

Community Health Profile

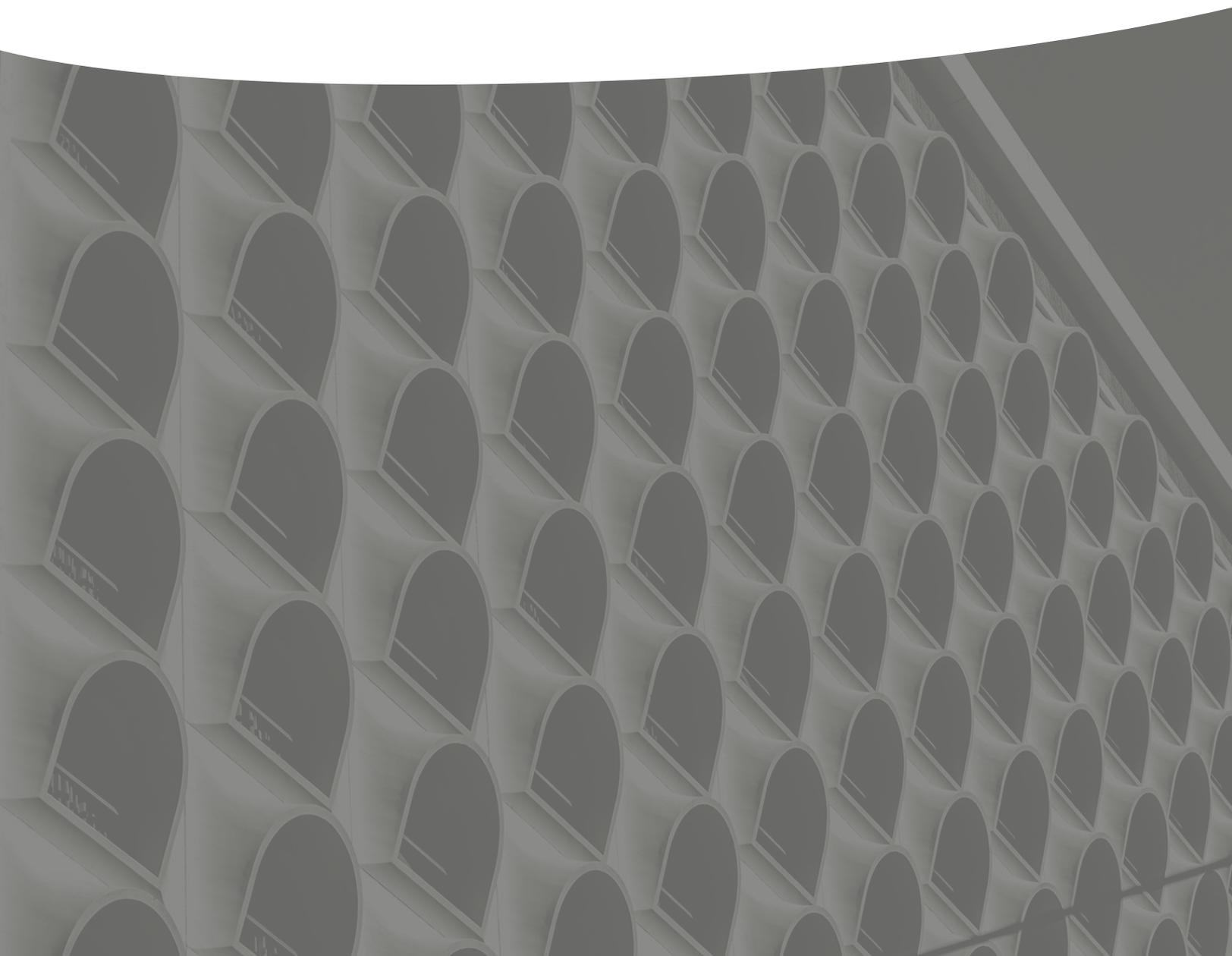
Individual Site Report | Flagstaff UIHP Service Area

August 2017



**Urban Indian
Health Institute**

A Division of the Seattle Indian Health Board



The mission of the UIHI is to support the health and well-being of urban Indian communities through information, scientific inquiry, and technology.



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TABLE OF CONTENTS

2	Urban Indian Health Programs
3	Introduction and Purpose
4	Methodology
6	Data Sources
8	Sociodemographics
15	Mortality
21	Maternal and Child Health
28	References
30	Appendix

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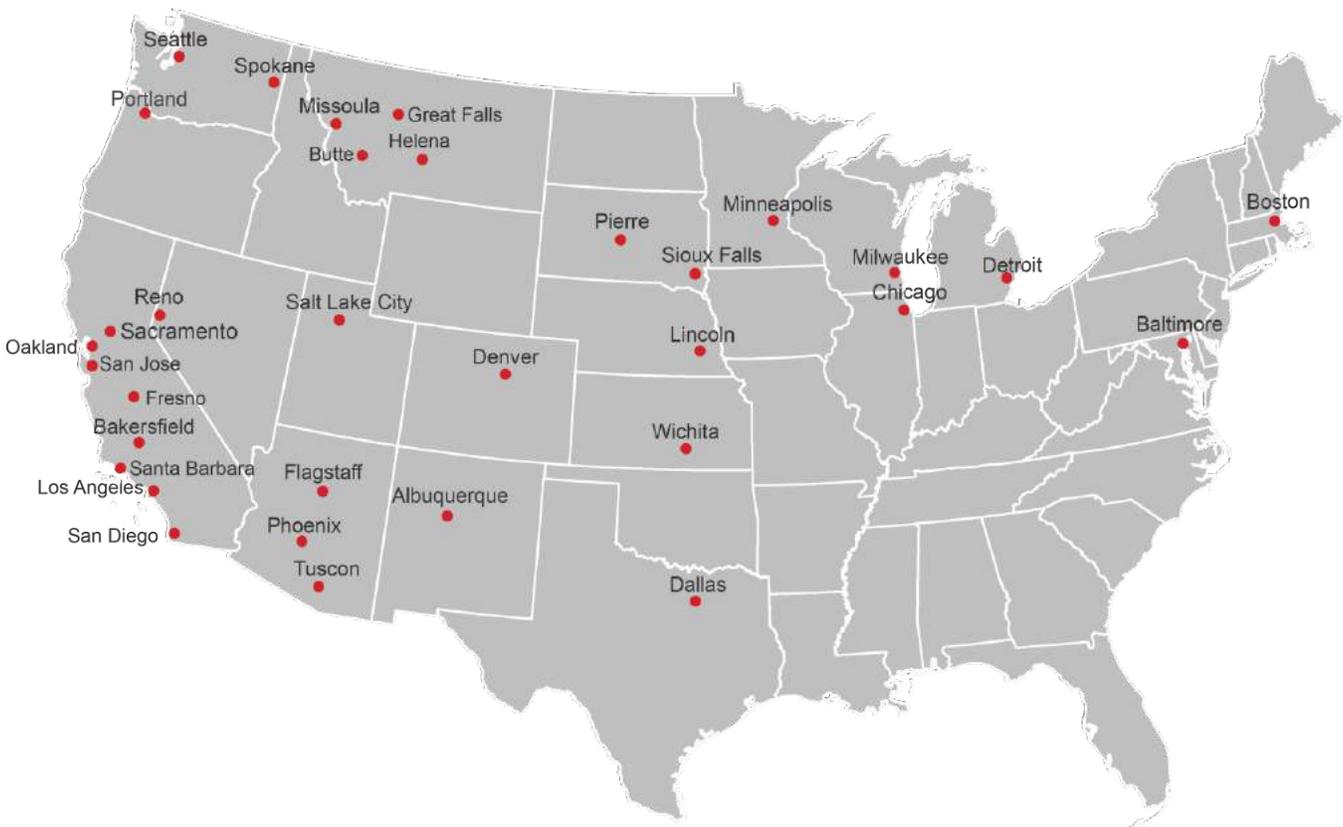
The Urban Indian Health Institute would like to thank the staff at the Urban Indian Health Programs, social service and faith based agencies for the excellent work they do daily on behalf of their communities.

URBAN INDIAN HEALTH PROGRAMS

Urban Indian Health Programs (UIHPs) are private, non-profit corporations that serve American Indian and Alaska Native (AI/AN) people in select cities with a range of health and social services from outreach and referral to full ambulatory care.

UIHPs are a network of 32 independent health agencies funded in part under Subchapter IV (formerly Title V) of the Indian Health Care Improvement Act and receive limited grants and contracts from the federal Indian Health Service (IHS). UIHPs are located in 18 states and serve individuals in approximately 100 U.S. counties where over 1.2 million AI/ANs reside.¹ In addition, there are numerous social service and faith based organizations serving the public health needs of urban AI/ANs.

UIHPs provide traditional health care services, cultural activities, and a culturally appropriate place for urban AI/ANs to receive health care. Comprehensive clinics provide direct primary care for at least 40 hours per week, Limited clinics provide direct primary care services for under 40 hours per week, and Outreach and Referral sites do not provide direct care services on site but refer patients to external health care providers. The map below identifies these sites, some of whom have multiple clinic locations. It does not include AI/AN social service or faith based agencies.



For more information on individual Urban Indian Health Programs, visit <http://www.uihi.org/urban-indian-health-organization-profiles/>.

INTRODUCTION AND PURPOSE

Introduction

This community health profile provides an overview of the health status of AI/ANs living in select urban counties served by the Native Americans for Community Action (NACA), which is one of 32 Subchapter IV UIHPs across the country. The counties analyzed in this report are defined as Coconino County by IHS. This report will refer to the service area the Flagstaff service area and Coconino County interchangeably. This document presents data specific to demographics, social determinants of health, mortality, and maternal and child health. The data used is from national data sources and in no way uses patient data from NACA. The profile examines and addresses the disparities that exist among the urban AI/AN population compared to the non-Hispanic White (NHW) population and demonstrates the disproportionality in outcomes and risk factors that adversely affect them. Data for this profile comes from the U.S. Census, the American Community Survey, and the U.S. Center for Health Statistics.

Not all issues important to the health of urban AI/AN communities are included in this report. Locally collected data may provide additional information about the health of AI/ANs living in the Coconino County. Data presented in this report may be most useful when combined with aggregate data, stories about patients and community members, and local surveillance or survey data when available.

Purpose

Improving community health through effective planning and decision-making requires good information about the factors that influence the health status of community members.² The following examples suggest possible ways to use the data from this report. UIHI is available to provide technical assistance on how to use the following data.

Program Planning

Data in this report can be used by UIHPs to identify health priorities, allocate resources, and guide the development of new programs.

Grant Writing

Data and figures in this report may be useful to include as background information for grant applications. This information can illustrate existing health disparities in the AI/AN population compared to NHW. This report can also be cited as the reference.

