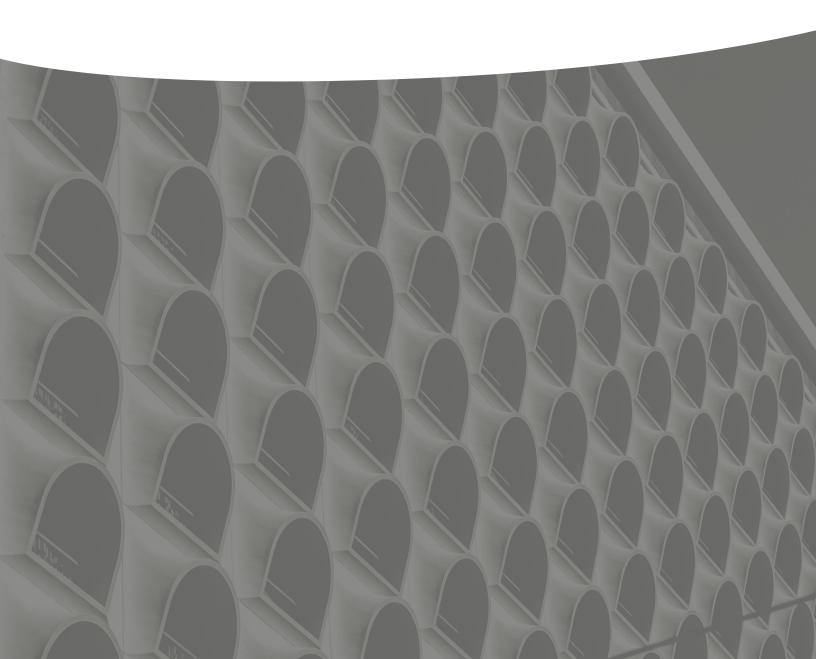
Community Health Profile

Individual Site Report | Phoenix UIHP Service Area August 2017





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







This report was prepared by: Adrian Dominguez, MS; Joshua Smith, BS; Kelsey Liu, MPH; with the support of Alyssa Yang, MPH; Brinda Sivaramkrishinan, MPH; Colin Gerber, MPH; and Leah Dodge, MPH.

Recommended Citation:

Urban Indian Health Institute, Seattle Indian Health Board. (2017). *Community Health Profile: Individual Site Report, Phoenix Urban Indian Health Program Service Area.* Seattle, WA: Urban Indian Health Institute.

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
- 29 References
- 31 Appendix

Acknowledgements

Funding for this report was provided by the Indian Health Service Division of Epidemiology and Disease Prevention. The report contents are solely the responsibility of the authors and do not necessarily represent the official views of the Indian Health Service. Additionally, UIHI would like to acknowledge the contributions of Francesca Murnan, MPA Katherine Ly, BA and Alexa Fay for their help in the production and review of this report.

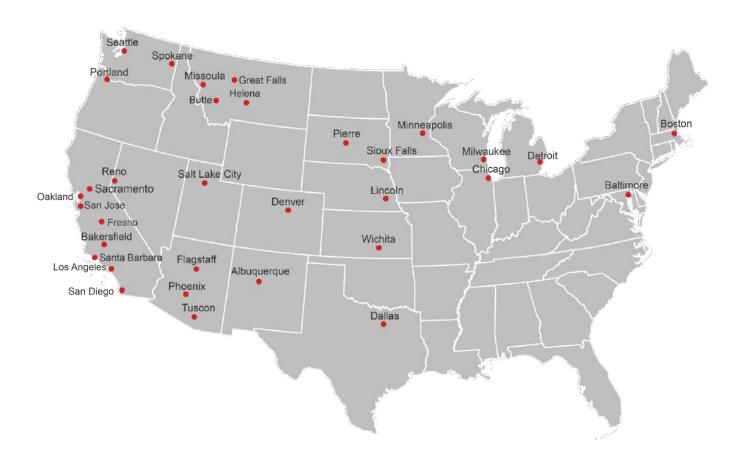
The Urban Indian Health Institute would like to thank the staff at the Urban Indian Health Programs, social service and faith based agencies for the excellent work they do daily on behalf of their communities.

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 Al/ANs reside. In addition, there are numerous social service and faith based organizations serving the public health needs of urban Al/ANs.

