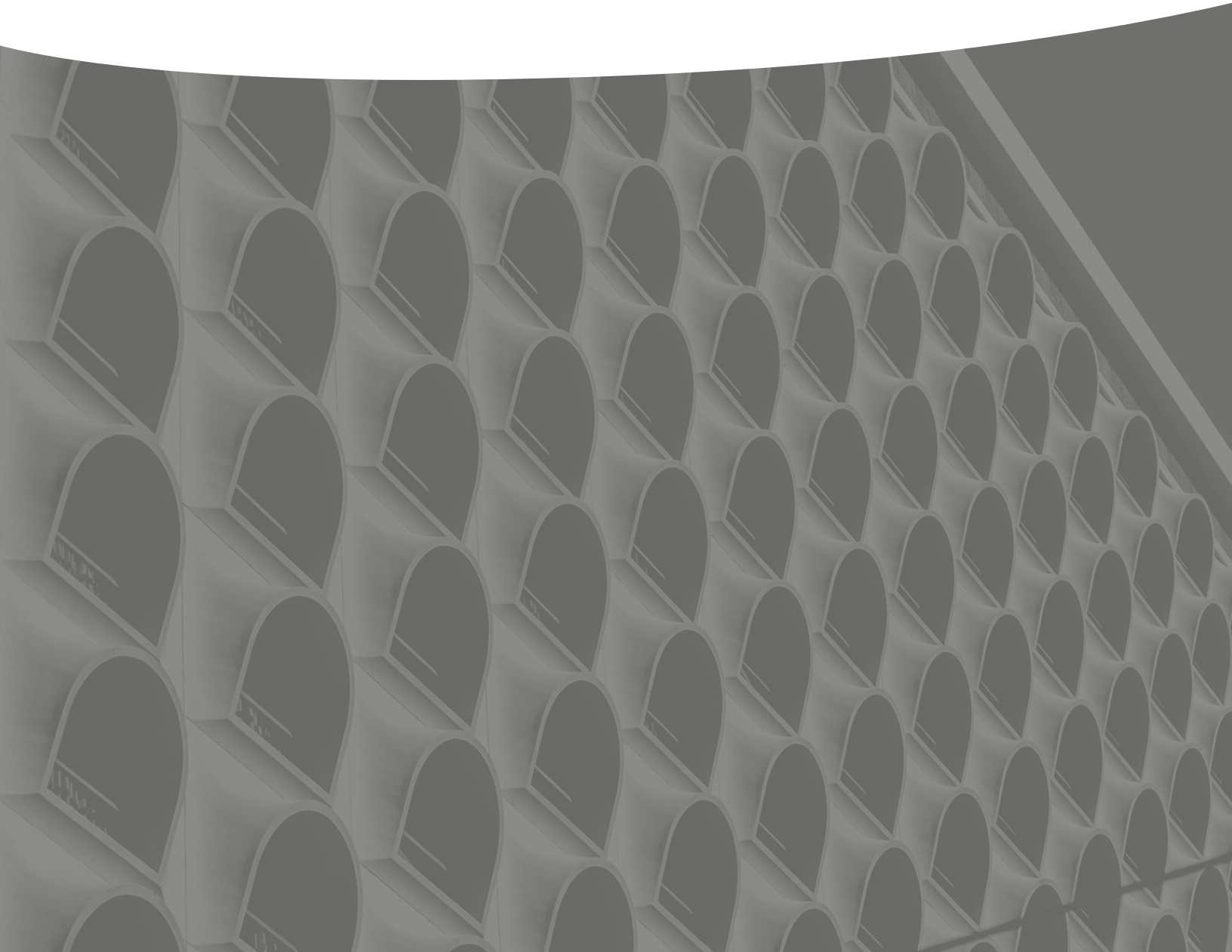
Community Health Profile

Individual Site Report | Boston 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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Acknowledgements

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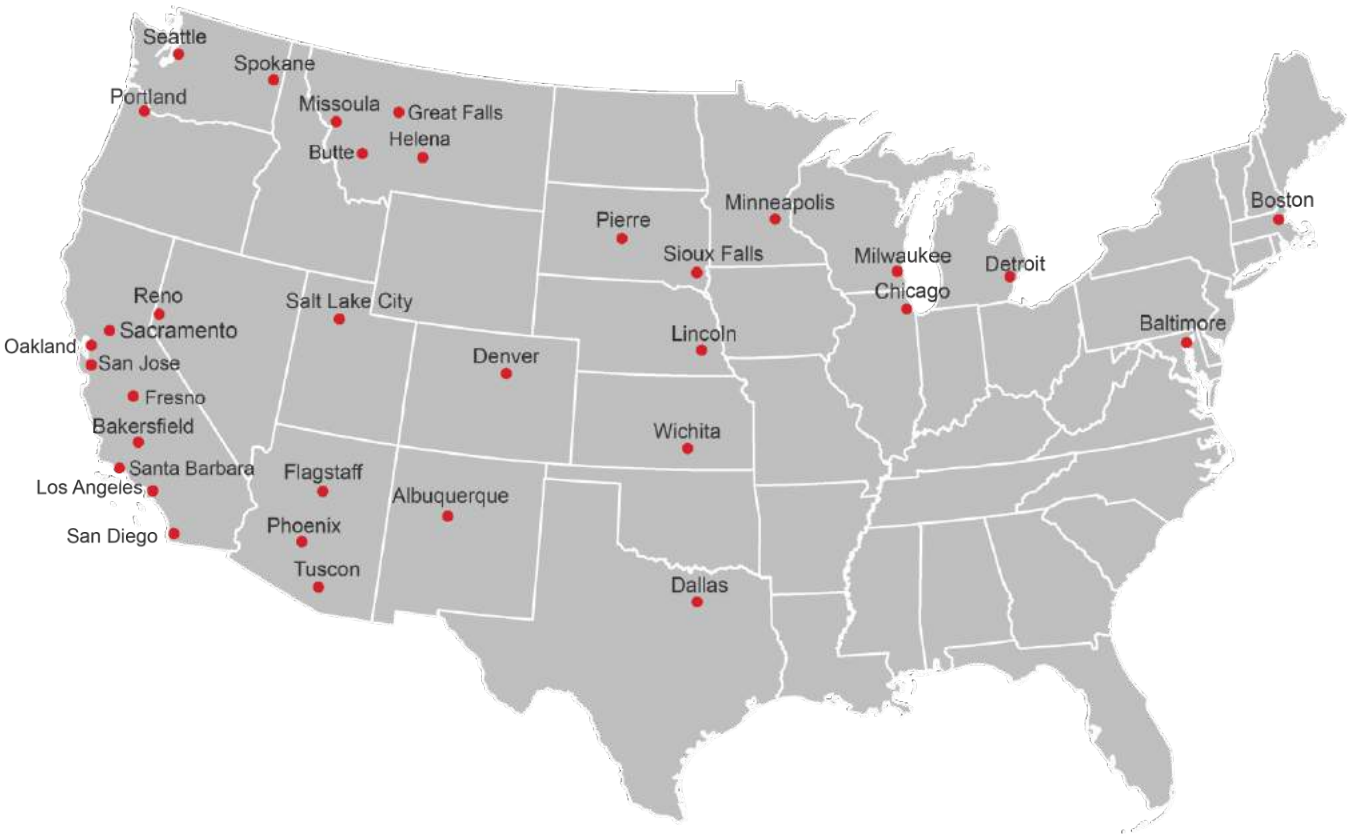
The Urban Indian Health Institute would like to thank the staff at the Urban Indian Health Programs, social service and faith based agencies for the excellent work they do daily on behalf of their communities.

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 Native American Lifelines (NAL), which is one of 32 Subchapter IV UIHPs across the country. The counties analyzed in this report are defined as Essex County, Middlesex County, Norfolk County, Plymouth County and Suffolk County by IHS. This report will refer to the service area as the Boston service area and Native American Lifelines 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 NAL. 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 Boston service area. 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 NHWs. 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 Essex County, Middlesex County, Norfolk County, Plymouth County and Suffolk 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.

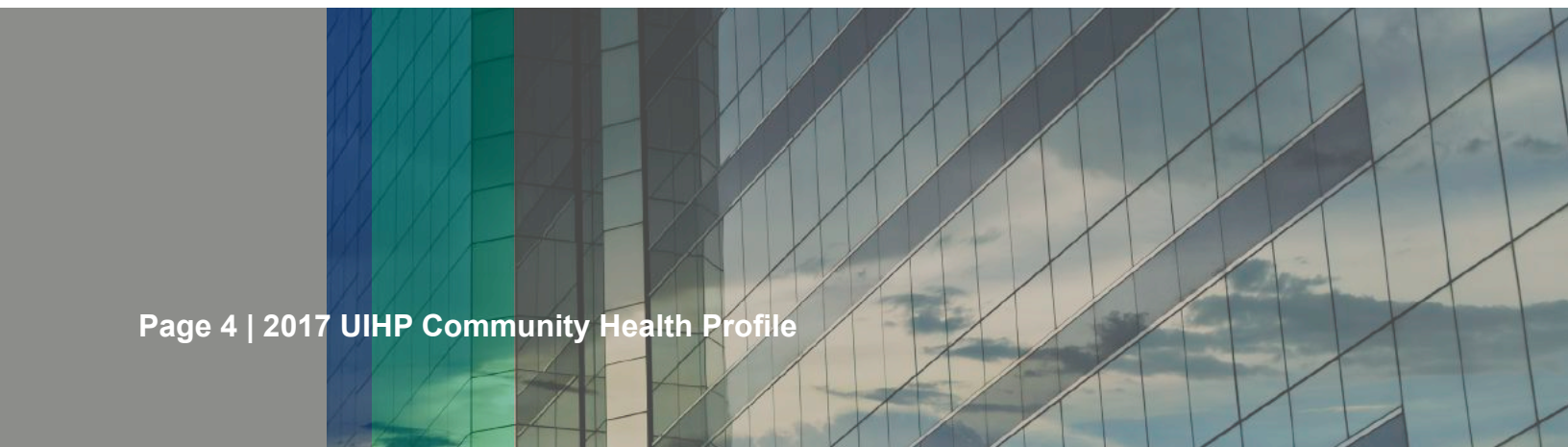
In some instances, confidence intervals were calculated and used to show differences in outcomes for specific indicators displayed in bar graphs. Confidence intervals are ranges of numbers used to assess the accuracy of a point estimate and measure the variability in the data. The point estimate may 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 NAL 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 NAL. 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 Essex County, Middlesex County, Norfolk County, Plymouth County and Suffolk 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.

