.97
55 to 64 years	17,846	11.09	2,806,920	13.33
65 to 74 years	8,672	5.39	1,703,416	8.09
75 to 84 years	3,143	1.95	944,153	4.48
85 years and older	772	0.48	437,022	2.07
Total population	160,961	100.00	21,061,859	100.00

¹ACS B01001C 5-year estimates; ²ACS B01001 5-year estimates; ³Values in the number and percent columns do not sum to the total population

SEX

In Michigan, Minnesota, and Wisconsin combined, in 2015 American Indian/Alaska Native males over age 55 comprised 9% of the total American Indian/Alaska Native population while American Indian/Alaska Native females over 55 made up about 10% of the American Indian/Alaska Native population in the three-state area. Thirteen and 15% of males and females, respectively, of all races were age 55 or older (Figure 1.4, Table 1.5). The same percent (53%) of American Indian/Alaska Native and all races individuals over age 55 were female (Table 1.6).

Figure 1.4: Sex of American Indian/Alaska Natives¹ and All Races² Aged 55 Years and Older, by Percent, Michigan, Minnesota, and Wisconsin Combined, 2015



¹ACS B01001C 5-year estimates; ²ACS B01001 5-year estimates

Table 1.5: Sex of American Indian/Alaska Natives and All Races Aged 55 Years and Older, by Percent of Total Population, Michigan, Minnesota, and Wisconsin Combined, 2015

	American Indian/Alaska Natives ¹		All Races ²	
	Number	Percent of Total Population	Number	Percent of Total Population
55 years and older, male	14,154	8.79	2,740,269	13.01
55 years and older, female	16,279	10.11	3,151,24	14.96
55 years and older, total	30,433	18.91	5,891,511	27.97
Total population	160,961	100.00	21,061,859	100.00

¹ACS B01001C 5-year estimates; ²ACS B01001 5-year estimates

Table 1.6: Sex of American Indian/Alaska Natives and All Races Aged 55 Years and Older, by Percent of Population Age 55 or Older, Michigan, Minnesota, and Wisconsin Combined, 2015

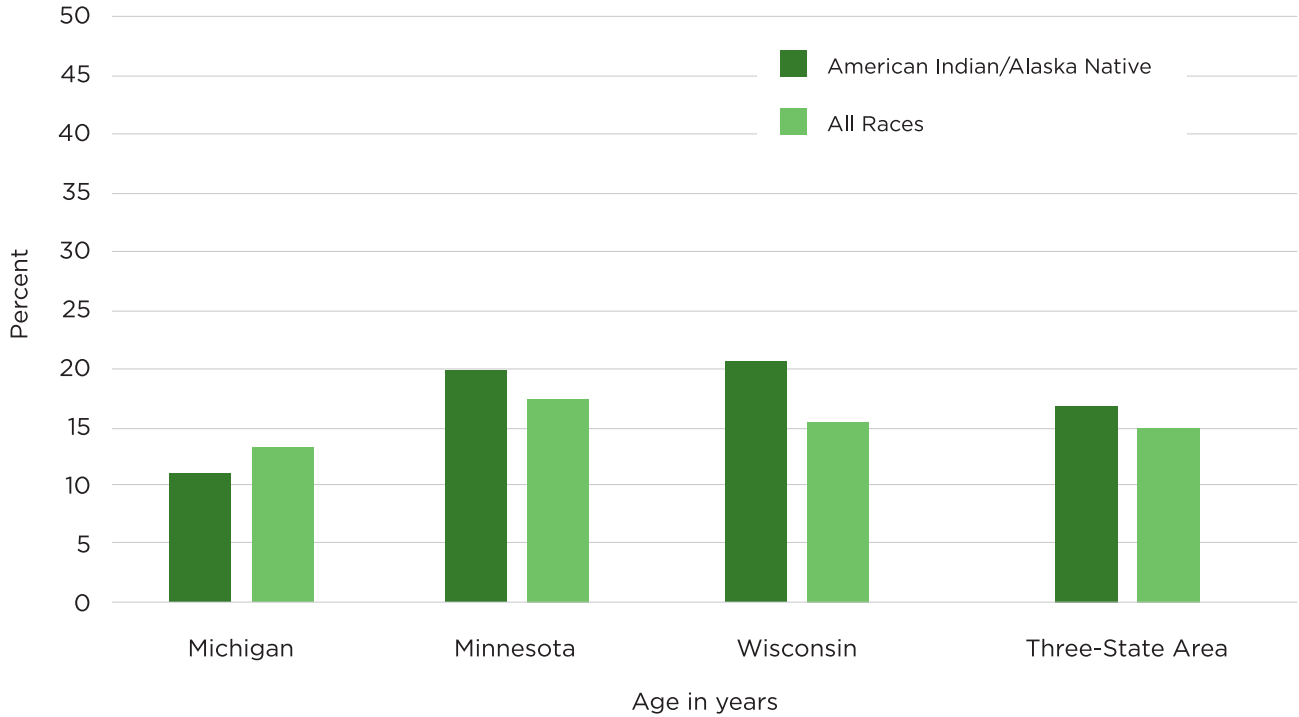
	American Indian/Alaska Natives ¹		All Races ²	
	Number	Percent of Total Population	Number	Percent of Total Population
55 years and older, male	14,154	46.51	2,740,269	46.51
55 years and older, female	16,279	53.49	3,151,242	53.49
Total	30,433	100.00	5,891,511	100.00

¹ACS B01001C 5-year estimates; ²ACS B01001 5-year estimates

EMPLOYMENT

In the three-state area, a slightly higher percent of American Indian/Alaska Natives over age 65 were working in 2015 (17%) as compared to the all races population (15%). This pattern was also seen in Minnesota and Wisconsin, while in Michigan a smaller percent of older American Indian/Alaska Natives than all-races were working (Figure 1.5, Table 1.7).

Figure 1.5: Percent Employed Among American Indian/Alaska Natives¹ and All Races² Aged 65 and Older, Michigan, Minnesota, and Wisconsin, 2015



¹ACS B23002C 5-year estimates; ²ACS B23001 5-year estimates

Table 1.7: Percent Employed Among American Indian/Alaska Natives and All Races Aged 65 and Older, Michigan, Minnesota, Wisconsin, and the Three-State Area, 2015

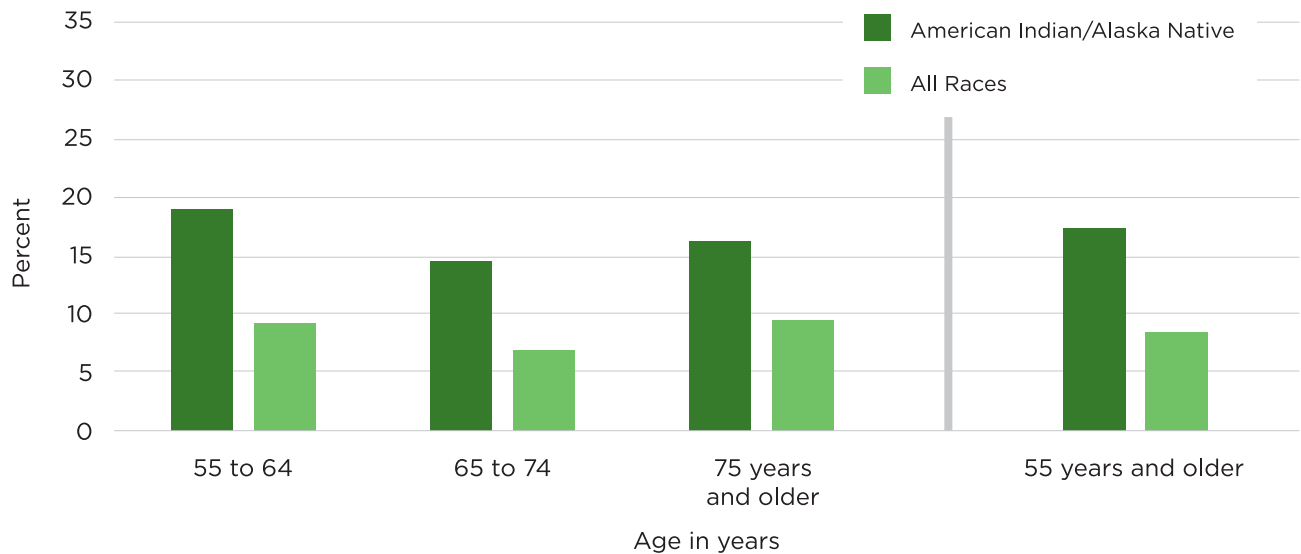
	American Indian/Alaska Natives ¹		All Races ²	
	Number	Percent	Number	Percent
Michigan	571	11.53	211,297	13.45
Minnesota	740	20.02	140,942	17.51
Wisconsin	815	20.69	141,413	15.70
Three-State Area	2,126	16.89	493,652	15.07

¹ACS B01001C 5-year estimates; ²ACS B01001 5-year estimates

POVERTY

Within Michigan, Minnesota, Wisconsin, and the three-state area, American Indian/Alaska Natives aged 55 or older had higher poverty rates compared to the all-races populations (Figure 1.6, Tables 1.8-1.11). For example, in the three-state area, 17.3% of American Indian/Alaska Natives aged 55 or older lived in poverty while 8.5% of people of all races aged 55 or older lived in poverty. The greatest difference between American Indian/Alaska Natives and all races was for those aged 65 to 74: the percent of American Indian/Alaska Natives elders in this age group in poverty was over twice as high as compared to the all-races population.

Figure 1.6: Percent of American Indian/Alaska Natives¹ and All Races² Age 55 or Older that Earned an Income in the Past 12 Months That Fell Below the Poverty Line, Michigan, Minnesota, and Wisconsin Combined, 2015



¹ACS B17001C 5-year estimates; ²ACS B17001 5-year estimates

Table 1.8: Percent of American Indian/Alaska Natives and All Races Age 55 or Older that Earned an Income in the Past 12 Months that Fell Below the Poverty Line, Michigan, 2015

Age	American Indian/Alaska Natives ¹			All Races ²		
	Number in Poverty	Total Number in Age Group	Percent ³ of Age Group in Poverty	Number in Poverty	Total Number in Age Group	Percent ³ of Age Group in Poverty
55 to 64 years old	1,083	6,593	16.43	144,942	1,337,303	10.84
65 to 74 years old	507	3,333	15.21	63,377	823,175	7.70
75 years and older	267	1,476	18.09	54,253	621,229	8.73
55 years and older, total	1,857	11,402	16.29	262,572	2,781,707	9.44

¹ACS B17001C 5-year estimates; ²ACS B17001 5-year estimates; ³The total number of people in each age group was used as the denominator

Table 1.9: Percent of American Indian/Alaska Natives and All Races Age 55 or Older that Earned an Income in the Past 12 Months that Fell Below the Poverty Line, Minnesota, 2015

Age	American Indian/Alaska Natives ¹			All Races ²		
	Number in Poverty	Total Number in Age Group	Percent ³ of Age Group in Poverty	Number in Poverty	Total Number in Age Group	Percent ³ of Age Group in Poverty
55 to 64 years old	1,263	5,439	23.22	49,934	692,137	7.21
65 to 74 years old	338	2,550	13.25	23,664	406,317	5.82
75 years and older	94	1,000	9.40	31,059	316,812	9.80
55 years and older, total	1,695	8,989	18.86	104,657	1,415,266	7.39

¹ACS B17001C 5-year estimates; ²ACS B17001 5-year estimates; ³The total number of people in each age group was used as the denominator

Table 1.10: Percent of American Indian/Alaska Natives and All Races Age 55 or Older that Earned an Income in the Past 12 Months that Fell Below the Poverty Line, Wisconsin, 2015

Age	American Indian/Alaska Natives ¹			All Races ²		
	Number in Poverty	Total Number in Age Group	Percent ³ of Age Group in Poverty	Number in Poverty	Total Number in Age Group	Percent ³ of Age Group in Poverty
55 to 64 years old	979	5,521	17.73	60,900	760,816	8.00
65 to 74 years old	368	2,549	14.44	27,926	456,472	6.12
75 years and older	229	1,189	19.26	35,186	362,519	9.71
55 years and older, total	1,576	9,259	17.02	124,012	1,579,807	7.85

¹ACS B17001C 5-year estimates; ²ACS B17001 5-year estimates; ³The total number of people in each age group was used as the denominator

Table 1.11: Percent of American Indian/Alaska Natives and All Races Age 55 or Older that Earned an Income in the Past 12 Months that Fell Below the Poverty Line, Michigan, Minnesota, and Wisconsin Combined, 2015

Age	American Indian/Alaska Natives ¹			All Races ²		
	Number in Poverty	Total Number in Age Group	Percent ³ of Age Group in Poverty	Number in Poverty	Total Number in Age Group	Percent ³ of Age Group in Poverty
55 to 64 years old	3,325	17,553	18.94	255,776	2,790,256	9.17
65 to 74 years old	1,213	8,432	14.39	114,967	1,685,964	6.82
75 years and older	590	3,665	16.10	120,498	1,300,560	9.27
55 years and older, total	5,128	29,650	17.30	491,241	5,776,780	8.50

¹ACS B17001C 5-year estimates; ²ACS B17001 5-year estimates; ³The total number of people in each age group was used as the denominator

HOUSING

Housing, as a form of shelter, is a basic human need. In addition to providing physical protection from the natural environment, housing provides a sense of place, identity, and belonging. As the World Health Organization states “the structure, location, facilities, environment, and uses of human shelter have a strong impact on the state of physical, mental, and social well-being.”¹⁶ Various characteristics of housing can have a major influence on health, whether positively or negatively. For example, there is some evidence that residents of single family detached houses have better mental health than residents of high-rise apartments.¹⁷ However, these studies are often criticized for not considering other factors related to these housing types that may be more directly related to the difference in mental health.¹⁷ Overall, there is a need for more quality research investigating the relationship between various housing factors and health, and particularly related to the elderly.

In Michigan, Minnesota, and Wisconsin combined, in 2014-2017 the majority (75%) of American Indian/Alaska Natives identified that they live in a single-family residence, with 13% reporting that they lived in an apartment (Table 1.12).

Table 1.12: Current Housing Type (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in Michigan, Minnesota, Wisconsin, and the Three States Combined, and Among All Races in the United States, 2014-2017¹

	AI/AN in Michigan ²	AI/AN in Minnesota ²	AI/AN in Wisconsin ²	AI/AN in Three-State Area ²	All Races in United States ³
Apartment	13.2	8.7	14.9	13.0	16.3
Health facility	0.5	1.5	0.6	0.8	Not available
Homeless	0.3	1.5	0.4	0.6	Not available
Other	7.7	15.7	8.4	9.7	Not available
Retirement home	0.3	0.7	0.6	0.5	Not available
Single family residence	77.2	71.2	74.6	74.8	82.5
Sleeping room/boarding house	0.7	0.7	0.5	0.6	Not available

¹Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.; ³2003-2006 Centers for Disease Control and Prevention (CDC). National Health and Nutrition Examination Survey Data (NHANES). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

CAREGIVING

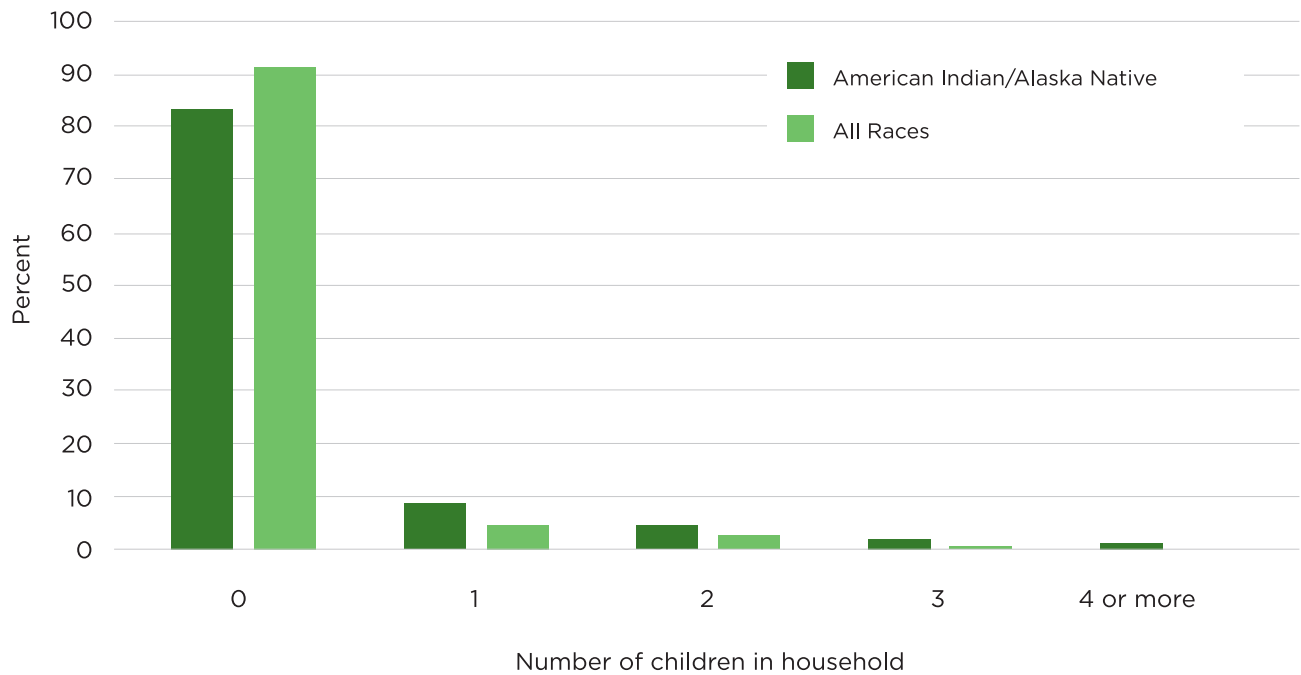
Across many cultures and in the United States overall, many grandparents play an important role in their grandchildren's lives. Often this may include being a part-time caregiver; some grandparents live in the same household as their grandchildren. In some cases, grandparents have taken the responsibility of becoming sole caregivers of their grandchildren because the child's parents may have died; be struggling with mental or physical health problems or substance abuse; be active in the military; or otherwise not be available to care for their child. Many grandparents have reported both negative and positive outcomes from accepting caregiving responsibilities. Overall, it's unclear what the effect of a grandparent raising a grandchild is for either the grandparent or grandchild.^{18,19} For American Indian/Alaska Native people, grandparents traditionally played a major role in childrearing and were recognized as important teachers in a child's life. It is not known what effect this caregiving has on American Indian/Alaska Native grandparents today.

Among American Indian/Alaska Natives and all races in the three-state area, most people age 50 or older did not have any children in their

household. About two out of every 10 American Indian/Alaska Natives in this age group had a child in their household, while about one out of 10 in the all-races population lived with a child (Figure 1.7, Table 1.13). Because of the limits of this data source, it's not possible to determine whether these children were related to the elder or whether the elder was responsible for caring for the children.

However, a different data source indicated that many grandparents who lived with their grandchildren in 2015 were also responsible for caring for them. More American Indian/Alaska Native grandparents were responsible for their grandchildren than all-races grandparents (Figure 1.8, Table 1.14). Among grandparents who were responsible for caring for their grandchildren, differences existed in terms of the age of the grandparent. Among the grandparents who were their grandchildren's caretaker, most were younger grandparents—30 to 59 years old. About 65% of the grandparents who were responsible for their grandchildren belonged in this age group for both American Indian/Alaska Natives and all races in the three-state area (Table 1.18). It was not possible to identify the reasons why they were serving as caretakers for their grandchildren.

Figure 1.7: Number of Children Under Age 18 in a Household for American Indian/Alaska Natives and All Races, 50 Years and Older, Michigan, Minnesota, and Wisconsin Combined, 2011-2013¹



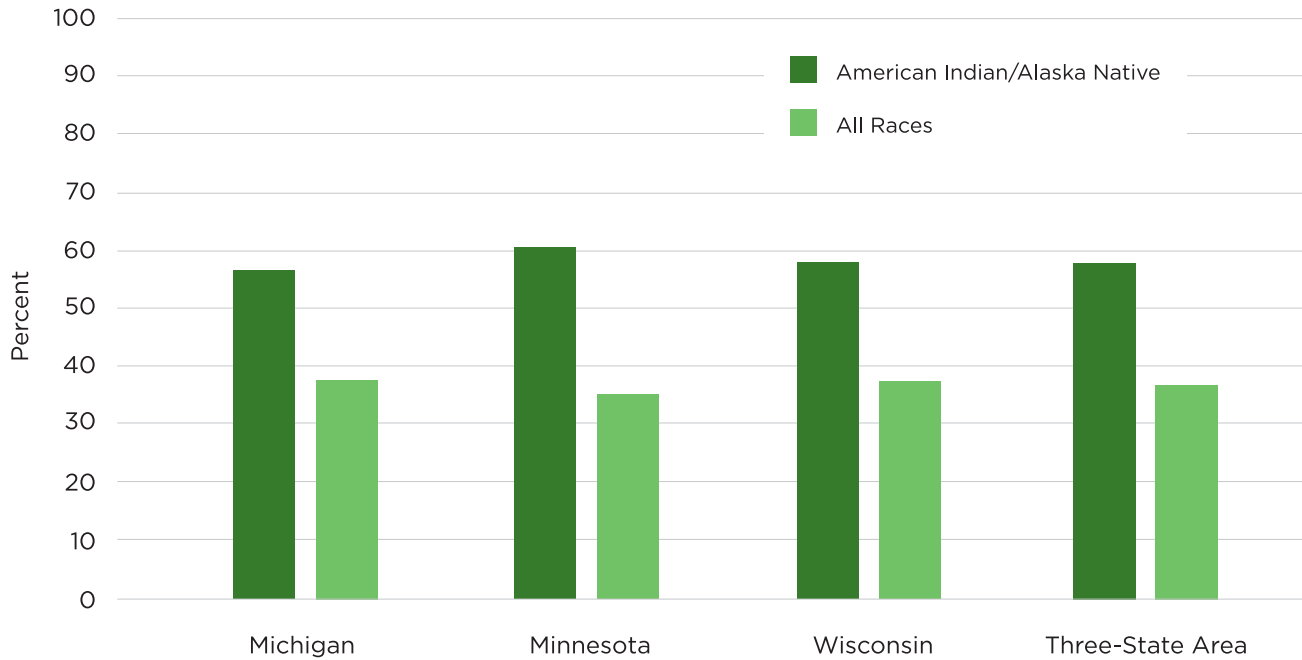
¹BRFSS 2011-2013

Table 1.13: Number of Children Under Age 18 in a Household for American Indian/Alaska Natives and All Races, 50 Years and Older, Michigan, Minnesota, and Wisconsin Combined, 2011-2013¹

Number of Children Under Age 18 in a Household	American Indian/Alaska Natives		All Races	
	Number	Percent	Number	Percent ²
Zero children	613	83.40	53,071	91.58
One child	64	8.71	2,968	5.12
Two children	33	4.49	1,340	2.31
Three children	15	2.04	379	0.65
Four or more children	10	1.36	192	0.33
Total	735	100.00	57,950	100.00

¹BRFSS 2011-2013; ²Due to rounding, total may not equal 100%

Figure 1.8: Percent of American Indian/Alaska Natives¹ and All Races² Grandparents Responsible for Grandchildren Under Age 18 in Michigan, Minnesota, Wisconsin, and Three-State Area, 2015



¹ACS B10051C 5-year estimates; ²ACS B10051 5-year estimates

Table 1.14: Grandparents Responsible for Grandchildren Under Age 18, American Indian/Alaska Native and All Races, Michigan, Minnesota, Wisconsin, and Three-State Area, 2015

	American Indian/Alaska Natives ¹		All Races ²	
	Number	Percent	Number	Percent
Michigan	883	56.49	66,378	37.72
Minnesota	1,280	60.46	23,398	35.10
Wisconsin	1,082	57.86	26,881	37.67
Three-State Area	3,245	58.47	116,657	37.15

¹ACS B10051C 5-year estimates; ²ACS B10051 5-year estimates

Table 1.15: Age Distribution of American Indian/Alaska Native and All Races Grandparents Responsible for Grandchildren Under Age 18, Michigan, 2015

Age	American Indian/Alaska Natives ¹		All Races ²	
	Number	Percent	Number	Percent
30 to 59 years	694	78.60	41,906	63.13
60 years and older	189	21.40	24,472	36.87
Total	883	100.00	66,378	100.00

¹ACS B10051C 5-year estimates; ²ACS B10051 5-year estimates

Table 1.16: Age Distribution of American Indian/Alaska Native and All Races Grandparents Responsible for Grandchildren Under Age 18, Minnesota, 2015

Age	American Indian/Alaska Natives ¹		All Races ²	
	Number	Percent	Number	Percent
30 to 59 years	694	54.22	15,453	66.04
60 years and older	586	45.78	7,945	33.96
Total	1,280	100.00	23,398	100.00

¹ACS B10051C 5-year estimates; ²ACS B10051 5-year estimates

Table 1.17: Age Distribution of American Indian/Alaska Native and All Races Grandparents Responsible for Grandchildren Under Age 18, Wisconsin, 2015

Age	American Indian/Alaska Natives ¹		All Races ²	
	Number	Percent	Number	Percent
30 to 59 years	719	66.45	18,495	68.80
60 years and older	363	33.55	8,386	31.20
Total	1,082	100.00	26,881	100.00

¹ACS B10051C 5-year estimates; ²ACS B10051 5-year estimates

Table 1.18: Age Distribution of American Indian/Alaska Native and All Races Grandparents Responsible for Grandchildren Under Age 18, Michigan, Minnesota, and Wisconsin Combined, 2015

Age	American Indian/Alaska Natives ¹		All Races ²	
	Number	Percent	Number	Percent
30 to 59 years	2,107	64.93	75,854	65.02
60 years and older	1,138	35.07	40,803	34.98
Total	3,245	100.00	116,657	100.00

¹ACS B10051C 5-year estimates; ²ACS B10051 5-year estimates





SECTION 2: HEALTH CARE

When people do not have access to health care services, it negatively affects them directly as well as harms society in general. Those without health insurance are less likely to receive the medical care they need and are more likely to have poor health status or to die early.²⁰ People who do not have health insurance are more likely to only access care in emergency situations when their health may be severely compromised and their care is much more expensive.²¹ This extra cost is often carried by hospitals, the government, and those who do have insurance.²² The Healthy People 2020 goal is for 100% of people to have medical insurance, and for fewer than 4.2% of people to be unable to obtain medical care or to delay medical care.²⁰

Individuals living in rural communities may face unique challenges when accessing health care because of fewer transportation options, long commutes, and limited access to specialists. In addition, Medicare (a federal program that provides insurance for people age 65 or older, as well as certain other groups) pays physicians in rural areas less than their urban counterparts for the same services, increasing the financial challenges associated with keeping health care facilities open in rural communities.²³

Although not insurance, the federal government has an additional responsibility to provide health care to American Indian/Alaska Natives of all ages and it does so through the IHS. Although treaties, statute, and federal doctrine state that the U.S. government has a trust obligation to provide health care to American Indian/Alaska Natives, IHS has continually been allocated too little funding to adequately do so. Further, American Indian/Alaska Native elders often navigate multiple spheres of health care providers (IHS, Tribally-run 638 programs, and off-reservation facilities) along with public insurance systems (Medicare, Medicaid, and state-run programs).²⁴ Navigating one system can make receiving health care a challenge, but navigating multiple systems vastly increases the complexity.

In 2013, on average IHS received only 59% of the funding necessary to cover the calculated full costs. In some areas the level of funding was lower.²⁵ In the Bemidji Area, the funding situation is even worse than in other Areas. In 2010, the most recent year for which data were available, the Bemidji Area received funding to meet just 50% of its need—the lowest among all the Areas. Twenty tribes in the Bemidji Area were funded at less than 45% of need. This can be compared to IHS overall being funded at 56.6% of need in 2010.²⁶ In addition, the funding

received per capita was lower for IHS users compared to many other populations who got federally-funded health care—in 2016, it was less than a third as much as the national per capita health spending, despite the fact that American Indian/Alaska Natives experience numerous health disparities (Figure 2.1).²⁷

In Michigan, Minnesota, and Wisconsin combined, 92% of American Indian/Alaska Natives age 50 or older surveyed through BRFSS surveys in 2011-2013 reported having health care coverage, compared to 94% of the all-races population in this age group (Figure 2.2, Table 2.1). Although a high percentage of American Indian/Alaska Native elders surveyed reported having health care, this percentage does not reflect complete fulfillment of the government's federal responsibility.