Identifying Gaps in Data

This report may also reveal current gaps in nationally collected data. For example, notably low mortality rates may indicate the need for improvements to race determination in death records. State and regional linkage projects can help correctly classify AI/ANs in state death records.³ Oversampling AI/ANs in national surveys is another way to improve data collection by providing sufficient statistical power to provide more stable estimates.



METHODOLOGY

Methods

Analysis

The data for this report only includes information from Coconino County residents. For each indicator, prevalence or incidence was calculated for the AI/AN population and compared with the NHW population. Because NHWs are the racial/ethnic majority, this population was chosen as the comparison group. The AI/AN population was defined as AI/AN only (not in combination with other races) unless otherwise indicated. The NHW population was defined as White only and excluded the Hispanic population unless otherwise indicated. Results were calculated using aggregate data from a two- to five-year time-period in order to have sufficient data to provide stable estimates and protect individual privacy.

In some instances, confidence intervals were calculated and used to show differences in outcomes for specific indicators displayed in bar graphs. Confidence intervals are ranges of numbers used to assess the accuracy of a point estimate and measure the variability in the data. The point estimate may be a rate, such as a death rate or an infectious disease rate, or a frequency, such as the percent of individuals living in poverty or the percent of adults experiencing unemployment.

Confidence intervals account for the uncertainty that arises from the natural variation inherent in the world around us. Confidence intervals also

account for the difference between a sample from a population and the population itself.

For analyses included in this report, confidence intervals were calculated at a p-value of <0.05 , the 95 percent confidence level. This means that 95 times out of 100 the confidence interval captures the true value for the population. Differences in outcomes were called statistically significant if confidence intervals of the study group (AI/AN), did not overlap with the comparison group (NHW).

Data analysis for indicators were analyzed using the statistical software StataSE version 13 or SAS version 9.4.

Indicator Selection

A list of indicators for the community health profile were selected after an analysis of the available data sources. Sample size and stratification of each population based on demographics, such as age groups, gender, and education, were considered and used if the sample size was sufficient.

This profile uses national surveillance data. This report does not pull data from the client database of the NACA or any other urban AI/AN serving organization in the area. There may be information not captured by these systems that better represent the unique strengths and challenges in communities served by NACA. Local sources of data may provide a more region-specific and comprehensive understanding of the community's health.

METHODOLOGY

Data Limitations

The contents of this report are specific to national surveillance data for Coconino County residents only.

Although data analysis and assessment of results were conducted for 42 indicators, data limitations were observed and experienced during the selection of these indicators and their analyses for this report. In some instances, the number of cases/sample size was limited, thus impacting the analysis and preventing or limiting the reporting of results. Frequently, data was only available for AI/ANs alone and was not inclusive of AI/ANs who also identify with another race or ethnicity. Thus, the estimates provided in this report may be an underestimation of the true value of the outcome or risk factor for any indicator analyzed in this report.

Another factor affecting and limiting the analysis of data are errors in racial misclassification, particularly for demographic and mortality data. Racial misclassification is defined as incorrect coding of an individual's race or ethnicity in public records.⁴ This can greatly underestimate the true rate of disease, risk factor, or outcome. AI/ANs are especially likely to experience problems of incorrect classification on death certificates; therefore, true mortality rates among AI/ANs are assumed to be higher than reported numbers suggest. Because mortality data are extracted from death certificates, the race/ethnicity category is not self-reported and is often completed by a funeral director based on information received

from a family member or personal observation. In a national sample, age-adjusted mortality for AI/ANs was underestimated by 9.7%.⁵ The bias created by misclassification varies by age, proximity to a reservation, and cause-of-death.⁶ Based on documented racial misclassification of AI/ANs in surveillance data, any of the health disparities presented in this community health profile are assumed to be larger than reported.

Lastly, we would like to acknowledge the presence of other gender identities outside of male and female categories including Two-Spirit and transgender identities which are systemically ignored and not included in these larger national surveillance systems.⁷ The lack of these other categories for gender can lead to invisibility and lack of information to support the health and well-being of people outside of binary gender identities thus limiting our data analysis.

DATA SOURCES

Data Sources

2010 U.S. Census

The U.S. Census takes place every 10 years and provides official population counts for individuals living in the United States and provides information by age, race, Hispanic origin, and sex. In 2010, the U.S. Census allowed individuals to self-report belonging to more than one race group. When determining a population count, this report considers people to be of AI/AN race if they report AI/AN as their only race or if they report being AI/AN in combination with other races. Some Census statistics are not easily accessible when including individuals who report multiple races. For these indicators in the profile, only individuals who report AI/AN alone are included.

For more information about the U.S. census, visit: www.census.gov.

American Community Survey

The American Community Survey (ACS) is a nationwide, continuous survey that collects demographic, housing, social, and economic data every year. To provide reliable estimates for small counties, neighborhoods, and population groups, the ACS provides 1-, 3-, and 5-year aggregate estimates. Estimates for this report are from aggregated data from 2010-2014.

Race is self-reported on ACS, with similar race categories as the U.S. Census. However, some ACS data are not easily accessible for multiple

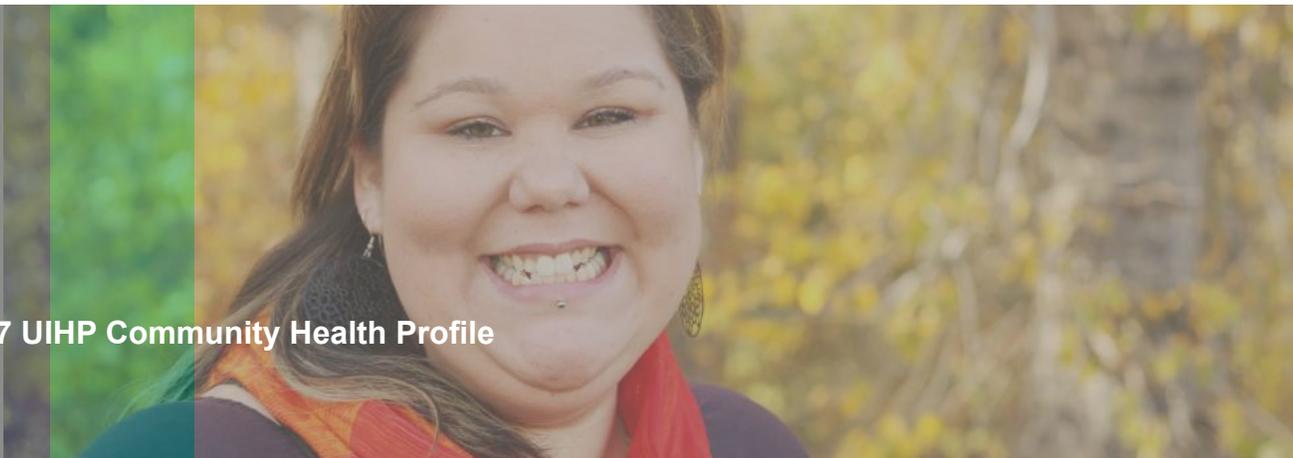
race groups. Therefore, ACS data are reported for AI/AN alone in this report. ACS estimates in this profile are not adjusted for age; observed differences in estimates may be due to a true difference in rates or due to differences in age distribution in the population.

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

National Vital Statistics System

Mortality data from the National Vital Statistics System (NVSS) is generated from death certificates. This data is the primary source of demographic, geographic, and cause-of-death information among persons dying in a given year. The five most recent years for which complete mortality data was available was from 2010-2014. The five most recent years for which complete infant mortality data was available was from 2008-2012. Maternal mortality was only available from aggregated data from 2010 to 2012. All mortality data are age-adjusted to the U.S. population for the year 2000. Age-adjusted death rates are useful when comparing different populations because they remove the potential bias that can occur when comparing populations with different age distributions. For example, AI/ANs historically are a younger population than other race groups.

Birth certificate data from NVSS data files include all documented births occurring within the United States as filed in each state. These data include demographic information about parents,



DATA SOURCES

information on the infant, the mother's risk factors, and information on the birth. The five most recent years for which complete natality data was available was from 2008-2012.

Since not all states allow individuals to identify as more than one race, National Center for Health Statistics (NCHS) releases bridged-race population estimates for calculation of rates. As a result, estimates in this report may not match local and county estimates because of differing projection methods.

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



SOCIODEMOGRAPHICS

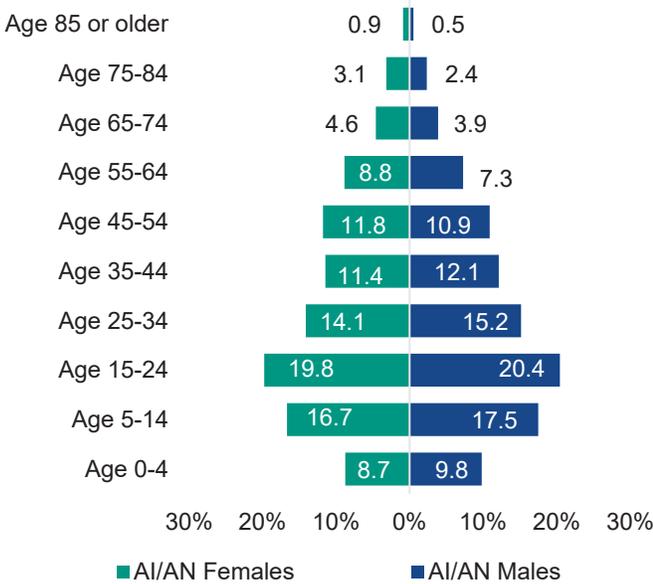
Introduction

The health of individuals and populations is greatly influenced by social determinants – the conditions in which people live, learn, work, and play.^{8,9} Evidence from decades of research on the relationship between key social determinants and health outcomes overwhelmingly suggests that greater social disadvantage leads to poorer health.¹⁰ These determinants, including race, lack of access to education or employment, poverty, and housing, among other things, produce extensive inequities within and between populations.^{8,9} This section presents data on measures of demographics and social determinants of health to illustrate differences between urban AI/ANs and NHWs that may contribute to overall health inequities between these populations.

Age and Gender

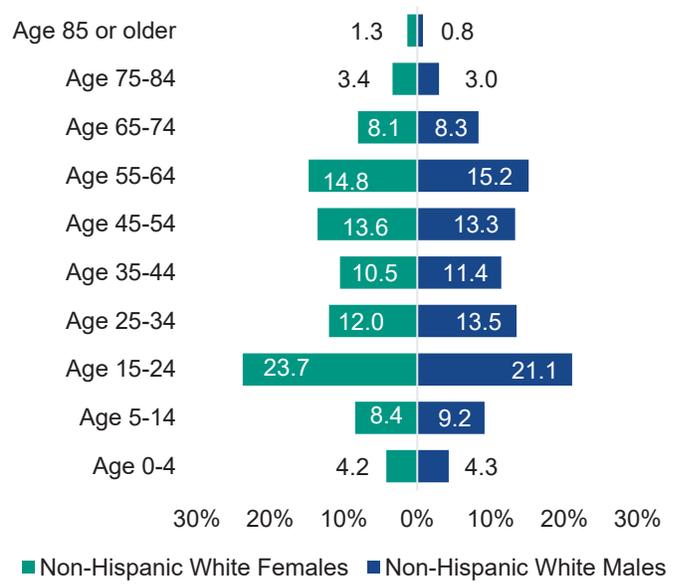
Relative to the NHW population, the AI/AN population in Coconino County was younger (Figure 1 and Figure 2). In Coconino County, 46.4% of AI/ANs were under the age of 25 years, compared with 35.4% of NHWs. In contrast, 7.7% of AI/ANs were over the age of 65 years, compared with 12.4% of NHWs.