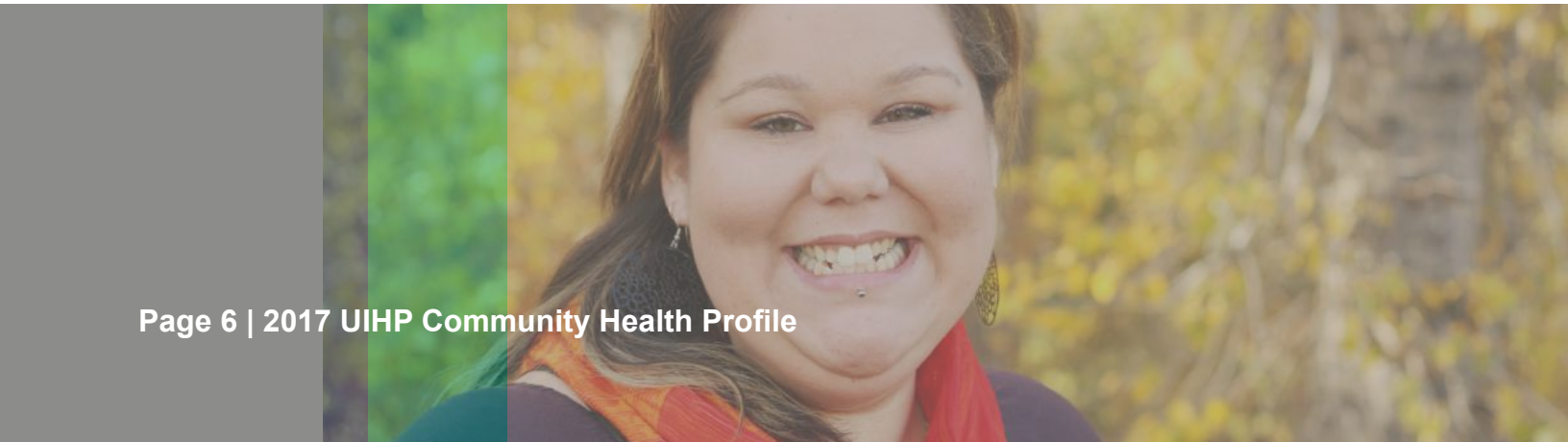
Race is self-reported on ACS, with similar race categories as the U.S. Census. However, some ACS data are not easily accessible for multiple race groups. Therefore, ACS data are reported for AI/AN alone in this report. ACS estimates in this profile are not adjusted for age; observed differences in estimates 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, information on the infant, the mother's risk factors,



DATA SOURCES

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

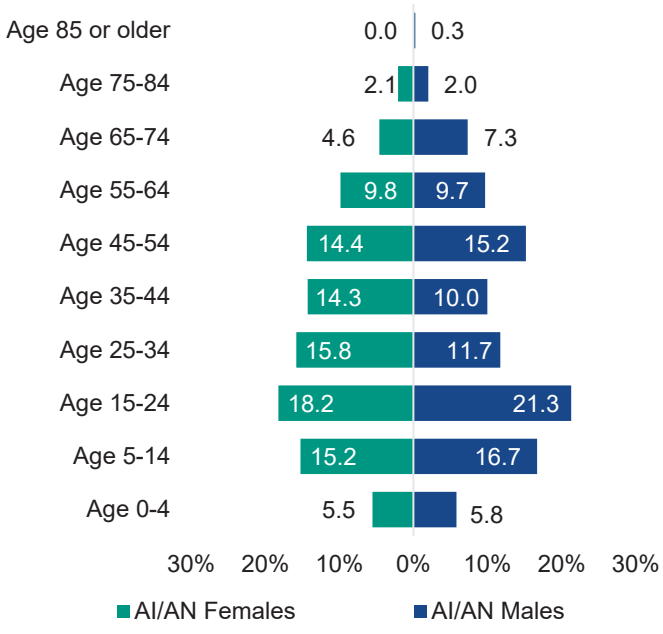
Introduction

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

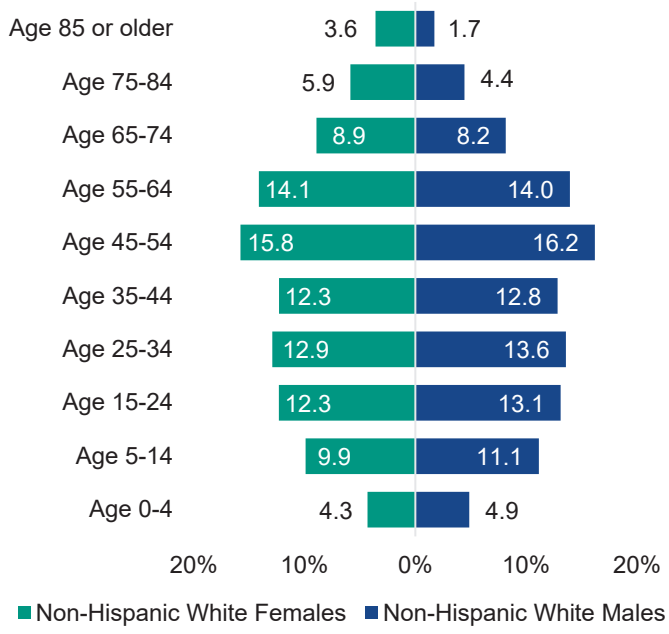
Relative to the NHW population, the AI/AN population in the Boston service area was younger (Figure 1 and Figure 2). Compared with 27.8% of NHWs, 41.3% of AI/ANs were under the age of 25 years. In contrast, 8.1% of AI/ANs were over the age of 65 years, compared with 16.4% of NHWs.

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

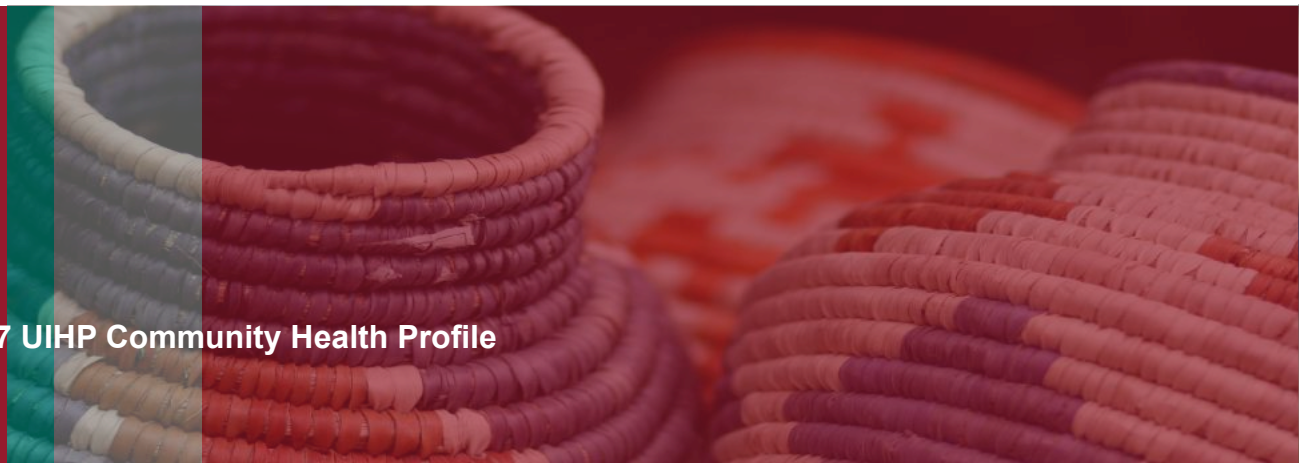


Source: American Community Survey, 2010-2014

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



Source: American Community Survey, 2010-2014

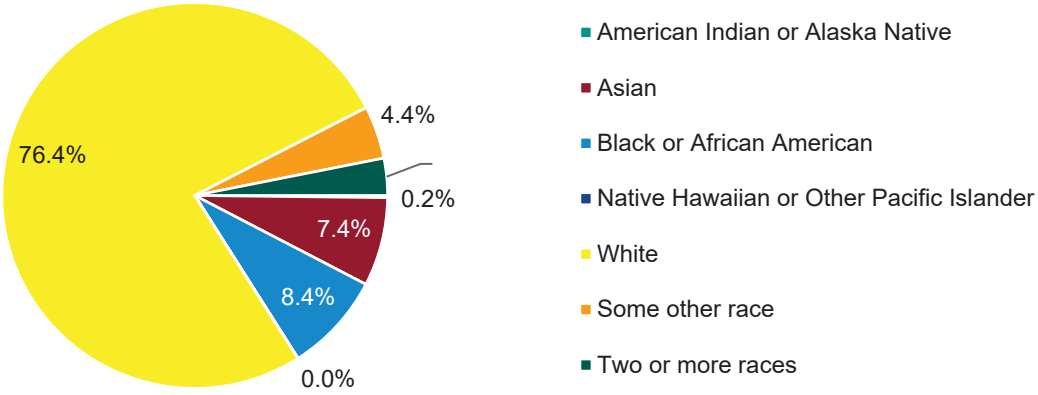


SOCIODEMOGRAPHICS

Race

As shown in Figure 3, an estimated 7,617 (0.2%) individuals identified as AI/AN alone in the Boston service area, and an estimated 253,727 (0.6%) 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 (76.4%) of the total population (3,034,783) in the Boston service area. In addition, Black or African Americans alone were the second largest population identified in the Boston service area, consisting of 355,218 individuals or 8.4% of the total population.