In the three-state area, according to *Identifying Our Needs: A Survey of Elders VI*, 86% of elders had received a health check-up in the past year. A slightly smaller percent of the all-races U.S. population (80%) had gotten a check-up in the past year (Table 2.2). Fewer than 2% of American Indian/Alaska Native elders had gone without receiving a check-up for five or more years. "Other" was the most common barrier to medical care that American Indian/Alaska Native elders reported; however, no information was available regarding what constitutes "other." A lack of transportation was the second-most common reason (9%). For the all-races U.S. population, cost was the most common barrier (Figure 2.3, Table 2.3).

Figure 2.1: 2016 IHS Expenditures per Capita and Other Federal Health Care Expenditures per Capita

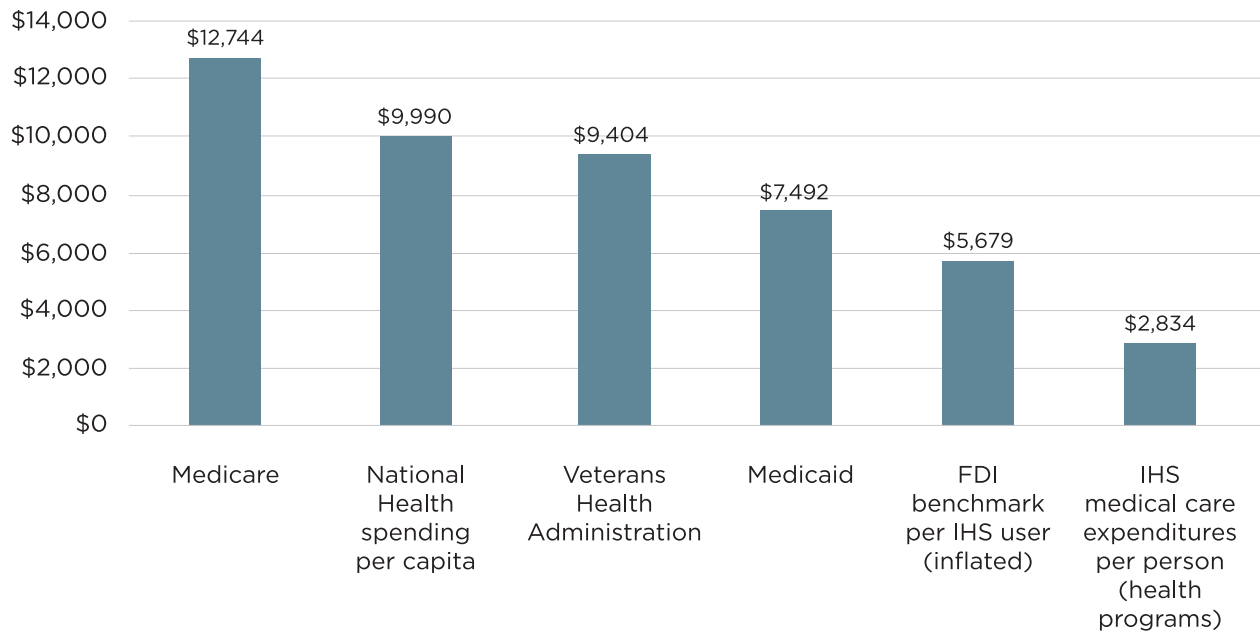
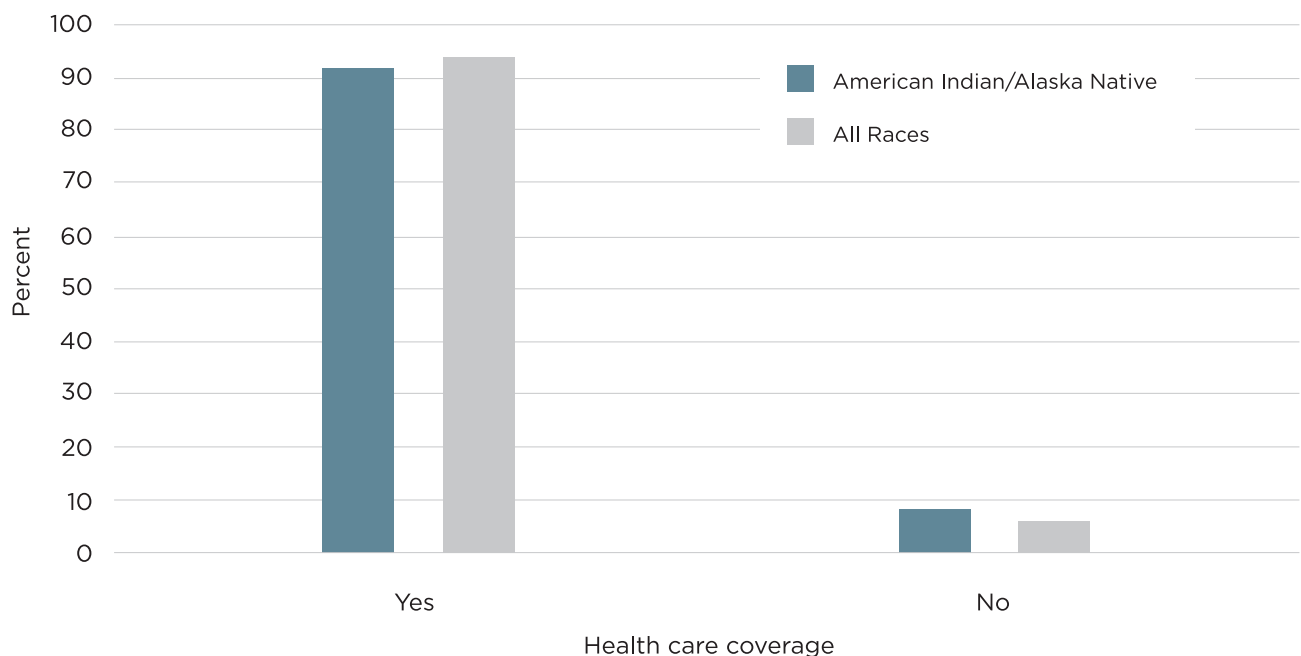


Figure adapted from: Joseph A. Jr., Pratt B., and Azure M.: The National Tribal Budget Formulation Workgroup's Recommendations on the Indian Health Service Fiscal Year 2019 Budget. Honoring the federal trust responsibility: a new partnership to provide quality healthcare to America's first citizens²⁷

Figure 2.2: Health Care Coverage for American Indian/Alaska Natives and All Races, 50 Years and Older, Michigan, Minnesota, and Wisconsin Combined, 2011-2013¹



¹BRFSS 2011-2013

Table 2.1: Health Care Coverage for American Indian/Alaska Natives and All Races, 50 Years and Older, Michigan, Minnesota, and Wisconsin Combined, 2011-2013¹

Coverage	American Indian/Alaska Natives		All Races	
	Number	Percent	Number	Percent
Yes	673	91.94	54,547	94.05
No	59	8.06	3,450	5.95
Total	732	100.00	57,997	100.00

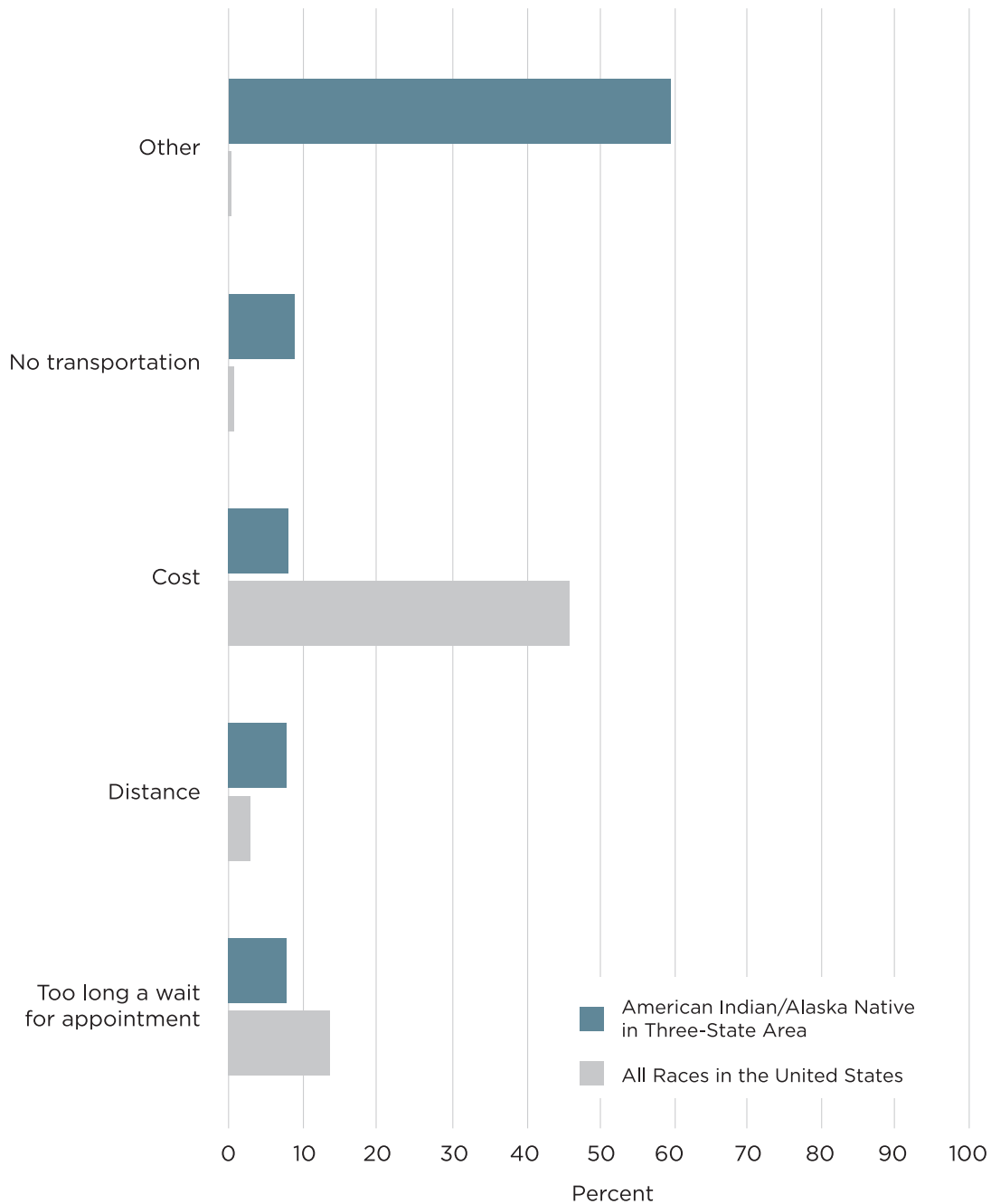
¹BRFSS 2011-2013

Table 2.2: Time Since Last Routine Check-up (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in Michigan, Minnesota, Wisconsin, and the Three States Combined, and Among All Races in the United States, 2014-2017¹

	AI/AN in Michigan ²	AI/AN in Minnesota ²	AI/AN in Wisconsin ²	AI/AN in Three-State Area ²	All Races in United States ³
Never had a check-up	0.7	1.6	0.9	1.0	0.7
Within the past year	88.3	87.7	83.8	86.2	79.9
Within the past 2 years	5.9	5.5	9.5	7.3	8.9
Within the past 3 years	2.6	1.9	3.0	2.6	Not available
Within the past 5 years	1.0	1.8	1.0	1.2	4.5
5 or more years ago	1.6	1.6	1.7	1.7	4.8

¹Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.; ³2006 Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data (BRFSS). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

Figure 2.3: Barriers to Medical Care in Past 12 Months (Top Five, by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in the Three States Combined,^{1,2} and Among All Races in the in the United States,³ 2014-2017



¹Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.; ³2002 Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data (BRFFS). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

Table 2.3: Barriers to Medical Care in Past 12 Months (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in Michigan, Minnesota, Wisconsin, and the Three States Combined, and Among All Races in the United States, 2014-2017¹

	AI/AN in Michigan ²	AI/AN in Minnesota ²	AI/AN in Wisconsin ²	AI/AN in Three-State Area ²	All Races in United States ³
Cost	11.5	8.0	5.0	7.9	46.0
Distance	8.2	10.1	6.4	7.9	2.8
No access for people with disabilities	0.2	0.0	0.2	0.1	24.8
No child care	0.3	0.5	0.3	0.3	0.1
No one spoke my language	0.2	0.2	0.2	0.2	1.4
No transportation	7.5	12.0	8.7	9.0	0.6
Office wasn't open when I could get there	4.4	2.7	3.1	3.5	6.7
Other	56.9	53.6	64.9	59.6	0.2
Too long a wait for appointment	5.7	10.3	8.2	7.8	13.8
Too long a wait in waiting room	4.0	7.2	3.9	4.6	3.5

¹Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota. ³2002 Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data (BRFFS). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.



SECTION 3: HEALTH STATUS

Many American Indian/Alaska Native communities have a different framework for understanding health than does the general U.S. population. In the U.S. overall, good health is frequently thought of as the absence of disease, with a focus on physical health. For many Indigenous cultures, good health occurs when there is balance between physical, mental, emotional, and spiritual wellbeing. A medicine wheel may be used to symbolize and emphasize the notion that health is holistic and interconnected: when one aspect is out of balance, the overall wellbeing of a person is affected. The conceptual framework of the medicine wheel is culturally-grounded and scientific research has supported some of its tenets.²⁸ Because most data collection efforts in North America are developed using a Western worldview, most data relate to physical health. This section discusses a few indicators related to emotional/mental health in addition to physical wellbeing.

Self-assessed general health status is considered a useful indicator of a person's overall health. Studies have shown a good association between an individual's perceived health and their mortality across many populations.²⁹ Self-reported health status is also associated with objective measures of health status like laboratory tests.³⁰

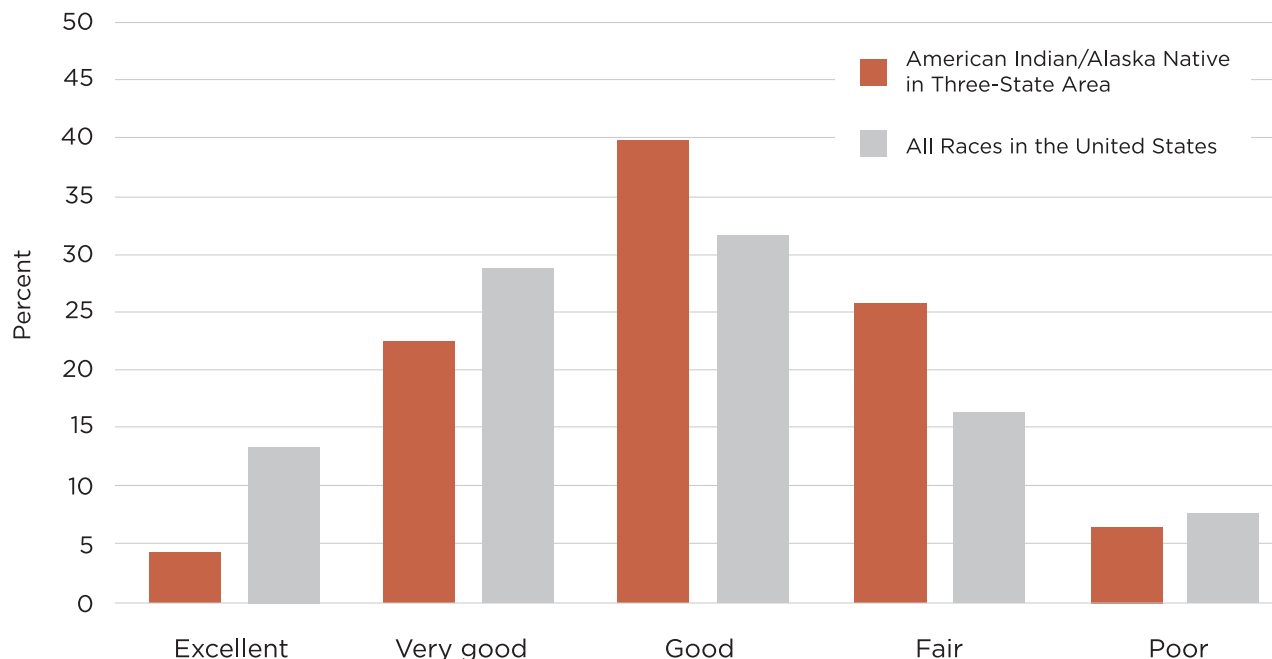
In the U.S., 43% of the all-races population aged 55 or older reported that their health was either "excellent" or "very good." In comparison, 27% of American Indian/Alaska Natives in this age group within the three-state area identified their health as being "excellent" or "very good." About 7% of American Indian/Alaska Native elders perceived their health as being "poor," similar to what was reported by older people of all races (8%) (Figure 3.1, Table 3.1).

Most American Indian/Alaska Native elders in the three-state area (74%) indicated that they did not have difficulty seeing (with or without the use of corrective lenses); this was similar to the all-races population nation-wide (Figure 3.2, Table 3.2). Over 80% of American Indian/Alaska Natives had no difficulty hearing (with or without hearing aids) (Figure 3.3, Table 3.3).

About one-third (36%) of American Indian/Alaska Natives in Michigan, Minnesota, and Wisconsin combined said that they did not need any dental care. Sixty percent of all races nationally reported not needing dental care. For American Indian/Alaska Natives that did need dental care, the type of dental care that the greatest percent of elders said they needed was getting teeth pulled or replaced (fillings, crowns, and/or bridges). This was also the greatest dental need expressed by the U.S. all-races population (Figure 3.4, Table 3.4).

When asked if they were limited in any activities in any way because of physical, mental, or emotional problems, 44% of American Indian/Alaska Native elders aged 50 or older in Michigan, Minnesota, and Wisconsin reported being limited in activities. Among people of all races who were 50 years old or older, this percentage was about 30% (Figure 3.5, Table 3.5). About one-third of American Indian/Alaska Native elders in the Area reported that due to a health or physical problem lasting at least three months, they had difficulty doing heavy housework (Figure 3.6, Table 3.6). The majority of American Indian/Alaska Native and all races individuals over the age of 50 did not report having a health problem that required the use of special equipment. Among American Indian/Alaska Native elders, 21% reported they needed special equipment for a health problem; this percentage was about 14% among all races (Figure 3.7, Table 3.7).

Figure 3.1: Self-reported Health Status (by Percent) Among American Indian/Alaska Natives Age 55 or Older, in the Three States Combined,^{1,2} and Among All Races in the United States,³ 2014-2017



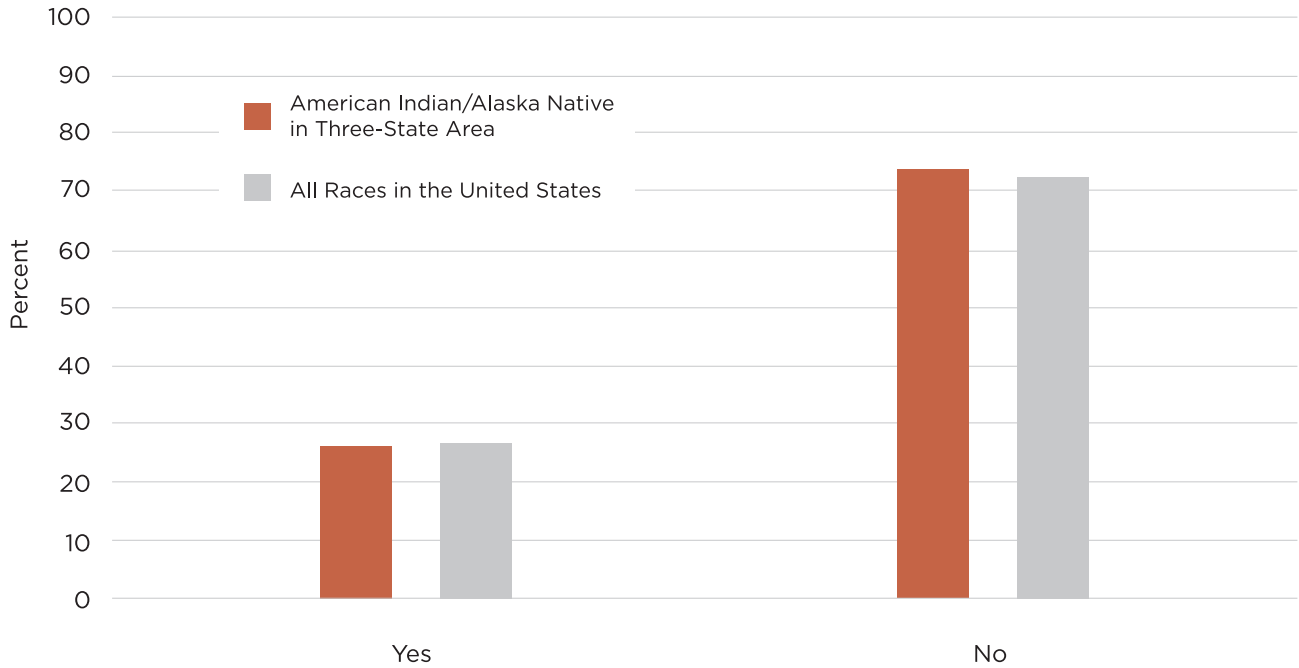
¹Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.; ³2006 Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data (BRFFS). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

Table 3.1: Self-reported Health Status (by Percent) Among American Indian/Alaska Natives Age 55 or Older in Michigan, Minnesota, Wisconsin, and the Three States Combined, and Among All Races in the United States, 2014-2017¹

	AI/AN in Michigan ²	AI/AN in Minnesota ²	AI/AN in Wisconsin ²	AI/AN in Three-State Area ²	All Races in United States ³
Excellent	5.6	3.1	4.3	4.5	13.8
Very good	23.4	20.2	23.5	22.8	29.2
Good	40.1	39.6	40.2	40.0	32.0
Fair	25.2	29.9	24.8	26.0	16.8
Poor	5.7	7.3	7.2	6.7	7.8

¹Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota. ³2006 Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data (BRFFS). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

Figure 3.2: Difficulty Seeing in One or Both Eyes (Even with Glasses or Contact Lenses) (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in the Three States Combined,^{1,2} and Among All Races in the United States,³ 2014-2017



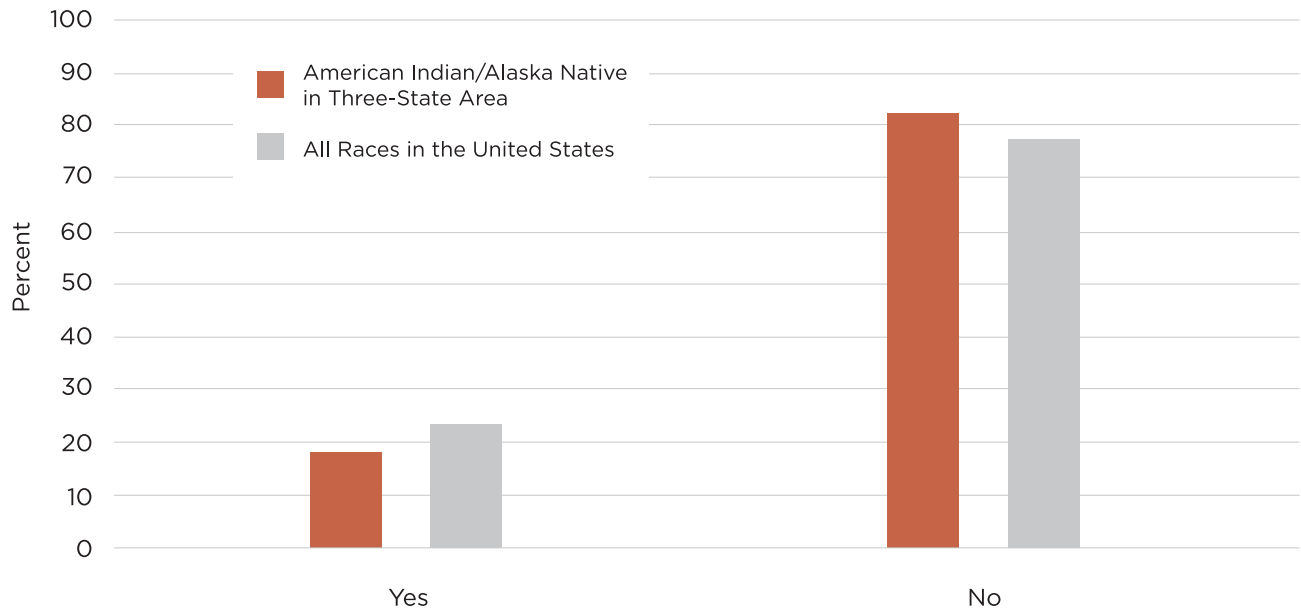
¹Three-State Area survey N=2,723; National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.; ²2003-2006 Centers for Disease Control and Prevention (CDC). National Health and Nutrition Examination Survey Data (NHANES). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

Table 3.2: Difficulty Seeing in One or Both Eyes (Even with Glasses or Contact Lenses) Among American Indian/Alaska Natives, Age 55 or Older, in Michigan, Minnesota, Wisconsin, and the Three States Combined, and Among All Races in the United States, 2014-2017¹

	AI/AN in Michigan ²	AI/AN in Minnesota ²	AI/AN in Wisconsin ²	AI/AN in Three-State Area ²	All Races in United States ³
Yes	27.1	23.3	26.6	26.1	27.0
No	72.9	76.7	73.4	73.9	72.8

¹Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.; ³2003-2006 Centers for Disease Control and Prevention (CDC). National Health and Nutrition Examination Survey Data (NHANES). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

Figure 3.3: Difficulty Hearing (Even with Hearing Aid) (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in the Three States Combined,^{1,2} and Among All Races in the United States,³ 2014-2017



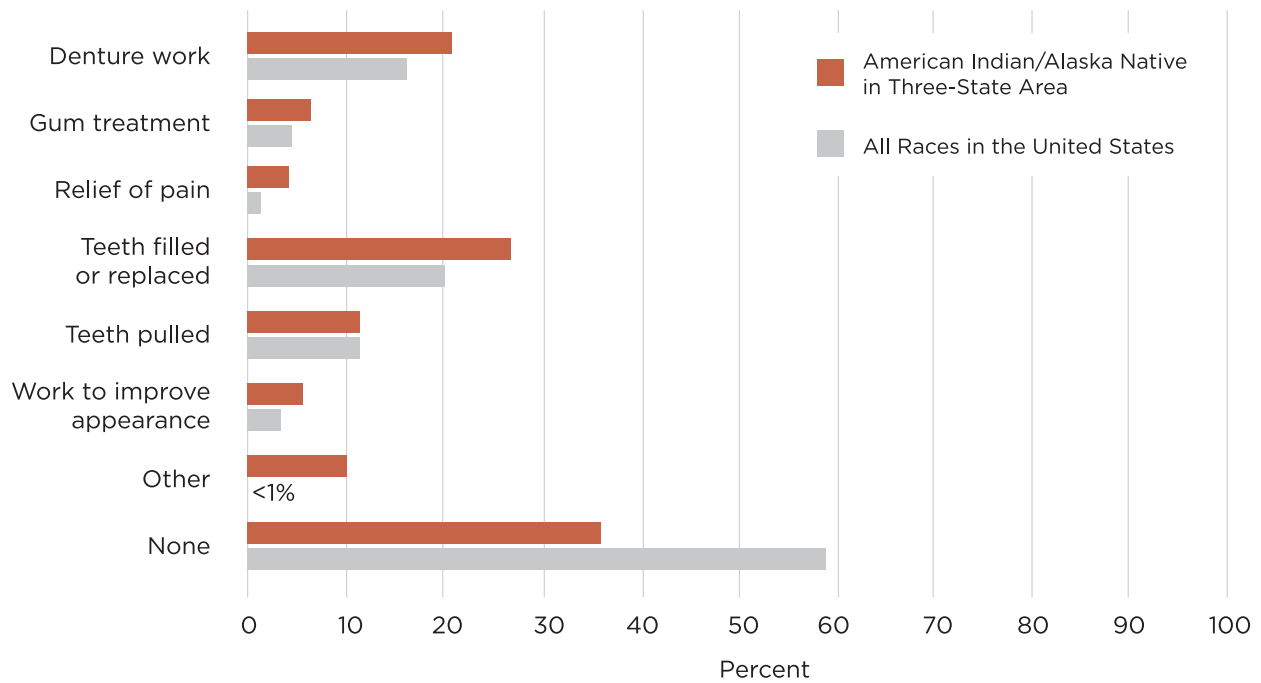
¹Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.; ³1988-1994 Centers for Disease Control and Prevention (CDC). National Health and Nutrition Examination Survey Data (NHANES III). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