Figure 1. AI/AN Population by Age and Gender, Flagstaff Service Area, 2010-2014



Source: American Community Survey, 2010-2014
 *Due to rounding error graphs may not total 100%

Figure 2. NHW Population by Age and Gender, Flagstaff Service Area, 2010-2014



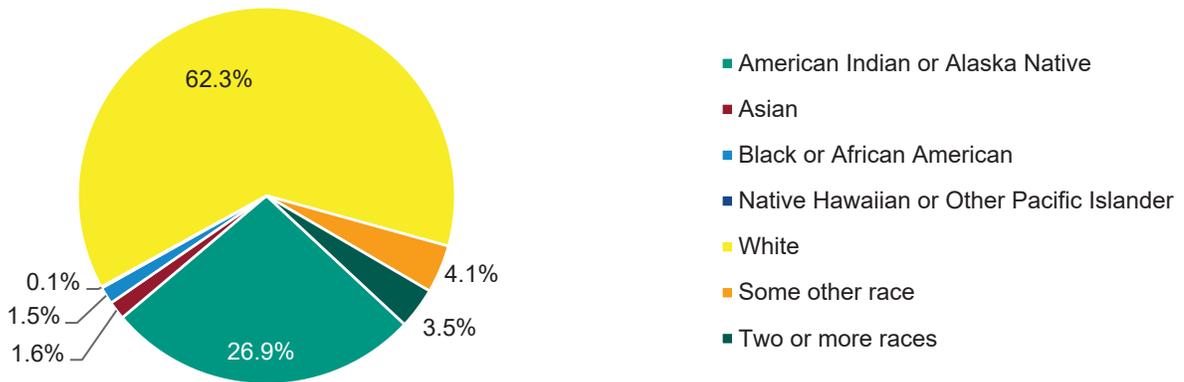
Source: American Community Survey, 2010-2014
 *Due to rounding error graphs may not total 100%

SOCIODEMOGRAPHICS

Race

As shown in Figure 3, an estimated 36,504 (26.9%) individuals identified as AI/AN alone in Coconino County, and an estimated 38,604 (28.4%) individuals identified as AI/AN alone or in combination with one or more races (data not shown). Those who identified as White alone comprised the largest proportion (62.3%) of the total population (135,817) in Coconino County. Other than AI/ANs and NHWs, “some other race” was the largest population identified in Coconino County, consisting of 5,568 individuals or 4.1% of the total population.

Figure 3. Population by Race, Flagstaff Service Area, 2010-2014

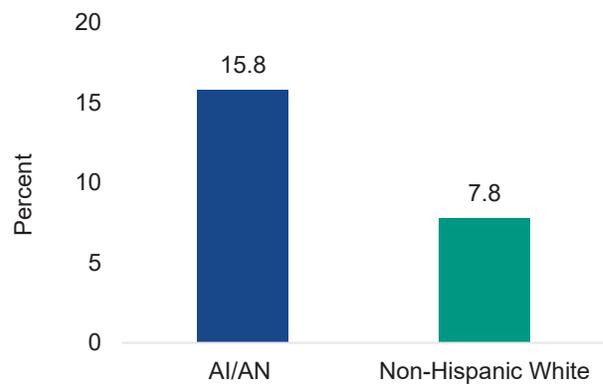


Source: American Community Survey, 2010-2014

Employment

Extensive evidence has shown that unemployment has a negative effect on health.¹¹ Unemployed individuals may experience financial insecurity and reduction in social status, social relations, and self-esteem.¹² In addition, unemployed individuals are also more likely to lack health insurance coverage.¹³ In Coconino County, AI/ANs aged 16 and older experienced proportions of unemployment that were 2.0 times higher than NHWs (15.8% vs. 7.8%; Figure 4). These proportions do not include individuals in the military or individuals who are institutionalized.

Figure 4. Civilian Labor Force 16 Years and Older, Flagstaff Service Area, 2010-2014



Source: American Community Survey, 2010-2014

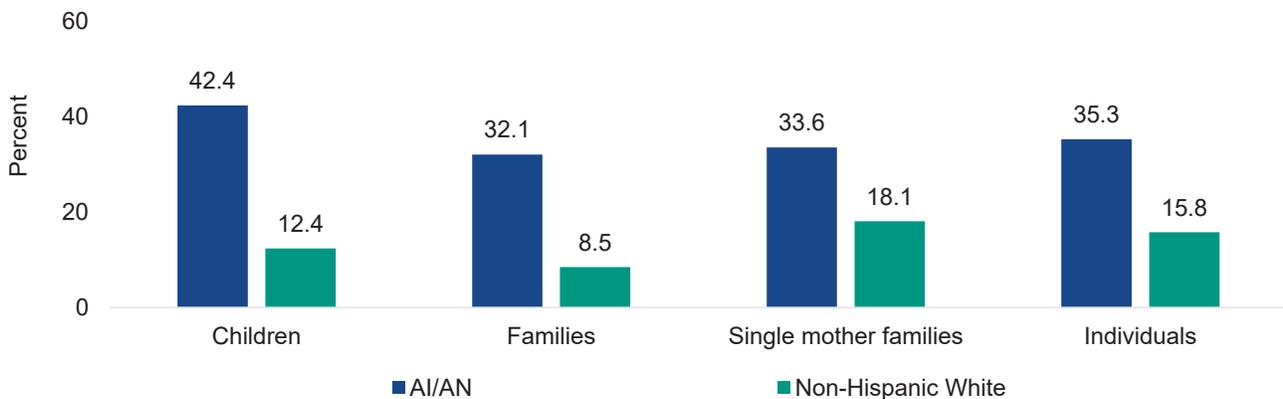
SOCIODEMOGRAPHICS

Poverty

Poverty and health are inextricably connected.¹⁴ Poverty may lead to poor health outcomes by limiting access to healthy foods, quality housing, safe neighborhoods, and adequate health care, among other things. Poverty can also impact many aspects of a child's health and well-being. Children in poverty have lower academic achievement and higher proportions of high school dropout, accidents, injuries, and food insecurity compared with their more affluent peers. Living in poverty as a child likely affects health throughout a person's lifespan.¹⁵ The American Community Survey defines individuals and families as being in poverty if their income is less than their poverty threshold (less than 100% of the federal poverty level).¹⁶

In Coconino County, more than a third of AI/AN individuals lived in poverty (35.3%; Figure 5), compared to approximately one sixth for NHWs (15.8%). AI/AN children experienced more poverty than NHWs. Approximately two fifths AI/AN children aged 17 and under (42.4%) in Coconino County lived in households with an income below the federal poverty level. This proportion is 3.4 times that of the NHW population (12.4%). In addition, nearly one in three AI/AN families in Coconino County (32.1%) lived in households with an income below the federal poverty level. This is 3.8 times the proportion of NHWs (8.5%). Finally, among those families in households headed by single mothers, one in three AI/ANs lived in poverty (33.6%), which was 1.9 times higher than the proportion of NHWs (18.1%).

Figure 5. Income Below the Federal Poverty Level in Past Year, Flagstaff Service Area, 2010-2014



Source: American Community Survey, 2010-2014

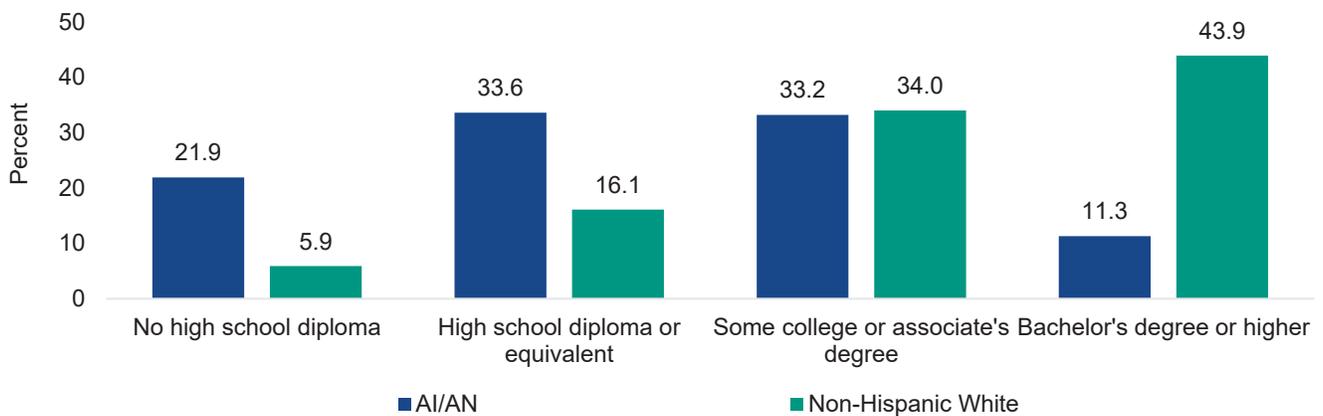
Data note: Federal poverty thresholds are used to determine poverty status. The thresholds are based on family size and the ages of family members. Federal poverty thresholds are not intended as a comprehensive description of families' needs, but rather as a statistical indicator that can be tracked over time.

SOCIODEMOGRAPHICS

Educational Attainment

The relationship between education and health, or the “health-education gradient,” is well documented.¹⁷ Disparities in life expectancy by level of education are found among all demographic groups and are arguably increasing over time.¹⁸ In Coconino County, a higher percentage of AI/ANs aged 25 and older had not completed high school or passed the General Educational Development (GED) exam (21.9%; Figure 6) compared with the NHW population (5.9%). A lower percentage of AI/ANs (11.3%) reported an undergraduate or graduate degree as their highest level of education compared with the NHW population (43.9%).