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

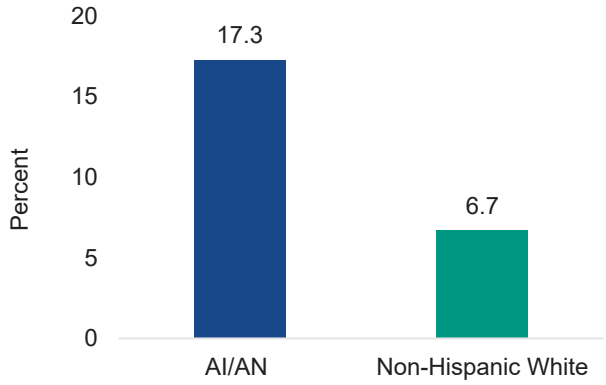


Source: American Community Survey, 2010-2014

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 the Boston service area, the percent of unemployed AI/ANs aged 16 and older was 2.6 times higher than NHWs (17.3% vs. 6.7%; Figure 4). These percentages do not include individuals in the military or individuals who are institutionalized.

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



Source: American Community Survey, 2010-2014

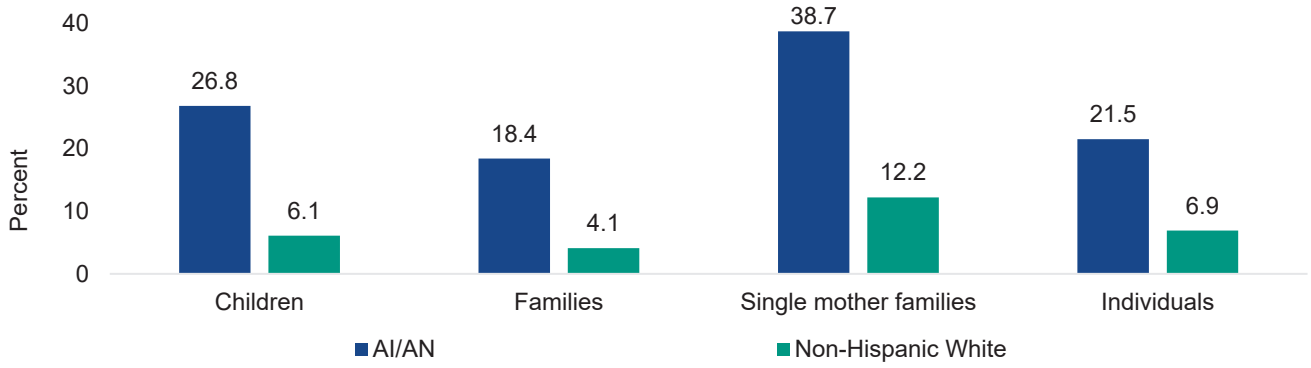
SOCIODEMOGRAPHICS

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 rates 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]

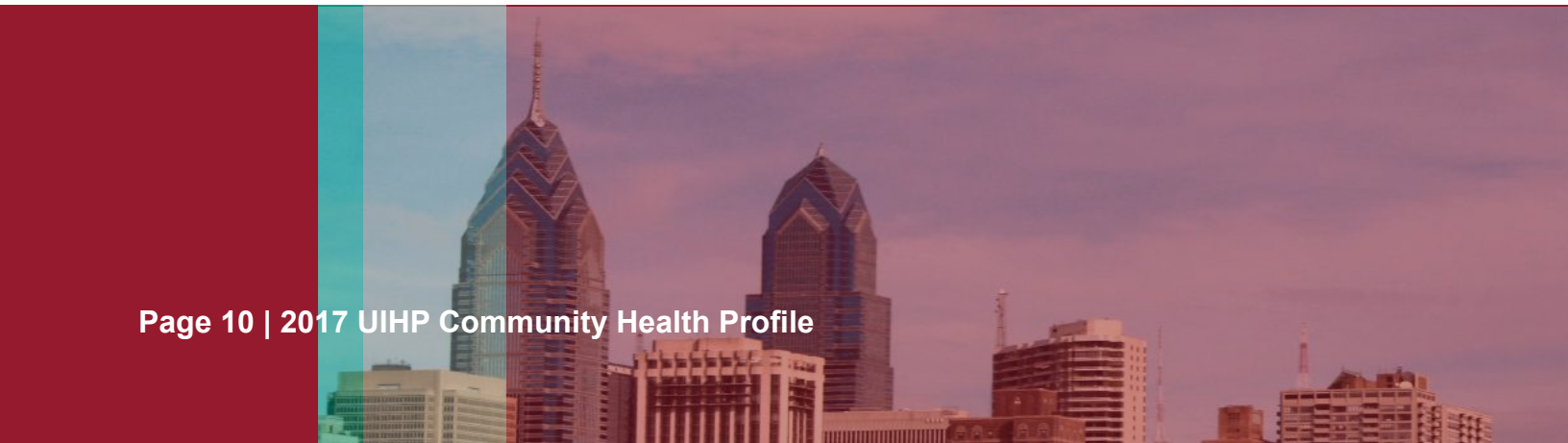
In the Boston service area, approximately one out of five AI/AN individuals lived in poverty (21.5%; Figure 5), compared to just 6.9% for NHWs. AI/AN children experienced more poverty than NHWs. Approximately one in four AI/AN children aged 17 and under (26.8%) in the Boston service area lived in households with an income below the federal poverty level. This proportion is 4.4 times that of the NHW population (6.1%). In addition, nearly one in five AI/AN families in the Boston service area (18.4%) lived in households with an income below the federal poverty level. This is 4.5 times the proportion among NHWs (4.1%). Finally, among those families in households headed by single mothers, 38.7% of AI/ANs lived in poverty, nearly 3.2 times the proportion among NHWs (12.2%).

Figure 5. Income Below the Federal Poverty Level in Past Year, Boston 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.

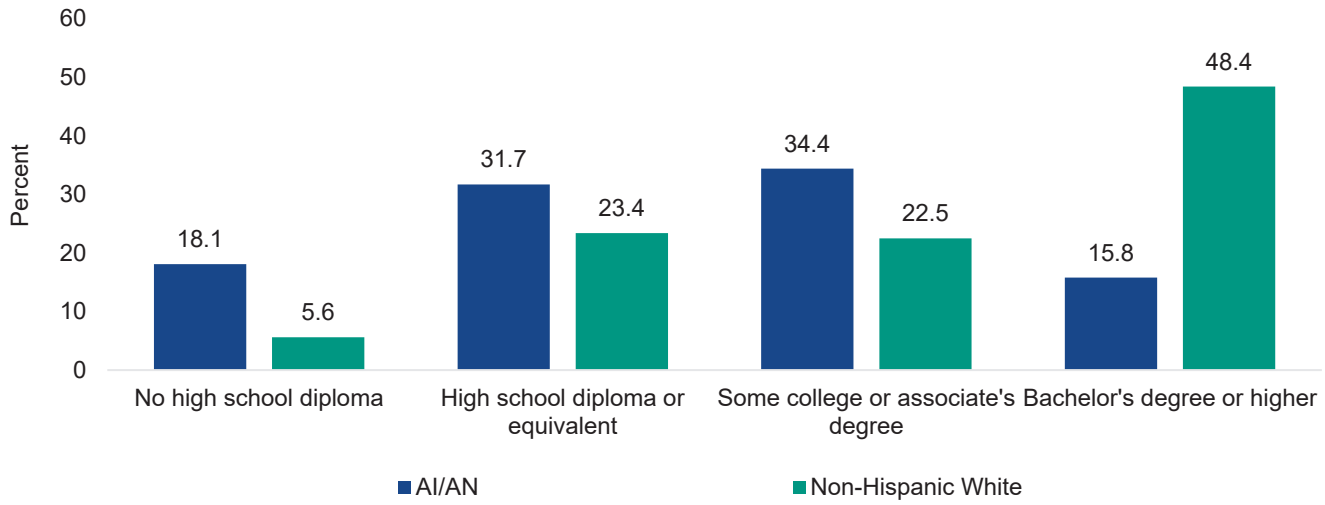


SOCIODEMOGRAPHICS

Educational Attainment

The relationship between education and health, or the "health-education gradient," is well documented.[17] Significant disparities in life expectancy by level of education are found among all demographic groups and are arguably increasing over time.[18] In the Boston service area, a higher percentage of AI/ANs aged 25 and older had not completed high school or passed the General Educational Development (GED) exam (18.1%; Figure 6) compared with the NHW population (5.6%). A lower percentage of AI/ANs (15.8%) reported an undergraduate or graduate degree as their highest level of education compared with the NHW population (48.4%).

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



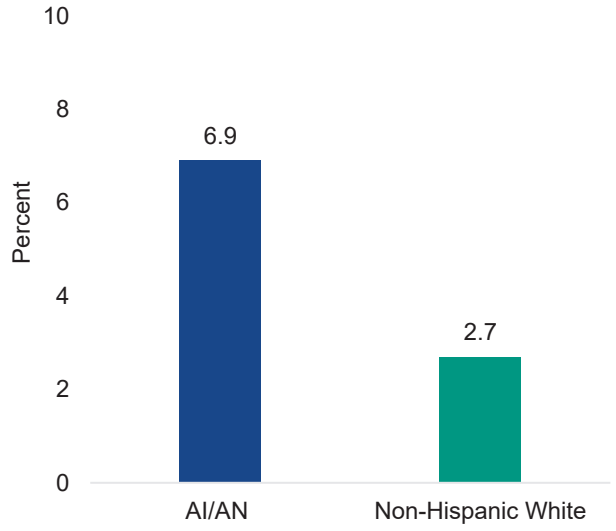
Source: American Community Survey, 2010-2014

SOCIODEMOGRAPHICS

Health Insurance Coverage

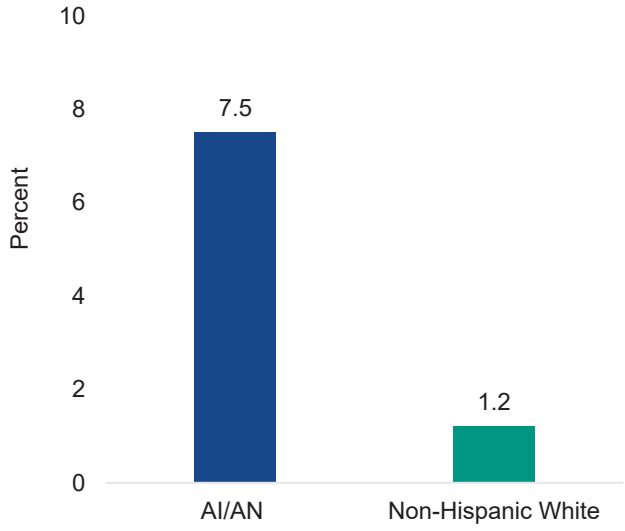
Compared to those with health insurance coverage, those without health insurance coverage have higher mortality rates.[19] Individuals without health insurance are also less likely to receive care and take longer to return to health after an unintentional injury or the onset of a chronic disease compared to those with health insurance.[20] In the Boston service area, 6.9% of AI/ANs under age 65 reported having no health insurance, a proportion 2.6 times higher than that of NHWs (2.7%; Figure 7). The proportion of uninsured AI/AN children under the age of 18 in the Boston service area is 6.3 times higher than the proportion of NHW children (7.5% vs. 1.2%, Figure 8).