Table 3.3: Difficulty Hearing (Even with Hearing Aid) Among American Indian/Alaska Natives, Age 55 or Older, in Michigan, Minnesota, Wisconsin, and the Three States Combined, and Among All Races in the United States, 2014-2017¹

	AI/AN in Michigan ²	AI/AN in Minnesota ²	AI/AN in Wisconsin ²	AI/AN in Three-State Area ²	All Races in United States ³
Yes	19.4	16.3	17.1	17.7	23.0
No	80.6	83.7	82.9	82.3	77.0

¹Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.; ³1988-1994 Centers for Disease Control and Prevention (CDC). National Health and Nutrition Examination Survey Data (NHANES III). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

Figure 3.4: Types of Dental Care Needed (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in the Three States Combined,^{1,2} and Among All Races in the United States,³ 2014-2017



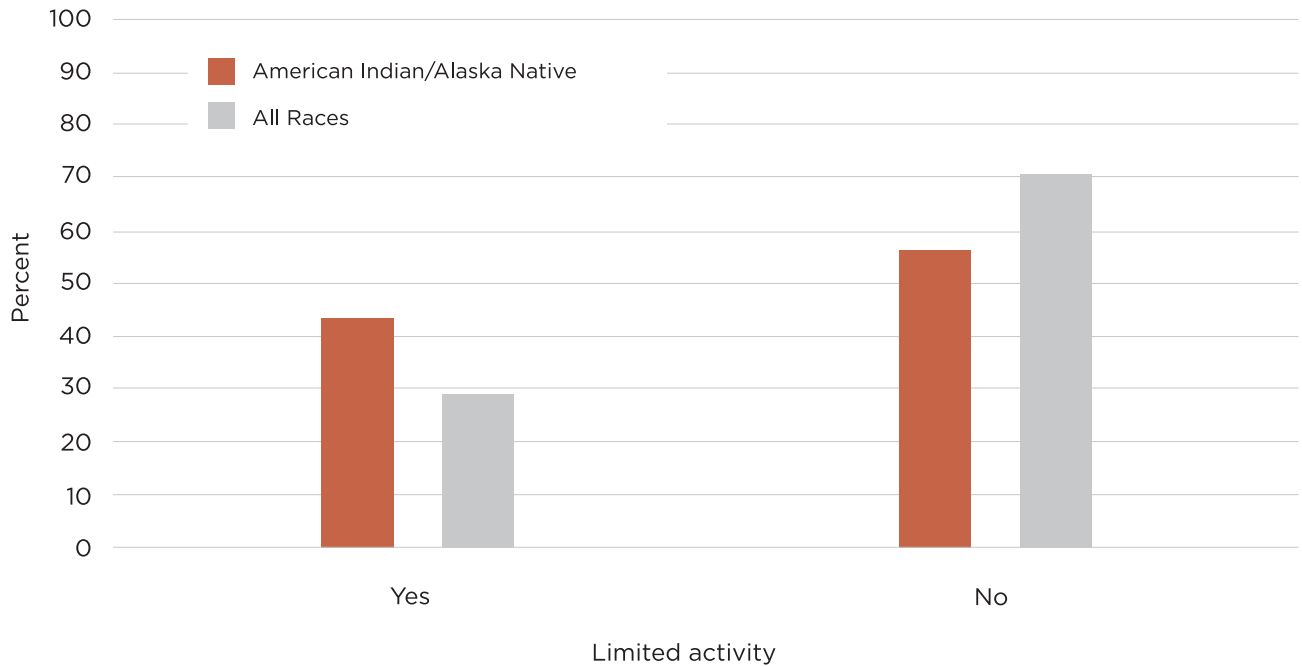
¹Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.; ³1988-1994 Centers for Disease Control and Prevention (CDC). National Health and Nutrition Examination Survey Data (NHANES III). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

Table 3.4: Types of Dental Care Needed (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in Michigan, Minnesota, Wisconsin, and the Three States Combined, and Among All Races in the United States, 2014-2017¹

	AI/AN in Michigan ²	AI/AN in Minnesota ²	AI/AN in Wisconsin ²	AI/AN in Three-State Area ²	All Races in United States ³
Denture work (new dentures)	21.3	23.5	18.3	20.5	16.0
Gum treatment	6.9	6.2	5.2	6.0	4.0
Relief of pain	4.1	4.5	3.2	3.8	1.0
Teeth filled or replaced (for example: fillings, crowns, and/or bridges)	28.2	29.8	23.8	26.7	20.0
Teeth pulled	11.7	14.0	9.2	11.1	11.0
Work to improve appearance (for example: braces or bonding)	5.7	5.7	4.9	5.4	3.0
Other	11.5	7.0	9.8	9.8	<1.0
None	34.3	31.2	39.5	35.9	59.0

¹Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.; ³1988-1994 Centers for Disease Control and Prevention (CDC). National Health and Nutrition Examination Survey Data (NHANES III). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

Figure 3.5: Limited Activity Due to Physical, Mental, or Emotional Problems Among American Indian/Alaska Natives and All Races, Age 50 or Older, Michigan, Minnesota, and Wisconsin Combined, 2011-2013



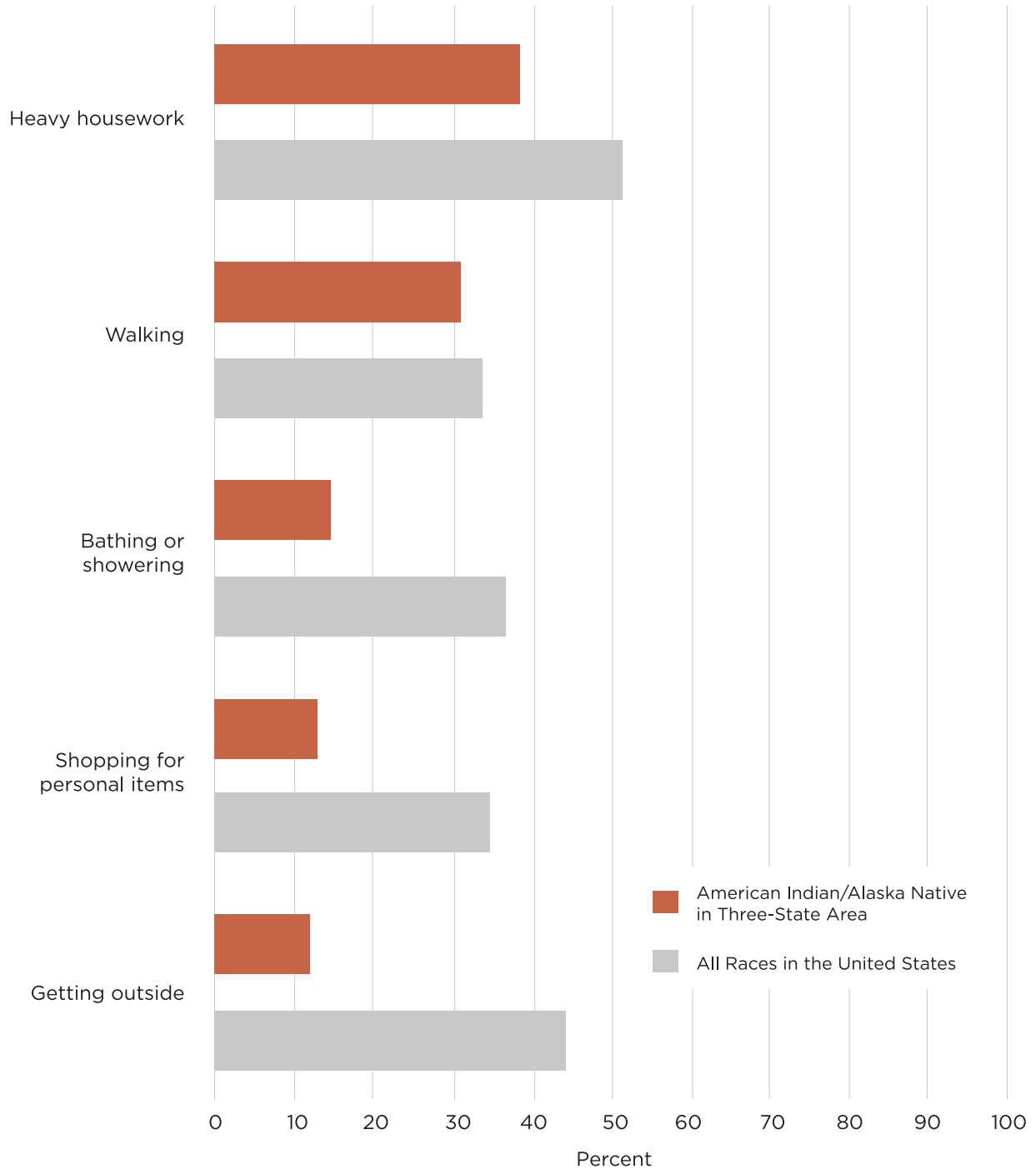
BRFSS 2011-2013

Table 3.5: Limited Activity Due to Physical, Mental, or Emotional Problems Among American Indian/Alaska Natives and All Races, Age 50 or Older, Michigan, Minnesota, and Wisconsin Combined, 2011-2013

Limited Activity	American Indian/Alaska Natives		All Races	
	Number	Percent	Number	Percent
Yes	309	43.71	16,462	29.26
No	398	56.29	39,802	70.74
Total	707	100.00	56,264	100.00

BRFSS 2011-2013

Figure 3.6: Difficulty with Daily Tasks Resulting from a Health or Physical Problem Lasting More than Three Months (Top Five, by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in the Three States Combined,^{1,2} and Among All Races in the United States,³ 2014-2017



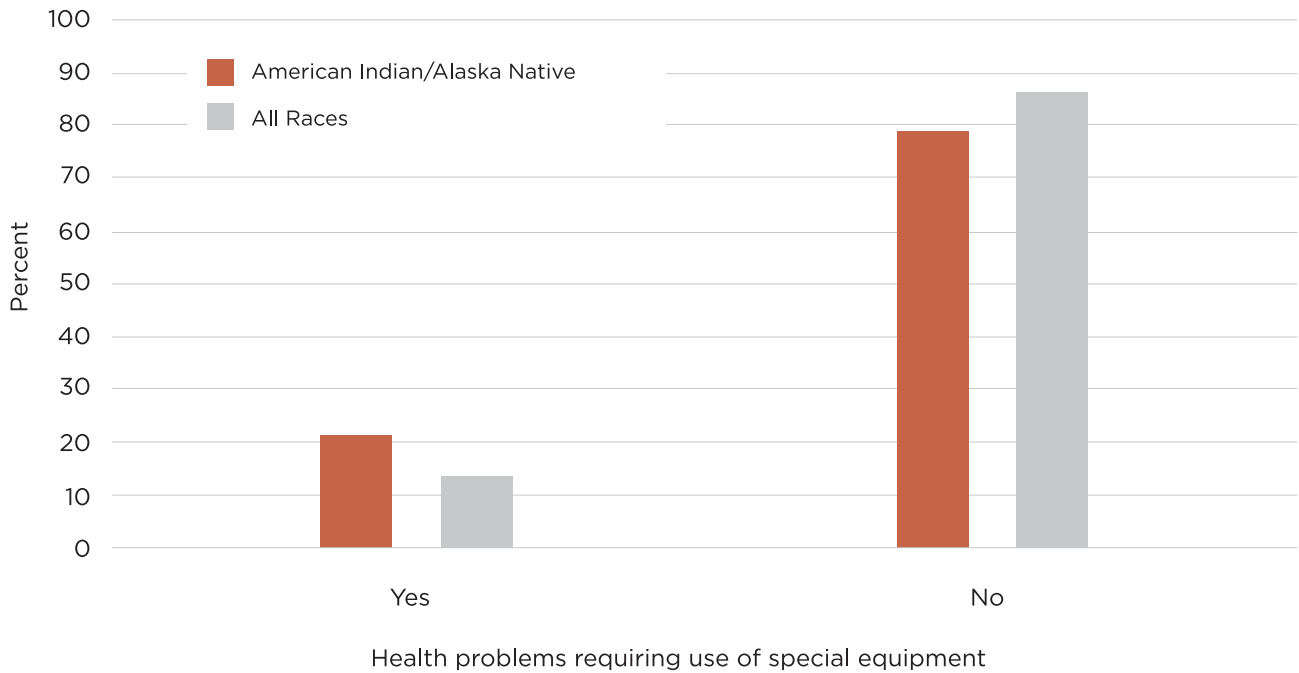
¹Three-State Area survey N=2,723;²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.; ³1982, 1984, 1989, 1994, 1999 Duke University Center for Demographic Studies. National Long-Term Care Survey (NLTC). Duke University, 2117 Campus Drive, Durham, NC 27708-2003.

Table 3.6: Difficulty with Daily Tasks Resulting from a Health or Physical Problem Lasting More than Three Months Among American Indian/Alaska Natives, Age 55 or Older, in Michigan, Minnesota, Wisconsin, and the Three States Combined, and Among All Races in the United States, 2014-2017¹

	AI/AN in Michigan ²	AI/AN in Minnesota ²	AI/AN in Wisconsin ²	AI/AN in Three-State Area ²	All Races in United States ³
Bathing or showering	13.0	19.2	13.7	14.7	36.8
Doing heavy housework (like scrubbing floors, or washing windows)	34.6	40.9	40.7	38.6	51.6
Doing light housework (like doing dishes, straightening up or light clean up)	14.6	17.8	16.6	16.2	17.0
Dressing	8.3	14.0	10.2	10.4	15.8
Eating	4.2	6.8	4.9	5.1	8.1
Getting in or out of bed	10.0	13.7	10.3	10.9	22.1
Getting outside	10.3	13.7	12.5	12.0	44.2
Preparing your own meals	9.6	15.9	13.2	12.5	19.7
Shopping for personal items (such as toilet items or medicines)	11.8	14.6	12.9	12.9	34.8
Using the telephone	4.3	3.4	2.9	3.5	9.6
Using the toilet, including getting to the toilet	5.6	8.6	6.4	6.6	22.8
Walking	29.8	34.1	30.4	31.0	33.7

¹Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.; ³1982, 1984, 1989, 1994, 1999 Duke University Center for Demographic Studies. National Long-Term Care Survey (NLTCS). Duke University, 2117 Campus Drive, Durham, NC 27708-2003.

Figure 3.7: Health Problems Requiring Use of Special Equipment Among American Indian/Alaska Natives and All Races, Age 50 or Older, Michigan, Minnesota, and Wisconsin Combined, 2011-2013¹



¹BRFSS 2011-2013

Table 3.7: Health Problems Requiring Use of Special Equipment Among American Indian/Alaska Natives and All Races, Age 50 or Older, Michigan, Minnesota, and Wisconsin Combined, 2011-2013¹

Health Problems Requiring Equipment	American Indian/Alaska Natives		All Races	
	Number	Percent	Number	Percent
Yes	150	21.16	7,680	13.62
No	559	78.84	48,720	86.38
Total	709	100.00	56,400	100.00

¹BRFSS 2011-2013



MENTAL HEALTH

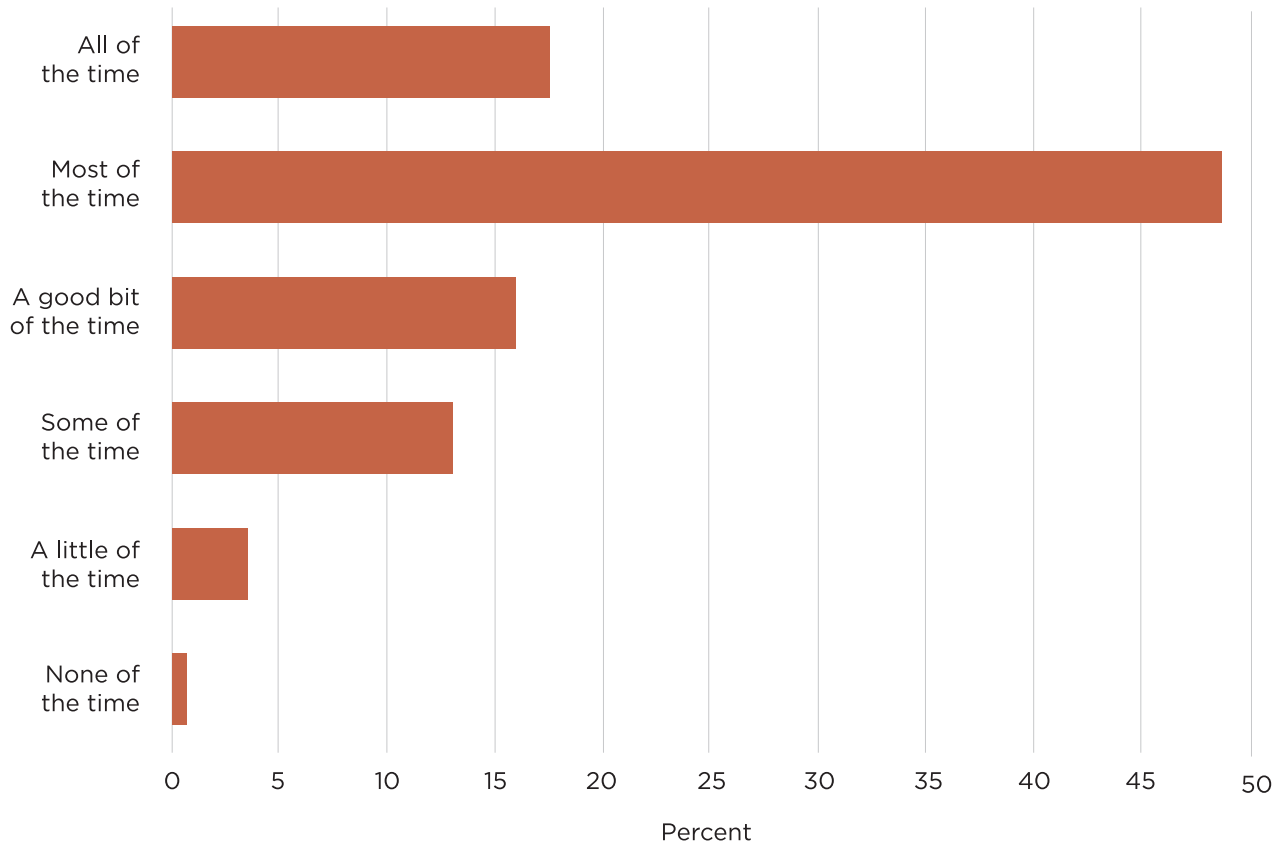
Among older Americans in general, mental health is an important issue. Mental health problems are relatively common—one out of every five Americans over age 55 has some kind of mental health concern. The most common are conditions like anxiety, severe cognitive problems, and mood disorders (like depression).³¹ Most mental health problems are treatable whether through Western and/or Indigenous methods.^{31,32}

When discussing mental health, it is important to acknowledge the historical trauma that many American Indian/Alaska Natives experience. As defined by Maria Yellow Horse Brave Heart, historical trauma is cumulative emotional and psychological wounding, over the lifespan and across generations, emanating from massive

group trauma experiences.³³ This trauma has affected communities in many ways, including by affecting mental health.

Two-thirds of American Indian/Alaska Natives age 55 or older self-reported being “a Happy Person” all the time or most of the time in the past month (Figure 3.8, Table 3.8). The majority (65%) of American Indian/Alaska Natives over age 50 reported having zero days in the past month where their mental health was not good. A greater percentage of the all-races population (74%) reported no days when their mental health was not good, however. Eleven percent of American Indian/Alaska Native elders reported having 16 or more days of poor mental health in the past month, which was nearly twice what was reported by the all-races population (Figure 3.9, Table 3.9).

Figure 3.8: Self-reported Frequency of Being “a Happy Person” in the Past Month (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in the Three States Combined,^{1,2} 2014-2017



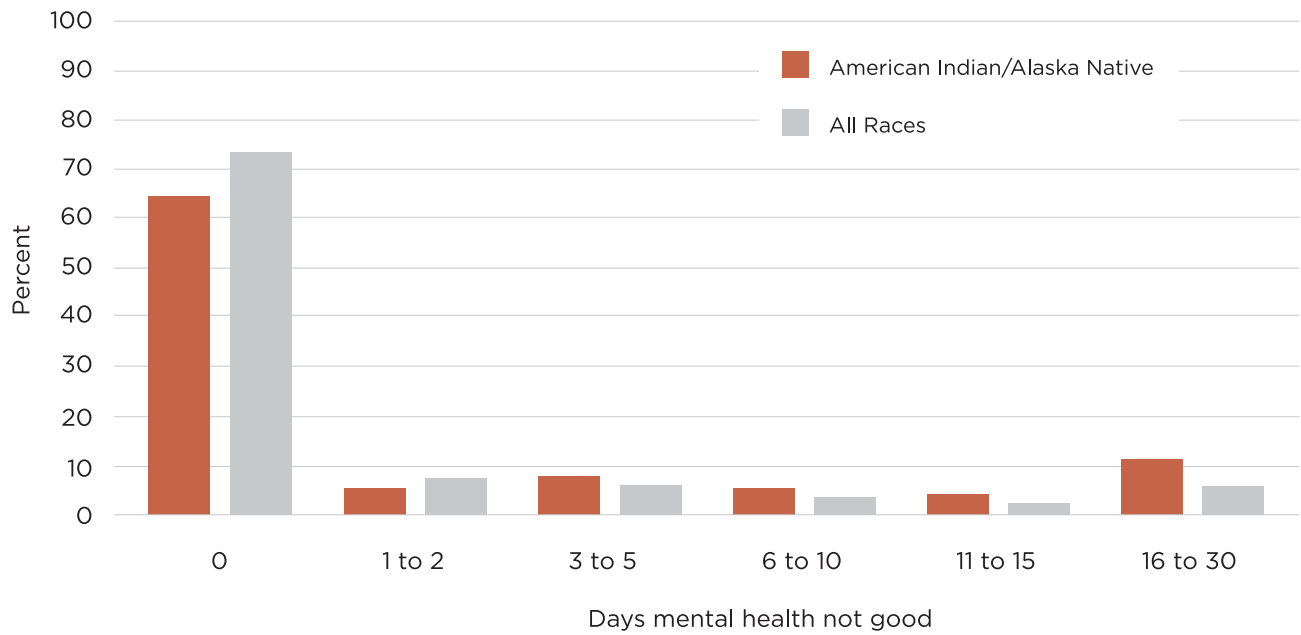
¹Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.

Table 3.8: Self-reported Frequency of Being “a Happy Person” in the Past Month (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in Michigan, Minnesota, Wisconsin, and the Three States Combined, and Among All Races in the United States, 2014-2017¹

	AI/AN in Michigan ²	AI/AN in Minnesota ²	AI/AN in Wisconsin ²	AI/AN in Three-State Area ²	All Races in United States
All of the time	17.9	20.5	16.0	17.6	Not available
Most of the time	50.3	48.4	47.7	48.8	Not available
A good bit of the time	14.8	16.2	16.8	16.0	Not available
Some of the time	12.3	11.5	14.7	13.2	Not available
A little of the time	3.8	2.9	3.9	3.6	Not available
None of the time	1.0	0.5	0.9	0.8	Not available

¹Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.

Figure 3.9: Days during the Past Month where Mental Health Was Not Good Among American Indian/Alaska Natives and All Races, Age 50 or Older, Michigan, Minnesota, and Wisconsin Combined, 2011-2013¹



¹BRFSS 2011-2013

Table 3.9: Days during the Past Month where Mental Health Was Not Good Among American Indian/Alaska Natives and All Races, Age 50 or Older, Michigan, Minnesota, and Wisconsin Combined, 2011-2013¹

Number of Days	American Indian/Alaska Natives		All Races	
	Number	Percent	Number	Percent
Zero days	469	65.05	42,189	73.71
1 to 2 days	40	5.55	4,335	7.58
3 to 5 days	58	8.04	3,690	6.45
6 to 10 days	41	5.69	2,055	3.59
11 to 15 days	31	4.30	1,416	2.47
16 to 30 days	82	11.37	3,548	6.20
Total	721	100.00	57,233	100.00

¹BRFSS 2011-2013

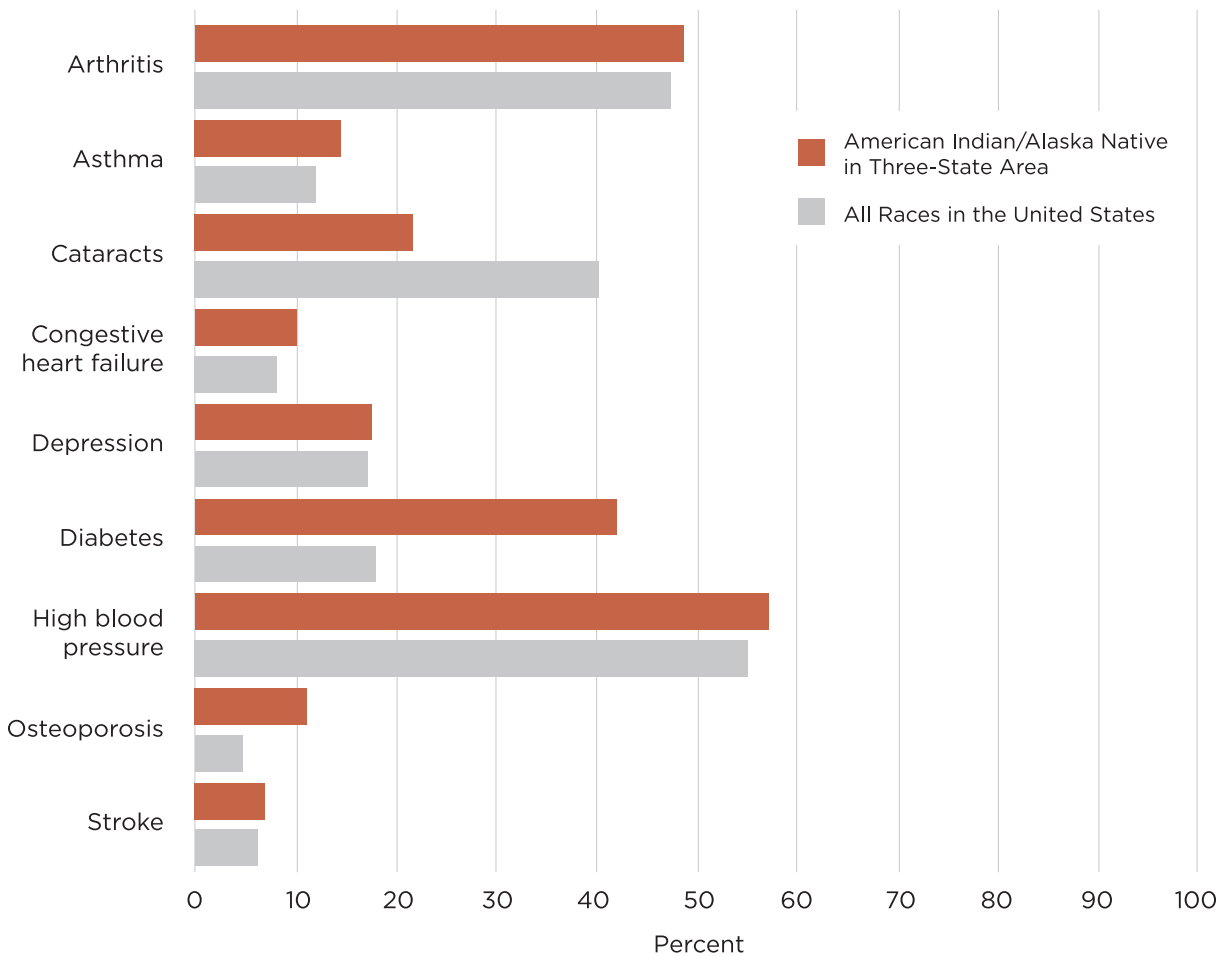
CHRONIC CONDITIONS

This report includes information on the prevalence of conditions which are common in older people: arthritis; asthma; cancer; cataracts; chronic obstructive pulmonary disease, emphysema, or chronic bronchitis; congestive heart failure; depression; diabetes; heart attack; high blood pressure; osteoporosis; and stroke.