UIHPs provide traditional health care services, cultural activities, and a culturally appropriate place for urban Al/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 Al/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 Al/ANs living in select urban counties served by the Native American Community Health Center (NACHC), which is one of 32 Subchapter IV UIHPs across the country. The counties analyzed in this report are defined as Maricopa County by IHS. This report will refer to the service area the Phoenix service area and Maricopa 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 NACHC. The profile examines and addresses the disparities that exist among the urban Al/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 Maricopa 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 innovative 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 Al/ANs in state death records.³ Oversampling Al/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 Maricopa County residents. For each indicator, prevalence or incidence was calculated for the Al/AN population and compared with the NHW population. Because NHWs are the racial/ethnic majority, this population was chosen as the comparison group.

The Al/AN population was defined as Al/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 NACHC or any other urban Al/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 NACHC. 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 Maricopa 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 Al/ANs alone and was not inclusive of Al/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. Al/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 Al/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 Al/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 wellbeing 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 Al/AN race if they report Al/AN as their only race or if they report being Al/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 Al/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 Al/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, Al/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.

Introduction

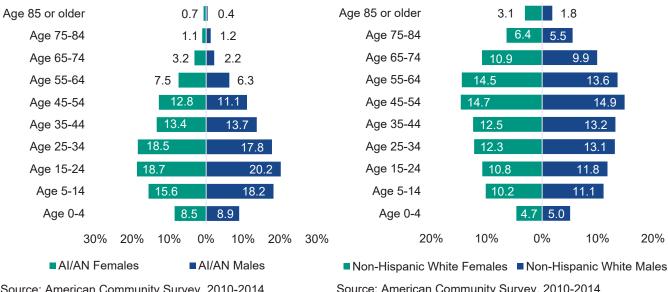
The health of individuals and populations is greatly influenced by social determinants – the conditions in which people live, learn, work, and play.^{8,9} Evidence from decades of research on the relationship between key social determinants and health outcomes overwhelmingly suggests that greater social 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 Al/AN population in Maricopa County was younger (Figure 1 and Figure 2). In Maricopa County, 45.0% of Al/ANs were under the age of 25 years, compared with 26.8% of NHWs. In contrast, 4.4% of Al/ANs were over the age of 65 years, compared with 18.9% of NHWs. Between the ages of 45 and 54 years, a shift in Al/AN women making up a greater proportion of the total AI/AN population occurred; however, this event did not occur among NHWs until the ages of 55 to 64, a complete decade later.

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

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

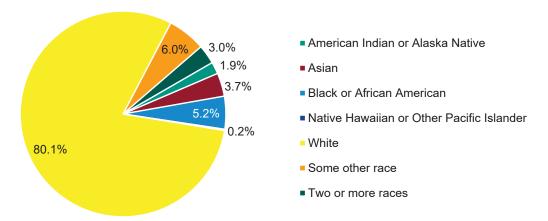


Source: American Community Survey, 2010-2014 Source: American Community Survey, 2010-2014

Race

As shown in Figure 3, an estimated 74,454 (1.9%) individuals identified as Al/AN alone in Maricopa County, and an estimated 106,104 (2.7%) individuals identified as Al/AN alone or in combination with one or more races (data not shown). Those who identified as White alone comprised the largest proportion (80.1%) of the total population (2,281,134) in Maricopa County. In addition, "some other race" was the second largest population identified in Maricopa County, consisting of 236,842 individuals or 6.0% of the total population.

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

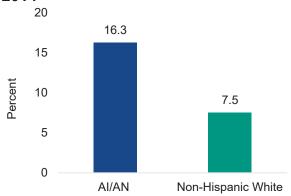


Source: American Community Survey, 2010-2014

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 selfesteem.¹² In addition, unemployed individuals are also more likely to lack health insurance coverage.¹³ In Maricopa County, AI/ANs aged 16 and older experienced proportions of unemployment that were 2.2 times higher than NHWs (16.3% vs. 7.5%; Figure 4). These proportion do not include individuals in the military or individuals who are institutionalized.