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

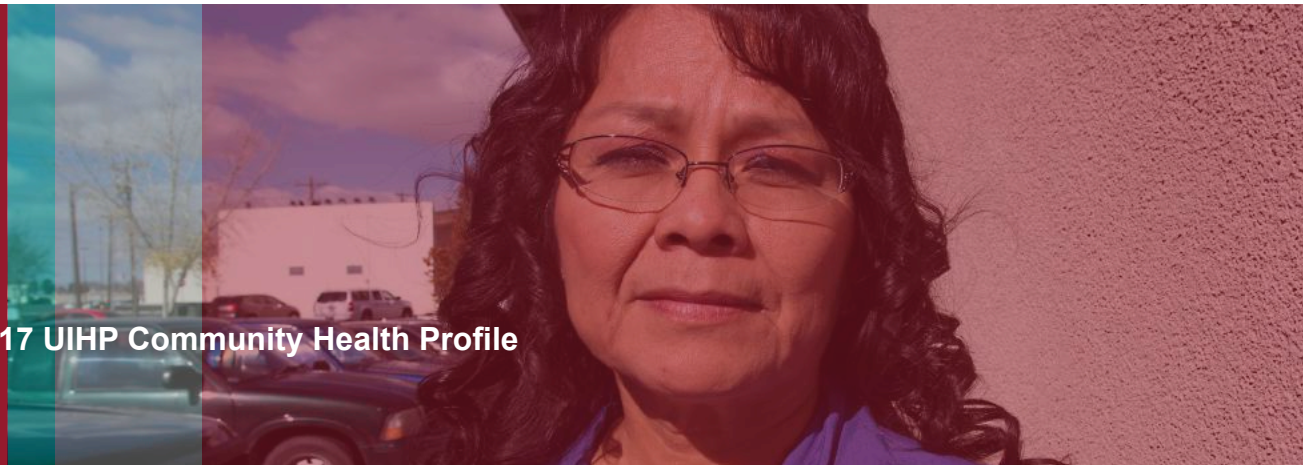


Source: American Community Survey, 2010-2014

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



Source: American Community Survey, 2010-2014



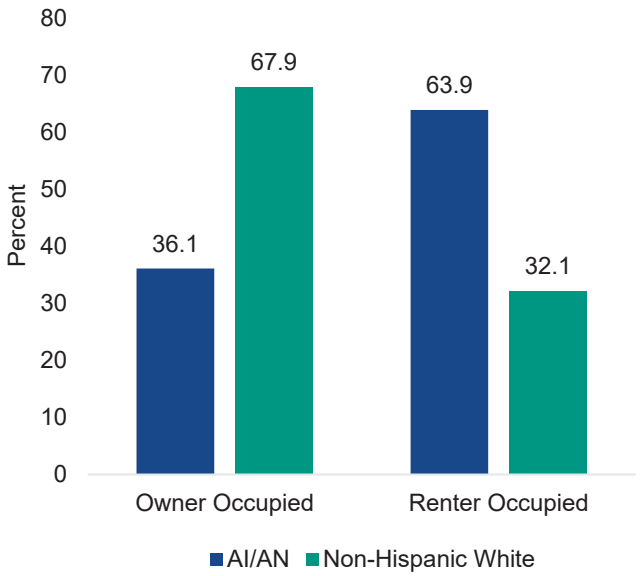
SOCIODEMOGRAPHICS

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 rates of coronary heart disease, and more risk factors, such as smoking.[21]

In the Boston service area, the proportion of renter occupation among AI/ANs was 2.0 times higher than NHWs (63.9% vs. 32.1%; Figure 9). Nearly two thirds of all homes of AI/ANs were renter occupied, compared with approximately one-third of homes for NHWs. In contrast, the proportion of home ownership among NHWs in the Boston service area was approximately 1.9 times higher than among AI/ANs (67.9% vs. 36.1%).

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



Source: American Community Survey, 2010-2014

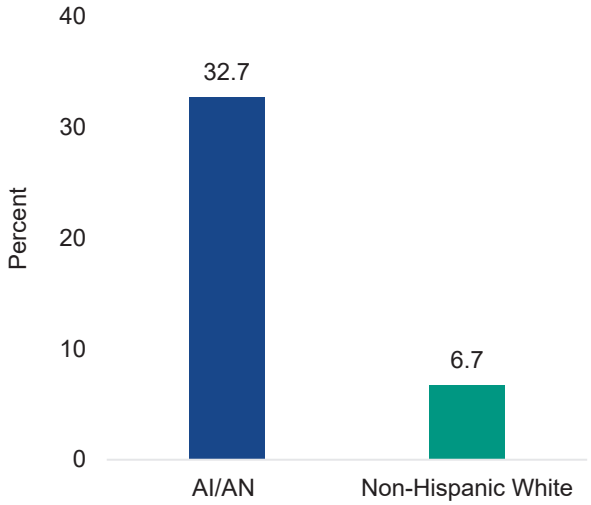
SOCIODEMOGRAPHICS

Food Stamps

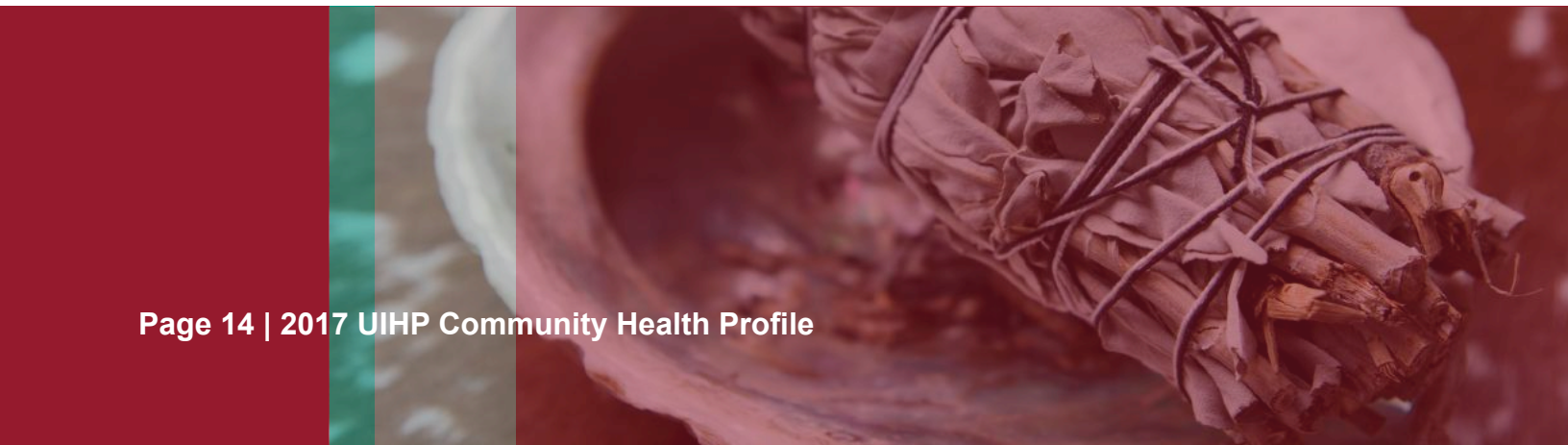
As the largest food assistance program in the United States, the Supplemental Nutrition Assistance Program (SNAP; formally known as the Federal Food Stamp program) is a crucial part of the social safety net.[22] Households with an income below 130% of the federal poverty level are eligible to receive 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 the Boston service area, nearly 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 4.9 times higher than the proportion among NHWs.

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



Source: American Community Survey, 2010-2014



MORTALITY

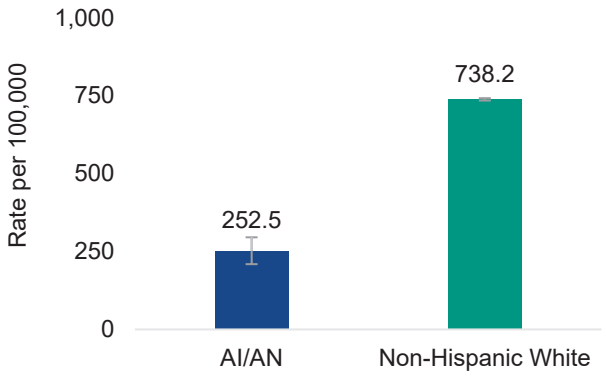
Introduction

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 the Boston service area are assumed to be higher than the rates described for this section.

All-Cause Mortality Rate

The all-cause mortality rate was significantly lower for the AI/AN population than for the NHW population, approximately 65.8% lower (Figure 11).

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

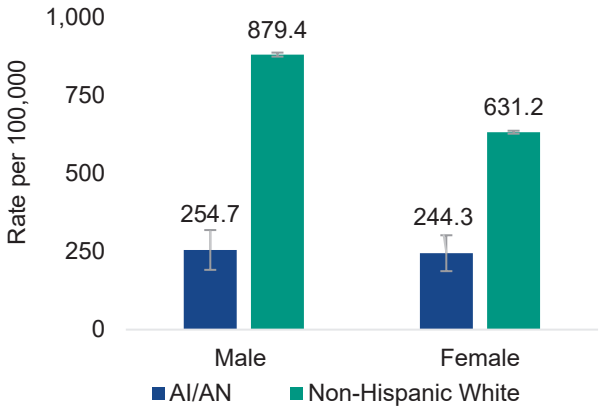


Source: US Center for Health Statistics, Death Certificates, 2010-2014

Mortality Rate by Gender

The mortality rates for both males and females were lower among AI/ANs compared to their NHW counterparts, approximately 71.0% & 61.3% lower, respectively (Figure 12). In addition, the mortality rate was similar between AI/AN women and AI/AN men.