Of these 12 conditions, among elders, American Indian/Alaska Natives reported higher rates of diagnosis than all races for 10 of these

conditions (Tables 3.10, 3.12, 3.13). American Indian/Alaska Natives reported that they were ever told they had chronic obstructive pulmonary disease, emphysema, or chronic bronchitis at twice the rate of all races in the three-state area (19% and 9%, respectively) (Table 3.12). It was more than twice as high for diabetes (42% for American Indian/Alaska Natives and 18% for all races nationwide), and almost twice as high for heart attack (15% as compared to 8% in the three-state area) (Tables 3.10, 3.13). Arthritis was the most

Figure 3.10: Ever Told Had Selected Disease Diagnosis (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in the Three States Combined,^{1,2} and Among All Races in the United States,^{3,4,5} 2014-2017



¹Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.; ³U.S. arthritis, congestive heart failure, and high blood pressure from: 2003-2006 Centers for Disease Control and Prevention (CDC). National Health and Nutrition Examination Survey Data (NHANES). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.; ⁴U.S. asthma, cataracts, depression, diabetes, and stroke from: 2006 Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data (BRFFS). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.; ⁵U.S. osteoporosis from: 1982, 1984, 1989, 1994, 1999 Duke University Center for Demographic Studies. National Long-Term Care Survey (NLTC). Duke University, 2117 Campus Drive, Durham, NC 27708-2003.

commonly reported of these conditions, with about half of American Indian/Alaska Natives over age 55 reporting ever being told they had arthritis (Table 3.10). Cancer (excluding skin cancer) was the only condition examined for which American Indian/Alaska Natives reported having ever been told they had it less frequently than all races (Table 3.11), although the difference between the two groups was extremely small (12.6% for American Indian/Alaska Natives as compared to 13.2% for all races in the three-state area).

However, data on actual cancer diagnoses (in contrast to the self-reported information above) tells a different story. Incidence refers to new cases of a disease or condition. In Minnesota and Wisconsin, American Indian/Alaska Natives over age 50 had a statistically-significant higher cancer incidence than whites in 2010-2014. In Michigan, the incidence was lower for American Indian/Alaska Natives (Figure 3.11, Table 3.14).

Table 3.10: Ever Told Had Select Diseases (by Percent) Among American Indian/Alaska Natives, Age 55 or Older in Michigan, Minnesota, Wisconsin, and the Three States Combined, and Among All Races in the United States, 2014-2017¹

	AI/AN in Michigan ²	AI/AN in Minnesota ²	AI/AN in Wisconsin ²	AI/AN in Three-State Area ²	All Races in United States
Arthritis	51.4	45.2	48.3	48.7	47.4 ³
Asthma	15.3	12.5	15.1	14.6	12.0 ⁴
Cataracts	23.8	20.5	20.4	21.6	40.2 ⁴
Congestive heart failure	9.1	9.9	10.6	9.9	8.2 ³
Depression	18.1	18.7	16.7	17.6	17.2 ⁴
Diabetes	37.6	40.8	46.3	42.0	18.0 ⁴
High blood pressure	62.0	56.7	53.6	57.2	55.2 ³
Osteoporosis	12.5	9.8	10.2	10.9	4.6 ⁵
Stroke	6.1	7.5	7.1	6.9	6.3 ⁴

¹Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.; ³ 2003-2006 Centers for Disease Control and Prevention (CDC). National Health and Nutrition Examination Survey Data (NHANES). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.; ⁴2006 Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data (BRFSS). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.; ⁵1982, 1984, 1989, 1994, 1999 Duke University Center for Demographic Studies. National Long-Term Care Survey (NLTC). Duke University, 2117 Campus Drive, Durham, NC 27708-2003.

Table 3.11: Ever Told Had Cancer (Other than Skin Cancer) Among American Indian/Alaska Natives and All Races, Age 50 or Older, Michigan, Minnesota, and Wisconsin Combined, 2011-2013¹

	American Indian/Alaska Natives		All Races	
	Number	Percent	Number	Percent
Yes	92	12.57	7,674	13.22
No	640	87.43	50,369	86.78
Total	732	100.00	58,043	100.00

¹BRFSS 2011-2013**Table 3.12:** Ever Told Had Chronic Obstructive Pulmonary Lung Disease (COPD), Emphysema, or Chronic Bronchitis Among American Indian/Alaska Natives and All Races, Age 50 or Older, Michigan, Minnesota, and Wisconsin Combined, 2011-2013¹

	American Indian/Alaska Natives		All Races	
	Number	Percent	Number	Percent
Yes	137	18.72	5,325	9.21
No	595	81.28	52,463	90.79
Total	732	100.00	57,788	100.00

¹BRFSS 2011-2013**Table 3.13:** Ever Told Had a Heart Attack Among American Indian/Alaska Natives and All Races, Age 50 or Older, Michigan, Minnesota, and Wisconsin Combined, 2011-2013¹

	American Indian/Alaska Natives		All Races	
	Number	Percent	Number	Percent
Yes	110	15.11	4,717	8.15
No	618	84.89	53,162	91.85
Total	728	100.00	57,879	100.00

¹BRFSS 2011-2013

Figure 3.11: Age-Adjusted Cancer Incidence (New Cases of Cancer) Rates (per 100,000), Aged 50 Years and Older, Michigan, Minnesota, and Wisconsin, 2010-2014¹



¹statecancerprofiles.cancer.gov

Table 3.14: Age-Adjusted Cancer Incidence (New Cases of Cancer) Rates (per 100,000) and Disparity Ratios, Aged 50 Years and Older, Michigan, Minnesota, and Wisconsin, 2010-2014¹

		Age-Adjusted Incidence Rate ¹	95% Confidence Interval ¹	American Indian/Alaska Native-White Disparity Ratio
Michigan**	AI/AN	1,194.6	1,117.6 - 1,275.4	0.89
	White	1,335.5	1,329.5 - 1,341.5	
	All Races	1,375.2	1,369.5 - 1,380.8	
Minnesota*	AI/AN	1,758.3	1,643.6 - 1,878.9	1.30
	White	1,357.2	1,349.1 - 1,365.3	
	All Races	1,377.1	1,369.1 - 1,385.1	
Wisconsin*	AI/AN	1,604.9	1,496.1 - 1,719.6	1.18
	White	1,363.4	1,355.8 - 1,371.1	
	All Races	1,388.6	1,381.0 - 1,396.1	

¹statecancerprofiles.cancer.gov

*Area in which American Indian/Alaska Native mortality rates were statistically significantly higher than white rate

**Area in which American Indian/Alaska Native mortality rates were statistically significantly lower than white rate

FALLS

Falls in older adults can have serious consequences, including serious injury, loss of independence, or death.³⁴ Falls among older people are more likely to result in a severe injury or death than falls among young people.³⁵ Among adults aged 65 and older, nationally, over half of the unintentional injury deaths were due to falls.³⁶

Most falls are caused by a combination of factors.³⁷ Older people are at higher risk of falls than younger people due to changes in balance, gait, decreased activity levels, more severe chronic conditions, and a higher level of prescription medication use.³⁴ Poor vision, low vitamin D levels, lower body weakness, trouble walking or balancing, foot pain or poor footwear, and use of certain prescription and over the counter medications are factors that may lead to a fall.³⁷ Women are at increased risk of falling

or being injured in a fall, particularly as they age. In addition to elders being at higher risk of experiencing a fall, older people are more likely to have risk factors for fall-related injuries, such as diseases like osteoporosis and decreased muscle strength, power, and balance.³⁸ The environment has a role in falls as well. Dangers in the home, such as broken or uneven stairs, throw rugs, or other things can cause tripping. A lack of handrails by stairs or in bathrooms can make a fall more likely.³⁷ For older adults, falling one time increases the risk of falling again.³⁷

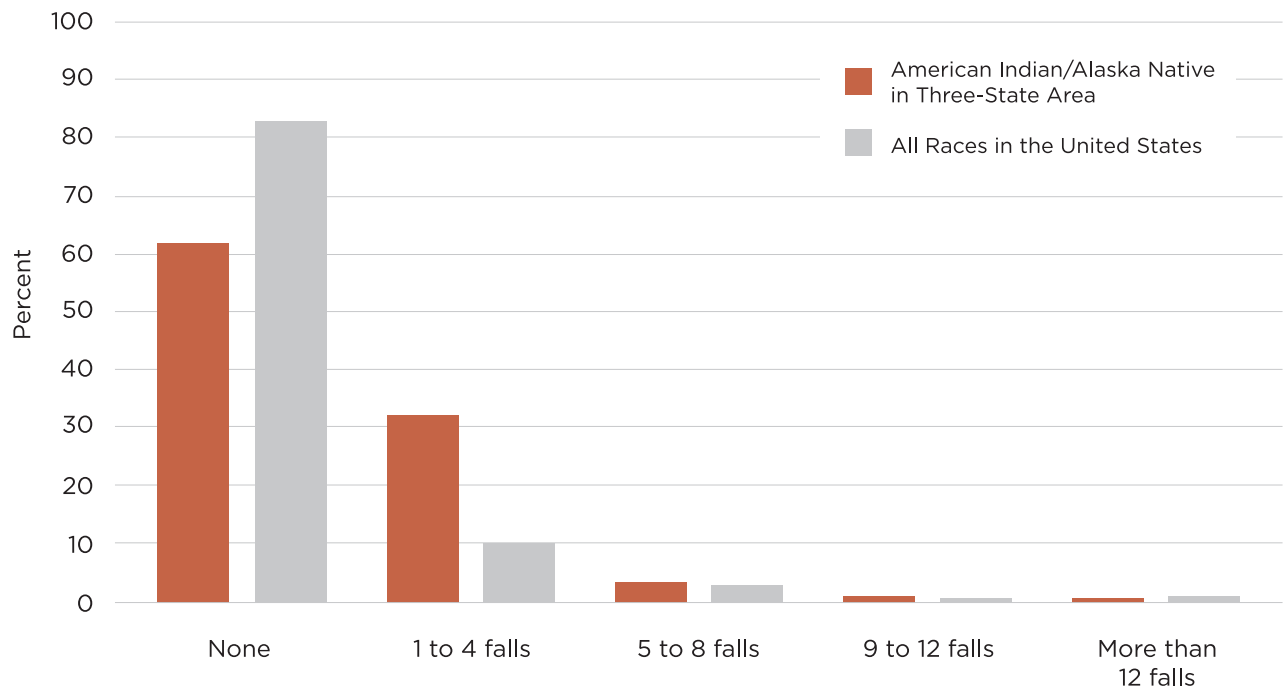
As seen in Figure 3.12 and Table 3.15, in the three-state area 33% of American Indian/Alaska Native elders fell one to four times, while nationally 11% of all race elders fell one to four times. About two-thirds of American Indian/Alaska Native elders (62%) did not fall in the past year, while 5% of three-state American Indian/Alaska Native elders fell more than four times.

Table 3.15: Number of Falls in the Past Year (by Percent) Among American Indian/Alaska Natives, Age 55 or Older in Michigan, Minnesota, Wisconsin, and the Three States Combined, and Among All Races in the United States, 2014-2017¹

	AI/AN in Michigan ²	AI/AN in Minnesota ²	AI/AN in Wisconsin ²	AI/AN in Three-State Area ²	All Races in United States ³
None	62.7	59.7	62.5	62.0	82.9
1 to 4 falls	32.2	33.6	32.5	32.6	10.6
5 to 8 falls	3.7	4.4	3.4	3.7	3.4
9 to 12 falls	1.2	1.4	1.0	1.1	1.2
More than 12 falls	0.2	0.9	0.5	0.5	1.4

¹Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.; ³2006 Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data (BRFFS). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. NOTE: Used item "In the past 3 months, how many times have you fallen?" and fit percentages to ranges based upon multiplying by 4 to determine falls per year.

Figure 3.12: Number of Falls in the Past Year (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in the Three States Combined,^{1,2} and Among All Races in the United States,³ 2014-2017



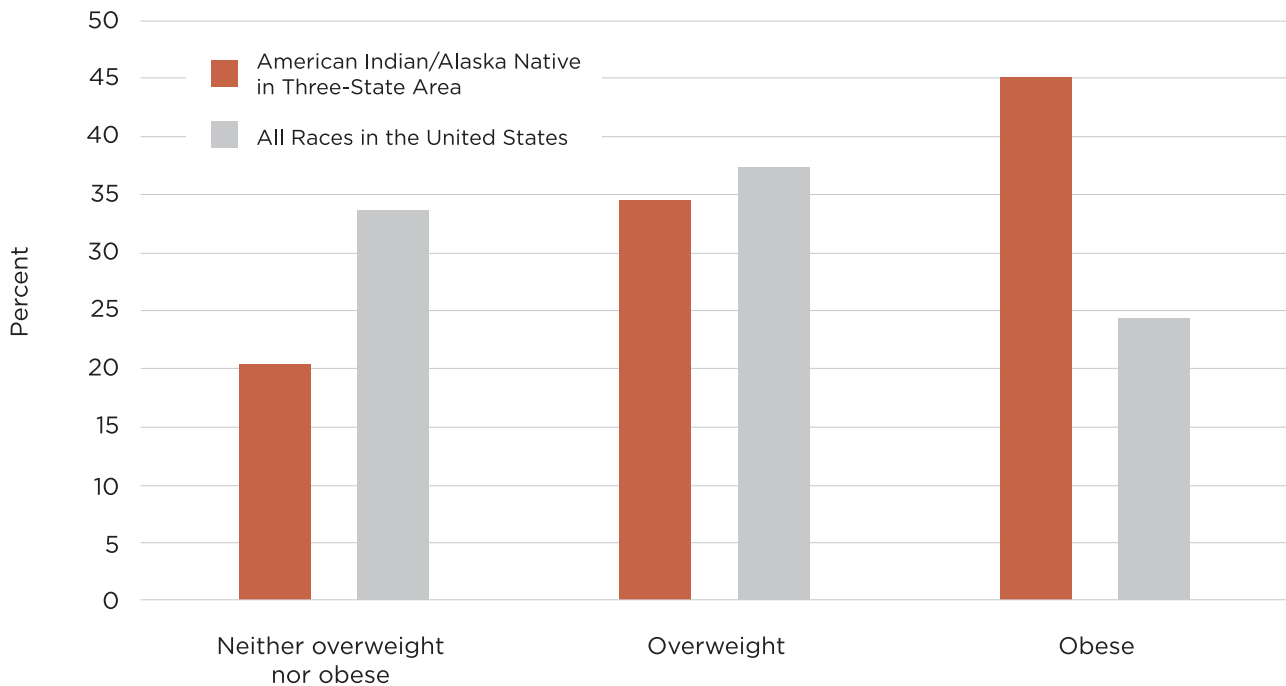
¹Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.; ³2006 Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data (BRFFS). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. NOTE: Used item "In the past 3 months, how many times have you fallen?" and fit percentages to ranges based upon multiplying by 4 to determine falls per year.

WEIGHT STATUS

A number of health conditions are associated with obesity, such as type 2 diabetes and heart disease.³⁹ Many factors affect weight, including the environment, genetics, health conditions, and medication use.⁴⁰ Socioeconomic factors such as income and education are also related to being overweight or obese.⁴¹

A higher proportion of American Indian/Alaska Native people in the three-state area were overweight or obese than people of all races nationwide (80% and 62%, respectively) (Figure 3.13, Table 3.16).

Figure 3.13: Weight Status (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in the Three States Combined,^{1,2} and Among All Races in the United States,³ 2014-2017



¹Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.; ³2006 Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data (BRFFS). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

Table 3.16: Weight Status (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in Michigan, Minnesota, and Wisconsin, and the Three States Combined, and Among All Races in the United States, 2014-2017¹

	AI/AN in Michigan ²	AI/AN in Minnesota ²	AI/AN in Wisconsin ²	AI/AN in Three-State Area ²	All Races in United States ³
Neither overweight nor obese	19.7	23.8	18.9	20.3	33.8
Overweight	34.9	32.2	35.3	34.5	37.3
Obese	45.4	44.0	45.7	45.3	24.6

¹Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota. ³2006 Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data (BRFFS). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

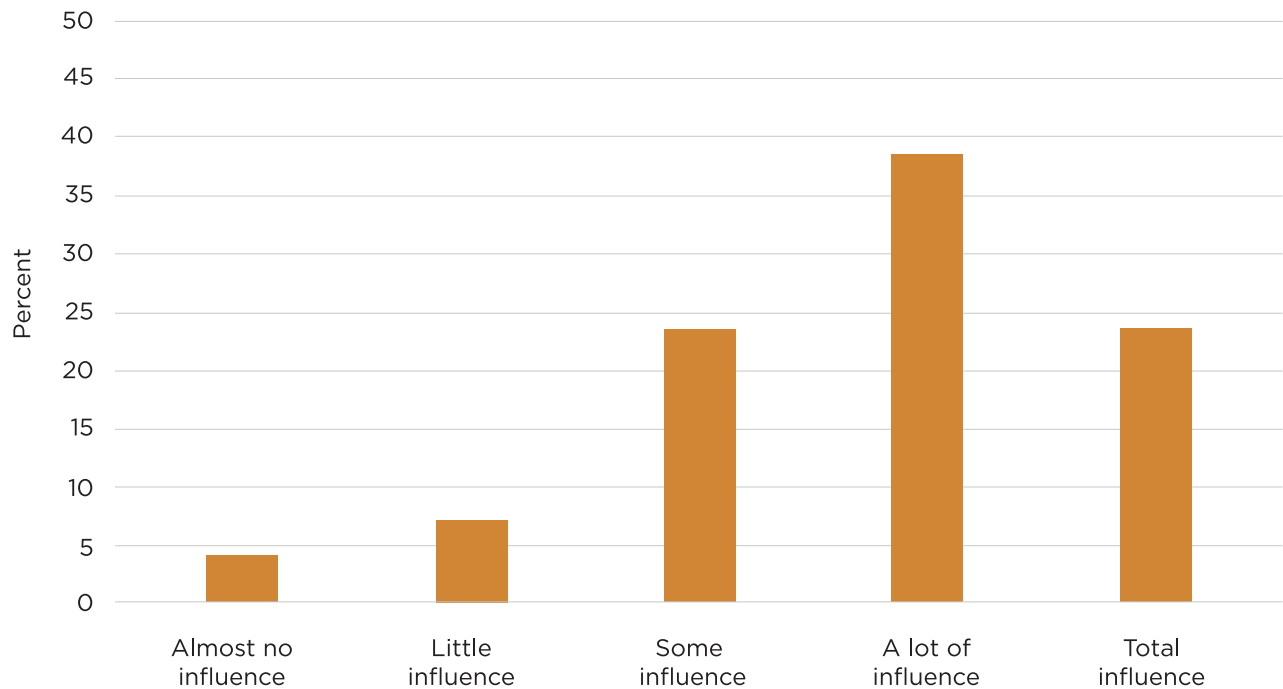


SECTION 4: INDEPENDENT LIVING

In mainstream American culture, independence is seen as an indicator of good health and well-being. American society values a person's ability to provide for oneself and not have to rely on others.⁴² However, this belief contradicts the family structure, values, and community beliefs of many American Indian/Alaska Natives. A harmonious balance between work and vital family affairs contributes to elders' ego, integrity, and personal identity.⁴³ As American Indian/Alaska Native elders age, they often assume increasing responsibility to assist with caring for their extended family members. In addition, providing care for elders is not considered a burden or challenge for many American Indian/Alaska Natives. Rather, it is a normal part of life. It is expected that as elders age, community networks will assist the elders and elders will provide important cultural teachings for younger generations.⁴³

Most (65%) American Indian/Alaska Native elders in the three-state area reported having total or a lot of influence over their lives; only 4% reported having “almost no influence” (Figure 4.1, Table 4.1). Almost two-thirds of American Indian/Alaska Native elders in the three-state area lived with family members (62%) (Table 4.2). Twenty-eight percent of American Indian/Alaska Native elders had a family member that provided care for them (Table 4.3). When asked about what kinds of services they currently use, the three most commonly-used services were home delivered meals (13%), congregate meals (13%), and transportation services (11%) (Figure 4.2, Table 4.4). Elders were also asked if they would be willing to use services in the future; the three services that elders were most interested in were home repair/modification (40%), transportation (36%), and home health services (36%) (Figure 4.3, Table 4.5).

Figure 4.1: Self-reported Degree of Feeling Influence over Life (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in the Three States Combined,^{1,2} 2014-2017



¹Three-State Area survey N=2,723; National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.

Table 4.1: Self-reported Degree of Feeling Influence over Life (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in Michigan, Minnesota, Wisconsin, and the Three States Combined, and Among All Races in the United States 2014-2017¹

	AI/AN in Michigan ²	AI/AN in Minnesota ²	AI/AN in Wisconsin ²	AI/AN in Three-State Area ²	All Races in United States
Almost no influence	3.4	4.4	4.5	4.1	Not available
Little influence	7.3	7.0	7.3	7.2	Not available
Some influence	23.1	24.9	22.8	23.4	Not available
A lot of influence	41.5	38.8	43.0	41.6	Not available
Total influence	24.6	24.9	22.4	23.7	Not available

¹Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.

Table 4.2: Living with Other Persons (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in Michigan, Minnesota, Wisconsin, and the Three States Combined, and Among All Races in the United States, 2014-2017¹

	AI/AN in Michigan ²	AI/AN in Minnesota ²	AI/AN in Wisconsin ²	AI/AN in Three-State Area ²	All Races in United States
With family members	67.2	60.0	58.8	62.0	Not available
With non-family members	4.6	4.0	3.5	4.0	Not available
With both family and non-family members	1.4	2.2	1.9	1.8	Not available
Alone	26.9	33.8	35.7	32.2	Not available

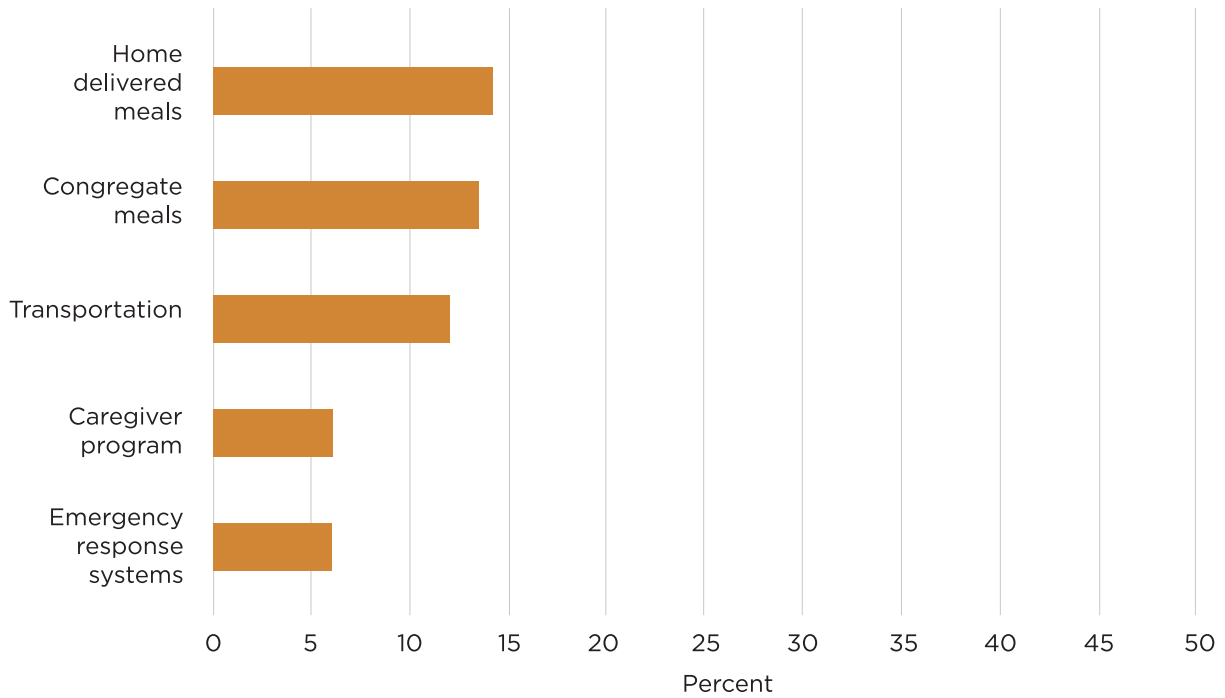
¹Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.

Table 4.3: Percent of Elders Who Has a Family Member That Provides Care Among American Indian/Alaska Natives, Age 55 or Older, in Michigan, Minnesota, Wisconsin, and the Three States Combined, and Among All Races in the United States, 2014-2017¹

	AI/AN in Michigan ²	AI/AN in Minnesota ²	AI/AN in Wisconsin ²	AI/AN in Three-State Area ²	All Races in United States
Yes	24.5	27.2	30.9	27.9	Not available
No	75.5	72.8	69.1	72.1	Not available

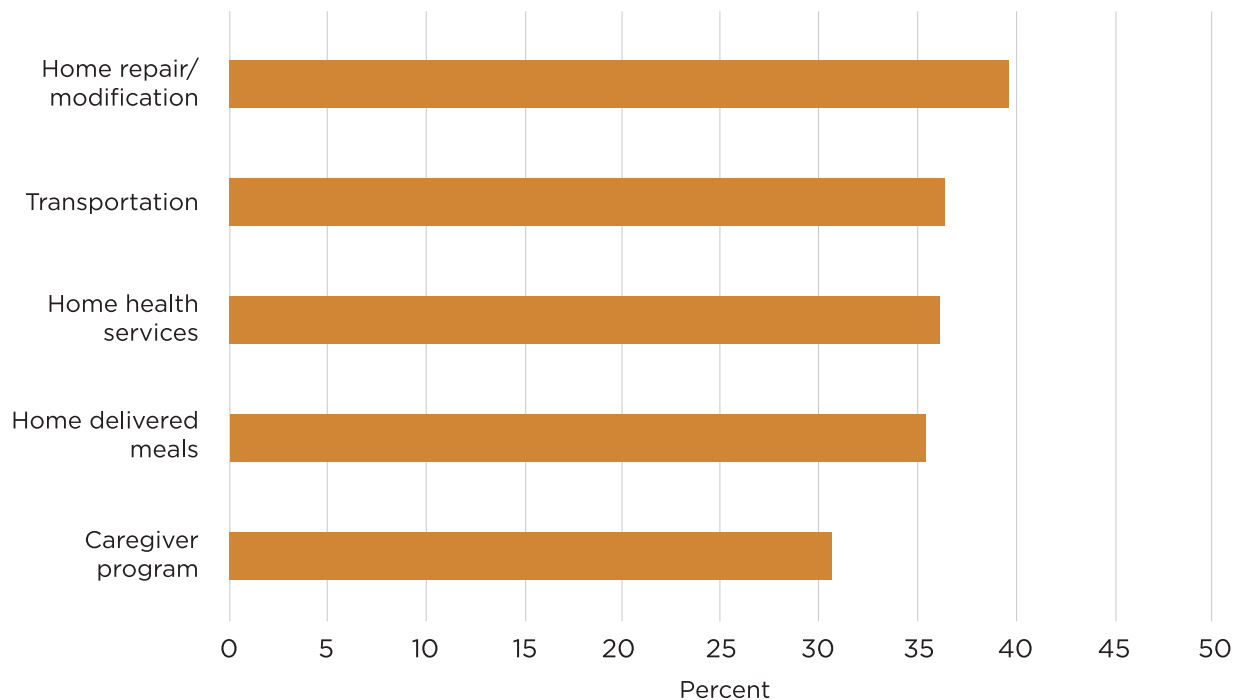
¹Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.

Figure 4.2: Current Use of Selected Services (Top Five, by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in the Three States Combined,^{1,2} 2014-2017



¹Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.

Figure 4.3: Willingness to Use Selected Services in the Future (Top Five, by Percent), Among American Indian/Alaska Natives, Age 55 or Older, in the Three States Combined,^{1,2} 2014-2017



¹Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.

Table 4.4: Current Use of Selected Services (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in Michigan, Minnesota, Wisconsin, and the Three States Combined, and Among All Races in the United States, 2014-2017¹

	AI/AN in Michigan ²	AI/AN in Minnesota ²	AI/AN in Wisconsin ²	AI/AN in Three-State Area ²	All Races in United States
Adult daycare	1.1	2.1	1.0	1.3	Not available
Assisted living	0.8	2.1	1.3	1.3	Not available
Caregiver program	4.6	5.5	6.7	5.7	Not available
Case management	3.0	2.1	3.0	2.8	Not available
Congregate meals	15.3	9.4	12.4	12.8	Not available
Elder abuse prevention programs	0.4	0.7	2.1	1.2	Not available
Emergency response systems	3.9	4.6	7.8	5.7	Not available
Employment services	1.1	1.2	2.0	1.5	Not available
Financial assistance	7.0	3.3	2.3	4.1	Not available
Government assisted housing	2.1	3.8	5.4	3.9	Not available
Home delivered meals	7.7	20.7	14.5	13.4	Not available
Home health services	4.8	6.8	5.3	5.4	Not available
Home repair/modification	2.5	1.9	4.7	3.3	Not available
Information and referral/assistance	2.5	0.9	3.7	2.7	Not available
Legal assistance	1.4	1.7	1.9	1.7	Not available
Long term care services	0.7	0.7	1.6	1.1	Not available
Nursing facilities	0.7	0.7	0.8	0.8	Not available
Personal care	2.1	4.5	2.8	2.9	Not available
Respite care	0.8	0.9	2.5	1.5	Not available
Retirement communities	0.4	1.2	0.4	0.6	Not available
Senior center programs	3.3	2.4	9.0	5.6	Not available
Shared housing	0.6	1.2	1.4	1.1	Not available
Telephone reassurance	0.9	2.7	4.4	2.8	Not available
Transportation	14.6	7.7	10.4	11.3	Not available
Volunteer services	1.7	1.2	1.5	1.5	Not available

¹Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.