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



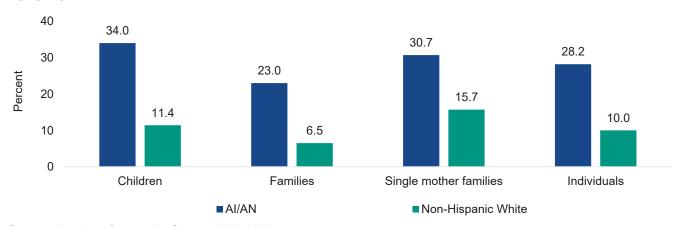
Poverty

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 Maricopa County, more than a quarter of Al/AN individuals lived in poverty (28.2%; Figure 5), compared to just one tenth for NHWs (10.0%). Al/AN children experienced more poverty than NHWs. Approximately one in three Al/AN children aged 17 and under (34.0%) in Maricopa County lived in households with an income below the federal poverty level. This proportion is 3.0 times that of the NHW population (11.4%). In addition, nearly one in four Al/AN families in Maricopa County (23.0%) lived in households with an income below the federal poverty level. This is 3.5 times the proportion of NHWs (6.5%). Finally, among those families in households headed by single mothers, almost one in three Al/AN families lived in poverty (30.7%), nearly 2.0 times the proportion of NHW families (15.7%).

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



Source: American Community Survey, 2010-2014

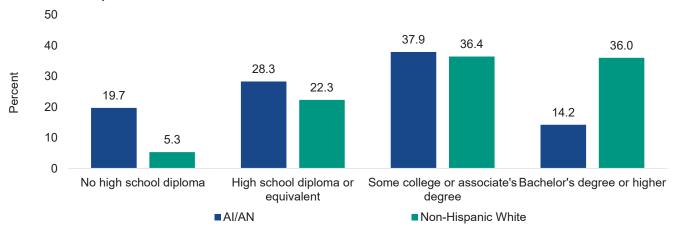
Data note: Federal poverty thresholds are used to determine poverty status. The thresholds are based on family size and the ages of family members. Federal poverty thresholds are not intended as a comprehensive description of families' needs, but rather as a statistical indicator that can be tracked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



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 Maricopa County, a higher percentage of Al/ANs aged 25 and older had not completed high school or passed the General Educational Development (GED) exam (19.7%; Figure 6) compared with the NHW population (5.3%). A lower percentage of Al/ANs (14.2%) reported an undergraduate or graduate degree as their highest level of education compared with the NHW population (36.0%).

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

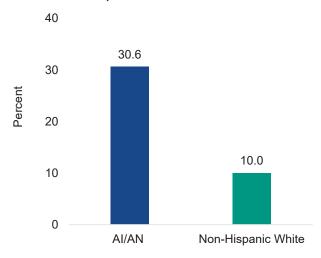




Health Insurance Coverage

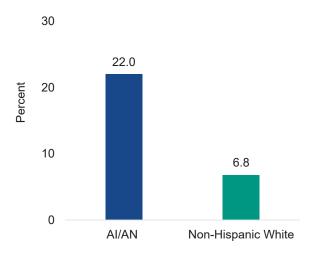
Compared to those with health insurance coverage, those without health insurance coverage have higher mortality rates. ¹⁹ Individuals without health insurance are also less likely to receive care and take longer to return to health after an unintentional injury or the onset of a chronic disease compared to those with health insurance. ²⁰ In Maricopa County, three in ten Al/ANs under age 65 (30.6%) reported having no health insurance, a proportion 3.1 times higher than that of NHWs (10.0%; Figure 7). The proportion of uninsured Al/AN children under the age of 18 in Maricopa County was 3.2 times higher than the proportion of NHW children (22.0% vs. 6.8%, Figure 8).

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



Source: American Community Survey, 2010-2014

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



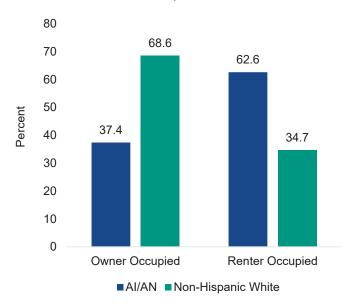


Housing

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 Maricopa County, the proportion of renter occupation among Al/ANs was 1.8 times higher than NHWs (62.6% vs. 34.7%, Figure 9). Almost two thirds of all homes of Al/ANs were renter occupied, compared with approximately one-third of homes for NHWs. In contrast, the proportion of home ownership among NHWs in Maricopa County was 1.8 times higher than among Al/ANs (68.6% vs. 37.4%). More than a third of all homes of Al/ANs were owner occupied, compared with nearly two-thirds of homes for NHWs.