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



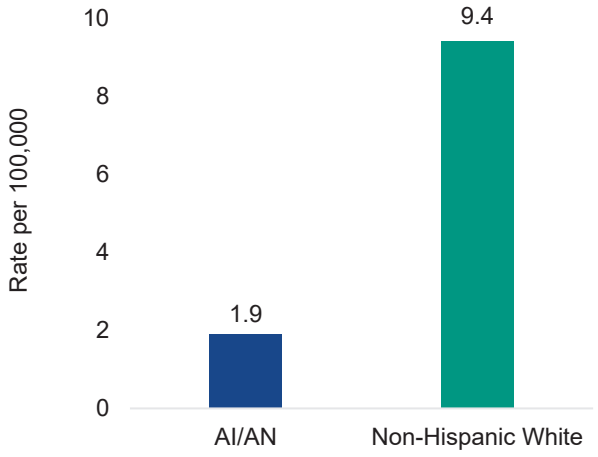
Source: US Center for Health Statistics, Death Certificates, 2010-2014

MORTALITY

Suicide

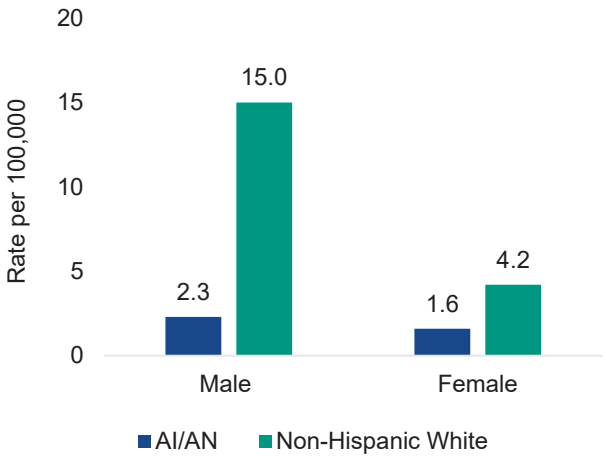
The suicide rate was approximately 4.9 times higher among NHWs compared to AI/ANs (Figure 13). In addition, the suicide rate by gender was higher for both NHW men and women compared to AI/AN men and women, approximately 6.5 and 2.6 times higher, respectively (Figure 14). When comparing rates of suicide among AI/ANs, the suicide rate for AI/AN males was 1.4 times higher compared to AI/AN females.

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



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

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



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

MORTALITY

Top Causes of Mortality

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

AI/AN			NHW		
Rank	**Cause**	**Rate (per 100,000)**	**Rank**	**Cause**	**Rate (per 100,000)**
1	Vascular disease	203.1	1	Vascular disease	472.2
2	Cancer	108.4	2	Cancer	400.2
3	Diabetes	25.6	3	Chronic lower respiratory disease	87.0
4	Nephritis, nephrotic syndrome, and nephrosis	23.8	4	Alzheimer's disease	53.9
5	Alzheimer's disease	14.9	5	Flu and pneumonia	47.7

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

Table 1 summarizes the top causes of mortality for both AI/ANs and NHWs.

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

AI/AN Males			NHW Males		
Rank	**Cause**	**Rate (per 100,000)**	**Rank**	**Cause**	**Rate (per 100,000)**
1	Vascular disease	55.7	1	Vascular disease	245.1
2	Cancer	43.4	2	Cancer	225.1
3	Nephritis, nephrotic syndrome, and nephrosis	14.9	3	Chronic lower respiratory disease	35.6
4	Alzheimer's disease	11.6	4	Nephritis, nephrotic syndrome, and nephrosis	23.7
5	Diabetes	10.0	5	Flu and pneumonia	22.9

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, Boston Service Area, 2010-2014

AI/AN Female			NHW Females		
Rank	**Cause**	**Rate (per 100,000)**	**Rank**	**Cause**	**Rate (per 100,000)**
1	Vascular disease	80.5	1	Cancer	167.4
2	Cancer	67.1	2	Vascular disease	161.9
3	Diabetes	13.1	3	Chronic lower respiratory disease	34.1
4	Chronic lower respiratory disease	10.4	4	Alzheimer's disease	23.0
5	Nephritis, nephrotic syndrome, and nephrosis	7.7	5	Flu and pneumonia	14.7

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. Overall Top Causes of Cancer Mortality, Boston Service Area, 2010-2014

AI/AN			NHW		
Rank	**Cause**	**Rate (per 100,000)**	**Rank**	**Cause**	**Rate (per 100,000)**
1	Tracheal/Bronchus/ Lung cancer	27.3	1	Tracheal/Bronchus/ Lung cancer	94.3
2	Colon cancer	16.0	2	Colon cancer	29.8
3	Pancreatic cancer	14.7	3	Pancreatic cancer	27.0
4	Cervical cancer	9.0	4	Breast cancer	24.8
5	Bladder cancer	7.7	5	Leukemia	18.6

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

Table 4 summarizes the top causes of cancer mortality for both AI/ANs and NHWs.

MORTALITY

Table 5. Top Male Causes of Cancer Mortality, Boston 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	16.8	1	Tracheal/Bronchus/ Lung cancer	57.5
2	Prostate cancer	6.6	2	Prostate cancer	20.4
3	Stomach cancer	5.8	3	Colon cancer	17.6
4	Bladder cancer	2.3	4	Bladder cancer	15.9

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, Boston Service Area, 2010-2014

AI/AN Females			NHW Females		
Rank	**Cause**	**Rate (per 100,000)**	**Rank**	**Cause**	**Rate (per 100,000)**
1	Colon cancer	12.5	1	Tracheal/Bronchus/ Lung cancer	46.2
2	Pancreatic cancer	12.3	2	Breast cancer	22.3
3	Tracheal/Bronchus/ Lung cancer	11.7	3	Cervical cancer	15.7
4	Cervical cancer	6.9	4	Colon cancer	12.6
5	Breast cancer	4.8	5	Pancreatic cancer	11.7

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

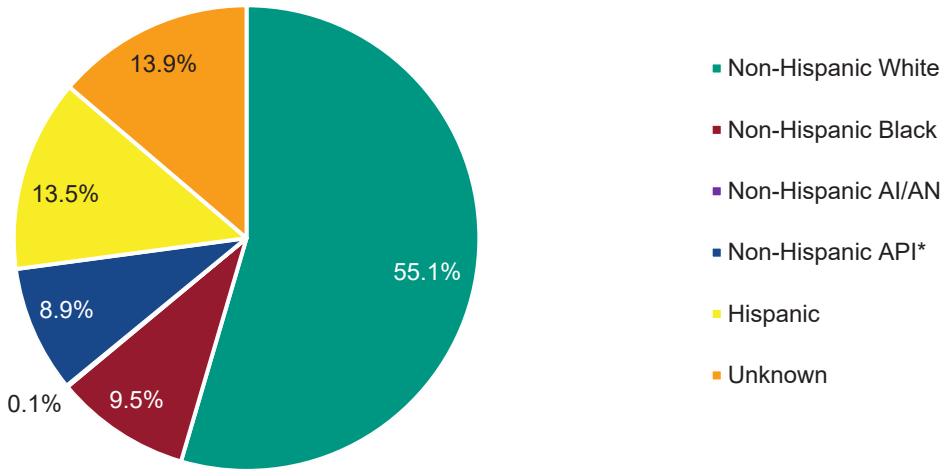
Introduction

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 NAL make decisions programs regarding 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

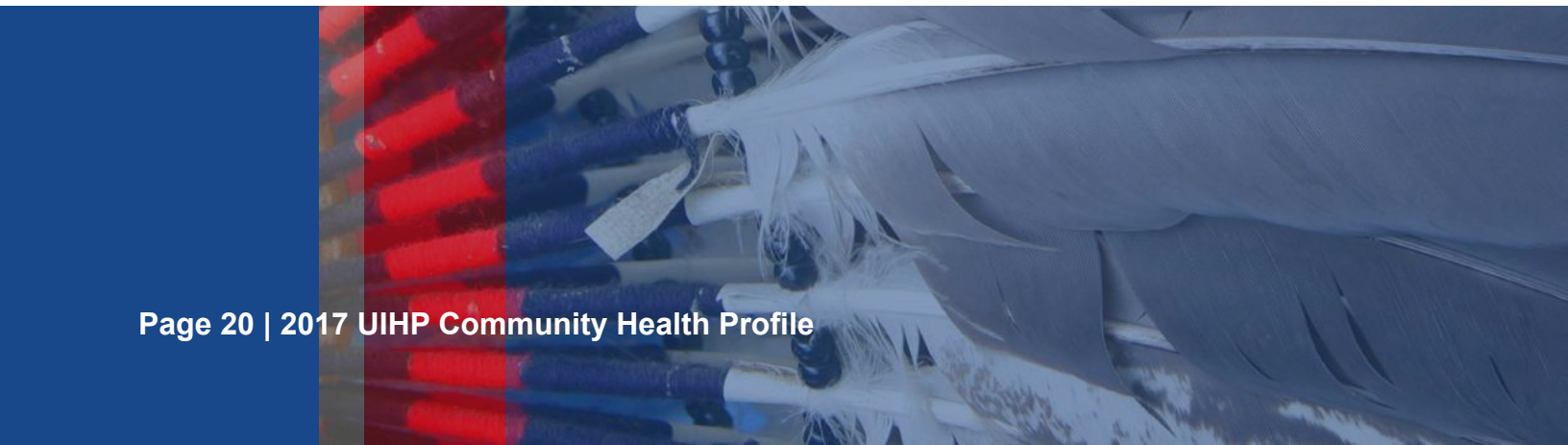
From 2008 to 2012, there were a total of 254,328 births in the Boston service area. Among those births, 0.1% were identified as non-Hispanic AI/AN alone (Figure 15). The largest proportions of births among the six racial/ethnic groups were from NHW (55.1%) and Hispanic (13.5%) women. Non-Hispanic Blacks were approximately 9.5% and non-Hispanic Asians and Pacific Islanders were approximately 8.9% of all births. For 13.9% of all births, race/ethnicity was not identified.