Table 4.5: Future Willingness to Use Selected Services (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in Michigan, Minnesota, Wisconsin, and the Three States Combined, and Among All Races in the United States, 2014-2017¹

	AI/AN in Michigan ²	AI/AN in Minnesota ²	AI/AN in Wisconsin ²	AI/AN in Three-State Area ²	All Races in United States
Adult daycare	23.2	19.0	17.1	19.7	Not available
Assisted living	26.1	22.9	21.3	23.4	Not available
Caregiver program	30.6	26.0	33.1	30.7	Not available
Case management	13.5	11.6	15.9	14.2	Not available
Congregate meals	19.1	12.7	21.7	18.8	Not available
Elder abuse prevention programs	11.8	11.6	15.6	13.4	Not available
Emergency response systems	33.2	23.1	32.5	30.7	Not available
Employment services	13.9	13.4	12.6	13.2	Not available
Financial assistance	36.1	26.5	26.3	29.8	Not available
Government assisted housing	19.2	16.4	13.8	16.3	Not available
Home delivered meals	35.5	32.0	37.1	35.4	Not available
Home health services	43.1	30.8	33.2	36.2	Not available
Home repair/modification	40.6	33.6	41.8	39.6	Not available
Information and referral/assistance	22.9	19.0	21.1	21.3	Not available
Legal assistance	30.5	24.3	27.2	27.8	Not available
Long term care services	25.7	16.3	24.4	23.1	Not available
Nursing facilities	16.9	13.9	15.5	15.6	Not available
Personal care	22.1	18.8	21.5	21.2	Not available
Respite care	15.9	12.5	19.0	16.5	Not available
Retirement communities	21.1	14.0	12.4	15.8	Not available
Senior center programs	34.3	19.9	24.2	26.8	Not available
Shared housing	7.1	7.7	6.9	7.1	Not available
Telephone reassurance	15.7	20.9	15.6	16.8	Not available
Transportation	37.8	33.7	36.6	36.4	Not available
Volunteer services	21.8	19.3	20.1	20.5	Not available

¹Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.



SECTION 5: HEALTH BEHAVIOR

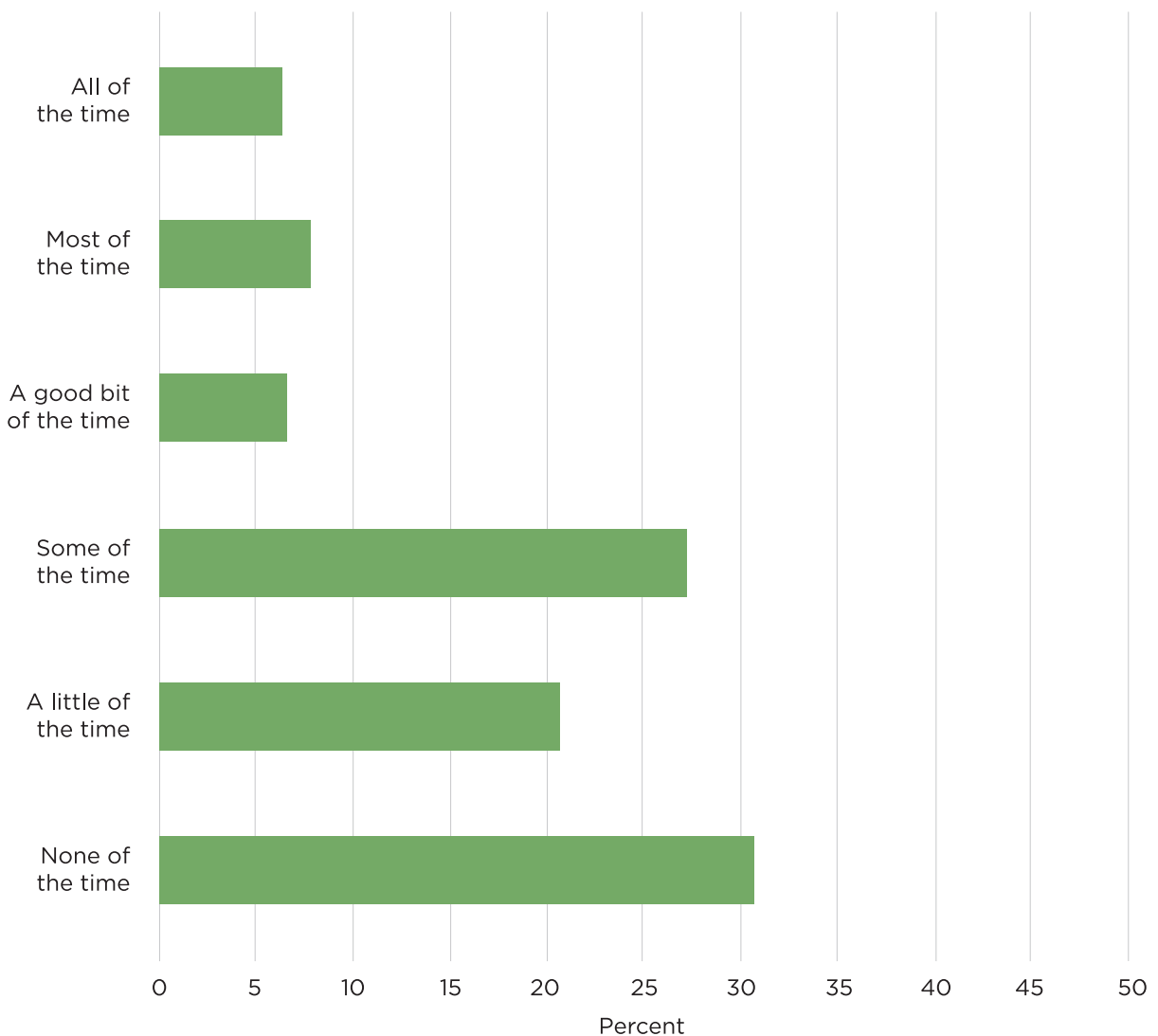
Many factors that affect a person's health are not under an individual's control. However, people may make choices that can affect their health positively or negatively. People's behaviors are shaped by many factors, including social and other environmental influences. For example, whether someone eats fresh fruit and vegetables may depend on whether they have easy access to a grocery store with a good selection of affordable, high quality, fresh produce. Additionally, policies or laws, like ones forbidding smoking in the workplace or prohibiting driving while intoxicated, affect people's health-related behavior.

SOCIAL ACTIVITY

Continuing to stay socially engaged in positive social relationships is one protective factor for reducing mortality risk in elders within the general population. There is also consistent evidence that positive social integration has a positive influence on mental health.⁴⁴ Unfortunately, through the process of colonization that American Indian/Alaska Native communities have been subject to, some of the culturally-specific social activities that elders used to engage in have been lost over time.⁴⁵ Still, elders have continued to engage in some traditional American Indian/Alaska Native practices; traditional practices build resilience among American Indians/Alaska Natives.^{46,47}

Sixty-nine percent of American Indian/Alaska Native elders in the three-state area participated in cultural practices in some capacity (Figure 5.1 and Table 5.1). American Indian/Alaska Native elders also socialized frequently; 86% reported connecting with others through attending church/religious meetings, clubs/organizations, or cultural activities/traditional ceremonies (Figure 5.2 and Table 5.2).

Figure 5.1: Self-reported Participation in Cultural Practices (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in the Three States Combined 2014-2017^{1,2}



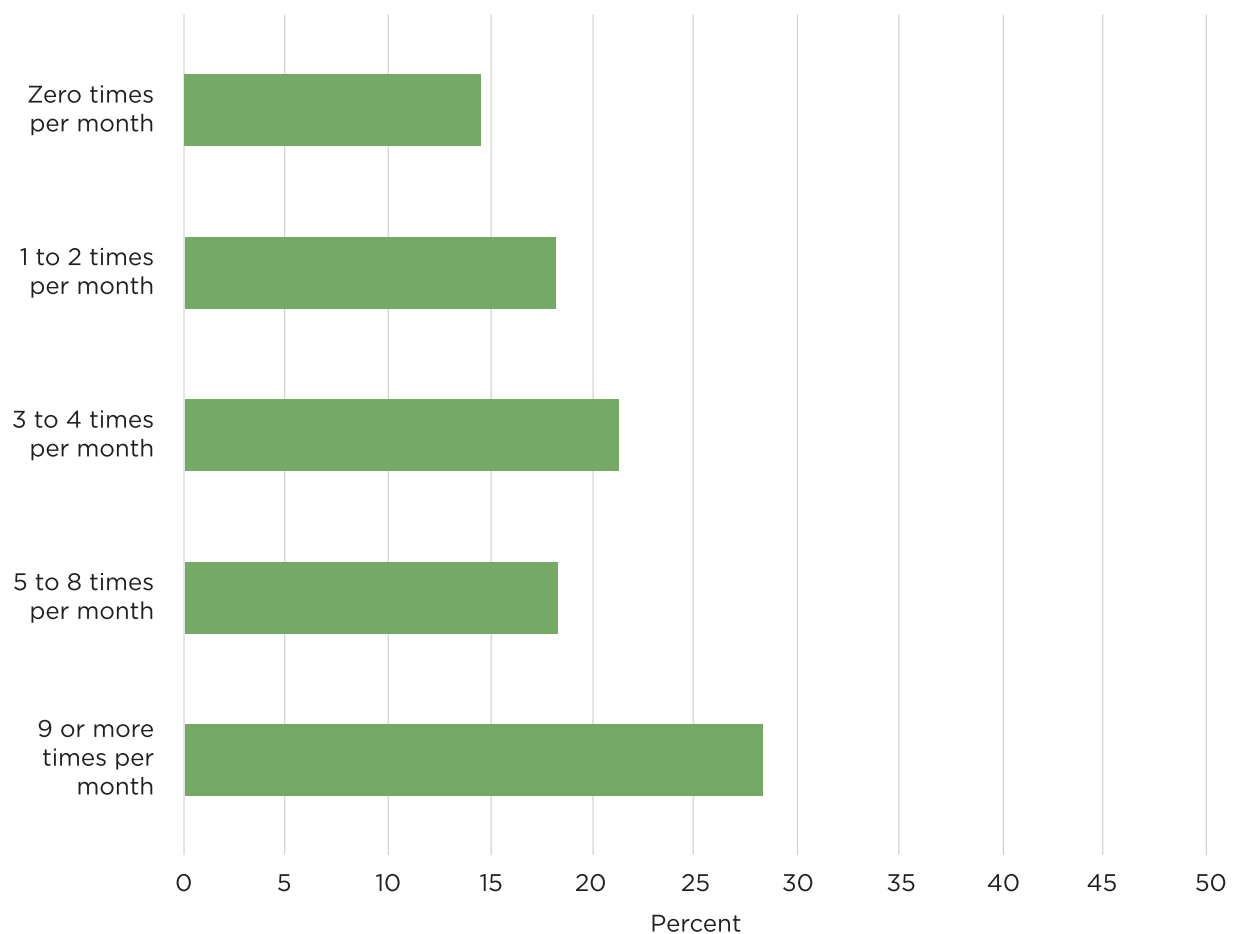
¹Three-State Area survey N=2,723; National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.

Table 5.1: Self-reported Participation in Cultural Practices (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in Michigan, Minnesota, Wisconsin, and the Three States Combined, and Among All Races in the United States 2014-2017¹

	AI/AN in Michigan ²	AI/AN in Minnesota ²	AI/AN in Wisconsin ²	AI/AN in Three-State Area ²	All Races in United States
All of the time	4.1	9.5	6.9	6.4	Not available
Most of the time	5.8	9.5	9.0	8.0	Not available
A good bit of the time	5.5	8.7	6.9	6.8	Not available
Some of the time	25.6	33.3	25.9	27.3	Not available
A little of the time	23.6	18.0	19.7	20.7	Not available
None of the time	35.4	21.2	31.7	30.8	Not available

¹Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ²National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.

Figure 5.2: Self-reported Frequency of Socializing¹ (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in the Three States Combined, 2014-2017^{2,3}



¹Socializing includes (Attending Church/Religious Meetings, Clubs/Organizations, or Cultural Activities/Traditional Ceremonies); ²Three-State Area survey N=2,723; ³National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.

Table 5.2: Self-reported Frequency of Socializing¹ (by Percent) Among American Indian/Alaska Natives, Age 55 or Older, in Michigan, Minnesota, Wisconsin, and the Three States Combined, and Among All Races in the United States, 2014-2017²

	AI/AN in Michigan ³	AI/AN in Minnesota ³	AI/AN in Wisconsin ³	AI/AN in Three-State Area ³	All Races in United States
Zero times per month	15.8	15.9	12.6	14.4	Not available
1 to 2 times per month	15.7	22.0	17.9	18.0	Not available
3 to 4 times per month	20.9	20.4	21.7	21.1	Not available
5 to 8 times per month	18.2	13.7	20.4	18.2	Not available
9 or more times per month	29.4	28.0	27.4	28.2	Not available

¹Socializing includes (Attending Church/Religious Meetings, Clubs/Organizations, or Cultural Activities/Traditional Ceremonies); ²Michigan survey N=960; Minnesota survey N=584; Wisconsin survey N=1,179; Three-State Area survey N=2,723; ³National Resource Center on Native American Aging. (2017). Identifying Our Needs: A Survey of Elders VI. Grand Forks, ND: University of North Dakota.

TOBACCO USE

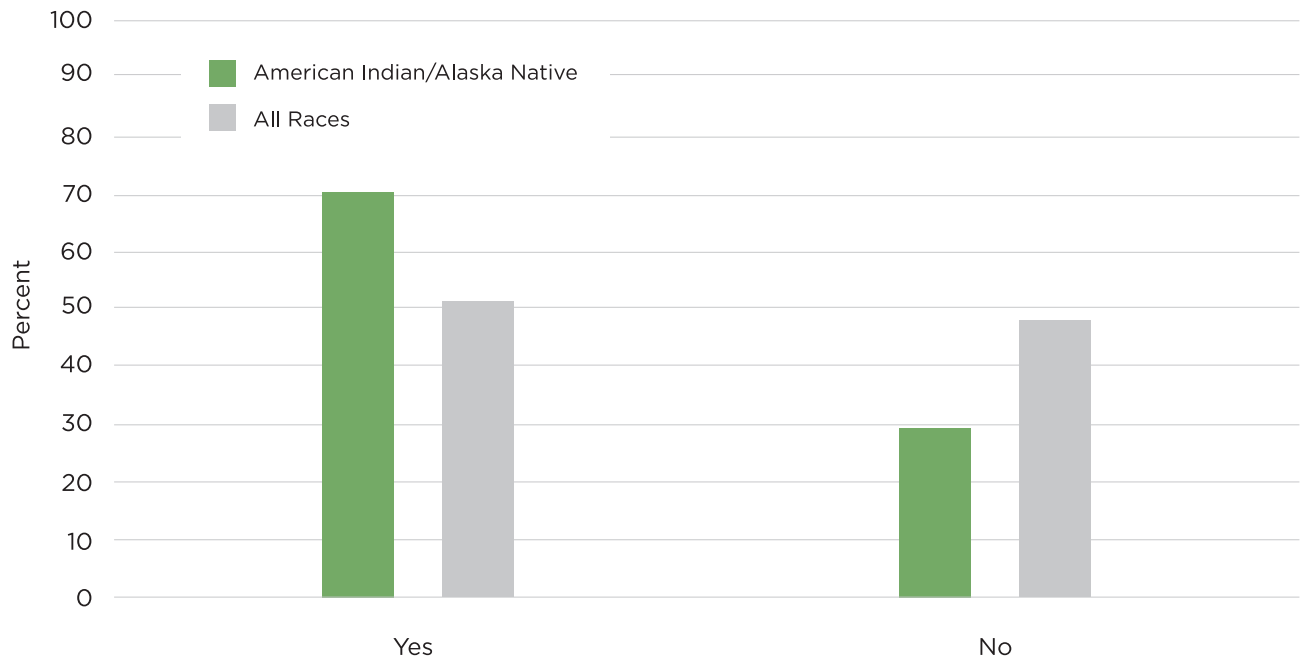
The traditional tobacco used by American Indians differs from commercial tobacco in many ways, including how it is used and the composition of the tobacco itself. Traditional tobacco (*Nicotinana rustica*) is used for spiritual or ceremonial purposes and often is not smoked at all; traditional tobacco comes from a different species than that used in commercial tobacco (*Nicotinana tabacum*), and may be a mixture of several kinds of plants that may not actually contain tobacco at all.⁴⁸ It should be noted that the survey question that was used to generate these data did not distinguish between abuse of commercial tobacco and the use of traditional tobacco for spiritual or ceremonial purposes.

The standard measure for determining whether a person is or ever was a smoker is if they have smoked at least 100 cigarettes (about five packs) in their lifetime; if a person reports having smoked this many, they are considered an “ever smoker.” A much higher percent of American Indian/Alaska Natives age 50 or older have smoked at least 100 cigarettes in their

lifetime as compared to people of all races in the same age group. Almost three-quarters of American Indian/Alaska Natives reported ever smoking, while about half of the all-races population has ever been a smoker (Figure 5.3, Table 5.3).

Among ever-smokers, 12% of American Indian/Alaska Natives aged 50 or older reported currently smoking commercial tobacco some days, and 30% reported smoking every day. Among people of all races aged 50 or older, 19% reported smoking every day, and 7% reported smoking some days. About 60% of older American Indian/Alaska Natives who ever smoked no longer do so (reporting “not at all”); in comparison, 74% of all races ever-smokers in this age group reported now not smoking at all (Figure 5.4, Table 5.4).

Figure 5.3: Lifetime Prevalence of Smoking¹ Among American Indian/Alaska Natives and All Races, Age 50 or Older, Michigan, Minnesota, and Wisconsin Combined, 2011-2013²



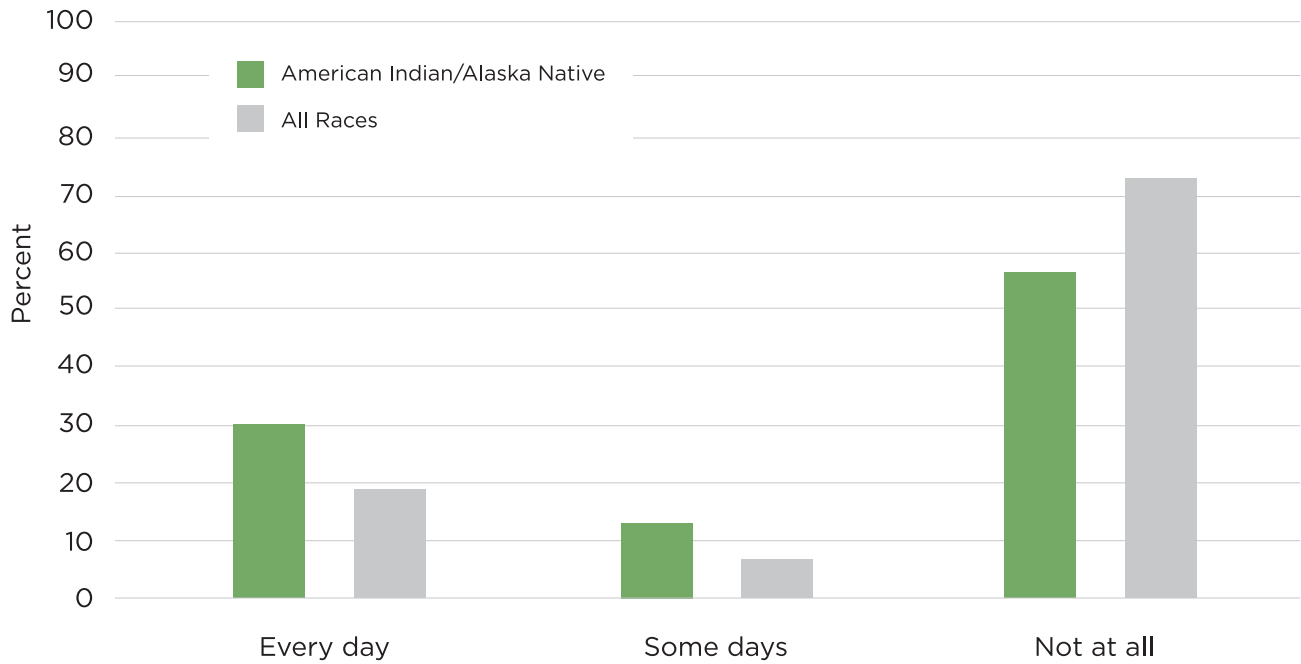
¹Smoked at least 100 cigarettes in lifetime; ²BRFSS 2011-2013

Table 5.3: Lifetime Prevalence of Smoking¹ Among American Indian/Alaska Natives and All Races, Age 50 or Older, Michigan, Minnesota, and Wisconsin Combined, 2011-2013²

	American Indian/Alaska Natives		All Races	
	Number	Percent	Number	Percent
Yes	509	70.11	29,410	51.53
No	217	29.89	27,663	48.47
Total	726	100.00	57,073	100.00

¹Smoked at least 100 cigarettes in lifetime; ²BRFSS 2011-2013

Figure 5.4: Current Smoking Status Among American Indian/Alaska Natives and All Races Who Have Ever Smoked,¹ 50 Years and Older in Michigan, Minnesota, and Wisconsin Combined, 2011-2013²



¹Ever smoked is defined as having smoked at least 100 cigarettes in lifetime; ²BRFSS 2011-2013

Table 5.4: Current Smoking Status Among American Indian/Alaska Natives and All Races Who Have Ever Smoked,¹ Age 50 or Older, Michigan, Minnesota, and Wisconsin Combined, 2011²

	American Indian/Alaska Natives		All Races	
	Number	Percent ³	Number	Percent
Every day	67	29.78	1,991	18.88
Some days	26	11.56	743	7.05
Not at all	132	58.67	7,809	74.07
Total	225	100.00	10,543	100.00

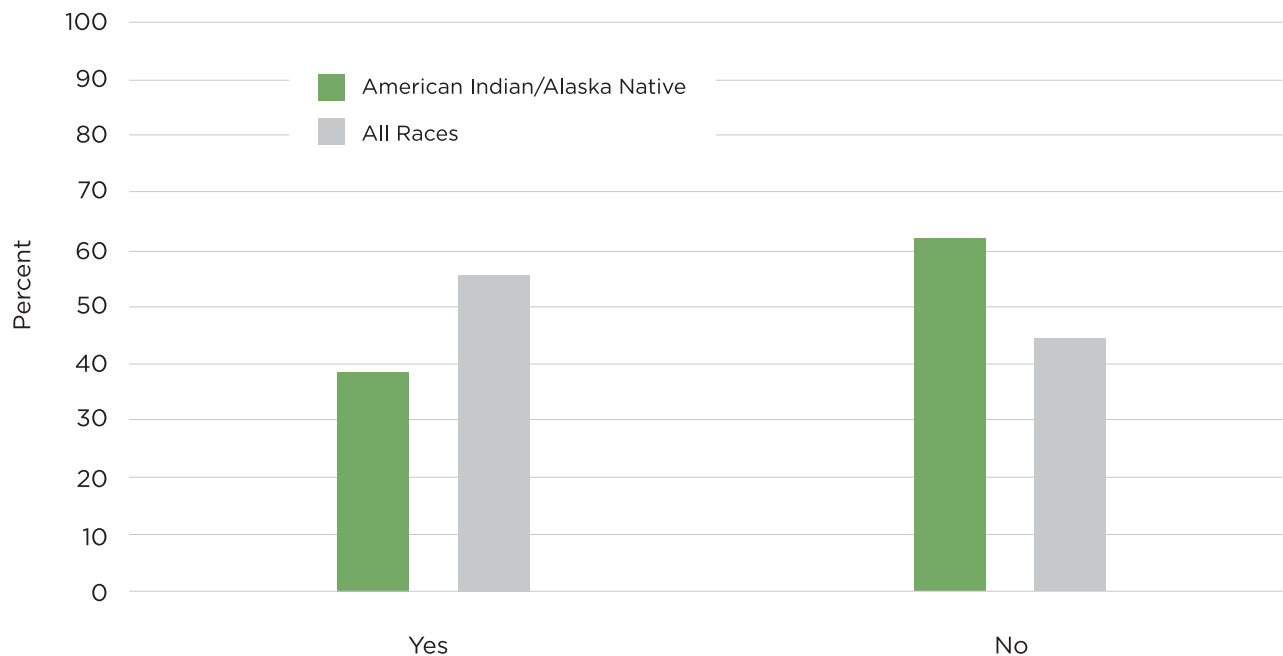
¹Ever smoked is defined as having smoked at least 100 cigarettes in lifetime; ²BRFSS 2011; ³Due to rounding, total may not equal 100%

ALCOHOL USE

Excessive alcohol consumption (including heavy drinking, binge drinking, drinking during pregnancy, and underage drinking) is linked to negative short and long term health outcomes. Short term health effects may include injury, violence, and alcohol poisoning. Negative birth outcomes including fetal alcohol spectrum disorders (FASDs) may occur for children whose mothers drank while pregnant. Long term effects include liver disease, cancer, and social problems like unemployment.⁴⁹ Binge drinking is defined as five or more standard drinks for a man and four or more standard drinks for a woman on one occasion. A standard drink is defined as 14.0 grams (or 0.6 ounces) of pure alcohol, which is the equivalent of 12 ounces of beer, 5 ounces of wine, or a 1.5-ounce shot of liquor.⁴⁹

Compared to the all-races population, fewer American Indian/Alaska Natives age 50 or older reported having a drink of alcohol in the past 30 days (Figure 5.5, Table 5.5). Fewer than 40% drank any alcohol at all, while more than half of all-races elders drank alcohol at least once. A higher percent of older American Indian/Alaska Natives than all races reported binge drinking (Table 5.6).

Figure 5.5: Any Alcohol Consumption During Last 30 Days, Among American Indian/Alaska Natives and All Races, 50 Years and Older in Michigan, Minnesota, and Wisconsin, 2011-2013¹



¹BRFSS 2011-2013

Table 5.5: Any Alcohol Consumption During Last 30 Days, American Indian/Alaska Natives and All Races, Age 50 or Older, Michigan, Minnesota, and Wisconsin Combined, 2011-2013¹

	American Indian/Alaska Natives		All Races	
	Number	Percent	Number	Percent
Yes	270	38.46	31,178	55.92
No	432	61.54	24,578	44.08
Total	702	100.00	55,756	100.00

¹BRFSS 2011-2013**Table 5.6:** Binge Drinking¹ Among American Indian/Alaska Natives and All Races, Age 50 or Older, Michigan, Minnesota, and Wisconsin Combined, 2011-2013²

	American Indian/Alaska Natives		All Races	
	Number	Percent	Number	Percent
Yes	105	15.00	5,926	10.71
No	595	85.00	49,416	89.29
Total	700	100.00	55,342	100.00

¹Binge drinking is defined as five or more standard drinks for a man and four or more standard drinks for a woman on one occasion; ²BRFSS 2011-2013

SEATBELT USE

Although a variety of unintentional injuries exist, this report discusses one protective factor for motor vehicle crash injury and death: seatbelt use. Seatbelt use is one of the best ways to prevent injury and mortality in crashes for adults and older children who are large enough to wear them safely.⁵⁰ A similar percent of older American Indian/Alaska Native and all races people reported always wearing a seatbelt (Table 5.7).