Figure 6. Educational Attainment for the Population 25 Years and Older, Flagstaff Service Area, 2010-2014



Source: American Community Survey, 2010-2014

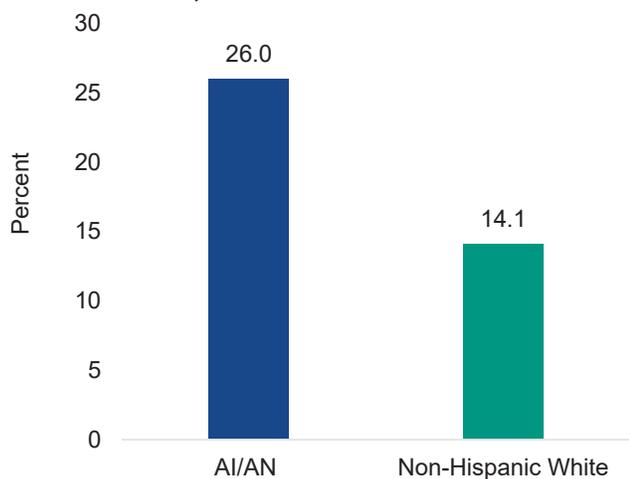


SOCIODEMOGRAPHICS

Health Insurance Coverage

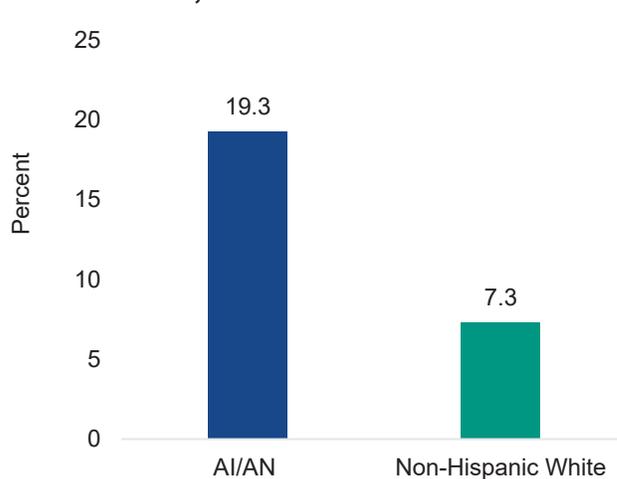
Compared to those with health insurance coverage, those without health insurance coverage have higher mortality rates.¹⁹ Individuals without health insurance are also less likely to receive care and take longer to return to health after an unintentional injury or the onset of a chronic disease compared to those with health insurance.²⁰ In Coconino County, slightly more than one in four AI/ANs under age 65 (26.0%) reported having no health insurance; a proportion 1.8 times higher than that of NHWs (14.1%; Figure 7). The proportion of uninsured AI/AN children under the age of 18 in Coconino County is 2.6 times higher than the proportion of NHW children (19.3% vs. 7.3%, Figure 8).

Figure 7. Population Under 65 with No Health Insurance Coverage, Flagstaff Service Area, 2010-2014



Source: American Community Survey, 2010-2014

Figure 8. Population Under 18 with No Health Insurance Coverage, Flagstaff Service Area, 2010-2014



Source: American Community Survey, 2010-2014



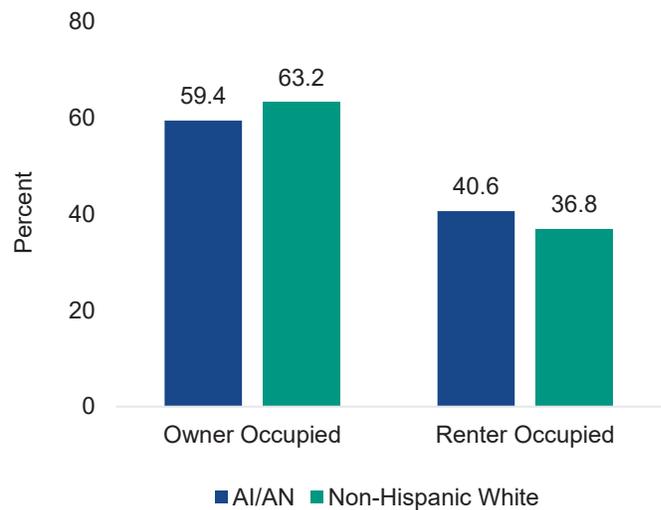
SOCIODEMOGRAPHICS

Housing

Housing and health are also closely linked. Several studies have found that home ownership is associated with many health benefits, including greater psychosocial wellbeing and lower mortality risk. These benefits may be explained by the fact that homeowners likely experience higher socioeconomic status, fewer problems of overcrowding, and lower exposure to neighborhood violence. In contrast, renters are more likely to experience poorer self-reported health, higher proportions of coronary heart disease, and more risk factors, such as smoking.²¹

In Coconino County, the proportion of renter occupation among AI/ANs was similar to NHWs (40.6% vs. 36.8%, Figure 9). Approximately 40% of all homes of AI/ANs and NHWs were renter occupied. The proportion of home ownership among NHWs and AI/ANs in Coconino County was also similar (63.2% vs. 59.4%). Approximately 60% of all homes of AI/ANs & NHWs were owner occupied.

Figure 9. Type of Occupied Housing Units, Flagstaff Service Area, 2010-2014



Source: American Community Survey, 2010-2014



SOCIODEMOGRAPHICS

Food Stamps

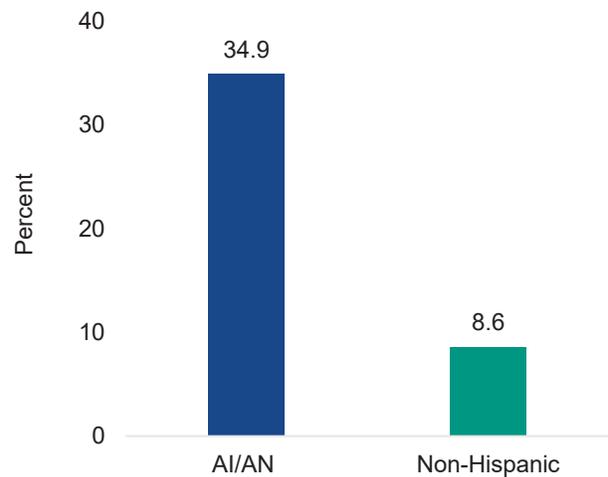
As the largest food assistance program in the United States, the Supplemental Nutrition Assistance Program (SNAP; formally known as the Federal Food Stamp program) is a crucial part of the social safety net.²²

Households with an income below 130% of the federal poverty level are eligible to receive SNAP benefits. According to a study done by the U.S. Department of Agriculture, which administers the SNAP program, 55% of households receiving SNAP benefits remained food insecure after receiving SNAP.²³

Moreover, children in households that receive SNAP benefits are significantly more likely to suffer from an array of health problems than those in households that do not receive SNAP.²²

In Coconino County, slightly more than one third of AI/AN households received SNAP benefits in the past year (Figure 10). The proportion of SNAP participation among AI/ANs in these areas was 4.1 times higher than NHWs.

Figure 10. Households that Received SNAP Benefits in the Past Year, Flagstaff Service Area, 2010-2014



Source: American Community Survey, 2010-2014

MORTALITY

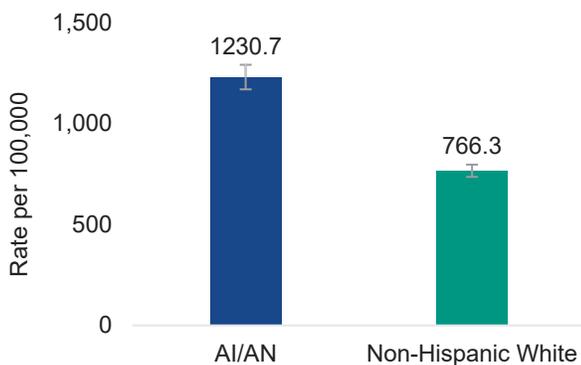
Introduction

Mortality data provides an indication of a community's or population's health and socioeconomic development status. Mortality data are also a key component in understanding population size, future growth, and change. Examining mortality data is one way to measure the burden of disease in a community or population. Tracking death rates may identify groups that are at an increased risk for premature death and may identify specific diagnoses resulting in death that are more prevalent in certain populations. In addition, high mortality rates may indicate an issue with environmental factors, communicable diseases, risk factors, and/or socioeconomic factors. This section examines age-adjusted mortality by race, gender, age groups, and specific causes of mortality. It is important to note that racial misclassification leads to an underestimation of mortality rates in AI/AN populations.²⁴ True mortality rates among AI/ANs in Coconino County are assumed to be higher than the rates described for this section.

All-Cause Mortality Rate

The all-cause mortality rate for AI/AN population was 1.6 times higher than the NHW population; a difference that was statistically significant (Figure 11).

Figure 11. All-Cause Mortality Rate, Flagstaff Service Area, 2010-2014

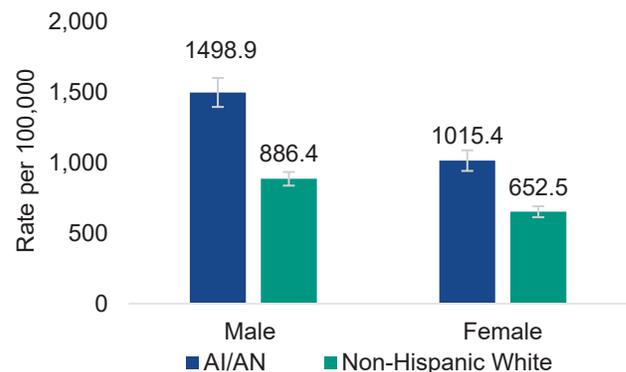


Source: US Center for Health Statistics, Death Certificates, 2010-2014

Mortality Rate by Gender

The mortality rates for both males and females were higher among AI/ANs compared to their NHW counterparts; 1.7 & 1.6 times respectively (Figure 12). In addition, the mortality rate for AI/AN men was 1.5 times higher than AI/AN women.

Figure 12. Mortality Rate by Gender, Flagstaff Service Area, 2010-2014



Source: US Center for Health Statistics, Death Certificates, 2010-2014

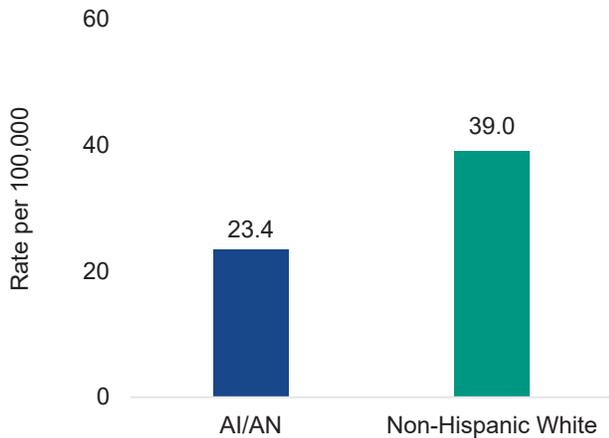


MORTALITY

Suicide

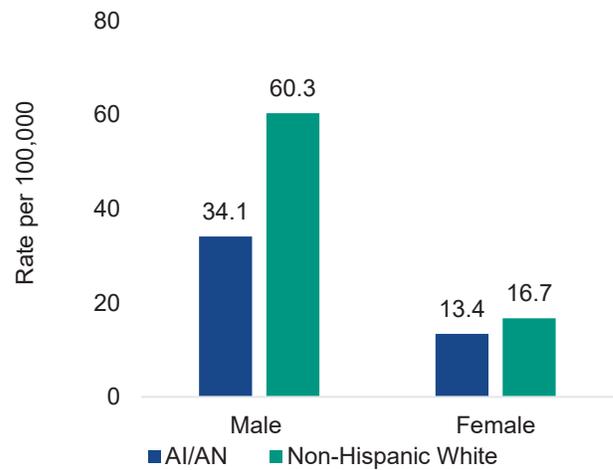
The suicide rate was 1.7 times higher among NHWs compared to AI/ANs (Figure 13). In addition, the suicide rate by gender was higher for both NHW men and women compared to AI/AN men and women at 1.8 and 1.2 times higher respectively (Figure 14). When comparing AI/ANs, the suicide rate for AI/AN males was 2.5 times higher compared to AI/AN females.