Figure 15. Births by Race/Ethnicity, Boston Service Area, 2008-2012



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

*API-Asian/Pacific Islander

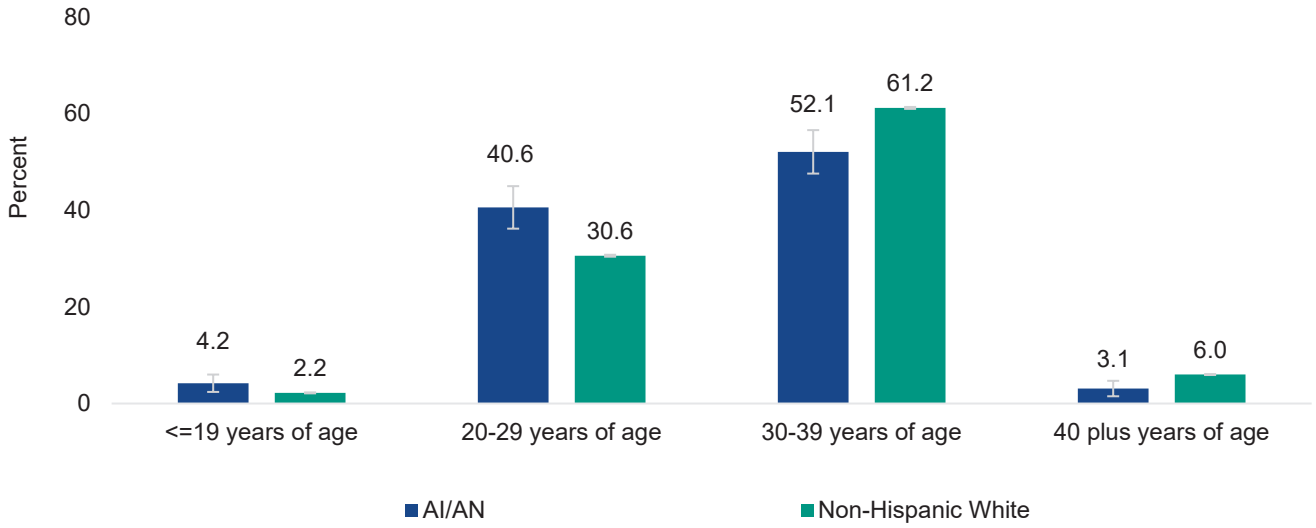


MATERNAL AND CHILD HEALTH

Age

In general, AI/AN women tend to give birth at younger ages than their NHW counterparts (Figure 16). In the Boston service area, 4.2% of births among AI/AN women were to teenage women (less than 19 years of age) compared to 2.2% of NHW births. Births were 1.9 times higher among AI/AN teenage women compared with their NHW counterparts. In addition, 40.6% of all births among AI/AN women were to women in their 20s, compared to 30.6% among NHWs. Conversely, NHW women had more children in their 30s compared to AI/AN women. While 61.2% of all births among NHW women were to women in their 30s, 52.1% of births among AI/AN women were to women in their 30s.

Figure 16. Births by Maternal Age Group, Boston Service Area 2008-2012



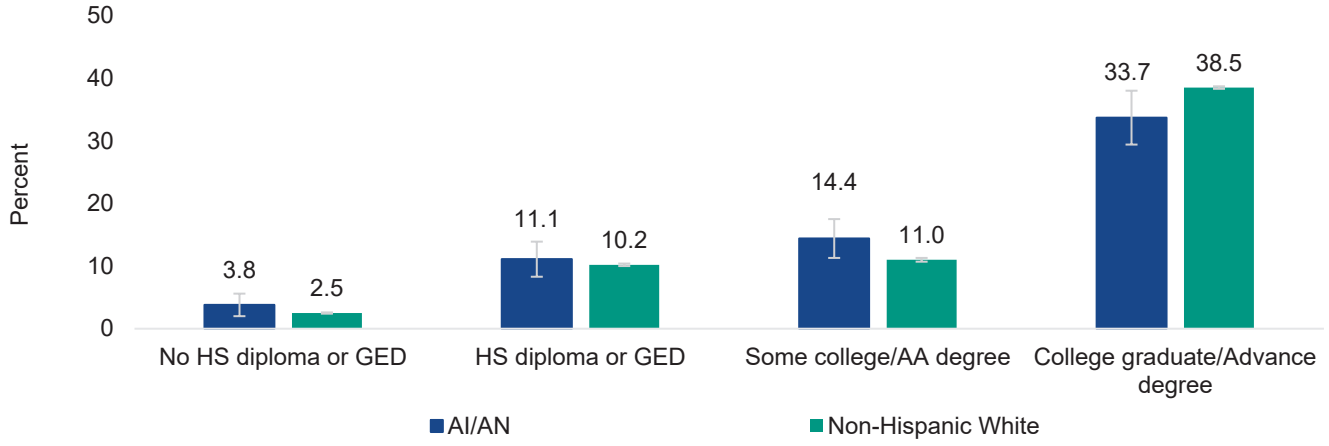
Source: National Vital Statistics, Birth Certificates, 2008-2012

MATERNAL AND CHILD HEALTH

Education

In the Boston service area, 3.8% of all births for AI/ANs were to women who did not complete high school and 11.1% were to women whose highest level of education was a high school diploma or GED (Figure 17). Similarly, among NHW women, 2.5% of all births were from women who did not complete high school and 10.2% were from women whose highest level of education was a high school diploma or GED. In addition, approximately a third all births among NHWs & AI/ANs were to women with a college or advanced degrees.

Figure 17. Births by Maternal Education, Boston Service Area, 2008-2012

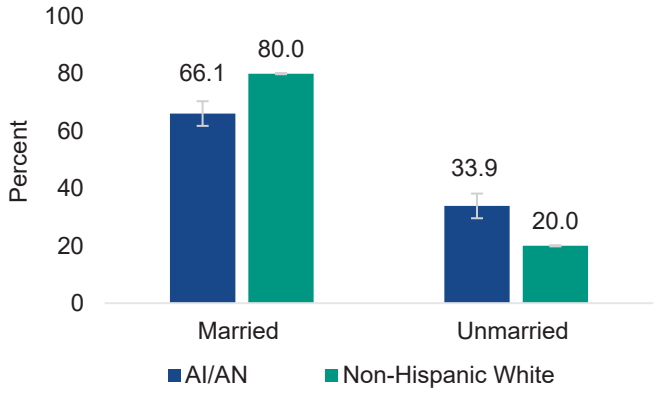


Source: National Vital Statistics Birth Certificates, 2008-2012

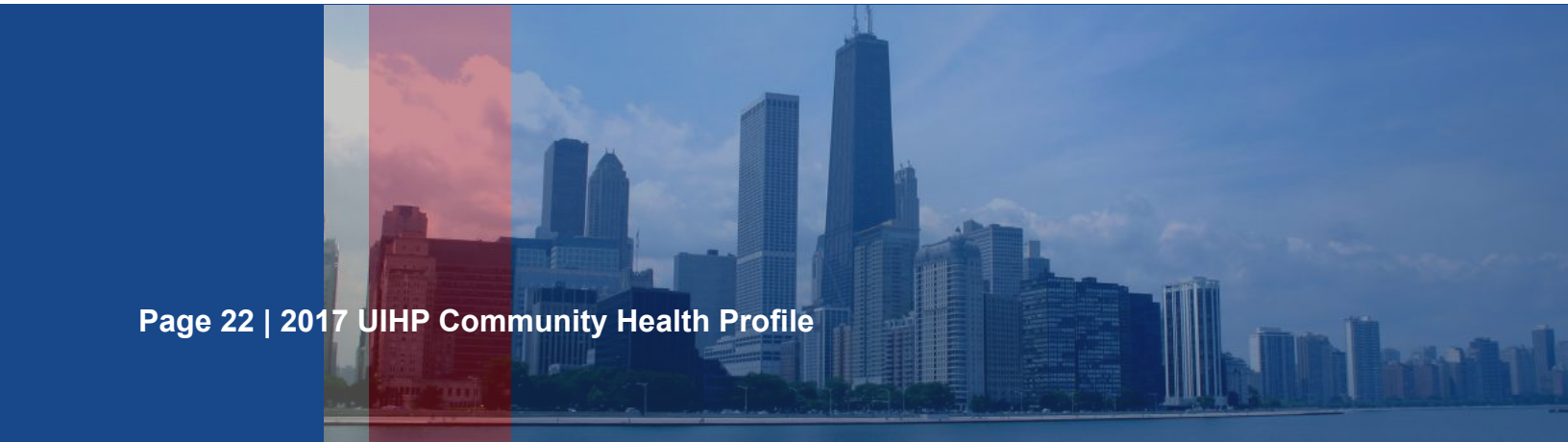
Marital Status

In the Boston service area, 66.1% of all births to AI/ANs were to women who were married and 33.9% were to women who were not married (Figure 18). The proportion of births for married women among NHWs was significantly higher (80%) compared to AI/ANs. The proportion of births to unmarried women was 1.7 times higher among AI/ANs compared to NHWs (33.9% vs. 20.0).

Figure 18. Births by Marital Status, Boston Service Area, 2008-2012



Source: National Vital Statistics Birth Certificates, 2008-2012

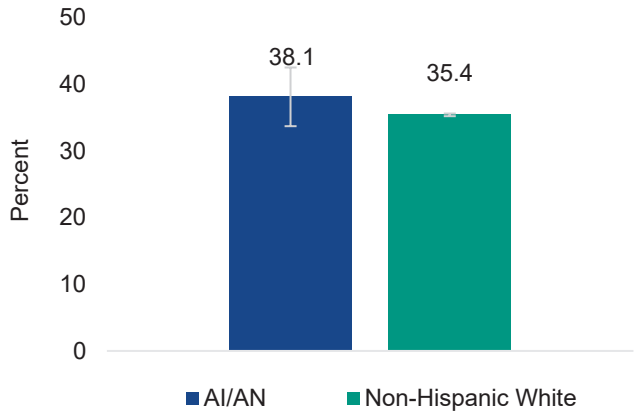


MATERNAL AND CHILD HEALTH

Cesarean Section

In the Boston service area, over one third of births were delivered by cesarean section for both AI/AN and NHW females (Figure 19).

