

## 2. Maternal & Child Health

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Maternal and child health indicators describe the health and well-being of mothers, infants, children, and families. We focus attention on this specific group because their health and well-being affects not only the present generation, but also the health and well-being of future generations. A mother's health and well-being before, during, and after pregnancy has direct and sometimes lifelong effects on the health of her child. Promoting healthy practices before, during, and after pregnancy is critical to ensuring that children will have the chance to begin life with good health.

The U.S. has shown improvement on several maternal and child health indicators over the last 20 years. However, we continue to see disparities by race and ethnicity, with some of the greatest burden in American Indian and Alaska Native populations. It is a nation-wide priority to eradicate these disparities and improve the health and well-being of AI/AN women, children, and communities.

While teenage birthrates in Washington have decreased since the 1990s, AI/AN teen birthrates are still significantly higher compared to NHW in the state. The infant mortality rate for AI/AN is 2.4 times higher compared to NHW, and has increased since the mid-1990s. Over 25% of AI/AN mothers in Washington report smoking during pregnancy, and only 61% receive adequate prenatal care. Compared to NHW infants, a larger percentage of AI/AN infants have low weight at birth and are born premature.

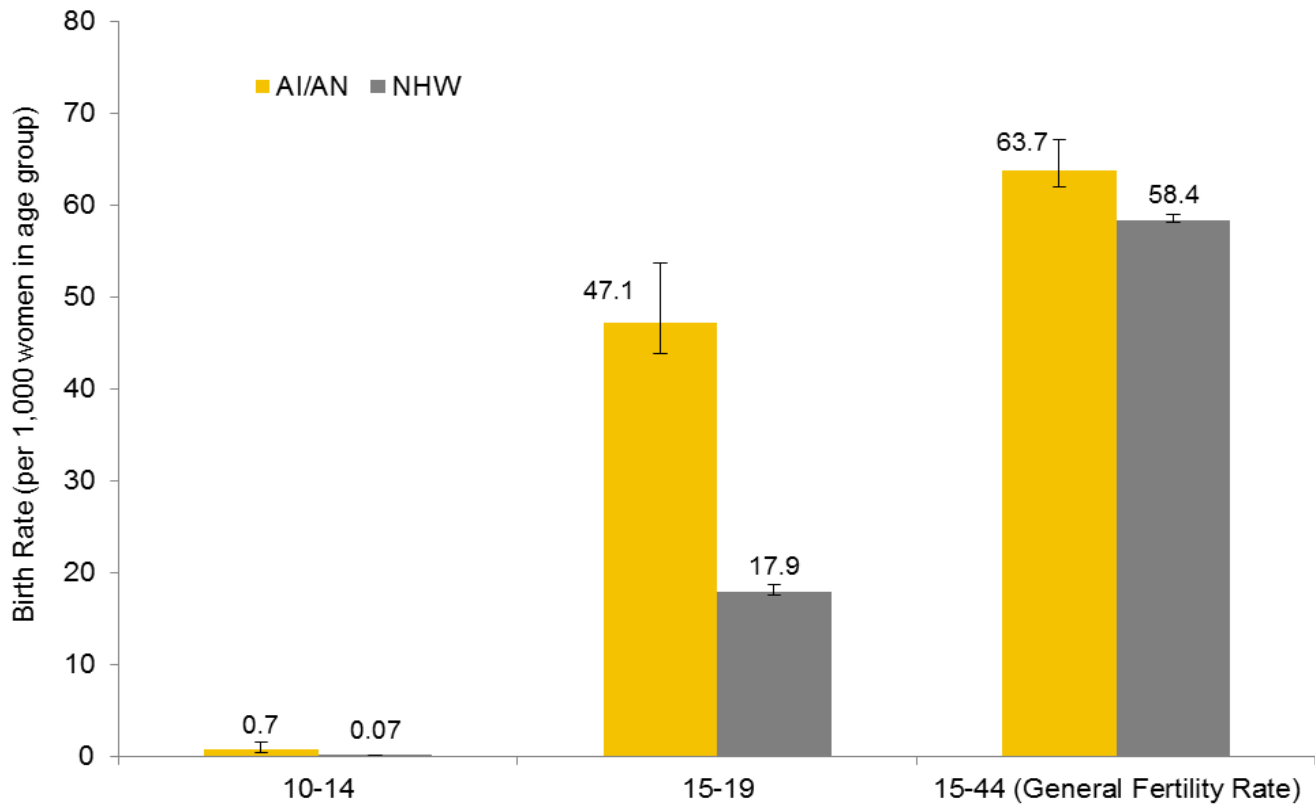
# Birth Rates

The general fertility rate (GFR) is the birth rate among women of reproductive age (15-44 years). From 2010-2012, the GFR for AI/AN in Washington was significantly higher compared to NHW (63.7 vs. 58.4 live births/1,000 women) (Figure 2.1). During the same time period, AI/AN had significantly higher teenage birth rates compared to NHW in the state. The birth rate for AI/AN ages 10-14 was 0.7 births/1,000 women, compared to 0.07 births/1,000 women for NHW. The AI/AN birth rate among 15-19 year olds was 2.6 times higher than the NHW rate.

**Data Source:** Washington State Department of Health, Center for Health Statistics birth certificate file. Data accessed using Washington's Community Health Assessment Tool.