Table 5.7: Frequency of Seatbelt Use Among American Indian/Alaska Natives and All Races, Age 50 or Older, Michigan, Minnesota, and Wisconsin Combined, 2011-2013¹

	American Indian/Alaska Natives		All Races	
	Number	Percent ²	Number	Percent
Always	596	87.13	49,785	90.36
Nearly always	53	7.75	3,240	5.88
Sometimes	15	2.19	1,002	1.82
Seldom	5	0.73	399	0.72
Never	15	2.19	668	1.21
Total	684	100.00	55,094	100.00

¹BRFSS 2011-2013; ²Due to rounding, total may not equal 100%

IMMUNIZATION

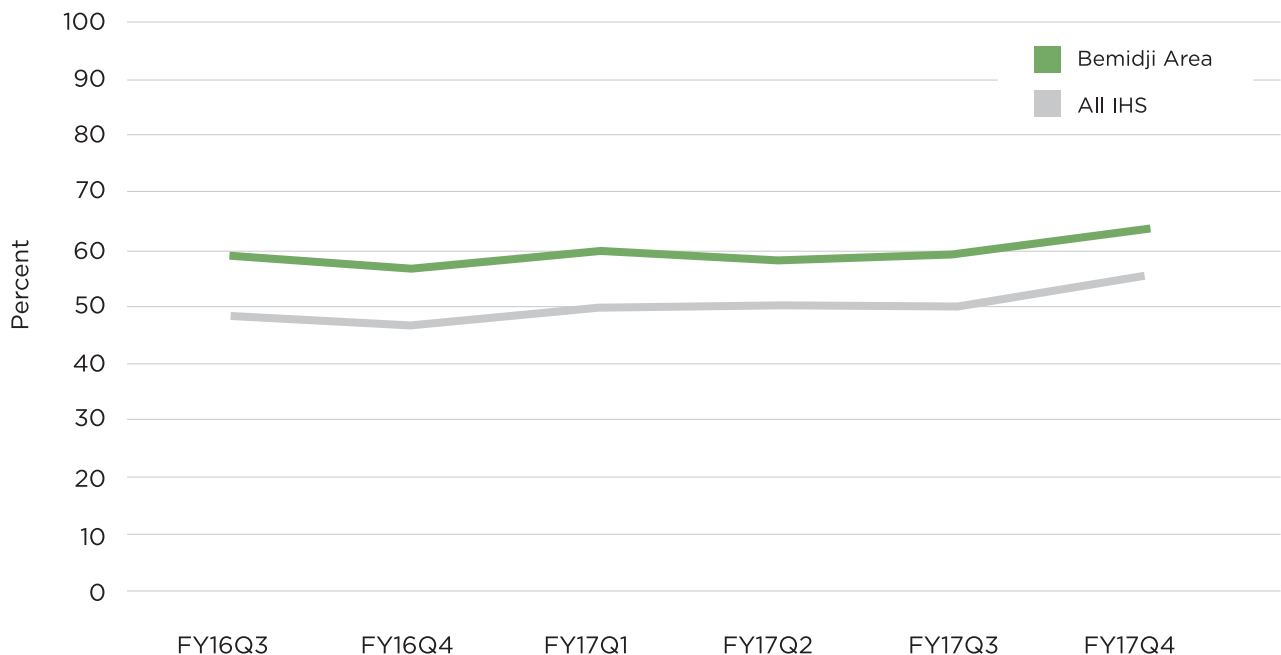
People of all ages are recommended to get vaccinated to avoid or reduce the risk of infectious disease. The exact vaccinations an adult needs depends on their age and health conditions. Being up-to-date on adult immunizations offers significant benefits to elders.⁵¹ This report contains information about immunization coverage for three vaccines, using patient data from IHS. IHS patient data is reported by federal fiscal year and quarter (see Appendix 2 for details).

An important vaccine for older adults is the zoster vaccine, which prevents shingles. Shingles is a condition that is caused by the same virus that causes varicella (chicken pox). If a person ever had chicken pox in their lifetime, they are at risk of developing shingles.⁵² A person only needs to get the Zoster vaccine once in their life after age 60.⁵³

The Tdap vaccine protects against tetanus, diphtheria, and pertussis (whooping cough). Sometimes a similar vaccine, Td, is given—this protects against tetanus and diphtheria but not pertussis. The Td vaccine does not provide lifetime immunity; a person needs a booster at least every 10 years.⁵⁴ Finally, the Pneumovax (PPSV23) vaccine protects against pneumonia. Like Zoster, Pneumovax only needs to be received once.⁵¹

IHS reports data for the percent of people over age 65 who have revived Tdap within the last 10 years and have ever received Zoster and Pneumovax. The trend across the 18-month period has been steady, with an increase in vaccine coverage. Nationally, a higher percent of IHS patients over age 65 have received all three of these vaccines (63% in FY17Q4) than in the Bemidji Area (55% in FY17Q4) (Figure 5.6, Table 5.8).

Figure 5.6: IHS Patients Over Age 65 who Received Tdap Within 10 Years and Zoster and Pneumovax Ever (by Percent), Bemidji Area and All IHS, FY16Q3-FY17Q4¹



¹National Immunization Reporting System (NIRS)
 FY = Fiscal Year & Q = Quarter

Table 5.8: IHS Patients Over Age 65 who Received Tdap within 10 Years and Zoster and Pneumovax Ever (by Percent), Bemidji Area and All IHS, FY16Q3-FY17Q4¹

	Bemidji Area	All IHS
FY16Q3	48.2	58.4
FY16Q4	46.2	56.7
FY17Q1	49.3	59.1
FY17Q2	49.8	57.8
FY17Q3	50.1	59.0
FY17Q4	54.7	63.0

¹National Immunization Reporting System (NIRS)
FY = Fiscal Year & Q = Quarter





SECTION 6: MORTALITY

Mortality data are important for several reasons. Death records are one of the only sources of data that are comparable across many different geographies and race groups, and they have been collected for a long period of time.⁹ Understanding mortality rates and related factors allows governments and communities to monitor and understand what is affecting the health of the population, make plans, and interpret the results of programs intended to reduce mortality.^{10,11}

Age-adjusted mortality rates are presented in this report. By adjusting the rates to a standard age distribution, age-adjusted rates allow for comparisons between groups that have different age distributions, thereby preventing the distortion that may occur when certain causes of death affect some age groups more than others.

Racial misclassification is a serious issue that limits the quality of mortality data for American Indian/Alaska Natives. Racial misclassification on death certificates occur when a medical professional does not correctly identify the race of the deceased. Studies of this issue have found varying rates of misclassification. For example, a study by the National Center for Health Statistics found that mortality rates for American Indian/Alaska Natives were underreported nationally by about 21%.¹² Other estimates for underreporting of mortality was lower; for example, one 2014 study placed misclassification prevalence at 14%.¹³ Another study reported 16.1% misclassification for the Bemidji Area (Michigan, Minnesota, and Wisconsin).¹⁴ Because this report section relies on mortality data, the quality of the information is limited by racial misclassification.

Mortality disparity rate ratios are included in this report. A disparity rate ratio is the ratio of the rates of two different population groups and indicates the degree of disparity between the two groups. The reference group's rate is placed in the denominator, so that a ratio of less than one indicates that the population of interest has a lower mortality rate than the reference population, while a ratio of greater than one shows that the population of interest has a higher mortality rate than the reference population. In the disparity ratios here, the white population, American Indian/Alaska Native females, and urban American Indian/Alaska Natives are alternately used as the reference population. In addition, when the ratio is subtracted from one and multiplied by 100%, the degree to which the disparity exists can be identified.

In the tables within this section, where the population of interest's mortality rate was significantly higher, with 95% confidence, than the reference population's rate are denoted with an

asterisk. Two asterisks indicate that the reference population's rate was significantly higher.

AGE-ADJUSTED MORTALITY RATES FROM ALL CAUSES

Figure 6.1 and Table 6.1 illustrate the all-cause age-adjusted mortality rates for the American Indian/Alaska Native, white, and all-races populations in Michigan, Minnesota, Wisconsin, the three states combined, and the United States among those who were age 55 or older, from 2011-2015. American Indian/Alaska Native elders in Minnesota, Wisconsin, and the three-state area had a greater mortality rate from all causes than the white populations. In the United States, older American Indian/Alaska Natives had a statistically significant, lower mortality rate than the white population.

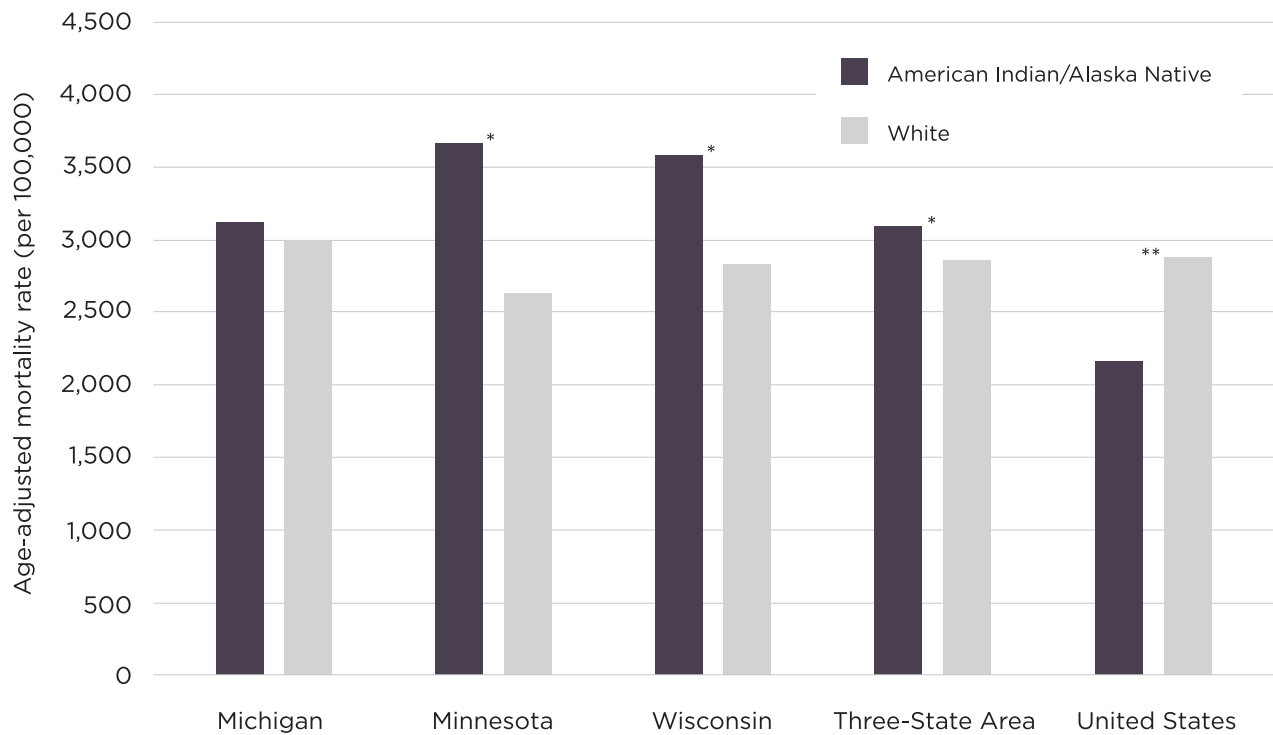
Minnesota had the greatest disparity between American Indian/Alaska Natives and whites. In fact, for the geographic areas examined, the highest all-cause age-adjusted mortality rate for American Indian/Alaska Native elders was in Minnesota, while elderly white Minnesotans had the lowest age-adjusted mortality rate of the geographic areas examined.

Furthermore, a significant difference existed between three-state area American Indian/Alaska Native elders and American Indian/Alaska Native elders across the United States: American Indian/Alaska Natives age 55 or older within the three-state area had a 57% higher all-cause mortality rate than elders nationally.

Mortality rates were higher for males than they were for females. In Michigan, Minnesota, the three states combined, and the United States, this difference was statistically significant (Figure 6.2, Table 6.2). In the three-state area, the mortality rate for males was 23% higher than that for females.

As seen in Figure 6.3 and Table 6.3, in Michigan, Minnesota, Wisconsin, the three-state area in aggregate, and the United States the mortality rates among American Indian/Alaska Natives in rural areas were statistically significantly higher than rates for American Indian/Alaska Natives in urban areas.

Figure 6.1: All-Cause Age-Adjusted Mortality Rates (per 100,000), Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, 55 Years and Older, 2011-2015¹



¹CDC Wonder.

*Area in which American Indian/Alaska Native mortality rate was statistically higher than White mortality rate

**Area in which American Indian/Alaska Native mortality rate was statistically lower than White mortality rate.

Table 6.1: All-Cause Age-Adjusted Mortality Rates (per 100,000) and Disparity Ratios, 55 Years and Older, Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, 2011-2015¹

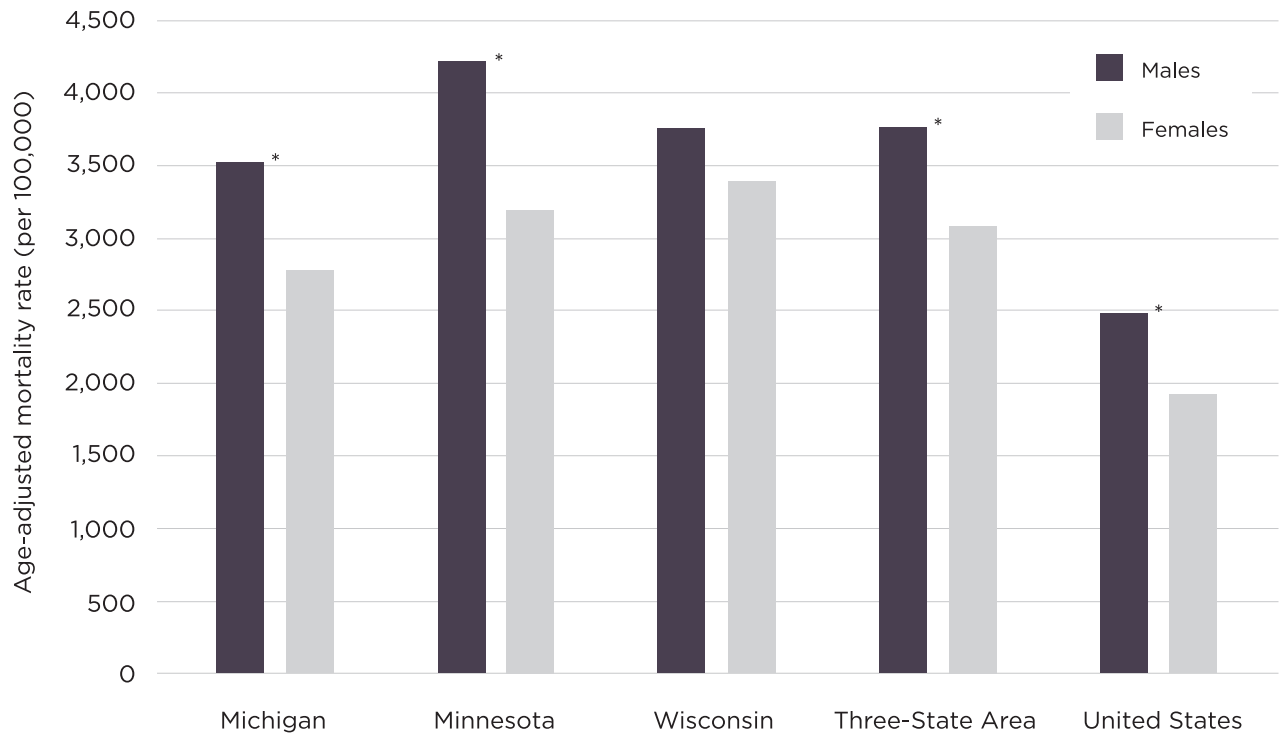
		Age-Adjusted Mortality Rate	95% Confidence Interval	American Indian/ Alaska Native-White Disparity Ratio
Michigan	AI/AN	3,108.2	2,958.3 - 3,258.1	1.03
	White	3,007.2	2,997.0 - 3,017.3	
	All Races	3,048.3	3,038.7 - 3,057.9	
Minnesota*	AI/AN	3,673.6	3,469.9 - 3,877.2	1.40
	White	2,633.1	2,620.5 - 2,645.6	
	All Races	2,638.6	2,626.3 - 2,650.9	
Wisconsin*	AI/AN	3,591.5	3,386.2 - 3,796.8	1.27
	White	2,831.2	2,818.9 - 2,843.5	
	All Races	2,857.4	2,845.3 - 2,869.5	
Three-State Area*	AI/AN	3,410.4	3,306.1 - 3,514.8	1.19
	White	2,861.0	2,854.3 - 2,867.6	
	All Races	2,895.4	2,889.0 - 2,901.8	
United States**	AI/AN	2,172.5	2,153.7 - 2,191.3	0.75
	White	2,891.4	2,889.5 - 2,893.2	
	All Races	2,874.7	2,873.0 - 2,876.4	

¹CDC Wonder.

*Area in which American Indian/Alaska Native mortality rate was statistically higher than White mortality rate

**Area in which American Indian/Alaska Native mortality rate was statistically lower than White mortality rate

Figure 6.2: All-Cause Age-Adjusted Mortality Rates (per 100,000) Among American Indian/Alaska Natives, Age 55 or Older, Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, by Sex, 2011-2015¹



¹CDC Wonder.

*Area in which male American Indian/Alaska Native mortality rates were statistically significantly higher than the female American Indian/Alaska Native mortality rates.

**Area in which male American Indian/Alaska Native mortality rates were statistically significantly lower than the female American Indian/Alaska Native mortality rates.

Table 6.2: All-Cause Age-Adjusted Mortality Rates (per 100,000) and Disparity Ratios for American Indian/Alaska Natives, Age 55 or Older, Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, by Sex, 2011-2015¹

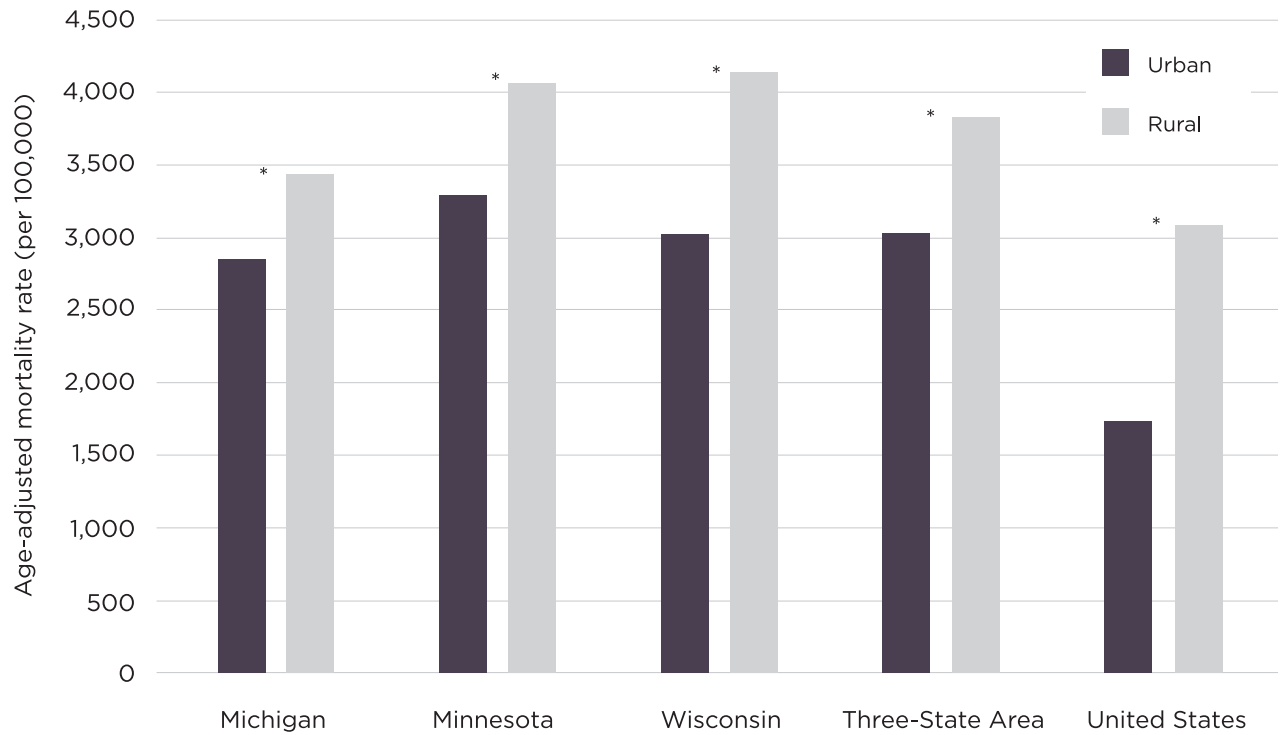
		Age-Adjusted Mortality Rate	95% Confidence Interval	American Indian/Alaska Native-White Disparity Ratio
Michigan*	Male	3,529.6	3,274.4 - 3,784.9	1.26
	Female	2,799.4	2,614.4 - 2,984.4	
Minnesota*	Male	4,235.4	3,899.5 - 4,571.4	1.32
	Female	3,217.2	2,964.6 - 3,469.8	
Wisconsin	Male	3,780.0	3,436.6 - 4,123.5	1.11
	Female	3,416.9	3,160.1 - 3,673.7	
Three-State Area*	Male	3,807.8	3,632.7 - 3,983.0	1.23
	Female	3,097.0	2,967.6 - 3,226.3	
United States*	Male	2,477.6	2,446.4 - 2,508.8	1.29
	Female	1,927.8	1,904.5 - 1,951.1	

¹CDC Wonder.

*Area in which male American Indian/Alaska Native mortality rates were statistically significantly higher than the female American Indian/Alaska Native mortality rates.

**Area in which male American Indian/Alaska Native mortality rates were statistically significantly lower than the female American Indian/Alaska Native mortality rates.

Figure 6.3: All Cause Age-Adjusted Mortality Rates (per 100,000) Among American Indian/Alaska Natives, Age 55 or Older, Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, by Urban or Rural Residency, 2011-2015¹



¹CDC Wonder.

*Area in which rural American Indian/Alaska Native mortality rates were statistically significantly higher than the urban American Indian/Alaska Native mortality rates.

**Area in which rural American Indian/Alaska Native mortality rates were statistically significantly lower than the urban American Indian/Alaska Native mortality rates.

Table 6.3: All Cause Age-Adjusted Mortality Rates (per 100,000) and Disparity Ratios for American Indian/Alaska Natives, Age 55 Years or Older, Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, by Urban or Rural Residency, 2011-2015¹

		Age-Adjusted Mortality Rate	95% Confidence Interval	American Indian/Alaska Native-White Disparity Ratio
Michigan*	Rural	3,448.5	3,210.0 - 3,687.0	1.21
	Urban	2,852.7	2,660.9 - 3,044.5	
Minnesota*	Rural	4,073.2	3,773.7 - 4,372.6	1.23
	Urban	3,298.4	3,021.1 - 3,575.7	
Wisconsin*	Rural	4,145.7	3,842.1 - 4,449.4	1.37
	Urban	3,016.0	2,741.6 - 3,290.5	
Three-State Area*	Rural	3,847.8	3,688.2 - 4,007.5	1.27
	Urban	3,026.2	2,889.5 - 3,162.8	
United States*	Rural	3,072.3	3,033.9 - 3,110.6	1.78
	Urban	1,725.8	1,705.3 - 1,746.4	

¹CDC Wonder.

*Area in which rural American Indian/Alaska Native mortality rates were statistically significantly higher than the urban American Indian/Alaska Native mortality rates.

**Area in which rural American Indian/Alaska Native mortality rates were statistically significantly lower than the urban American Indian/Alaska Native mortality rates.

AGE-ADJUSTED MORTALITY RATES FOR SELECT CAUSES

Within Michigan, Wisconsin, the three states combined, and the United States, when examined by rate heart disease was the leading cause of death among American Indian/Alaska Native elders, and cancer (malignant neoplasms) was the second-leading cause of death. However, in Minnesota, the leading cause of death among American Indian/Alaska Native elders was cancer, while the second-leading cause of death was heart disease. In Michigan, Wisconsin, and the three-states combined, the third-leading cause of death among American Indian/Alaska Native elders was chronic lower respiratory disease (CLRD). In Minnesota and the United States, the third-leading cause of death among American Indian/Alaska Native elders was diabetes (Table 6.4).

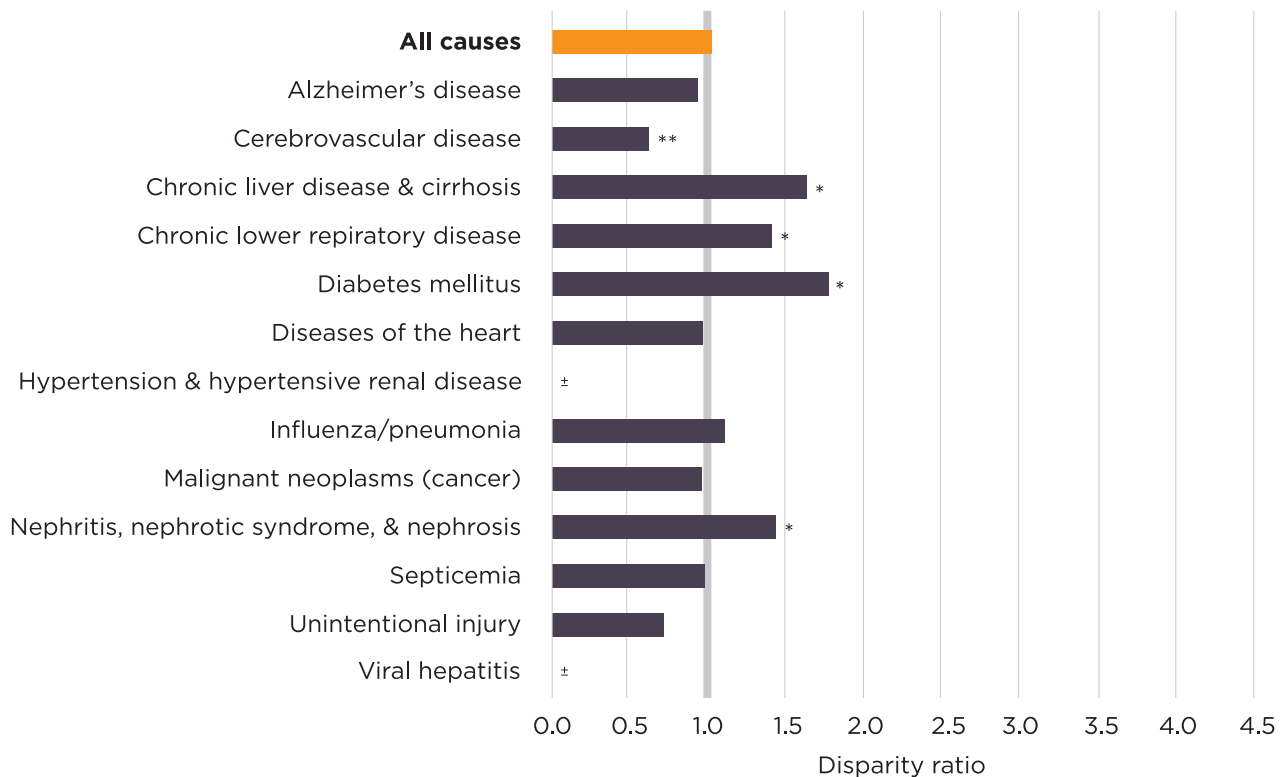
Table 6.4: Top Three (by Rate) Causes of Death for American Indian/Alaska Natives Age 55 or Older and Age-Adjusted Rates (per 100,000), Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, 2011-2015¹

	Leading cause of death (rate)	Second-highest cause of death (rate)	Third-highest cause of death (rate)
Michigan	Heart disease (798.9)	Cancer (680.2)	CLRD (302.3)
Minnesota	Cancer (910.2)	Heart disease (723.1)	Diabetes (278.3)
Wisconsin	Heart disease (825.0)	Cancer (762.5)	CLRD (265.6)
Three-State Area	Heart disease (786.9)	Cancer (767.1)	CLRD (266.9)
United States	Heart disease (495.4)	Cancer (451.4)	Diabetes (138.3)

¹CDC Wonder.