Figure 13. Overall Suicide Rate, Flagstaff Service Area, 2010-2014



Source: US Center for Health Statistics, Death Certificates, 2010-2014

Figure 14. Suicide Rate by Gender, Flagstaff Service Area, 2010-2014



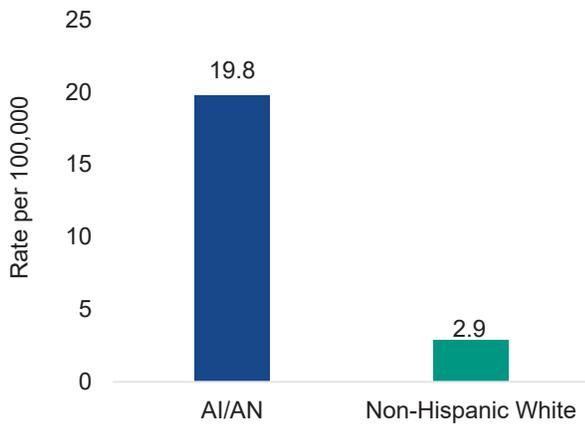
Source: US Center for Health Statistics, Death Certificates, 2010-2014

MORTALITY

Homicide

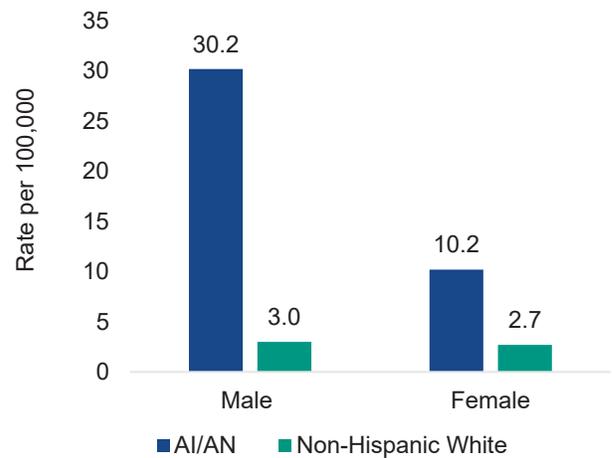
Homicides rates were 6.8 times higher for the AI/AN population compared to the NHW population (Figure 15). True disparities in homicide rates become apparent when looking at homicide by gender. The homicides for AI/AN males were 30.2 per 100,000 (Figure 16). This rate was 10.1 times higher than NHW males, 3.0 times higher than AI/AN females, and 11.2 times higher than NHW females.

Figure 15. Overall Homicide Rate, Flagstaff Service Area, 2010-2014



Source: US Center for Health Statistics, Death Certificates, 2010-2014

Figure 16. Homicide Rate by Gender, Flagstaff Service Area, 2010-2014



Source: US Center for Health Statistics, Death Certificates, 2010-2014



MORTALITY

Top Causes of Mortality

Table 1. Top Overall Causes of Mortality, Flagstaff Service Area, 2010-2014

AI/AN			NHW		
Rank	Cause	Rate (per 100,000)	Rank	Cause	Rate (per 100,000)
1	Vascular disease	942.4	1	Vascular disease	780.7
2	Cancer	377.5	2	Cancer	304.9
3	Chronic liver disease and cirrhosis	143.3	3	Chronic lower respiratory disease	111.3
4	Motor vehicle accidents	142.1	4	Intentional self-harm	76.7
5	Flu and pneumonia	130.9	5	Motor vehicle accidents	59.5

Source: US Center for Health Statistics, Death Certificates, 2010-2014

Table 1 summarizes the top causes of mortality for both AI/AN and NHW.

Table 2. Top Male Causes of Mortality, Flagstaff Service Area, 2010-2014

AI/AN Males			NHW Males		
Rank	Cause	Rate (per 100,000)	Rank	Cause	Rate (per 100,000)
1	Vascular disease	324.6	1	Vascular disease	256.6
2	Cancer	189.9	2	Cancer	162.3
3	Motor vehicle accidents	101.0	3	Intentional self-harm	60.3
4	Flu and pneumonia	80.0	4	Chronic lower respiratory disease	53.8
5	Chronic liver disease and cirrhosis	74.7	5	Motor vehicle accidents	40.3

Source: US Center for Health Statistics, Death Certificates, 2010-2014

Table 2 summarizes the top causes of mortality for both AI/AN and NHW men.



MORTALITY

Table 3. Top Female Causes of Mortality, Flagstaff Service Area, 2010-2014

AI/AN Female			NHW Females		
Rank	Cause	Rate (per 100,000)	Rank	Cause	Rate (per 100,000)
1	Vascular disease	196.5	1	Vascular disease	172.6
2	Cancer	148.5	2	Cancer	131.4
3	Flu and pneumonia	71.1	3	Chronic lower respiratory disease	48.1
4	Chronic liver disease and cirrhosis	66.9	4	Alzheimer's disease	24.3
5	Diabetes	36.8	5	Motor vehicle accidents	17.4

Source: US Center for Health Statistics, Death Certificates, 2010-2014

Table 3 summarizes the top causes of mortality for both AI/AN and NHW women.

Cancer Mortality

Table 4. Top Overall Causes of Cancer Mortality, Flagstaff Service Area, 2010-2014

AI/AN			NHW		
Rank	Cause	Rate (per 100,000)	Rank	Cause	Rate (per 100,000)
1	Colon cancer	41.0	1	Tracheal/Bronchus/ Lung cancer	66.2
2	Stomach cancer	32.8	2	Colon cancer	26.3
3	Cervical cancer	29.3	3	Breast cancer	24.6
4	Breast cancer	28.3	4	Prostate cancer	19.9
5	Prostate cancer	24.4	5	Bladder cancer	15.1

Source: US Center for Health Statistics, Death Certificates, 2010-2014

Table 4 summarizes the top causes of cancer mortality for both AI/AN and NHW.



MORTALITY

Table 5. Top Male Causes of Cancer Mortality, Flagstaff Service Area, 2010-2014

AI/AN Males			NHW Males		
Rank	Cause	Rate (per 100,000)	Rank	Cause	Rate (per 100,000)
1	Prostate cancer	30.7	1	Tracheal/Bronchus/ Lung cancer	37.3
2	Colon cancer	24.3	2	Prostate cancer	24.5
3	Stomach cancer	20.5	3	Colon cancer	13.9
4	Pancreatic cancer	15.4	4	Pancreatic cancer	12.3
5	Bladder cancer	15.1	5	Bladder cancer	10.6

Source: US Center for Health Statistics, Death Certificates, 2010-2014

Table 5 summarizes the top causes of cancer mortality for both AI/AN and NHW men.

Table 6. Top Female Causes of Cancer Mortality, Flagstaff Service Area, 2010-2014

AI/AN Females			NHW Females		
Rank	Cause	Rate (per 100,000)	Rank	Cause	Rate (per 100,000)
1	Cervical cancer	24.0	1	Tracheal/Bronchus/ Lung cancer	31.1
2	Breast cancer	23.6	2	Breast cancer	23.9
3	Colon cancer	13.5	3	Colon cancer	12.9
4	Stomach cancer	12.5	4	Cervical cancer	10.6
5	Bladder cancer	6.6	5	Pancreatic cancer	7.2

Source: US Center for Health Statistics, Death Certificates, 2010-2014

Table 6 summarizes the top causes of cancer mortality for both AI/AN and NHW women.

MATERNAL AND CHILD HEALTH

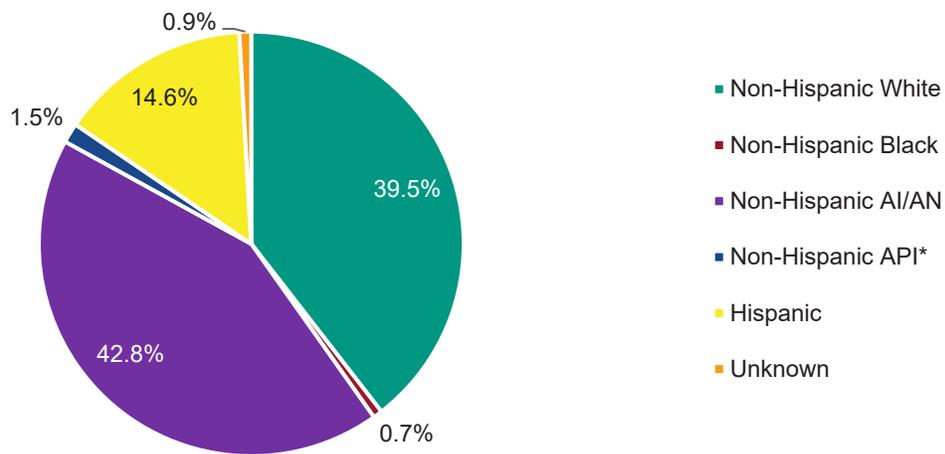
Introduction

Maternal and child health (MCH) is the foundation for healthy children, mothers, and families. Monitoring indicators such as maternal smoking, gestational diabetes, prenatal care, and premature births can help NACA make decisions regarding programs for pregnant women, infants and newborns. This section of the community health profile focuses on key indicators for MCH. The data can be used to further examine why these disparities exist and consider programs to eliminate these health disparities.

Total Births

From 2008 to 2012, there were a total of 10,637 births in Coconino County. Among those births, 42.8% were identified as non-Hispanic AI/AN alone (Figure 17). The largest proportions of births among non-AI/AN racial/ethnic groups were from NHW (39.5%) and Hispanic (14.6%) women. Non-Hispanic Blacks were 0.7% and non-Hispanic Asians and Pacific Islanders were 1.5% of all births.