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



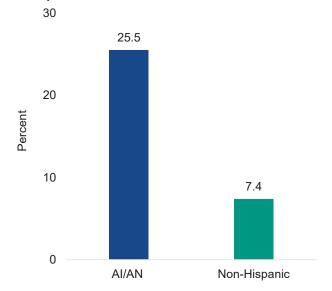


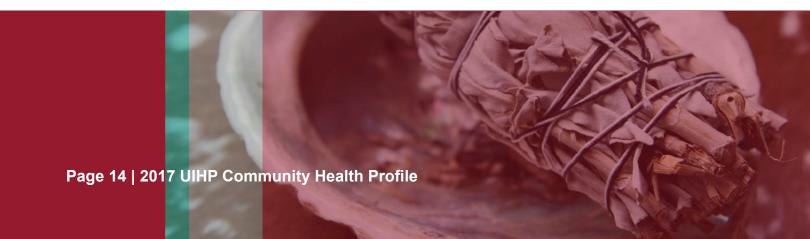
Food Stamps

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 SNAP²³ 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 Maricopa County, one quarter 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 3.4 times higher than NHWs.

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





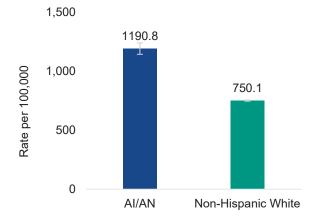
Introduction

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 ageadjusted 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 Al/AN populations.²⁴ True mortality rates among Al/ANs in Maricopa County are assumed to be higher than the rates described for this section.

All-Cause Mortality Rate

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

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

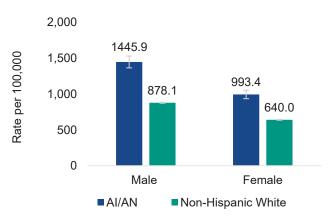


Source: US Center for Health Statistics, Death Certificates, 2010-2014

Mortality Rate by Gender

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

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



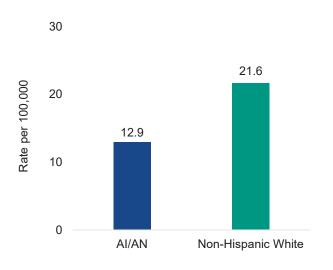
Source: US Center for Health Statistics, Death Certificates, 2010-2014



Suicide

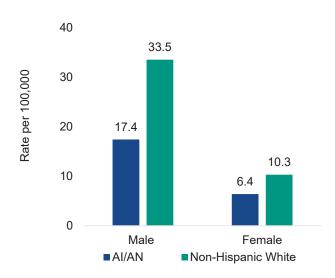
The suicide rate was 1.7 times higher among NHWs compared to Al/ANs (Figure 13). In addition, the suicide rate by gender was higher for both NHW men and women compared to Al/AN men and women at 1.9 and 1.6 times higher respectively (Figure 14). When comparing Al/ANs, the suicide rate for Al/AN males was 2.7 times higher compared to Al/AN females.

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



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

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

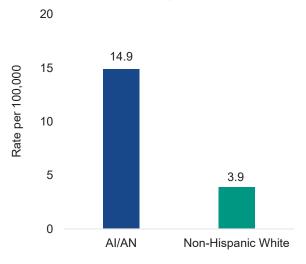


Source: US Center for Health Statistics, Death Certificates, 2010-2014

Homicide

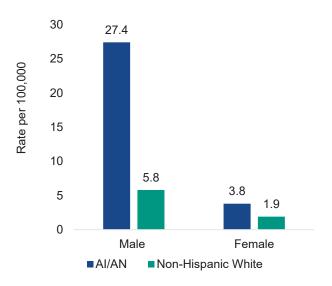
The homicide rate was 3.8 times higher for the Al/AN population compared to the NHW population (Figure 15). True disparities in homicide rates become apparent when looking at homicide by gender. The homicide rate for Al/AN males was 27.4 per 100,000 (Figure 16). This rate is 4.7 times higher than NHW males, 7.2 times higher than Al/AN females, and more than 14.4 times higher than NHW females.

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



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

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



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



Top Causes of Mortality

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

| AI/AN | | | NHW | | |
|-------|-------------------------------------|--------------------|------|-----------------------------------|--------------------|
| Rank | Cause | Rate (per 100,000) | Rank | Cause | Rate (per 100,000) |
| 1 | Vascular disease | 887.8 | 1 | Vascular disease | 374.3 |
| 2 | Cancer | 304.6 | 2 | Cancer | 329.6 |
| 3 | Diabetes | 271.9 | 3 | Chronic lower respiratory disease | 105.2 |
| 4 | Chronic liver disease and cirrhosis | 205.0 | 4 | Alzheimer's disease | 73.7 |
| 5 | Alzheimer's disease | 116.6 | 5 | Intentional self-harm | 43.1 |