**Data Notes:** AI/AN data are not corrected for misclassified race.

**Figure 2.1: Birth rates by age group and race, Washington, 2010-2012.**



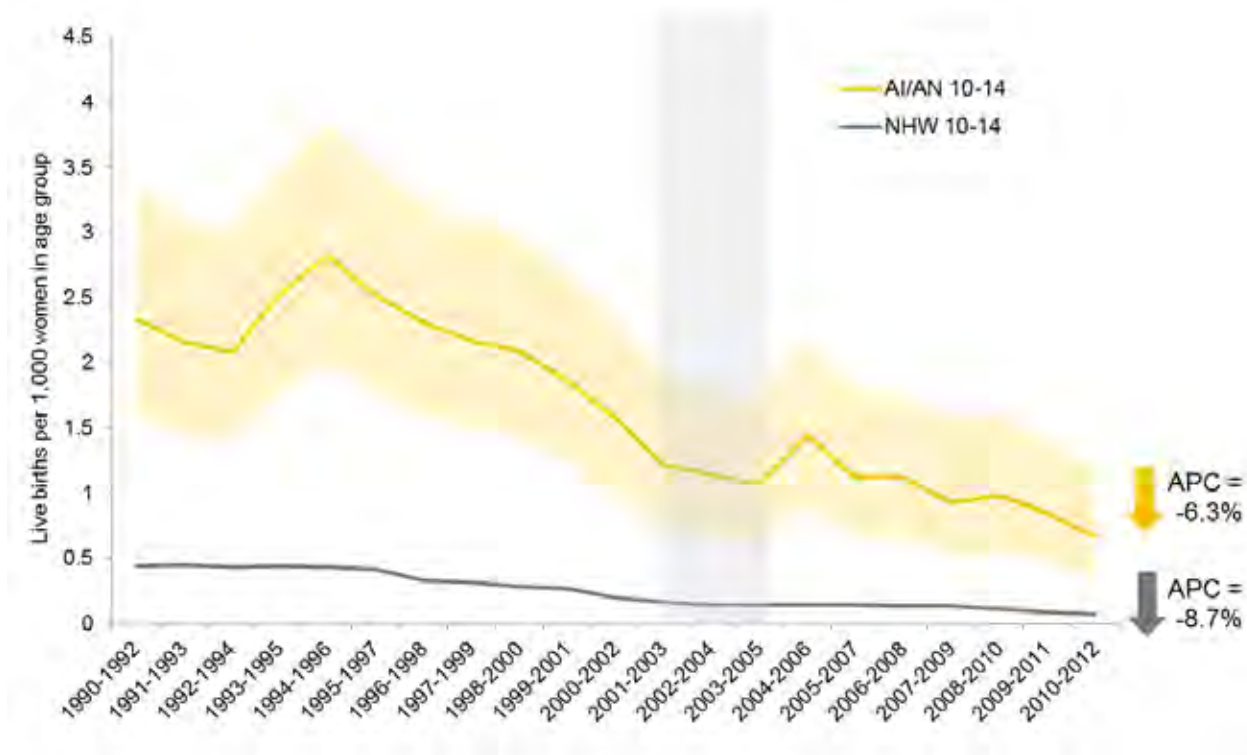
# Trends in Teenage Birth Rates

Birth rates for AI/AN and NHW teenagers (ages 10-19) in Washington have decreased since 1990. However, the rates for AI/AN teenagers have consistently been higher than the rates for their NHW counterparts. On average, AI/AN birth rates for 10-14 year-olds decreased by 6.3% each year since 1990, compared to 8.7% for NHW (Figure 2.2). AI/AN birth rates for 15-19 year olds have decreased by 3.4% each year, versus 4.5% for NHW (Figure 2.3).