Tables 6.5 through 6.17 display the age-adjusted mortality rates for select causes of death for the American Indian/Alaska Native, white, and all-races populations age 55 or older in the three states individually, the three states combined, and the United States. For many of the specific causes of death examined, American Indian/Alaska Native people in the three states were statistically more likely to die from those causes than their white counterparts. In all three of the states individually chronic liver disease and cirrhosis; diabetes; and nephritis, nephrotic syndrome, and nephrosis age-adjusted mortality rates were higher for American Indian/Alaska Natives. In the three states in aggregate, American Indian/Alaska Natives had significantly higher mortality rates for chronic liver disease and cirrhosis; chronic lower respiratory disease (CLRD); diabetes mellitus; heart disease; influenza and pneumonia; malignant neoplasm (cancer); nephritis, nephrotic syndrome, and nephrosis; septicemia; and viral hepatitis. In the United States, American Indian/Alaska Native elders had significantly higher age-adjusted mortality rates than whites for just three causes: chronic liver disease and cirrhosis; diabetes; and viral hepatitis. Figures 6.4 through 6.8 illustrate the disparity ratios for each individual state, the three states combined, and the United States.

Figure 6.4: Age-Adjusted Mortality Rate Disparity Ratios for American Indian/Alaska Natives and Whites, Michigan, Age 55 or Older, 2011-2015¹



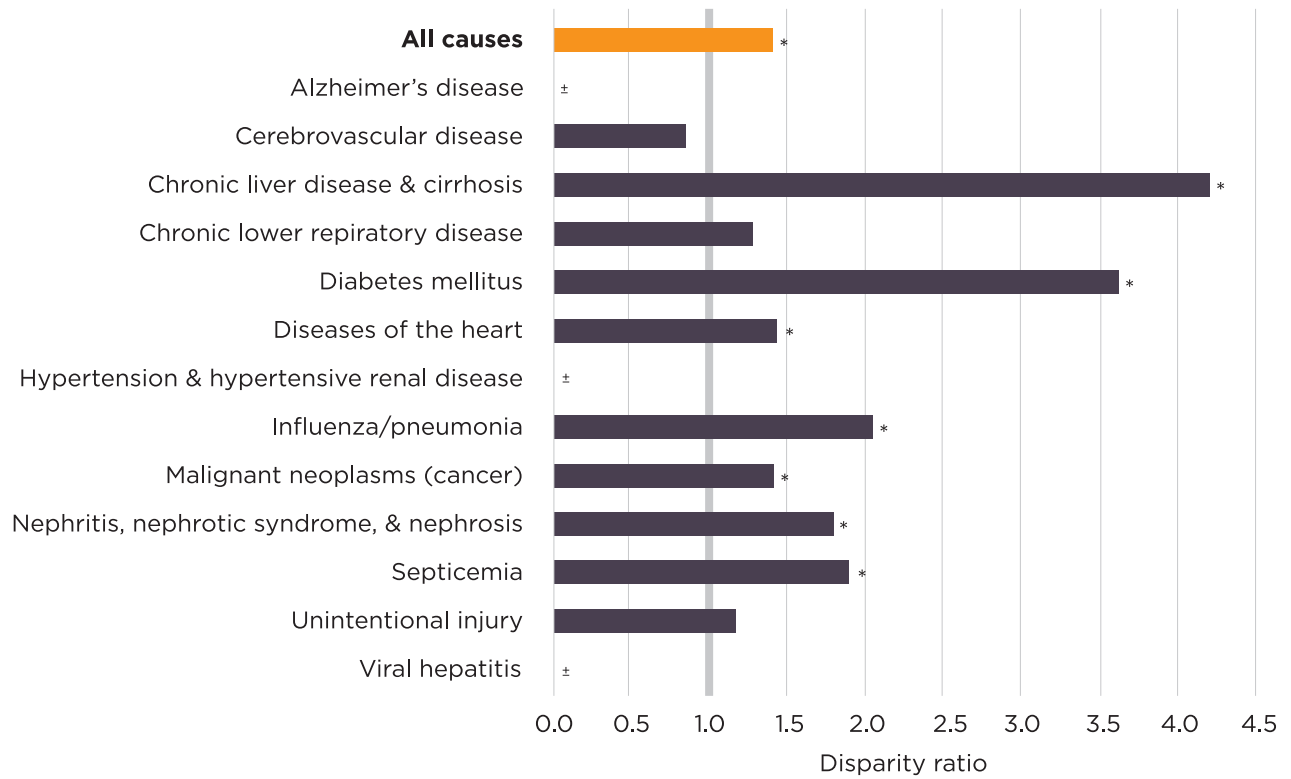
¹ CDC Wonder.

* Cause of death for which American Indian/Alaska Native mortality rate was statistically significantly higher than white rate

** Cause of death for which American Indian/Alaska Native mortality rate was statistically significantly lower than white rate

± Ratio not available

Figure 6.5: Age-Adjusted Mortality Rate Disparity Ratios for American Indian/Alaska Natives and Whites, Minnesota, Age 55 or Older, 2011-2015¹



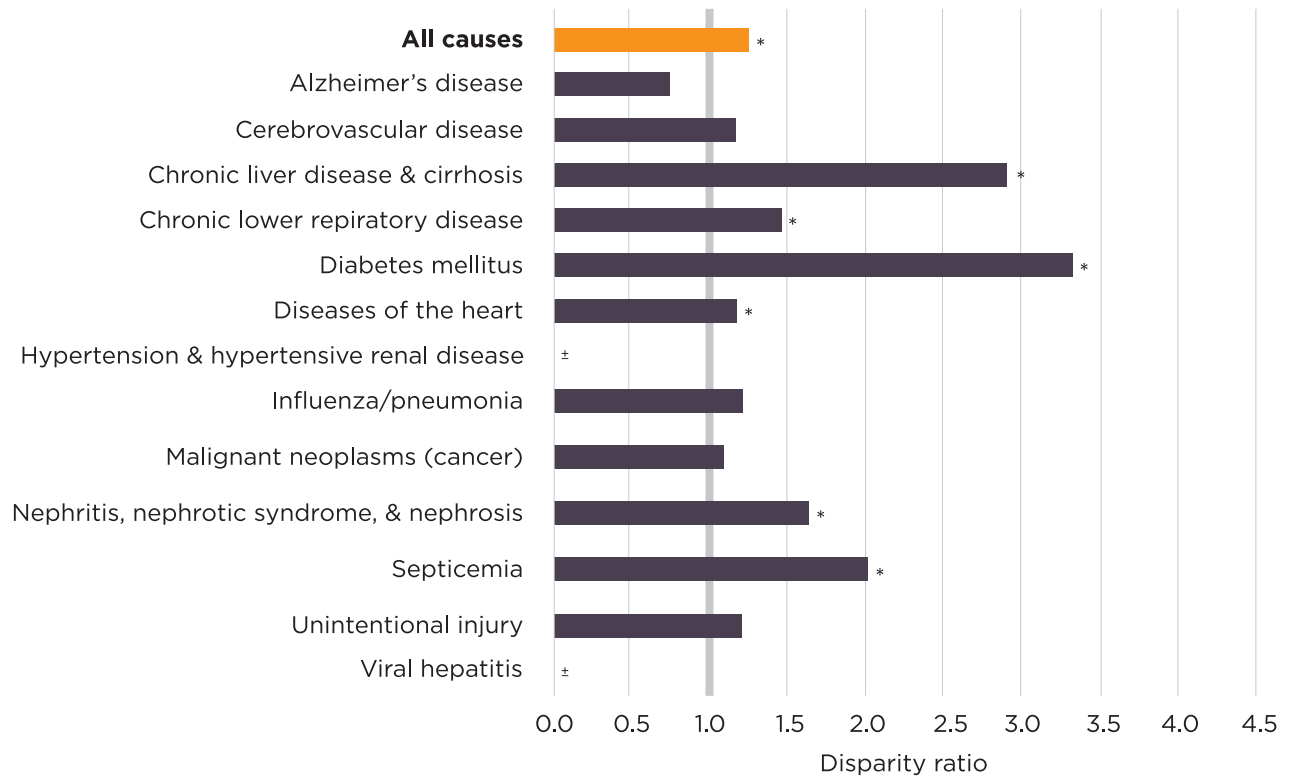
¹CDC Wonder.

* Cause of death for which American Indian/Alaska Native mortality rate was statistically significantly higher than white rate.

** Cause of death for which American Indian/Alaska Native mortality rate was statistically significantly lower than white rate.

± Ratio not available

Figure 6.6: Age-Adjusted Mortality Rate Disparity Ratios for American Indian/Alaska Natives and Whites, Wisconsin, Age 55 or Older, 2011-2015¹



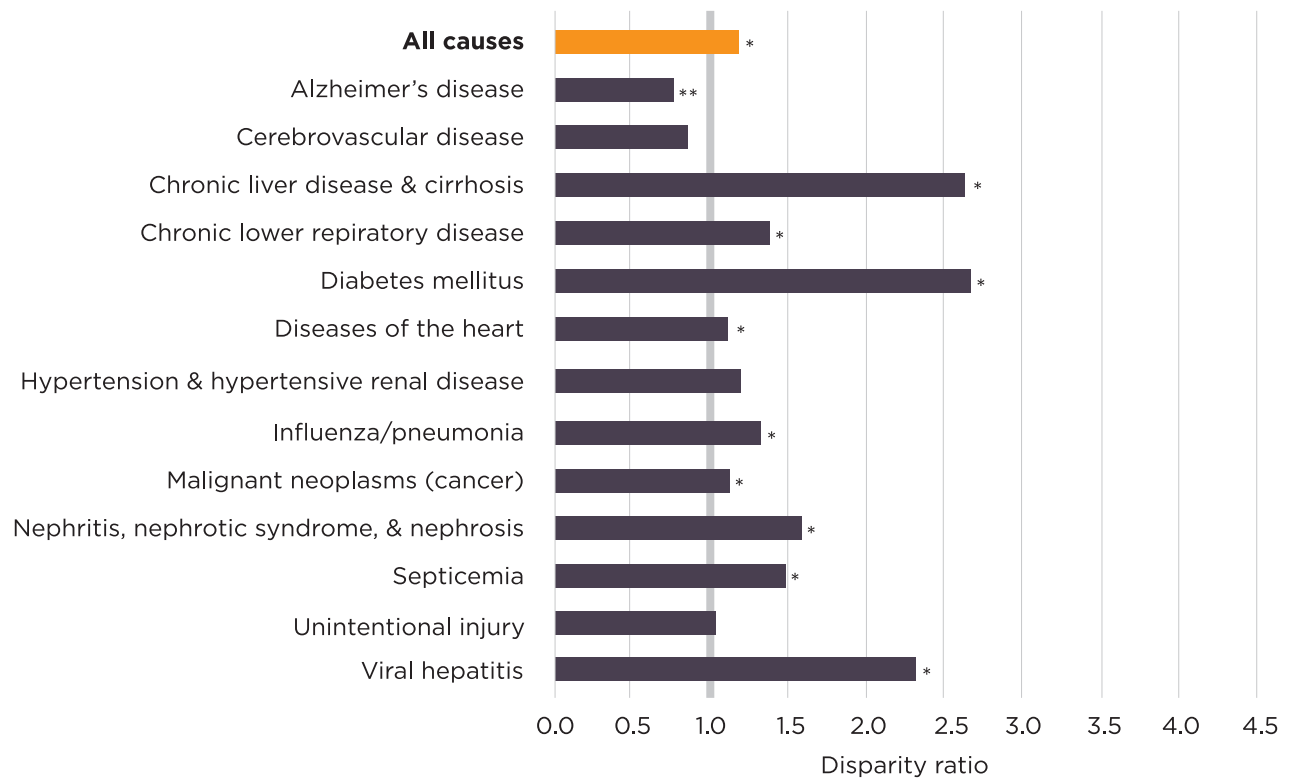
¹CDC Wonder.

*Cause of death for which American Indian/Alaska Native mortality rate was statistically significantly higher than white rate.

** Cause of death for which American Indian/Alaska Native mortality rate was statistically significantly lower than white rate.

‡ Ratio not available

Figure 6.7: Age-Adjusted Mortality Rate Disparity Ratios for American Indian/Alaska Natives and Whites, Michigan, Minnesota, and Wisconsin Combined, Age 55 or Older, 2011-2015¹

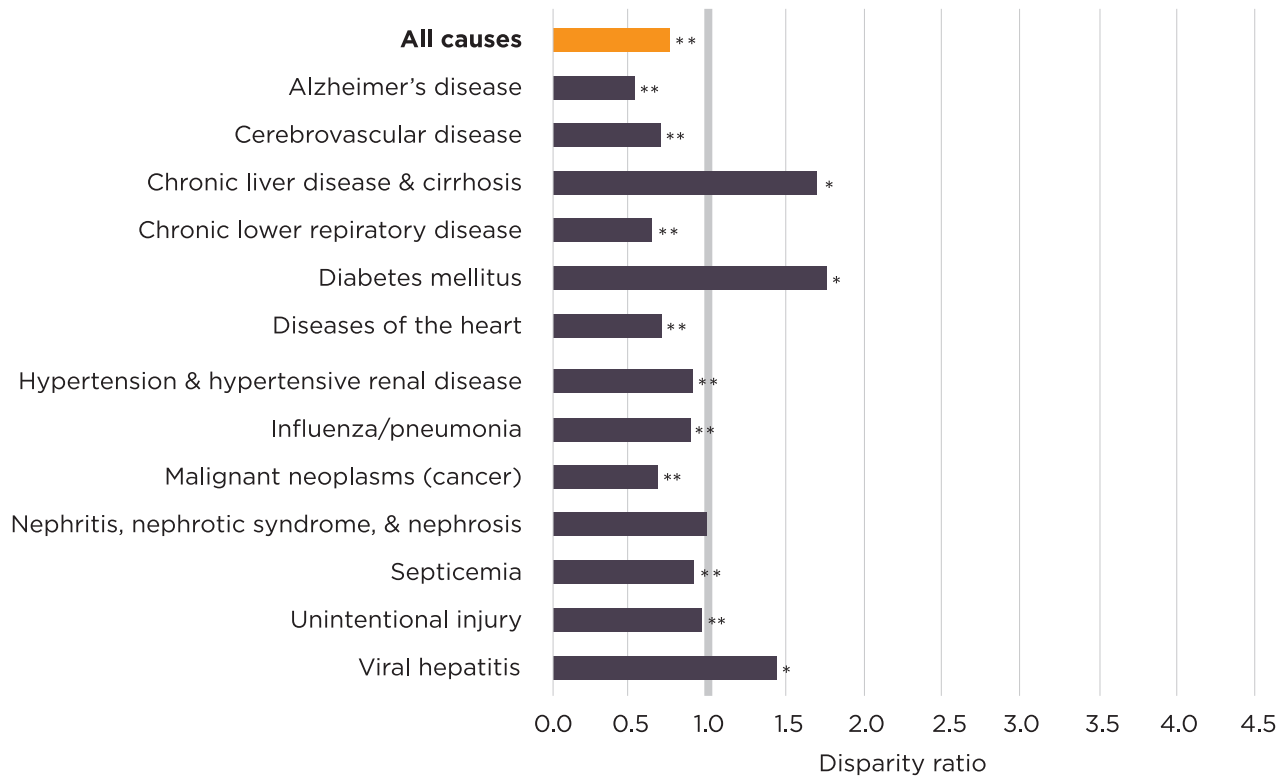


¹CDC Wonder.

*Cause of death for which American Indian/Alaska Native mortality rate was statistically significantly higher than white rate

** Cause of death for which American Indian/Alaska Native mortality rate was statistically significantly lower than white rate

Figure 6.8: Age-Adjusted Mortality Rate Disparity Ratios for American Indian/Alaska Natives and Whites, United States, Age 55 or Older, 2011-2015¹



¹CDC Wonder.

*Cause of death for which American Indian/Alaska Native mortality rate was statistically significantly higher than white rate

** Cause of death for which American Indian/Alaska Native mortality rate was statistically significantly lower than white rate



Table 6.5: Alzheimer’s Disease Age-Adjusted Mortality Rates (per 100,000) and Disparity Ratios, Aged 55 Years and Older, Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, 2011-2015¹

		Age-Adjusted Mortality Rate	95% Confidence Interval	American Indian/ Alaska Native-White Disparity Ratio
Michigan	AI/AN	122.4	92.2 - 159.4	0.95
	White	128.9	126.8 - 131.0	
	All Races	125.0	123.1 - 127.0	
Minnesota	AI/AN	—	—	—
	White	110.5	108.0 - 113.0	
	All Races	109.1	106.6 - 111.6	
Wisconsin	AI/AN	88.6	55.5 - 134.1	0.77
	White	115.8	113.4 - 118.3	
	All Races	115.2	112.8 - 117.6	
Three-State Area**	AI/AN	93.8	75.4 - 115.5	0.78
	White	120.4	119.0 - 121.7	
	All Races	118.3	117.0 - 119.6	
United States**	AI/AN	65.0	61.5 - 68.6	0.53
	White	123.2	122.9 - 123.6	
	All Races	118.9	118.5 - 119.2	

¹CDC Wonder.

*Area in which American Indian/Alaska Native mortality rates were statistically significantly higher than white rate

**Area in which American Indian/Alaska Native mortality rates were statistically significantly lower than white rate

Table 6.6: Cerebrovascular Disease (Stroke) Age-Adjusted Mortality Rates (per 100,000) and Disparity Ratios, Aged 55 Years and Older, Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, 2011-2015¹

		Age-Adjusted Mortality Rate	95% Confidence Interval	American Indian/Alaska Native-White Disparity Ratio
Michigan**	AI/AN	101.6	75.7 - 133.6	0.64
	White	158.3	155.9 - 160.6	
	All Races	163.1	160.9 - 165.4	
Minnesota	AI/AN	123.5	90.7 - 164.2	0.84
	White	146.6	143.6 - 149.5	
	All Races	148.4	145.5 - 151.4	
Wisconsin	AI/AN	185.6	140.2 - 241.0	1.20
	White	154.9	152.0 - 157.7	
	All Races	157.6	154.8 - 160.4	
Three-State Area	AI/AN	132.5	111.5 - 153.5	0.86
	White	154.3	152.8 - 155.9	
	All Races	158.0	156.5 - 159.5	
United States**	AI/AN	108.8	104.5 - 113.2	0.69
	White	156.8	156.4 - 157.2	
	All Races	160.7	160.2 - 161.1	

¹CDC Wonder.

*Area in which American Indian/Alaska Native mortality rates were statistically significantly higher than white rate

**Area in which American Indian/Alaska Native mortality rates were statistically significantly lower than white rate

Table 6.7: Chronic Liver Disease and Cirrhosis Age-Adjusted Mortality Rates (per 100,000) and Disparity Ratios, Aged 55 Years and Older, Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, 2011-2015¹

		Age-Adjusted Mortality Rate	95% Confidence Interval	American Indian/ Alaska Native-White Disparity Ratio
Michigan*	AI/AN	45.3	31.7 - 62.7	1.64
	White	27.6	26.7 - 28.5	
	All Races	27.5	26.6 - 28.4	
Minnesota*	AI/AN	94.7	69.6 - 126.0	4.21
	White	22.5	21.3 - 23.6	
	All Races	22.9	21.7 - 24.0	
Wisconsin*	AI/AN	68.8	47.1 - 97.2	2.95
	White	23.3	22.2 - 24.4	
	All Races	23.8	22.7 - 24.9	
Three-State Area*	AI/AN	66.6	54.4 - 78.8	2.65
	White	25.1	24.5 - 25.7	
	All Races	25.3	24.7 - 25.9	
United States*	AI/AN	52.2	49.8 - 54.7	1.69
	White	30.8	30.6 - 31.0	
	All Races	29.3	29.1 - 29.4	

¹CDC Wonder.

*Area in which American Indian/Alaska Native mortality rates were statistically significantly higher than white rate

**Area in which American Indian/Alaska Native mortality rates were statistically significantly lower than white rate

Table 6.8: Chronic Lower Respiratory Disease (CLRD) Age-Adjusted Mortality Rates (per 100,000) and Disparity Ratios, Aged 55 Years and Older, Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, 2011-2015¹

		Age-Adjusted Mortality Rate	95% Confidence Interval	American Indian/ Alaska Native-White Disparity Ratio
Michigan*	AI/AN	302.3	255.7 - 349.0	1.42
	White	213.5	210.7 - 216.2	
	All Races	204.2	201.7 - 206.7	
Minnesota	AI/AN	212.7	167.6 - 266.3	1.28
	White	166.0	162.8 - 169.2	
	All Races	164.7	161.6 - 167.8	
Wisconsin*	AI/AN	265.6	210.0 - 321.3	1.50
	White	177.6	174.4 - 180.7	
	All Races	176.3	173.2 - 179.3	
Three-State Area*	AI/AN	266.9	237.9 - 296.0	1.40
	White	190.9	189.2 - 192.7	
	All Races	186.8	185.2 - 188.5	
United States**	AI/AN	133.9	129.2 - 138.6	0.67
	White	198.6	198.1 - 199.1	
	All Races	186.0	185.5 - 186.4	

¹CDC Wonder.

*Area in which American Indian/Alaska Native mortality rates were statistically significantly higher than white rate

**Area in which American Indian/Alaska Native mortality rates were statistically significantly lower than white rate

Table 6.9: Diabetes Age-Adjusted Mortality Rates (per 100,000) and Disparity Ratios, Aged 55 Years and Older, Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, 2011-2015¹

		Age-Adjusted Mortality Rate	95% Confidence Interval	American Indian/ Alaska Native-White Disparity Ratio
Michigan*	AI/AN	160.8	127.0 - 194.6	1.78
	White	90.3	88.6 - 92.1	
	All Races	95.9	94.2 - 97.6	
Minnesota*	AI/AN	278.3	224.3 - 332.3	3.63
	White	76.7	74.5 - 78.8	
	All Races	79.8	77.7 - 82.0	
Wisconsin*	AI/AN	247.7	196.0 - 299.3	3.37
	White	73.6	71.6 - 75.6	
	All Races	77.4	75.4 - 79.4	
Three-State Area*	AI/AN	220.0	194.2 - 245.9	2.68
	White	82.1	80.9 - 83.2	
	All Races	86.8	85.7 - 87.9	
United States*	AI/AN	138.3	133.7 - 143.0	1.75
	White	79.2	78.9 - 79.5	
	All Races	85.8	85.6 - 86.1	

¹CDC Wonder.

*Area in which American Indian/Alaska Native mortality rates were statistically significantly higher than white rate

**Area in which American Indian/Alaska Native mortality rates were statistically significantly lower than white rate

Table 6.10: Heart Disease Age-Adjusted Mortality Rates (per 100,000) and Disparity Ratios, Aged 55 Years and Older, Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, 2011-2015¹

		Age-Adjusted Mortality Rate	95% Confidence Interval	American Indian/Alaska Native-White Disparity Ratio
Michigan	AI/AN	798.9	721.9 - 876.0	0.98
	White	816.1	810.8 - 821.3	
	All Races	841.1	836.1 - 846.1	
Minnesota*	AI/AN	723.1	630.3 - 815.9	1.43
	White	504.3	498.8 - 509.7	
	All Races	503.0	497.7 - 508.3	
Wisconsin*	AI/AN	825.0	725.5 - 924.5	1.22
	White	674.9	669.0 - 680.9	
	All Races	680.8	675.0 - 686.7	
Three-State Area*	AI/AN	786.9	735.9 - 837.9	1.13
	White	694.7	691.5 - 698.0	
	All Races	712.9	709.7 - 716.0	
United States**	AI/AN	495.4	486.3 - 504.5	0.69
	White	717.9	717.0 - 718.8	
	All Races	717.4	716.6 - 718.3	

¹CDC Wonder.

*Area in which American Indian/Alaska Native mortality rates were statistically significantly higher than white rate

**Area in which American Indian/Alaska Native mortality rates were statistically significantly lower than white rate

Table 6.11: Hypertension and Hypertensive Renal Disease Age-Adjusted Mortality Rates (per 100,000) and Disparity Ratios, Aged 55 Years and Older, Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, 2011-2015¹

		Age-Adjusted Mortality Rate	95% Confidence Interval	American Indian/ Alaska Native-White Disparity Ratio
Michigan	AI/AN	—	—	—
	White	32.0	31.0 - 33.0	
	All Races	34.1	33.1 - 35.1	
Minnesota	AI/AN	—	—	—
	White	34.6	33.2 - 36.0	
	All Races	35.3	33.9 - 36.7	
Wisconsin	AI/AN	—	—	—
	White	25.7	24.5 - 26.9	
	All Races	26.8	25.6 - 28.0	
Three-State Area	AI/AN	36.9	26.3 - 50.2	1.20
	White	30.8	30.2 - 31.5	
	All Races	32.3	31.7 - 33.0	
United States**	AI/AN	29.6	27.3 - 31.9	0.90
	White	32.8	32.6 - 33.0	
	All Races	35.9	35.7 - 36.1	

¹CDC Wonder.

*Area in which American Indian/Alaska Native mortality rates were statistically significantly higher than white rate

**Area in which American Indian/Alaska Native mortality rates were statistically significantly lower than white rate

Table 6.12: Influenza/Pneumonia Age-Adjusted Mortality Rates (per 100,000) and Disparity Ratios, Aged 55 Years and Older, Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, 2011-2015¹

		Age-Adjusted Mortality Rate	95% Confidence Interval	American Indian/Alaska Native-White Disparity Ratio
Michigan	AI/AN	70.5	49.6 - 97.2	1.12
	White	62.8	61.3 - 64.2	
	All Races	63.5	62.1 - 64.9	
Minnesota*	AI/AN	92.9	62.2 - 133.4	2.05
	White	45.4	43.8 - 47.0	
	All Races	45.4	43.8 - 47.0	
Wisconsin	AI/AN	77.7	48.7 - 117.7	1.26
	White	61.8	60.0 - 63.6	
	All Races	61.9	60.1 - 63.6	
Three-State Area*	AI/AN	78.4	62.1 - 94.7	1.35
	White	58.0	57.1 - 59.0	
	All Races	58.6	57.7 - 59.5	
United States**	AI/AN	57.7	54.5 - 60.8	0.89
	White	65.1	64.8 - 65.3	
	All Races	65.2	65.0 - 65.5	

¹CDC Wonder.

*Area in which American Indian/Alaska Native mortality rates were statistically significantly higher than white rate

**Area in which American Indian/Alaska Native mortality rates were statistically significantly lower than white rate

Table 6.13: Malignant Neoplasm (Cancer) Age-Adjusted Mortality Rates (per 100,000) and Disparity Ratios, Aged 55 Years and Older, Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, 2011-2015¹

		Age-Adjusted Mortality Rate	95% Confidence Interval	American Indian/ Alaska Native-White Disparity Ratio
Michigan	AI/AN	680.2	613.0 - 747.5	0.98
	White	693.2	688.4 - 698.1	
	All Races	701.9	697.3 - 706.5	
Minnesota*	AI/AN	910.2	810.8 - 1,009.6	1.41
	White	644.2	637.9 - 650.5	
	All Races	644.3	638.1 - 650.5	
Wisconsin	AI/AN	762.5	672.4 - 852.5	1.13
	White	677.6	671.5 - 683.6	
	All Races	684.4	678.4 - 690.4	
Three-State Area*	AI/AN	767.1	719.6 - 814.7	1.13
	White	676.3	673.1 - 679.6	
	All Races	683.1	680.0 - 686.3	
United States**	AI/AN	451.4	443.1 - 459.7	0.67
	White	671.3	670.4 - 672.2	
	All Races	668.1	667.3 - 668.9	

¹CDC Wonder.

*Area in which American Indian/Alaska Native mortality rate is statistically higher than White mortality rate

**Area in which American Indian/Alaska Native mortality rate is statistically lower than White mortality rate

Table 6.14: Nephritis, Nephrotic Syndrome, and Nephrosis (Kidney Disease) Age-Adjusted Mortality Rates (per 100,000) and Disparity Ratios, Aged 55 Years and Older, Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, 2011-2015¹

		Age-Adjusted Mortality Rate	95% Confidence Interval	American Indian/Alaska Native-White Disparity Ratio
Michigan*	AI/AN	84.4	60.9 - 114.2	1.45
	White	58.4	57.0 - 59.8	
	All Races	63.5	62.1 - 64.9	
Minnesota*	AI/AN	81.1	53.9 - 117.2	1.80
	White	45.1	43.4 - 46.7	
	All Races	46.9	45.2 - 48.5	
Wisconsin*	AI/AN	100.6	69.3 - 141.3	1.67
	White	60.1	58.3 - 61.9	
	All Races	62.5	60.8 - 64.3	
Three-State Area*	AI/AN	88.1	71.2 - 105.1	1.59
	White	55.5	54.6 - 56.4	
	All Races	59.1	58.2 - 60.0	
United States	AI/AN	51.9	48.9 - 54.8	0.98
	White	53.1	52.9 - 53.4	
	All Races	57.3	57.1 - 57.6	

¹CDC Wonder.