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, Phoenix Service Area, 2010-2014

| AI/AN Males | | | NHW Males | | |
|-------------|-------------------------------------|--------------------|-----------|-----------------------------------|--------------------|
| Rank | Cause | Rate (per 100,000) | Rank | Cause | Rate (per 100,000) |
| 1 | Vascular disease | 316.0 | 1 | Vascular disease | 252.2 |
| 2 | Cancer | 207.1 | 2 | Cancer | 201.4 |
| 3 | Chronic liver disease and cirrhosis | 155.9 | 3 | Chronic lower respiratory disease | 57.3 |
| 4 | Motor vehicle accidents | 44.8 | 4 | Alzheimer's disease | 37.4 |
| 5 | Flu and pneumonia | 43.9 | 5 | Intentional self-harm | 33.5 |

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.



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

| Al/AN Female | | | NHW Females | | |
|--------------|-------------------------------------|--------------------|-------------|-----------------------------------|--------------------|
| Rank | Cause | Rate (per 100,000) | Rank | Cause | Rate (per 100,000) |
| 1 | Vascular disease | 202.5 | 1 | Vascular disease | 168.2 |
| 2 | Cancer | 135.6 | 2 | Cancer | 150.7 |
| 3 | Diabetes | 122.0 | 3 | Chronic lower respiratory disease | 49.9 |
| 4 | Chronic liver disease and cirrhosis | 86.0 | 4 | Alzheimer's disease | 47.9 |
| 5 | Alzheimer's disease | 47.6 | 5 | Diabetes | 16.1 |

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, Phoenix Service Area, 2010-2014

| AI/AN | | | NHW | | |
|-------|-----------------------------------|--------------------|------|-----------------------------------|--------------------|
| Rank | Cause | Rate (per 100,000) | Rank | Cause | Rate (per 100,000) |
| 1 | Tracheal/Bronchus/ Lung cancer | 59.9 | 1 | Tracheal/Bronchus/ Lung cancer | 95.7 |
| 2 | Colon cancer | 29.5 | 2 | Colon cancer | 33.6 |
| 3 | Cervical cancer | 21.2 | 3 | Pancreatic cancer | 27.3 |
| 4 | Pancreatic cancer | 19.6 | 4 | Breast cancer | 25.5 |
| 5 | Bladder cancer | 18.8 | 5 | Bladder cancer | 19.6 |

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.

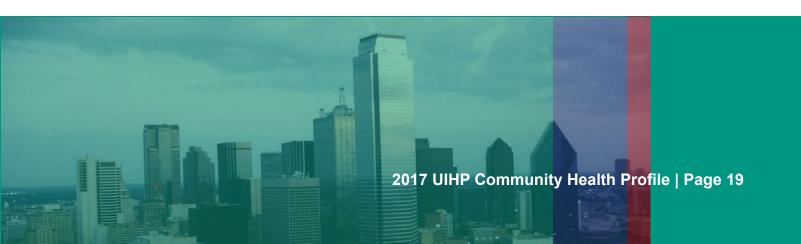


Table 5. Top Male Causes of Cancer Mortality, Phoenix Service Area, 2010-2014

| AI/AN Males | | | NHW Males | | |
|-------------|-----------------------------------|--------------------|-----------|-----------------------------------|--------------------|
| Rank | Cause | Rate (per 100,000) | Rank | Cause | Rate (per 100,000) |
| 1 | Tracheal/Bronchus/ Lung cancer | 41.9 | 1 | Tracheal/Bronchus/ Lung cancer | 52.2 |
| 2 | Prostate cancer | 20.1 | 2 | Prostate cancer | 18.9 |
| 3 | Colon cancer | 19.2 | 3 | Colon cancer | 17.5 |
| 4 | Pancreatic cancer | 12.6 | 4 | Bladder cancer | 14.5 |
| 5 | Leukemia | 9.9 | 5 | Pancreatic cancer | 14.0 |

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, Phoenix Service Area, 2010-2014

| AI/AN Females | | | NHW Females | | |
|---------------|-----------------------------------|--------------------|-------------|--------------------------------|--------------------|
| Rank | Cause | Rate (per 100,000) | Rank | Cause | Rate (per 100,000) |
| 1 | Cervical cancer | 17.7 | 1 | Tracheal/Bronchus/ Lung cancer | 38.8 |
| 2 | Tracheal/Bronchus/ Lung cancer | 15.6 | 2 | Breast cancer | 23.4 |
| 3 | Breast cancer | 13.3 | 3 | Cervical cancer | 15.7 |
| 4 | Colon cancer | 12.4 | 4 | Colon cancer | 13.6 |
| 5 | Bladder cancer | 9.0 | 5 | Pancreatic cancer | 10.8 |

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.