Figure 17. Births by Race/Ethnicity, Flagstaff Service Area, 2008-2012



Source: National Vital Statistics, Birth Certificates, 2008-2012

*API-Asian/Pacific Islander

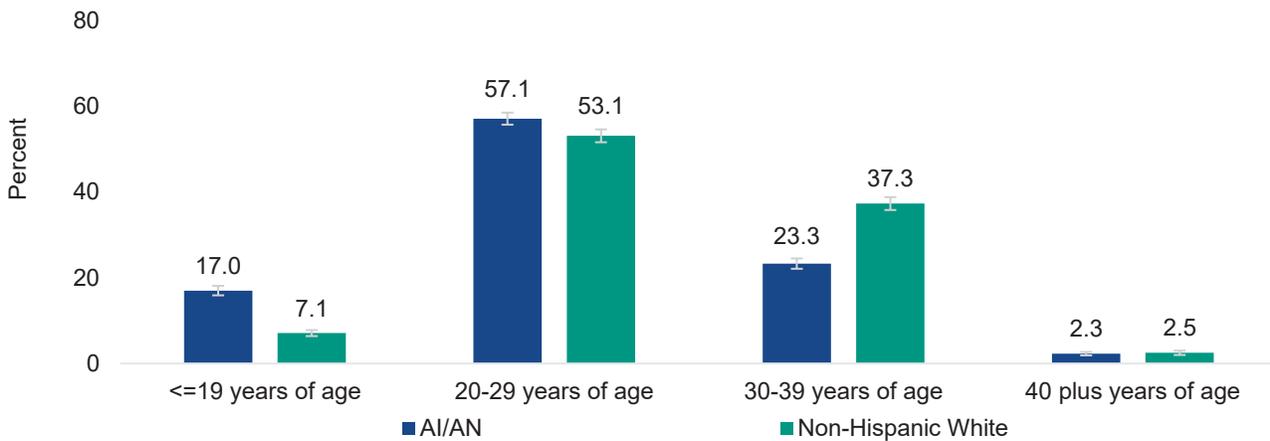


MATERNAL AND CHILD HEALTH

Age

In general, AI/AN women tend to give birth at younger ages than their NHW counterparts (Figure 18). 17.0% of births among AI/AN women in Coconino County were to teenage women (less than 19 years of age) compared to 7.1% of NHW births. The proportion of births to teenage women was 2.4 times higher in AI/ANs compared to NHWs. In addition, 57.1% of all births among AI/AN women were to women in their 20s, compared to 53.1% among NHWs. Conversely, NHW women had more children in their 30s compared to AI/AN women. 37.3% of all births among NHW women were to women in their 30s, whereas 23.3% of births were to AI/AN women in their 30s.

Figure 18. Births by Maternal Age Group, Flagstaff Service Area, 2008-2012



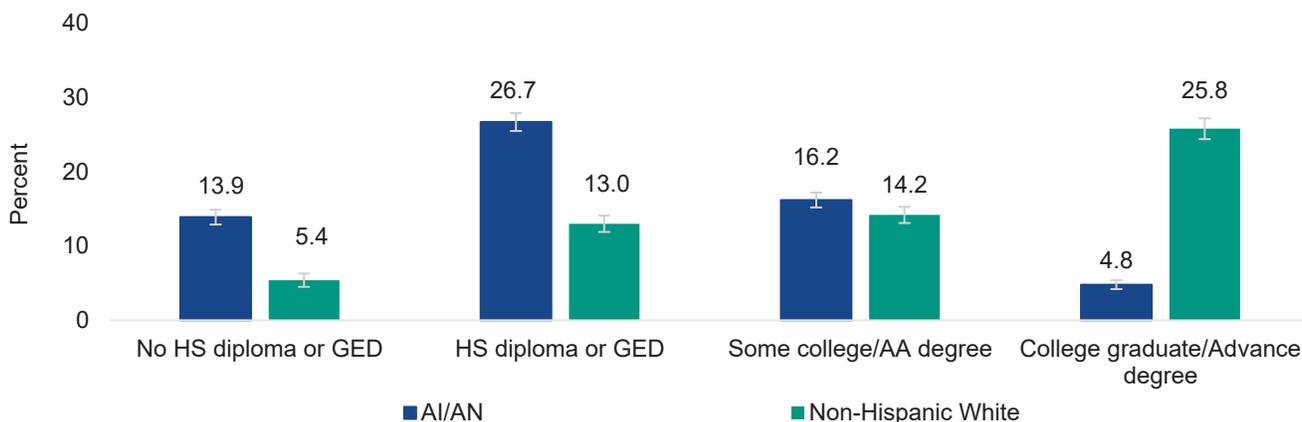
Source: National Vital Statistics, Birth Certificates, 2008-2012

MATERNAL AND CHILD HEALTH

Education

13.9% of all births for AI/ANs in Coconino County were to women who did not complete high school and 26.7% were to women whose highest level of education was a high school diploma or GED (Figure 19). Conversely, among NHW women, 5.4% of all births were from women who did not complete high school and 13.0% were from women whose highest level of education was a high school diploma or GED. In addition, 25.8% of all births among NHWs were to women with a college or advance degree compared to only 4.8% among their AI/AN counterparts.

Figure 19. Births by Maternal Education, Flagstaff Service Area, 2008-2012

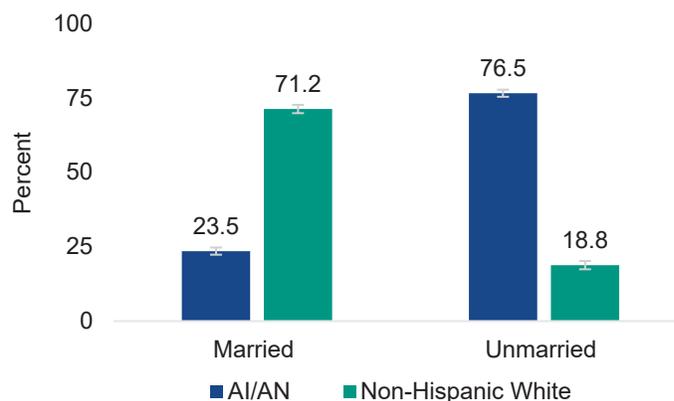


Source: National Vital Statistics, Birth Certificates, 2008-2012

Marital Status

23.5% of all births to AI/ANs in Coconino County were to women who were married and 76.5% were to women who were not married (Figure 20). This was significantly different compared to NHWs in which 71.2% of births were to married mothers and 18.8% of births were to unmarried mothers. The proportion of births to unmarried women was 4.1 times higher in AI/ANs compared to their NHW counterparts.

Figure 20. Births by Marital Status, Flagstaff Service Area, 2008-2012



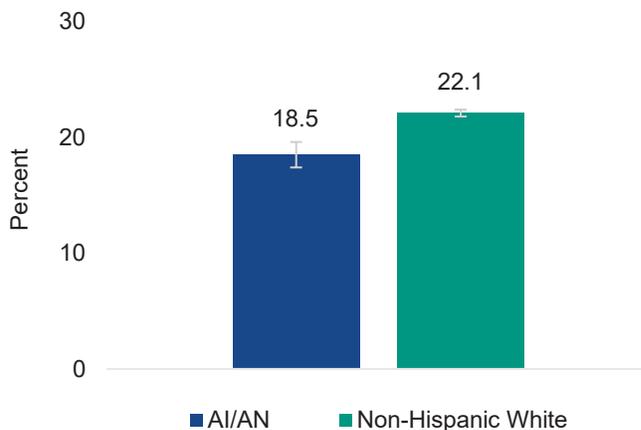
Source: National Vital Statistics, Birth Certificates, 2008-2012

MATERNAL AND CHILD HEALTH

Cesarean Section

In Coconino County, more than one fifth of births were delivered by cesarean section among NHW females. This was significantly higher than the proportion of deliveries by cesarean section among AI/AN births (18.5%, Figure 21). The proportion of deliveries by cesarean section was 19.5% higher for NHW women compared to AI/AN women.

Figure 21. Births by Cesarean Section, Flagstaff Service Area, 2008-2012

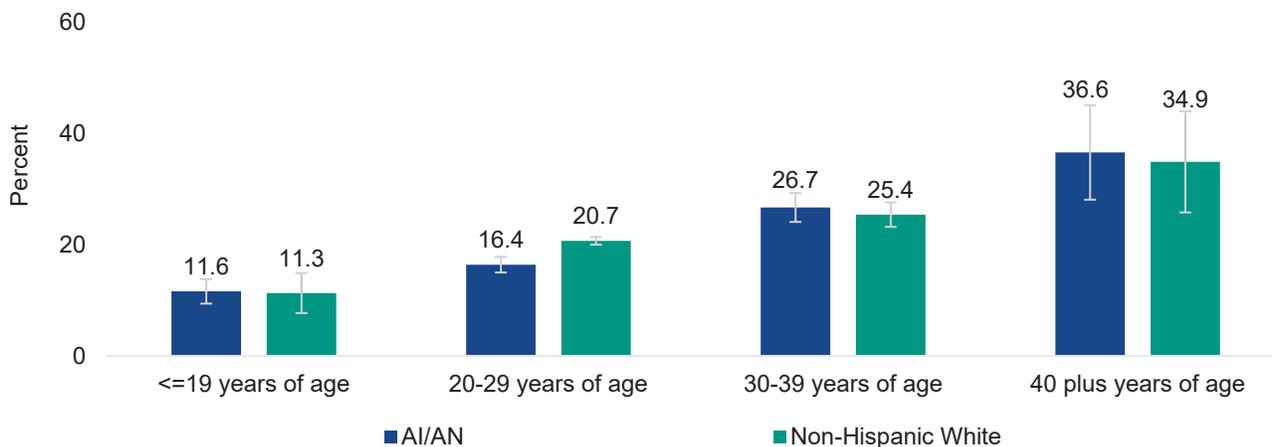


Source: National Vital Statistics, Birth Certificates, 2008-2012

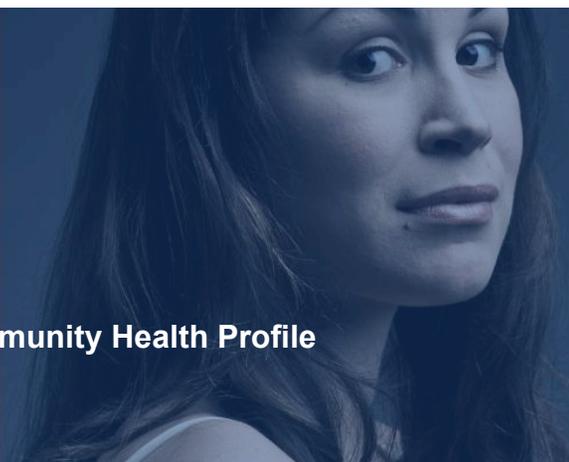
Cesarean Section by Maternal Age

The proportion of cesarean deliveries increased significantly as maternal age increased for both AI/AN and NHW women (Figure 22). 36.6% of AI/AN women in their 40s gave birth via cesarean section.