Figure 19. Births by Cesarean Section, Boston Service Area, 2008-2012

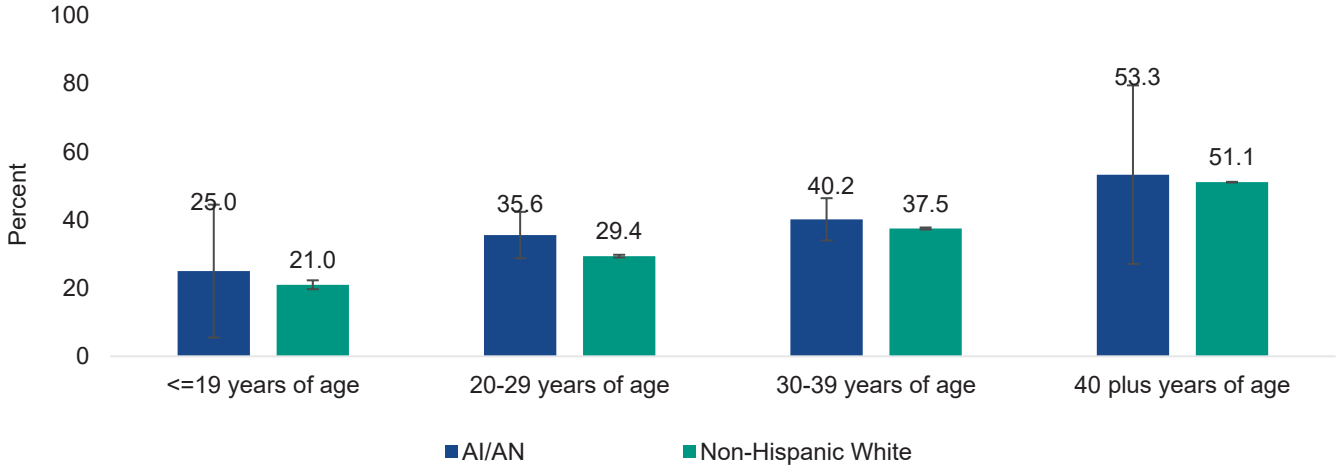


Source: National Vital Statistics, Birth Certificates 2008-2012

Cesarean Section by Maternal Age

The proportion of cesarean deliveries significantly increased as maternal age increased for NHW women, but no significant increase was found for AI/AN women (Figure 20). Over half of both AI/ANs and NHWs in their 40s delivered via cesarean section.

Figure 20. Cesarean Sections by Maternal Age Group, Boston Service Area, 2008-2012



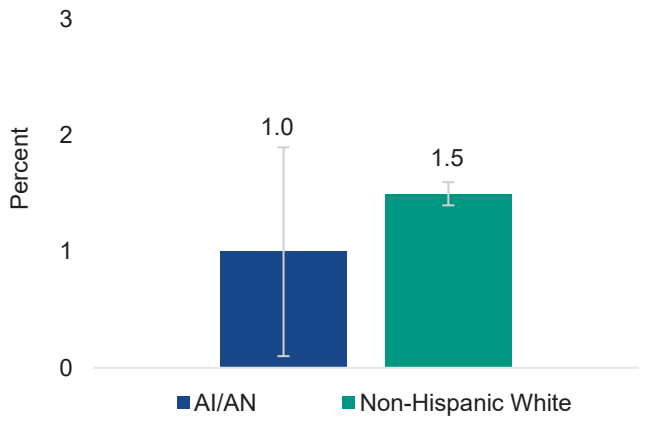
Source: National Vital Statistics, Birth Certificates 2008-2012

MATERNAL AND CHILD HEALTH

Gestational Diabetes

In the Boston service area, 1.0% of AI/AN births were to women who were diagnosed with gestational diabetes during their pregnancy (Figure 21). This proportion was similar to the proportion of NHW women, where 1.5% of women giving birth were diagnosed with gestational diabetes.

Figure 21. Gestational Diabetes, Boston Service Area, 2008-2012

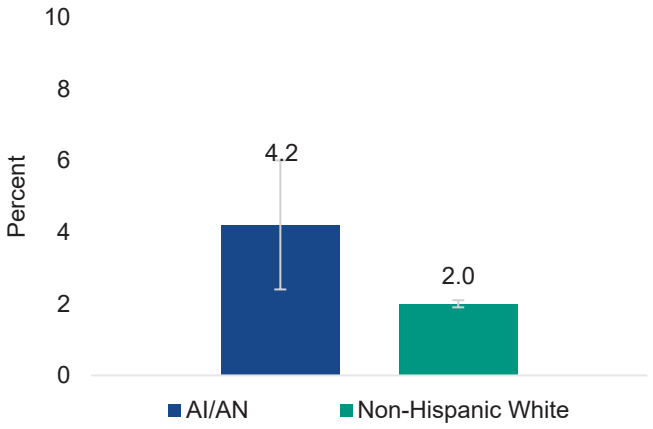


Source: National Vital Statistics, Birth Certificates, 2008-2012

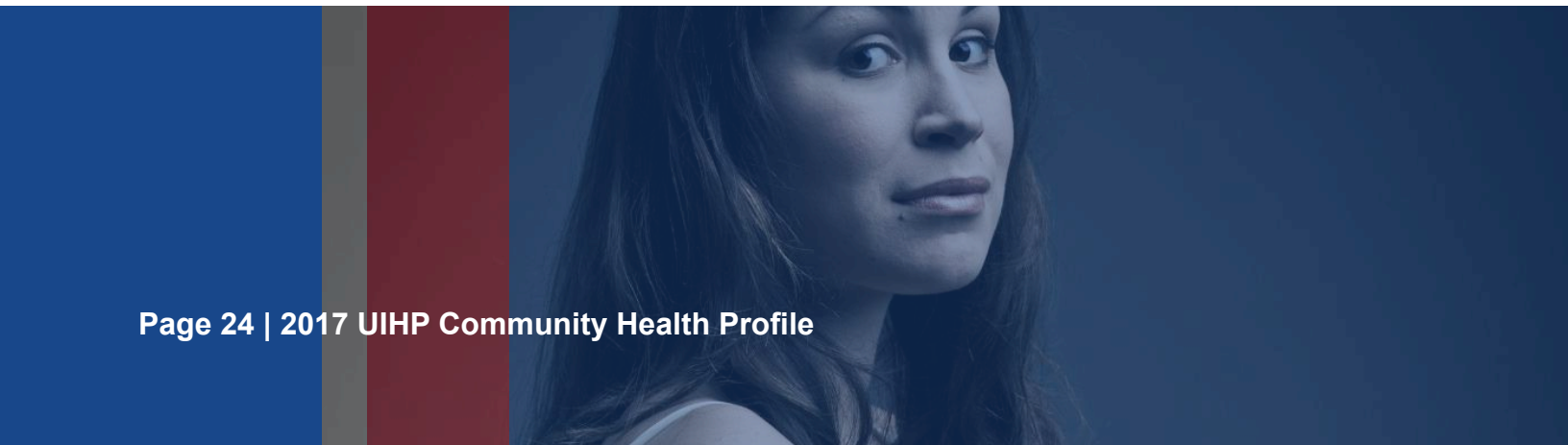
Maternal Smoking

In the Boston service area, 4.2% of AI/AN women smoked while pregnant compared to 2.0% NHW women (Figure 22). The proportion of maternal smoking among AI/AN women was 2.1 times higher compared to NHW women.

Figure 22. Maternal Smoking, Boston Service Area, 2008-2012



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



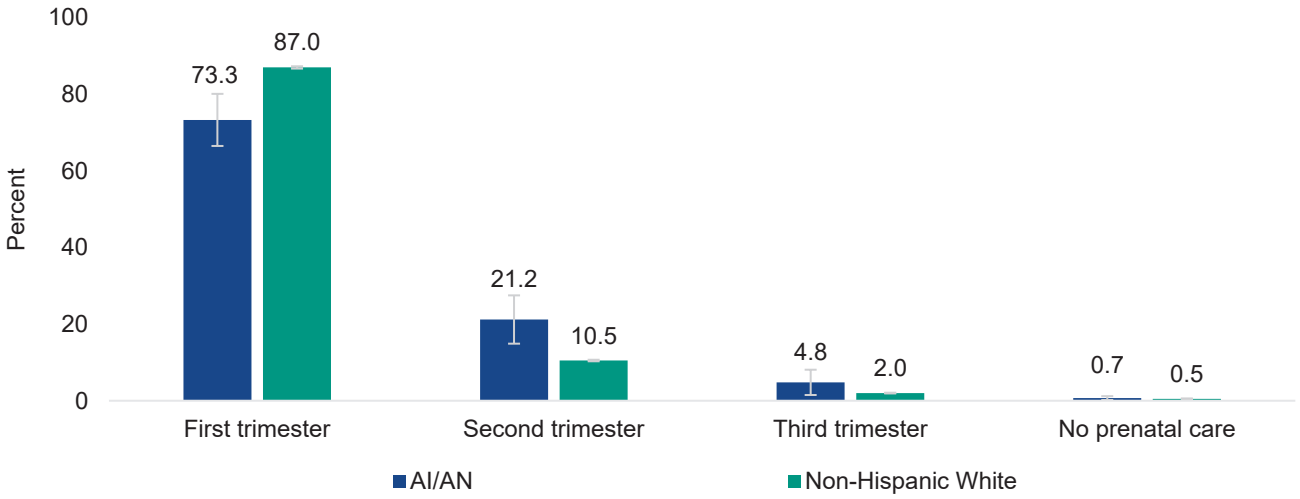
MATERNAL AND CHILD HEALTH

Prenatal Care

Prenatal care refers to the medical attention received by women before or during their pregnancy, specifically addressing the mother's well-being during her pregnancy and caring for the development of her baby. The goal of prenatal care is to detect potential problems early on in the pregnancy and to prevent potential complications. Early prenatal care is a significant component in ensuring a good pregnancy outcome and it is recommended for women to begin prenatal care during the first trimester. Women who receive late or no prenatal care are at risk for having undetected complications during their pregnancy that can result in severe maternal morbidity and mortality, and serious consequences to the unborn infant including low birth weight, premature birth, morbidity and mortality.[25]

Among pregnant women in the Boston service area, 73.3% of AI/AN women began prenatal care in the first trimester compared to 87.0% of NHW women, a significant difference (Figure 23). The proportion of women beginning prenatal care in the first trimester was 18.7% higher among NHWs compared to AI/ANs. In addition, 5.5% of AI/AN pregnant women began prenatal care in the third trimester or did not receive any prenatal care during their pregnancy compared to 2.5% of NHW pregnant women. The proportion of women beginning prenatal care in their third trimester or receiving no prenatal care was 2.2 times higher in AI/AN women compared to NHW women.