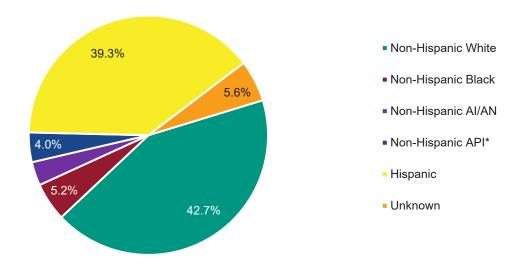
Introduction

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 NACHC make decisions regarding programs that impact pregnant mothers, newborns, and infants. 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 305,094 births in Maricopa County. Among those births, 3.2% were identified as non-Hispanic Al/AN alone (Figure 17). The largest proportions of births among racial/ethnic groups were from NHW (42.7%) and Hispanic (39.3%) women. Non-Hispanic Blacks were 5.2% and non-Hispanic Asians and Pacific Islanders were 4.0% of all births.

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



^{*}API-Asian/Pacific Islander

Age

In general, Al/AN women tend to give birth at younger ages than their NHW counterparts (Figure 18). 15.9% of births among Al/AN women in Maricopa county were to teenage women (less than 19 years of age) compared to 5.2% of NHW births. The proportion of births to teenage women was 3.1 times higher in Al/ANs compared to NHWs. In addition, 58.8% of all births among Al/AN women were to women in their 20s, compared to 51.7% among NHWs. Conversely, NHW women had more children in their 30s compared to Al/AN women. 40.2% of all births among NHW women were to women in their 30s, whereas 23.9% births were to Al/AN women in their 30s.

80 58.8 60 51.7 Percent 40.2 40 23.9 15.9 20 5.2 2.9 1.5 0 <=19 years of age 20-29 years of age 30-39 years of age 40 plus years of age ■ AI/AN ■ Non-Hispanic White

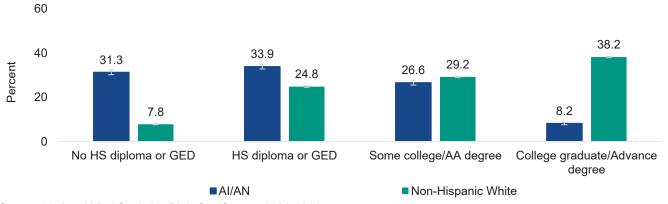
Figure 18. Births by Maternal Age Group, Phoenix Service Area, 2008-2012



Education

31.3% of all births for AI/ANs in Maricopa county were to women who did not complete high school and 33.9% were to women whose highest level of education was a high school diploma or GED (Figure 19). Conversely, among NHW women, 7.8% of all births were from women who did not complete high school and 24.8% were from women whose highest level of education was a high school diploma or GED. The proportion of infants born to women with a high school diploma or less was 2.0 times higher among AI/AN women than to NHW women. In addition, approximately two fifths of all births among NHWs were to women with a college or advance degree compared to 8.2% among their AI/AN counterparts. The proportion of infants being born to women with college or advance degrees was 4.7 times higher among NHW women than to AI/AN women.

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

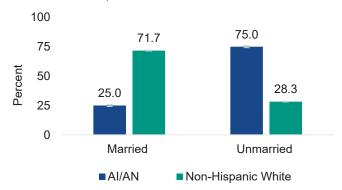


Source: National Vital Statistics Birth Certificates, 2008-2012

Marital Status

25.0% of all births to Al/ANs in Maricopa County were to women who were married and 75.0% were to women who were not married (Figure 20). This was significantly different compared to NHWs in which 71.7% of births were to married mothers and 28.3% of births were to unmarried mothers. The proportion of births to unmarried women was 2.7 times higher in Al/ANs compared to their NHW counterparts.

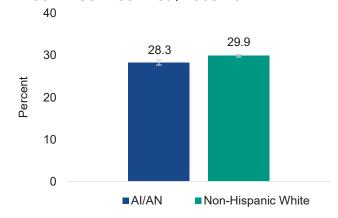
Figure 20. Births by Marital Status, Phoenix Service Area, 2008-2012



Cesarean Section

In Maricopa county, approximately three in ten 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 (28.3%, Figure 21).