Figure 22. Cesarean Sections by Maternal Age Group, Flagstaff Service Area, 2008-2012



Source: National Vital Statistics, Birth Certificates 2008-2012



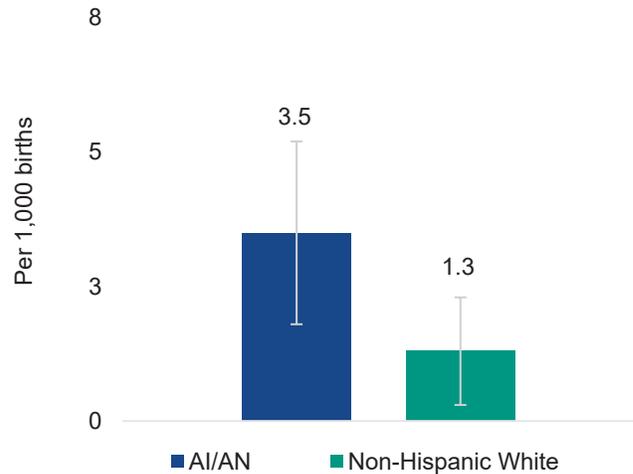
MATERNAL AND CHILD HEALTH

Infant Mortality

Infant mortality is a useful indicator for the level of health in a community. It is defined as the number of deaths of infants younger than one year of age per 1,000 live births for a given period of time. Infant mortality is related to the underlying health of the mother, public health practices, socioeconomic conditions, and the availability and use of appropriate health care for infants and pregnant women.²⁵ Two thirds of infant deaths occur in the first month after birth and are primarily due to health problems of the infant or the pregnancy, such as preterm delivery or birth defects. Infant deaths occurring after the first month are influenced greatly by social or environmental factors, such as exposure to cigarette smoke or problems with access to health care.²⁵

The infant mortality for AI/ANs in Coconino County was 3.5 per 1,000 live births (Figure 23). This was similar to the infant mortality rate for NHWs (1.3 per 1,000 live births).

Figure 23. Infant Mortality Rate, Flagstaff Service Area, 2008-2012



Source: National Vital Statistics, Birth Certificates, 2008-2012



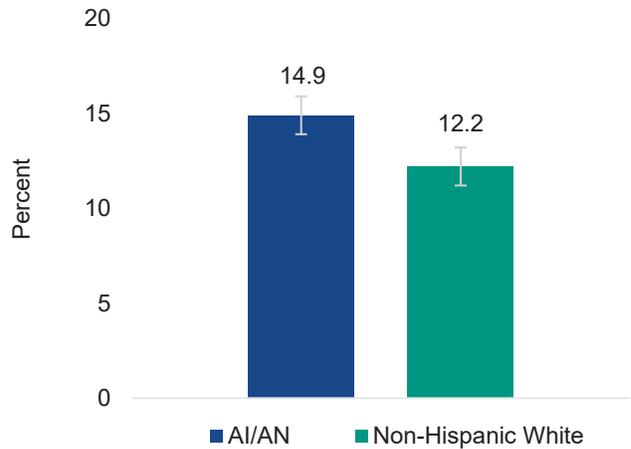
MATERNAL AND CHILD HEALTH

Premature Births

A premature birth is defined as childbirth occurring earlier than 37 completed weeks of pregnancy.²⁶ In Coconino County, 12.2% of all infants born to NHW women were born prematurely, which is significantly lower than all infants born prematurely to AI/AN women at 14.9% (Figure 24). The proportion of premature births to AI/AN women was 22.1% higher than NHWs.

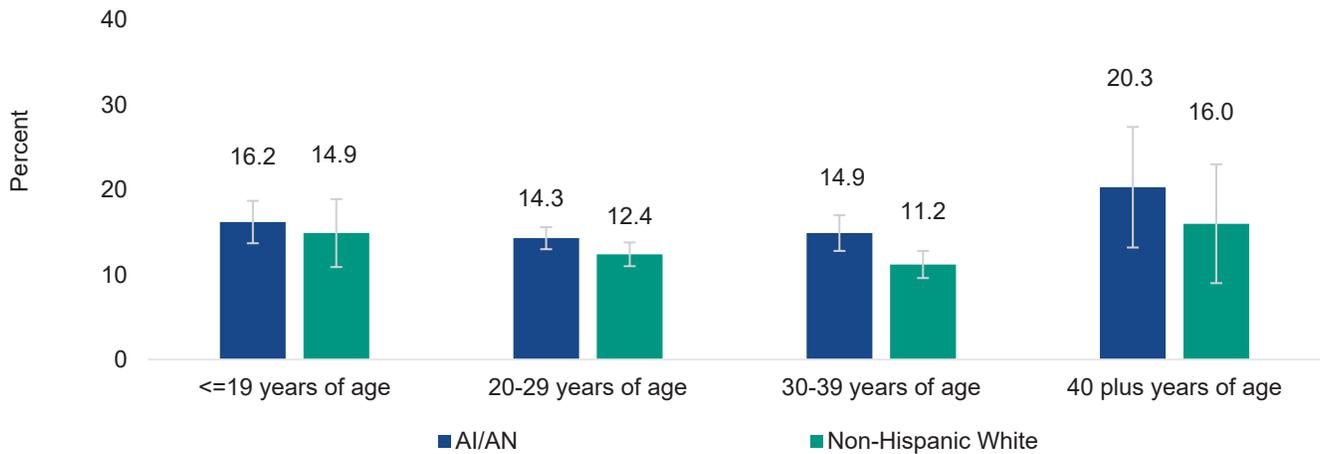
Patterns of premature births were similar for both NHW and AI/AN pregnant woman by age stratification and across each age group within each race (Figure 25).

Figure 24. Premature Births (<37 weeks), Flagstaff Service Area, 2008-2012

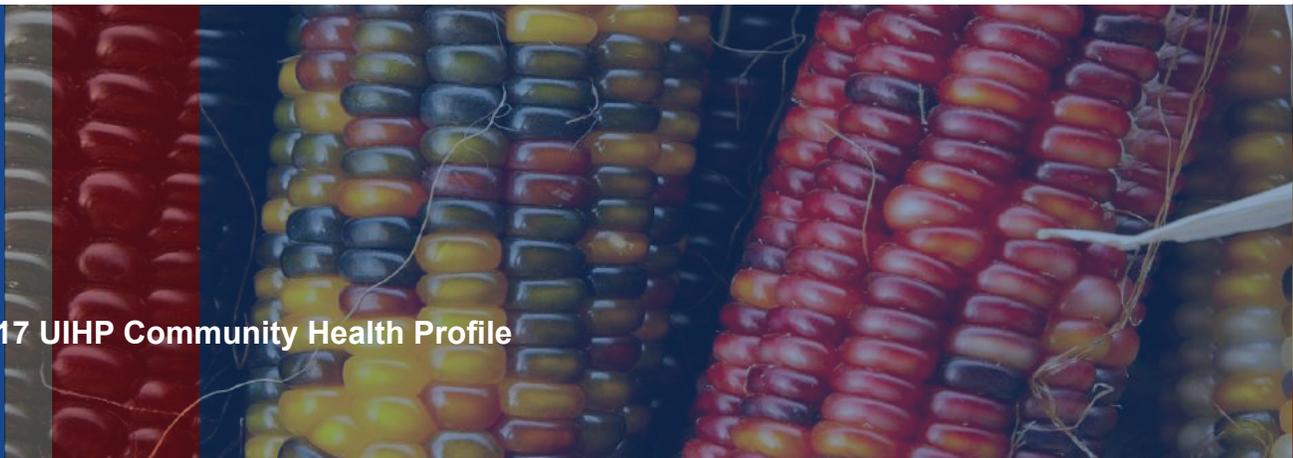


Source: National Vital Statistics, Birth Certificates, 2008-2012

Figure 25. Premature Births (<37 weeks) by Maternal Age Group, Flagstaff Service Area, 2008-2012



Source: National Vital Statistics, Birth Certificates 2008-2012



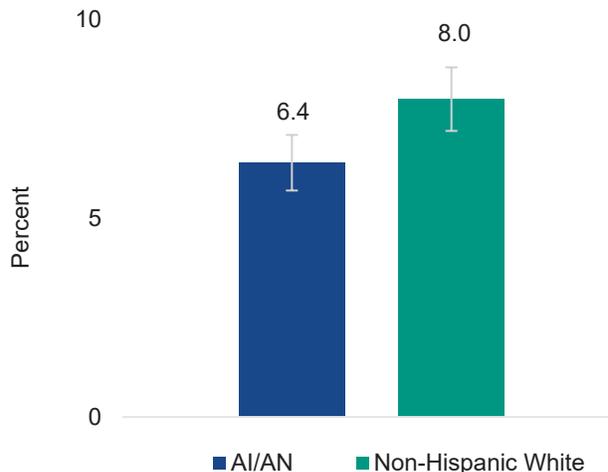
MATERNAL AND CHILD HEALTH

Low Birth Weight

Low birth weight is defined as less than 2,500 grams (5.5 pounds).²⁷ In Coconino County, 6.4% of all infants born to AI/AN women were low birth weight, which is lower than all infants born to NHW women who were low birth weight at 8.0% (Figure 26). AI/AN women had 20.0% lower proportions of giving birth to a new born who was low birth weight compared to NHW women.

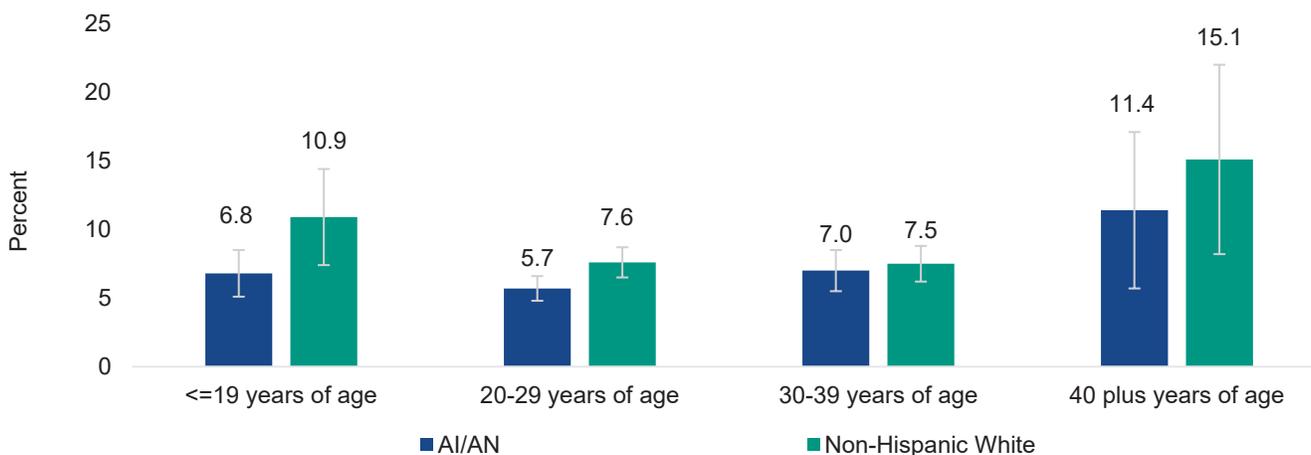
Low birth weight patterns by age stratification were similar for both NHW and AI/AN pregnant woman and across each age group within each race (Figure 27).