Figure 23. Prenatal Care by Trimester, Boston Service Area, 2008-2012



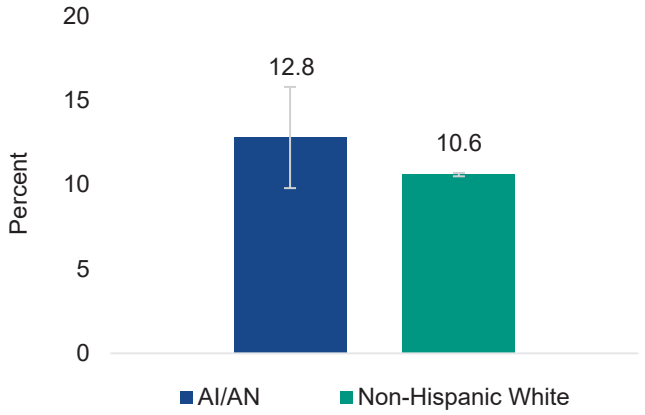
Source: National Vital Statistics, Birth Certificates, 2008-2012

MATERNAL AND CHILD HEALTH

Premature Births

A premature birth is defined as childbirth occurring earlier than 37 completed weeks of pregnancy.[26] In the Boston service area, the proportion of premature births was similar between AI/AN women and NHW women, at 12.8% and 10.6%, respectively (Figure 24).

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

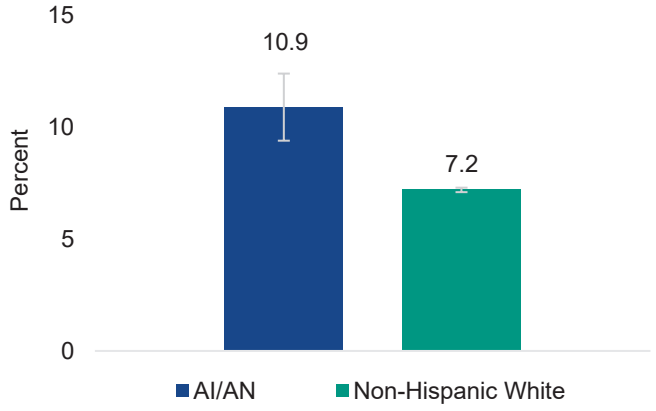


Source: National Vital Statistics, Birth Certificates, 2008-2012

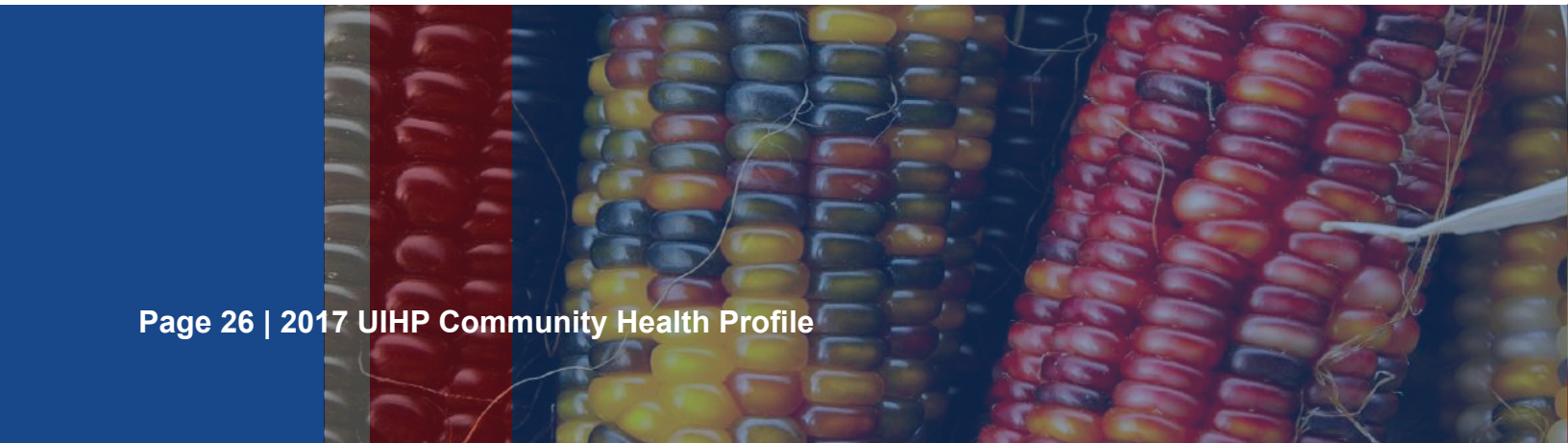
Low Birth Weight

Low birth weight is defined as less than 2,500 grams (5.5 pounds).[27] In the Boston service area, 10.9% of all infants born to AI/AN women were low birth weight, which is significantly higher than all infants born to NHW women who were low birth weight at 7.2% (Figure 25). The proportion of low birth weight among AI/ANs was 1.5 times higher than NHWs.

Figure 25. Low Birth Weight (<2,500 g), Boston Service Area, 2008-2012



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



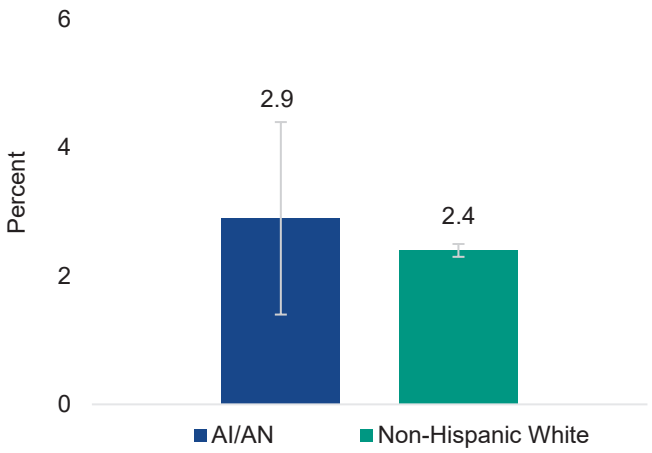
MATERNAL AND CHILD HEALTH

Neonatal Intensive Care Unit Admission

Most babies admitted to the neonatal intensive care unit (NICU) are premature, have low birth weight, or have a medical condition that requires special care. In the U.S., nearly half a million babies are born preterm, and many of these babies also have low birth weights. Babies with medical conditions such as heart problems, infections, or birth defects are also cared for in the NICU.[28]

Admission to the NICU for newborns in the Boston service area was similar between AI/ANs and NHWs (Figure 27).

Figure 27. Newborns Admitted to the NICU, Boston Service Area, 2008-2012



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

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APPENDIX

Glossary of Terms

ACS – American Community Survey

AI/AN – American Indian / Alaska Native

IHS – Indian Health Service

MCH – Maternal and Child Health

NAL – Native American Lifelines

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.

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.

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Seattle Indian Health Board
611 12th Avenue South
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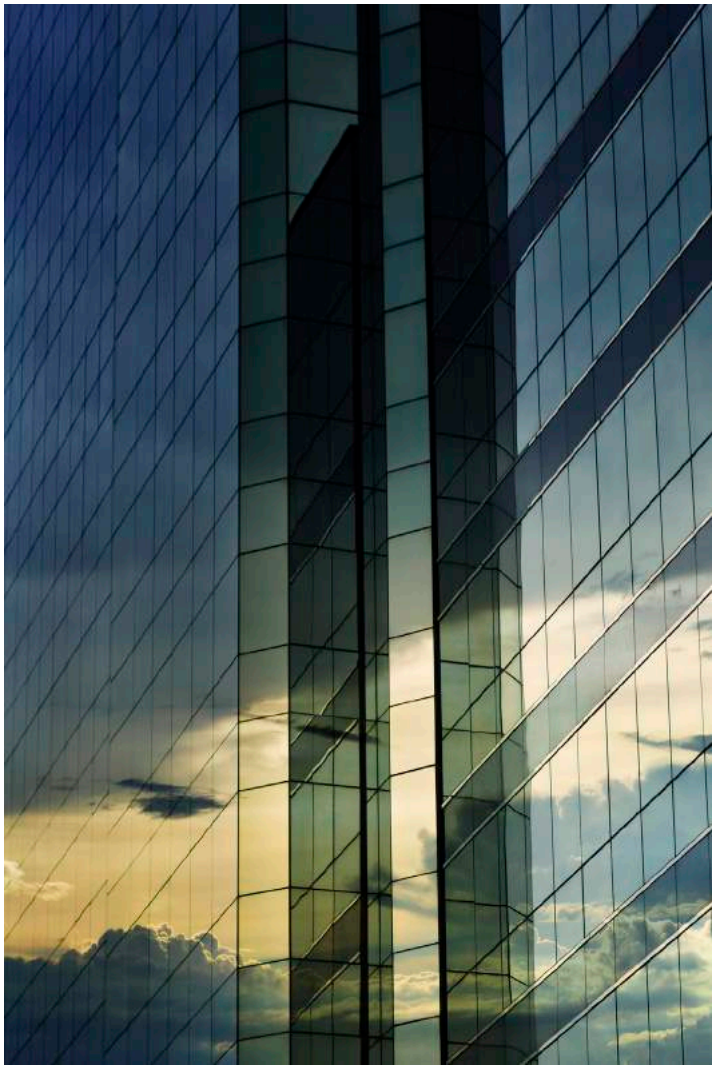
NOTES



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.

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