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

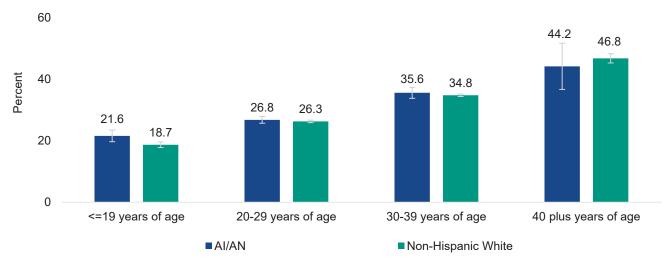


Source: National Vital Statistics, Birth Certificates 2008-2012

Cesarean Section by Maternal Age

The proportion of cesarean deliveries increased as maternal age increased for both Al/AN and NHW women (Figure 22). 44.2% of births for Al/AN women in their 40s were delivered via cesarean section. Between Al/AN and NHW women for each age group, the proportion of cesarean sections was similar.

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

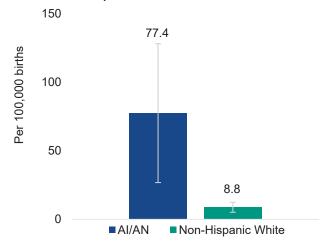


Maternal Mortality

Maternal mortality is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy or its management, but not from accidental or incidental causes. Major causes of maternal death include bacterial infection; variants of gestational hypertension, including preeclampsia, obstetrical hemorrhage, ectopic pregnancy; and complications of abortions.²⁵

In Maricopa County, maternal mortality was 77.4 per 100,000 births for Al/AN women, which was significantly higher than NHW women (8.8 per 100,000 births, Figure 23). Al/AN women had 8.8 times higher rates of maternal mortality than NHW women.

Figure 23. Maternal Mortality Rate, Phoenix Service Area, 2010-2012



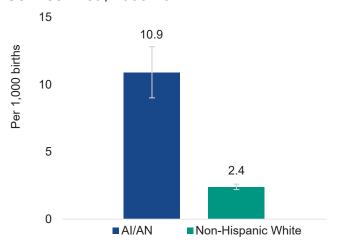


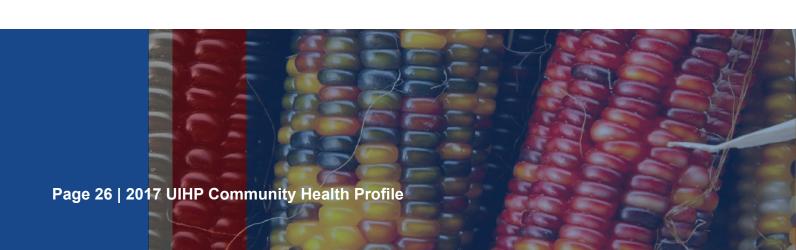
Infant Mortality

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 time-period. 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.²⁶ 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.²⁶

The infant mortality for AI/ANs in Maricopa County was 10.9 per 1,000 live births (Figure 24). This was significantly higher than the infant mortality rate for NHWs (2.4 per 1,000 live births), with AI/AN infants having 4.5 times higher rates of death within their first year of life, compared to NHW infants.

Figure 24. Infant Mortality Rate, Phoenix Service Area, 2008-2012



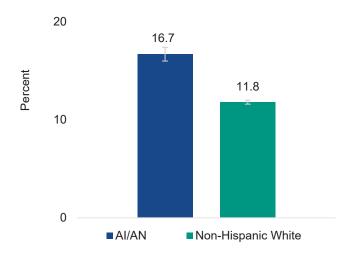


Premature Births

A premature birth is defined as childbirth occurring earlier than 37 completed weeks of pregnancy. ²⁷ In Maricopa County, 11.8% of all infants born to NHW women were born prematurely, which is significantly lower than all infants born prematurely to AI/AN women at 16.7% (Figure 25). Additionally, AI/AN pregnant women had 1.4 times higher proportions of having an infant born prematurely than a NHW women.