Figure 26. Low Birth Weight (<2,500 g), Flagstaff Service Area, 2008-2012



Source: National Vital Statistics, Birth Certificates, 2008-2012

Figure 27. Low Birth Weight (<2,500 g), by Maternal Age Group, Flagstaff Service Area, 2008-2012



Source: National Vital Statistics, Birth Certificates 2008-2012



REFERENCES

1. U.S. Census Bureau. U.S. Census. <https://www.census.gov/>. Published 2012.
2. Centers for Disease Control and Prevention (CDC). *Community Health Assessment for Population Health Improvement: Resource of Most Frequently Recommended Health Outcomes and Determinants*. Atlanta, GA; 2013.
3. Hoopes MJ, Taulii M, Weiser TM, Brucker R, Becker TM. Including self-reported race to improve cancer surveillance data for American Indians and Alaska Natives in Washington state. *J Registry Manag*. 2010;37(2):43-48. <http://www.ncbi.nlm.nih.gov/pubmed/21086821>. Accessed July 24, 2017.
4. Campbell ME, Troyer L. The Implications of Racial Misclassification by Observers. *Am Sociol Rev*. 2007;72(5):750-765. doi:10.1177/000312240707200505.
5. U.S. Census Bureau. What is the census? <https://www.census.gov/2010census/about/>.
6. Arias E, Schauman WS, Eschbach K, Sorlie PD, Backlund E. The validity of race and Hispanic origin reporting on death certificates in the United States. *Vital Health Stat 2*. 2008;(148):1-23. <http://www.ncbi.nlm.nih.gov/pubmed/19024798>. Accessed July 24, 2017.
7. Chae DH, Walters KL. Racial discrimination and racial identity attitudes in relation to self-rated health and physical pain and impairment among two-spirit American Indians/Alaska Natives. *Am J Public Health*. 2009;99 Suppl 1(S1):S144-51. doi:10.2105/AJPH.2007.126003.
8. Health WHOC on the SD of. *The Social Determinants of Health: Developing an Evidence Base for Political Action*. Chile; 2007.
9. Thornton RLJ, Glover CM, Cené CW, Glik DC, Henderson JA, Williams DR. Evaluating Strategies For Reducing Health Disparities By Addressing The Social Determinants Of Health. *Health Aff (Millwood)*. 2016;35(8):1416-1423. doi:10.1377/hlthaff.2015.1357.
10. Braveman P, Egerter S, Williams DR. The Social Determinants of Health: Coming of Age. *Annu Rev Public Health*. 2011;32(1):381-398. doi:10.1146/annurev-publhealth-031210-101218.
11. Norström F, Virtanen P, Hammarström A, Gustafsson PE, Janlert U. How does unemployment affect self-assessed health? A systematic review focusing on subgroup effects. *BMC Public Health*. 2014;14:1310. doi:10.1186/1471-2458-14-1310.
12. Marmot M, Friel S, Bell R, Houweling TA, Taylor S, Commission on Social Determinants of Health. Closing the gap in a generation: health equity through action on the social determinants of health. *Lancet*. 2008;372(9650):1661-1669. doi:10.1016/S0140-6736(08)61690-6.
13. Cawley J, Moriya AS, Simon K. The Impact of the Macroeconomy on Health Insurance Coverage: Evidence from the Great Recession. *Health Econ*. 2015;24(2):206-223. doi:10.1002/hec.3011.
14. Murray S. Poverty and health. *Can Med Assoc J*. 2006;174(7):923-923. doi:10.1503/cmaj.060235.
15. Moore KA, Redd Z. Children in Poverty: Trends, Consequences, and Policy Options. *Child Trends*. 2002;54. <https://childtrends-ciw49tixgw5lbab.stackpathdns.com/wp-content/uploads/2013/03/PovertyRB.pdf>. Accessed July 24, 2017.
16. U.S. Census Bureau. Poverty Glossary. <https://www.census.gov/topics/income-poverty/poverty/about/glossary.html>. Published 2016. Accessed January 1, 2017.
17. Brunello G, Fort M, Schneeweis N, Winter-Ebmer R. The Causal Effect of Education on Health: What is the Role of Health Behaviors? *Health Econ*. 2016;25(3):314-336. doi:10.1002/hec.3141.
18. Cutler DM, Lleras-Muney A. Understanding differences in health behaviors by education. *J Health Econ*. 2010;29(1):1-28. doi:10.1016/j.jhealeco.2009.10.003.
19. Wilper AP, Woolhandler S, Boyd JW, et al. The health and health care of US prisoners: results of a nationwide survey. *Am J Public Health*. 2009;99(4):666-672. doi:10.2105/AJPH.2008.144279.
20. Hadley J. Insurance Coverage, Medical Care Use, and Short-term Health Changes Following an Unintentional Injury or the Onset of a Chronic Condition. *JAMA*. 2007;297(10):1073-1084. doi:10.1001/jama.297.10.1073.
21. Baker E, Bentley R, Mason K. The Mental Health Effects of Housing Tenure: Causal or Compositional? *Urban Stud*. 2013;50(2):426-442. doi:10.1177/0042098012446992.
22. Kreider B, Pepper J V., Gundersen C, Jolliffe D. Identifying the effects of SNAP (Food Stamps) on child health outcomes when participation is endogenous and misreported. *J Am Stat Assoc*. 2012;107(499):958-975. doi:10.1080/01621459.2012.682828.
23. Nord M, Coleman-Jensen A, Andrews M, Carlson S. Household Food Security in the United States, 2009. 2010. https://www.ers.usda.gov/webdocs/publications/44776/7024_err108_1_.pdf?v=41056. Accessed July 24, 2017.
24. Urban Indian Health Institute. *Community Health Profile: National Aggregate of Urban Indian Health*

REFERENCES

- Organization Service Areas*. Seattle; 2011. http://www.uihi.org/download/Combined-UIHO-CHP_Final.pdf. Accessed July 24, 2017.
25. Medical Definition of Mortality, infant. <http://www.medicinenet.com/script/main/art.asp?articlekey=14274>. Published 2016. Accessed July 24, 2017.
 26. The Mayo Clinic. Premature Birth. <http://www.mayoclinic.org/diseases-conditions/premature-birth/basics/definition/con-20020050>. Published 2014.
 27. Effects of a prenatal care intervention for adolescent mothers on birth weight, repeat pregnancy, and educational outcomes at one year postpartum.

APPENDIX

Glossary of Terms

ACS – American Community Survey

AI/AN – American Indian / Alaska Native

IHS – Indian Health Service

MCH – Maternal and Child Health

NACA – Native Americans for Community Action

NCHS – National Center for Health Statistics

NHW – Non-Hispanic White

NICU – Neonatal Intensive Care Unit

NVSS – National Vital Statistics System

SNAP – Supplemental Nutrition Assistance Program, commonly referred to as Food Stamps

TEC – Tribal Epidemiology Center

UIHI – Urban Indian Health Institute, a division of the Seattle Indian Health Board

UIHP – Urban Indian Health Program

APPENDIX

About Us – Our Mission & History

The mission of UIHI is to support the health and well-being of urban Indian communities through information, scientific inquiry, and technology.

The UIHI was established as a Division of the Seattle Indian Health Board, a community health center for urban American Indians and Alaska Natives (AI/ANs). The UIHI is one of 12 tribal epidemiology centers (TECs) funded by the Indian Health Service (IHS). While the other 11 TECs work with tribes regionally, the UIHI focuses on the nationwide urban AI/AN population. As a crucial component of the health care resources for all AI/ANs, tribal epidemiology centers are responsible for:

- Managing public health information systems
- Investigating diseases of concern
- Managing disease prevention and control programs
- Communicating vital health information and resources
- Responding to public health emergencies
- Coordinating these activities with other public health authorities

Contact Information

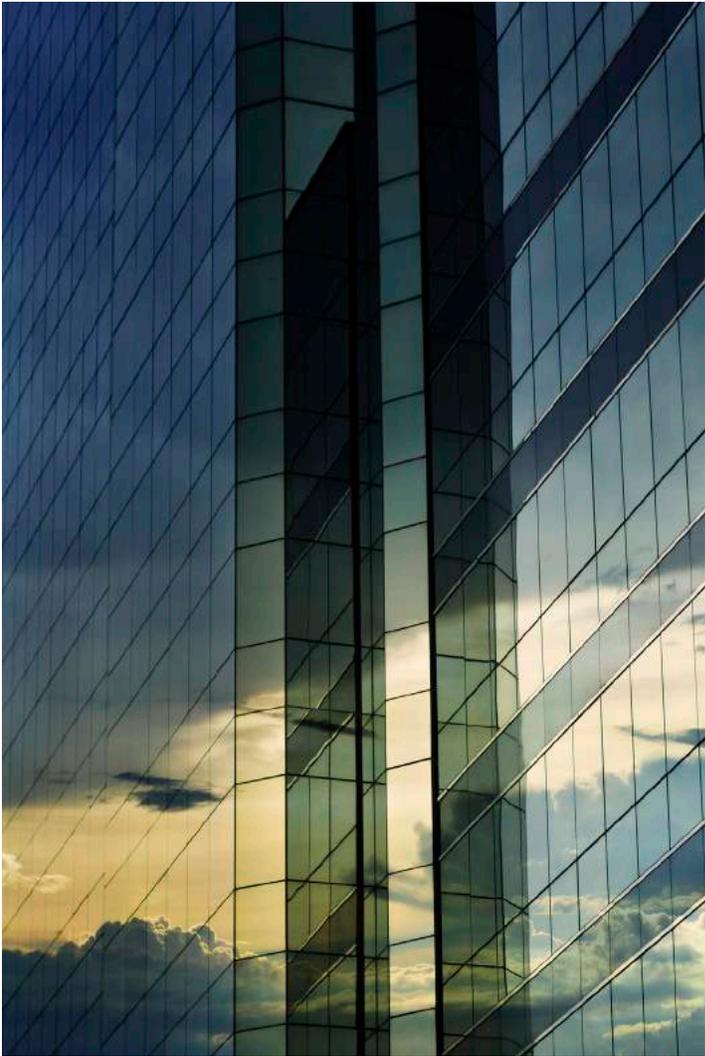
For general questions, please contact: info@uihi.org

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