*Area in which American Indian/Alaska Native mortality rates were statistically significantly higher than white rate

**Area in which American Indian/Alaska Native mortality rates were statistically significantly lower than white rate

Table 6.15: Septicemia Age-Adjusted Mortality Rates (per 100,000) and Disparity Ratios, Aged 55 Years and Older, Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, 2011-2015¹

		Age-Adjusted Mortality Rate	95% Confidence Interval	American Indian/ Alaska Native-White Disparity Ratio
Michigan	AI/AN	36.2	21.8 - 56.6	0.99
	White	36.7	35.6 - 37.8	
	All Races	40.5	39.4 - 41.6	
Minnesota*	AI/AN	46.8	29.0 - 71.6	1.90
	White	24.6	23.4 - 25.9	
	All Races	25.3	24.1 - 26.5	
Wisconsin*	AI/AN	59.1	35.6 - 92.3	2.06
	White	28.7	27.5 - 30.0	
	All Races	29.6	28.3 - 30.8	
Three-State Area*	AI/AN	46.2	35.0 - 59.8	1.48
	White	31.3	30.6 - 32.0	
	All Races	33.7	33.0 - 34.4	
United States**	AI/AN	37.5	35.1 - 40.0	0.90
	White	41.6	41.3 - 41.8	
	All Races	43.6	43.4 - 43.8	

¹CDC Wonder.

*Area in which American Indian/Alaska Native mortality rates were statistically significantly higher than white rate

**Area in which American Indian/Alaska Native mortality rates were statistically significantly lower than white rate

Table 6.16: Unintentional Injury Age-Adjusted Mortality Rates (per 100,000) and Disparity Ratios, Aged 55 Years and Older, Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, 2011-2015¹

		Age-Adjusted Mortality Rate	95% Confidence Interval	American Indian/Alaska Native-White Disparity Ratio
Michigan	AI/AN	56.5	40.0 - 77.6	0.74
	White	76.4	74.8 - 78.0	
	All Races	75.5	74.0 - 77.0	
Minnesota	AI/AN	124.5	91.8 - 165.1	1.17
	White	106.4	103.9 - 108.9	
	All Races	106.5	104.1 - 108.9	
Wisconsin	AI/AN	138.1	102.2 - 182.6	1.25
	White	110.7	108.3 - 113.1	
	All Races	110.8	108.4 - 113.1	
Three-State Area	AI/AN	98.3	81.8 - 114.8	1.04
	White	94.2	93.0 - 95.4	
	All Races	93.2	92.0 - 94.3	
United States**	AI/AN	78.9	75.5 - 82.2	0.96
	White	82.6	82.3 - 82.9	
	All Races	79.4	79.2 - 79.7	

¹CDC Wonder.

*Area in which American Indian/Alaska Native mortality rates were statistically significantly higher than white rate

**Area in which American Indian/Alaska Native mortality rates were statistically significantly lower than white rate

Table 6.17: Viral Hepatitis Age-Adjusted Mortality Rates (per 100,000) and Disparity Ratios, Aged 55 Years and Older, Michigan, Minnesota, Wisconsin, Three-State Area, and the United States, 2011-2015¹

		Age-Adjusted Mortality Rate	95% Confidence Interval	American Indian/ Alaska Native-White Disparity Ratio
Michigan	AI/AN	—	—	—
	White	4.3	4.0 - 4.7	
	All Races	5.5	5.1 - 5.9	
Minnesota	AI/AN	—	—	—
	White	2.6	2.3 - 3.0	
	All Races	3.4	3.0 - 3.9	
Wisconsin	AI/AN	—	—	—
	White	2.4	2.1 - 2.8	
	All Races	2.8	2.4 - 3.1	
Three-State Area*	AI/AN	7.7	4.8 - 11.8	2.33
	White	3.3	3.1 - 3.5	
	All Races	4.3	4.0 - 4.5	
United States*	AI/AN	8.6	7.7 - 9.5	1.43
	White	6.0	5.9 - 6.1	
	All Races	6.5	6.4 - 6.5	

¹CDC Wonder.

*Area in which American Indian/Alaska Native mortality rates were statistically significantly higher than white rate

**Area in which American Indian/Alaska Native mortality rates were statistically significantly lower than white rate

CAUSES OF EARLY DEATH

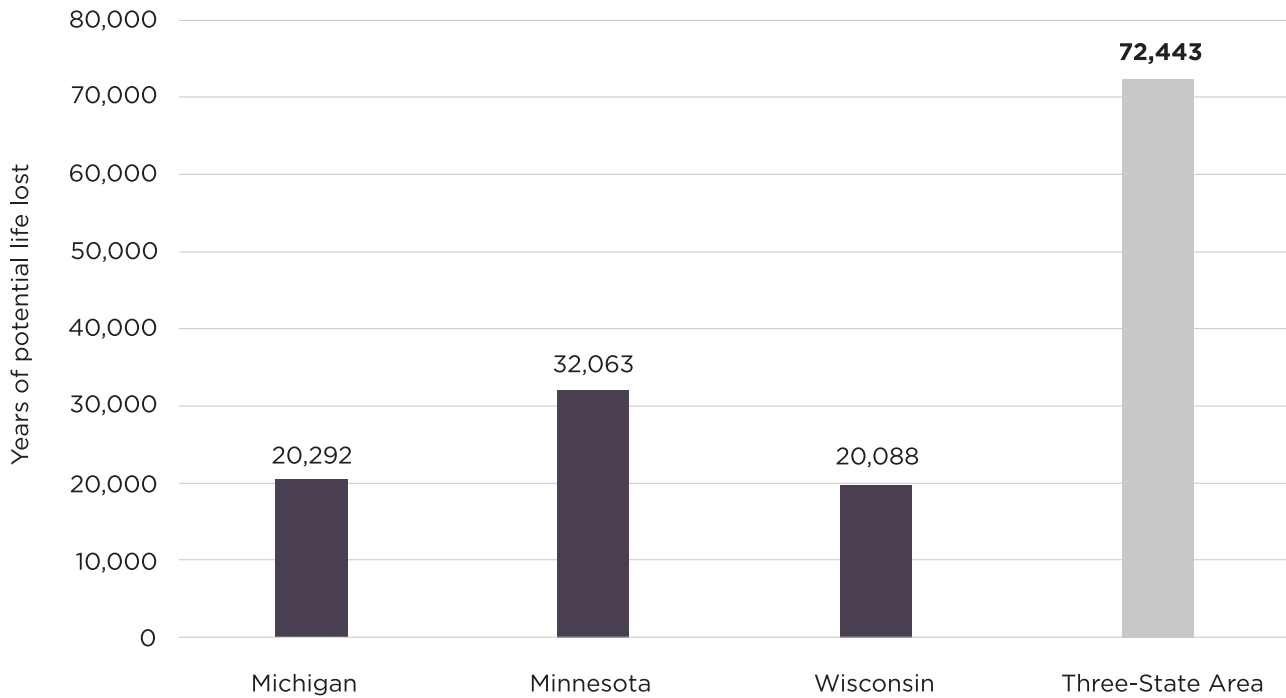
Early death has a large effect on American Indian/Alaska Native communities. When people do not reach elder status, or when elders die relatively young, the community suffers. Elders are a connection between young people and the ancestors and possess a wealth of knowledge about traditional life skills, spirituality, language, and life lessons that can help others better navigate the world. Nationally, American Indian/Alaska Native people have a lower life expectancy than the general population.⁵⁵ Early death was included in this report on elder health to highlight the need to not only address the health concerns of elders within the Bemidji area, but to address the health concerns of all American Indian/Alaska Natives throughout the region so more people reach elder status.

Years of potential life lost (YPLL) is a measure that is used to describe the magnitude of early death; in contrast to typical mortality measures, YPLL emphasizes the processes that affect premature death. YPLL is calculated by subtracting the age of an individual at the time of death from an age that people are “expected” to live until; in this report, this age is 65 years of age (a typically-used age for this measure). For example, if someone died when they were one year of age, they would have a YPLL of 64 ($65-1=64$). If someone died at age 64, they would have one YPLL ($65-64=1$). Therefore, YPLL is strongly affected by the age at which a person died, and so causes for which people tend to die very young will contribute a large amount of YPLL. For a population, the total YPLL is determined by adding together all the YPLL for all people in the population. YPLL is just one method of measuring the impact of early death.

Figure 6.9 shows the number of years of potential life lost due to all causes for American Indian/Alaska Natives in Michigan, Minnesota, Wisconsin, and the three-state area from 2011-2015. Over this five-year period, American Indian/Alaska Natives in Michigan and Wisconsin each had about 20,000 years of potential life lost from all causes, and Minnesota had approximately 32,000 years of potential life lost from all causes. Note that YPLL is reported as an absolute number and was not adjusted for population size.

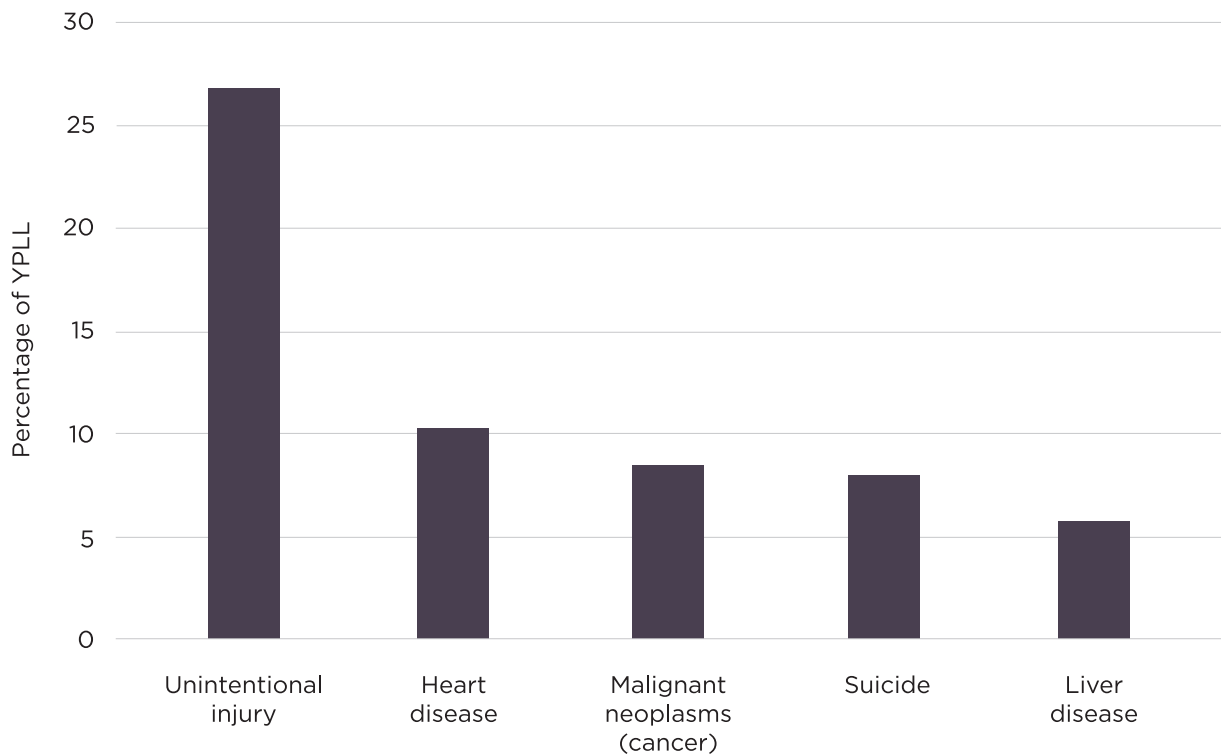
The top two causes of early death, as measured by YPLL, for American Indian/Alaska Natives in the three-state area were the same as for each state individually: unintentional injury and heart disease. Cancer was the third-leading cause of early death in the three states combined, Michigan, and Wisconsin; in Minnesota the third-leading cause of early death was suicide. The leading cause of death before age 65, unintentional injury, accounted for just over a quarter of all YPLL. The top five causes of early death combined accounted for about 60% of all YPLL (Figure 6.10, Tables 6.18-6.21).

Figure 6.9: Years of Potential Life Lost Among American Indian/Alaska Natives Due to All Causes, Michigan, Minnesota, and Wisconsin Combined, 2011-2015¹



¹WISQARS 2011-2015

Figure 6.10: Top Five Causes of Years of Potential Life Lost (YPLL) Among American Indian/Alaska Natives, Michigan, Minnesota, and Wisconsin Combined, 2011-2015¹



¹WISQARS 2011-2015

Table 6.18: Top Five Causes of Years of Potential Life Lost Among American Indian/Alaska Natives, Michigan, 2011-2015¹

Cause of Death	Number of Early Deaths	Number of Years of Potential Life Lost	Percent of Total Years of Potential Life Lost
Unintentional injury	192	5,276	26.00
Heart disease	193	2,349	11.58
Malignant neoplasms (cancer)	220	2,133	10.51
Suicide	61	1,774	8.74
Perinatal period	21	1,365	6.73
All other causes	472	7,395	36.44
Total	1,159	20,292	100.00

¹WISQARS 2011-2015**Table 6.19:** Top Five Causes of Years of Potential Life Lost Among American Indian/Alaska Natives, Minnesota, 2011-2015¹

Cause of Death	Number of Early Deaths	Number of Years of Potential Life Lost	Percent of Total Years of Potential Life Lost ²
Unintentional injury	321	9,374	29.24
Heart disease	219	3,051	9.52
Suicide	82	2,780	8.67
Malignant neoplasms (cancer)	217	2,327	7.26
Liver disease	109	1,658	5.17
All other causes	586	12,873	40.15
Total	1,534	32,063	100.00

¹WISQARS 2011-2015²Due to rounding, total may not equal 100%

Table 6.20: Top Five Causes of Years of Potential Life Lost Among American Indian/Alaska Natives, Wisconsin, 2011-2015¹

Cause of Death	Number of Early Deaths	Number of Years of Potential Life Lost	Percent of Total Years of Potential Life Lost
Unintentional injury	189	4,709	23.44
Heart disease	160	2,023	10.07
Malignant neoplasms (cancer)	162	1,774	8.83
Liver disease	91	1,430	7.12
Congenital anomalies	23	1,267	6.31
All other causes	436	8,885	44.23
Total	1,061	20,088	100.00

¹WISQARS 2011-2015**Table 6.21:** Top Five Causes of Years of Potential Life Lost Among American Indian/Alaska Natives, Michigan, Minnesota, and Wisconsin Combined, 2011-2015¹

Cause of Death	Number of Early Deaths	Number of Years of Potential Life Lost	Percent of Total Years of Potential Life Lost ²
Unintentional injury	702	19,359	26.72
Heart disease	572	7,423	10.25
Malignant neoplasms (cancer)	599	6,234	8.61
Suicide	184	5,785	7.99
Liver disease	275	4,127	5.70
All other causes	1,422	29,515	40.74
Total	3,754	72,443	100.00

¹WISQARS 2011-2015²Due to rounding, total may not equal 100%



APPENDIX ONE: LIMITATIONS

There are limitations related to data presented in this report.

The most important limitation of this report relates to the way in which health and data are conceptualized. The information presented in this report was obtained using Western methods and interpreted through a Western lens. The concept of health used in this report reflects the Western way of thinking, with a focus on physical health. Though they differ, many Indigenous models of health are holistic and good health is seen as a balance between physical, mental, emotional, and spiritual wellbeing. This report focuses on physical health, with only a few measures about mental or emotional health. One aspect of cultural connection is included. Furthermore, other key components of wellness such as communities' connection to their land or language, and their relationships with creation in the Area (such as animals, birds, plants, water, or earth) are absent altogether.

American Indian/Alaska Natives make up a small proportion of the United States as well as the three-state area. As a result, obtaining and using data for this population can be challenging.

Racial misidentification of American Indian/Alaska Natives in data sets is common. With regard to mortality, the rate of misidentification varies across the country, and may be lower in Contract Service Delivery Areas (CHSDAs, counties that include or adjoin reservations).¹³ Studies on all-cause mortality have reported varying amounts of racial misclassification of American Indian/Alaska Natives. The National Center for Health Statistics found that mortality rates for American Indian/Alaska Natives were underreported by about 21%;¹² one 2014 study placed misclassification prevalence at 14%.¹³

When state and IHS data were compared, 16.1% of mortality reports had an incorrect racial classification in the Bemidji IHS Area (Michigan, Minnesota, and Wisconsin).

Only race variables were used in this report; ethnicity was not included. The incorporation of ethnicity into analyses can reduce the count for small races' populations. In many reports, Hispanic American Indian/Alaska Natives will often be grouped with Hispanics of all races, and only non-Hispanic American Indian/Alaska Natives will be considered American Indian/Alaska Native, thereby reducing the population size.

Data regarding sex were presented using binary categories (male and female), and data about gender were not available. As a result, the data presented may not reflect individuals' own sex or gender identities.



APPENDIX TWO: TECHNICAL NOTES

DEMOGRAPHICS

All data in the demographics section of this report were retrieved from American Fact Finder⁵⁶ except for those included in the age pyramids (Figures 1.1, 1.2) or related to housing (Table 1.12). See the section below on *Identifying Our Needs: A Survey of Elders VI* for details.

American Fact Finder contains data collected through the United States' decennial Census and the American Community Survey (ACS), both conducted by the U.S. Census Bureau. The decennial Census is conducted once every ten years and seeks to include every person in the United States in its sample, while the ACS collects data every year using a probabilistic sample, creating one-, three-, and five-year estimates. The content of the two surveys differ from each other. For both surveys, the Census Bureau defines *American Indian or Alaska Native* as being "a person having origins in any of the original peoples of North and South America (including Central American) and who maintains tribal affiliation or community attachment."⁵⁷

American Community Survey

The demographic information for age, sex, employment, poverty, and responsibility for grandchildren were retrieved from the 2015 ACS five-year estimates for "American Indian and Alaska Native alone," meaning that the data were not inclusive of American Indian/Alaska Natives who identified as more than one race. While the American Indian/Alaska Native population increases substantially when those who identify as American Indian/Alaska Native in combination with other races are included, this report is limited by how the data sources report race.

Maps 1.1 and 1.2 were created using data from the ACS 2015 five-year estimates retrieved

from American Fact Finder table B01001C and B01001. Maps were generated for the entire U.S. by state for American Indian/Alaska Natives alone and the all-races population age 55 or older and presented by percent of the total respective population in each state.

Inter-Censal Estimates

The age and sex data for the age pyramids originated from inter-Censal estimates and were retrieved from CSV files available online. Inter-Censal estimates were used for the age pyramid because age groups of even width were not available in ACS data on American Fact Finder for American Indian/Alaska Natives at the state level.

MORTALITY

Mortality Rates

The five most recent years of data available were aggregated to determine mortality rates. Age-adjusted mortality rates and their corresponding confidence intervals were retrieved from CDC WONDER. By adjusting the rates to a standard age distribution, age-adjusted rates allow for comparisons between groups that have different age distributions, thereby preventing the distortion that may occur when certain causes of death affect some age groups more than others. Data were not adjusted for racial misclassification.

All-cause mortality rates were also examined by sex and urbanicity. Age-adjusted mortality rates were retrieved by geography to examine differences in rates for rural and urban residents. Mortality data are based on place of residency, not place of death. It cannot be determined whether the deaths occurred in the same type of geography as where the residency was located. For the purposes of this report, urban classification was assigned to counties categorized as large central metro, large

fringe metro, medium metro, and small metro. Rural classification was assigned to counties categorized as micropolitan (non-metro) and noncore (non-metro). Counties are assigned to each classification based upon the 2013

NCHS Urban-Rural Scheme for Counties and is available within CDC WONDER. In addition to all-cause mortality rates, causes for 13 specific causes of death were included in this report (Table A.1).

Table A.1: Causes of Death and Associated ICD-10 Codes

Condition	ICD-10 Codes
Alzheimer’s disease	G30
Cerebrovascular disease	I60-I69
Chronic liver disease and cirrhosis	K70, K73-K74
Chronic lower respiratory disease (CLRD)	J40-J47
Diabetes mellitus	E10-E14
Diseases of the heart	I00-I09, I11, I13, I20-I51
Hypertension and hypertensive renal disease	I10, I12, I15
Influenza and pneumonia	J09-J18
Malignant neoplasm (all cancer)	C00-C97
Nephritis, nephrotic syndrome, and nephrosis	N00-N07, N17-N19, N25-N27
Septicemia	A40-A41
Unintentional injury	V01-X59, Y85-Y86
Viral hepatitis	B15-B19

Disparity Ratios

Mortality disparity ratios were included in this report. A disparity ratio is the ratio of the rates of two different population groups and indicates the degree of disparity between the two groups. The reference group’s rate is placed in the denominator, so that a ratio of less than one indicates that the population of interest has a lower mortality rate than the reference population, while a ratio of greater than one shows that the population of interest has a higher mortality rate than the reference population. In addition, when the ratio is subtracted from one and multiplied by 100%, the degree to which the disparity exists can be identified. For the disparity ratios in this report, the white population, American Indian/Alaska Native females, and urban American Indian/

Alaska Natives were alternately used as the reference population.

Years of Potential Life Lost

Years of Potential Life Lost (YPLL) is a measure that is used to describe the magnitude of early death; in contrast to typical mortality measures, YPLL emphasizes the processes that cause premature death. YPLL is calculated by subtracting the age of an individual at the time of death from an age that people are “expected” to live until; in this report, this age is 65 years of age. For example, if someone died when they were one year of age, they would have a YPLL of 64 (65-1=64). If someone died at age 64, they would have one YPLL (65-64=1). Therefore, YPLL is strongly affected by the age at which a person died, and so causes for which

people tend to die very young will contribute a large amount of YPLL. For a population, the total YPLL is determined by adding together all the YPLL for all people in the population. YPLL is just one method of measuring the impact of early death.

The five most recent years of data available were aggregated to determine top causes of YPLL. Absolute numbers of early deaths and the number of YPLL were not adjusted for population size. Data were not adjusted for racial misclassification.

BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM

Behavioral Risk Factor Surveillance System (BRFSS) data files retrieved from the CDC website were analyzed for this report. BRFSS is a survey of civilian, non-institutionalized adults aged 18 and older about health-related risk behaviors, chronic health conditions, and use of health services. Random-digit dialing is used to call landline and cell phones to conduct the interview survey year-round.

For BRFSS data in this report, individuals who reported being age 50 or older were considered elders and included in the analysis. Data from 2011 through 2013 were analyzed. Results of analyses were only included in this report when there were at least 50 American Indian/Alaska Native participants aged 50 or older for a question in a year, in each state in the three-state area, and when the question was asked in all three states. “Preferred race” (_PRACE and _PRACE1) was the race variable used in the analysis. Data are reported by year of BRFSS survey interview (IYEAR). No weighting, age-adjusting, or tests for statistical significance were conducted.

Too few American Indian/Alaska Native individuals took the BRFSS for only those aged 55 and older to be used, and this low sample size also affected which years of data were used in this report. Although 2014 and 2015 BRFSS datasets were available, too few older American Indian/Alaska Natives took the survey in those years to meet the threshold of 50 per state per year. Rather than expand the age group to include even younger individuals, the decision was made to use the slightly older data from 2011–2013. Few American Indian/Alaska Natives are surveyed by BRFSS each year—for example, from 2011–2014, only 1.45% (n=1,810) of the BRFSS participants (of all ages) in the three states were American Indian/Alaska Native alone or in combination with another race, while in 2014, 1.62% of the three-state population was American Indian/Alaska Native alone or in combination (American Community Survey Table DP05 1-year estimates).

CANCER INCIDENCE

Incidence refers to the number of new cases of a condition—in this situation, cancer cases—occurring in a specified population during a year. It should be noted that the data are based upon the time of diagnosis, not when the cancer may have first occurred. Some slow-growing types of cancer may be present for years before they are discovered.

The cancer incidence data in this report were retrieved for individuals aged 50 and older for the most recent five-year period from <https://statecancerprofiles.cancer.gov/index.html>, which includes data from cancer registries. The rates were age-adjusted per 100,000 population to the standard year 2000 U.S. population and were for invasive cancers only (excluding bladder cancer, which included invasive and in situ). Data were not corrected for racial misclassification.

**IDENTIFYING OUR NEEDS
A SURVEY OF ELDERS VI**

The University of North Dakota's National Resource Center on Native American Aging's (NRCNAA) *Identifying Our Needs: A Survey of Elders VI* survey was conducted among elders aged 55 or older. It was conducted from April 1, 2014 to March 31, 2017. It is a nationwide, self- or interviewer-administered, self-report survey utilizing a convenience sample. This survey includes various health, mental health, and quality of life measures; for some questions, national all-races comparisons were available from sources such as BRFSS.

NRCNAA analyzed the survey data and provided data tables for respondents from Michigan, Minnesota, Wisconsin, and the three states in aggregate. They also provided national, all races comparisons where available. Prior to this report's publication, NRCNAA reviewed the data tables, figures, accompanying comparison data, and narrative related to *Identifying Our Needs: A Survey of Elders VI* that is included in this report.

Not all the data available from *Identifying Our Needs: A Survey of Elders VI* were included in this report.

IMMUNIZATION

All IHS and Bemidji Area immunization data were accessed from the National Indian Health Service Immunization Program Quarterly Reports from the website http://www.ihs.gov/epi/index.cfm?module=epi_vaccine_reports. IHS, Tribal, and Urban Indian health centers submit immunization reports to the Immunization Program. The data are reported by IHS fiscal year (October 1- September 30). Three immunizations recommended for older people were included in this report: Tdap, Zoster, and Pneumovax. Other recommended vaccines for older people, such as the flu shot, were not included.

DATA SOURCES**Table A.2: Data Sources Used in this Report**

Report Chapters	Data Source
Demographics	<ul style="list-style-type: none"> • Inter-Censal Estimates • Identifying Our Needs: A Survey of Elders VI* • American Fact Finder (ACS)
Health care coverage	<ul style="list-style-type: none"> • Behavioral Risk Factor Surveillance System (BRFSS) • Identifying Our Needs: A Survey of Elders VI*
Health status	<ul style="list-style-type: none"> • Behavioral Risk Factor Surveillance System (BRFSS) • Cancer registries (https://statecancerprofiles.cancer.gov/index.html) • Identifying Our Needs: A Survey of Elders VI* • Indian Health Service National Immunization Reporting System (NIRS)
Independent living	<ul style="list-style-type: none"> • Identifying Our Needs: A Survey of Elders VI*
Health behavior	<ul style="list-style-type: none"> • Behavioral Risk Factor Surveillance System (BRFSS) • Identifying Our Needs: A Survey of Elders VI* • Indian Health Service National Immunization Reporting System (NIRS)
Mortality	<ul style="list-style-type: none"> • CDC WONDER • CDC Web-based Injury Statistics Query and Reporting System (WISQARS)

* National Resource Center on Native American Aging (2017). Needs assessment, identifying our needs: a survey of elders. Retrieved from <https://www.nrcnaa.org/needs-assessment>.

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CONTACT INFORMATION

Great Lakes Inter-Tribal Epidemiology Center

Great Lakes Inter-Tribal Council, Inc.

PO Box 9

Lac du Flambeau, Wisconsin 54538

glitc.org/epicenter

1-800-472-7207

Director

German Gonzalez, MD, MPH, FACE

ggonzalez@glitc.org

Program Managers/Senior Epidemiologists

Stephanie Bliss, MS

Umbrella Program

sbliss@glitc.org

Christina Denslinger, PhD

Strategic Prevention Framework -

Partnerships for Success

cdenslinger@glitc.org

Tyler LaPlaunt, MS

Good Health and Wellness in Indian Country

(GHWIC)/Bemidji Area Leaders Acting for

Change (BALAC)

tlaplaunt@glitc.org

Samantha Lucas-Pipkorn, MPH

Tribal Epidemiology Centers Public Health

Infrastructure (TECPHI)/ Bemidji Area

Thriving (BAT)

slucas-pipkorn@glitc.org

Meghan Porter, MPH

IHS Epidemiology Program Cooperative

Agreement

mporter@glitc.org

Epidemiologists

Gifty Crabbe, MPH

Marissa Hogan, MPH

Pasang Perera, MS

Valerie Poole, MPH

Ha Truong, MPH

Evaluator

Rebecca Cathey, MS

Research Associate

Alexandra Cirillo Lilli, MPH

Public Health Associate

Genelle Monger, CNP

Fiscal Assistant

Traci Buechner

Research Assistant

Chalyse Schellinger

Administrative Assistant

Jordyn Fink, BS





Great Lakes Inter-Tribal Council, Inc.
Lac du Flambeau, WI 54538
glitc.org/epicenter