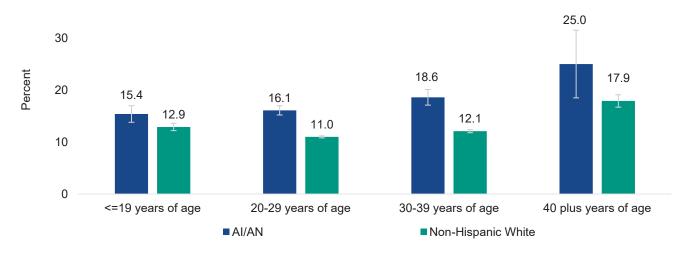
Premature births increased as age increased for both Al/AN and NHW women (Figure 26). Al/AN women in their 20s and 30s had significantly higher proportions of premature births when compared to NHWs.

Figure 25. Premature Births (<37 weeks), Phoenix Service Area, 2008-2012



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

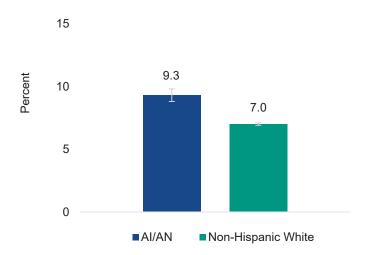
Figure 26. Premature Births (<37 weeks) by Maternal Age Group, Phoenix Service Area, 2008-2012



Low Birth Weight

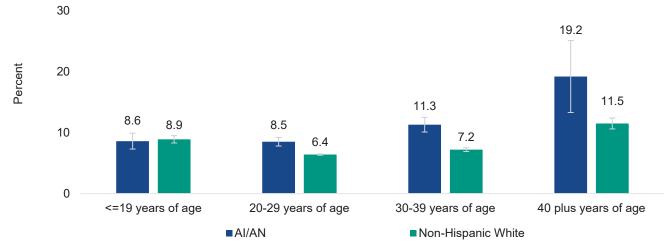
Low birth weight is defined as less than 2,500 grams (5.5 pounds).²⁸ In Maricopa County, 9.3% of all infants born to Al/AN women were low birth weight, which is significantly higher than all infants born to NHW women who were low birth weight at 7.0% (Figure 27). AI/AN women had 1.3 times higher proportions 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 (Figure 28). Although low birth weight generally increased as maternal age increased from 20 to 40+ years, AI/AN women in their 20s, 30s and 40s had significantly higher rates of giving birth to low birth weight infants than comparable NHWs.

Figure 27. Low Birth Weight (<2,500 g), Phoenix Service Area, 2008-2012



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

Figure 28. Low Birth Weight (<2,500 g), by Maternal Age Group, Phoenix Service Area, 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, Taualii 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. Stehr-Green P, Bettles J, Robertson LD. Effect of racial/ethnic misclassification of American Indians and Alaskan Natives on Washington State death certificates, 1989-1997. *Am J Public Health*. 2002;92(3):443-444. doi:10.2105/AJPH.92.3.443.
- 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.

REFERENCES

- 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 Organization Service Areas.* Seattle; 2011. http://www.uihi.org/download/Combined-UIHO-CHP_Final.pdf. Accessed July 24, 2017.
- 25. Spokane Regional Health District. *A Healthy Start: Spokane's Future : Maternal and Infant Health*. Spokane, WA; 2008. https://books.google.com/books/about/A_Healthy_Start.html?id=9RqxXwAACAAJ. Accessed July 24, 2017.
- 26. Medical Definition of Mortality, infant. http://www.medicinenet.com/script/main/art.asp?articlekey=14274. Published 2016. Accessed July 24, 2017.
- 27. The Mayo Clinic. Premature Birth. http://www.mayoclinic.org/diseases-conditions/premature-birth/basics/definition/con-20020050. Published 2014.
- 28. CHILD HEALTH USA 2013. U.S. Department of Health and Human Services. http://mchb.hrsa.gov/chusa13/perinatal-health-status-indicators/p/low-birth-weight.html. Published 2013.

APPENDIX

Glossary of Terms

ACS – American Community Survey

Al/AN - American Indian / Alaska Native

IHS - Indian Health Service

MCH - Maternal and Child Health

NACHC - Native American Community Health Center

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 (Al/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 Al/AN population. As a crucial component of the health care resources for all Al/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

UIHI distributes a Weekly Resource Email – if you would like to be included in our subscription to receive updates, you can email the address above.

Urban Indian Health Institute Seattle Indian Health Board 611 12th Avenue South Seattle, WA 98144 Phone: (206) 812 – 3030

Fax: (206) 812 – 3044



Contact Us

Please contact the Urban Indian Health Institute with your comments by emailing info@uihi.org, calling (206) 812-3030 or visiting us online at www.uihi.org.