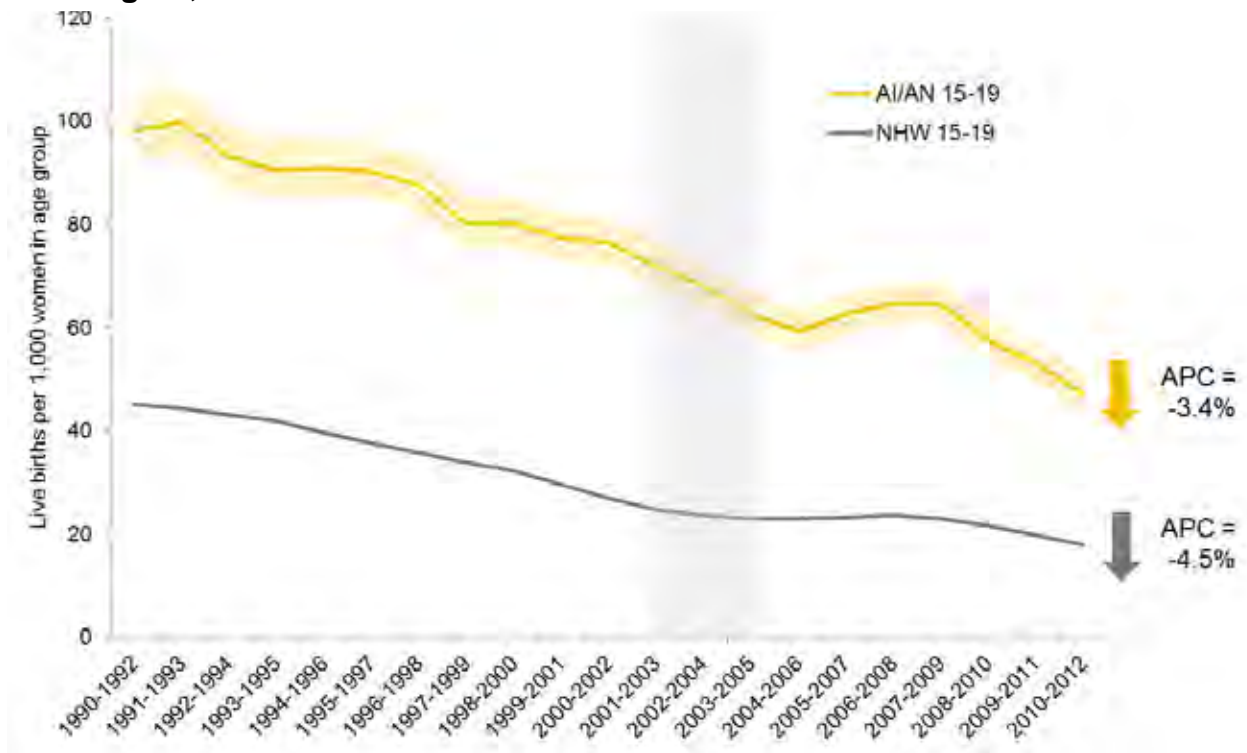
**Data Source:** Washington State Department of Health, Center for Health Statistics Birth Certificate file. Data accessed using Washington's Community Health Assessment Tool.

**Data Notes:** APC = Annual Percentage Change. AI/AN data are not corrected for misclassified race. The State of Washington revised its birth certificate in 2003; any abrupt changes in rates around this time should be interpreted with caution.

**Figure 2.2: Trends in birth rates for 10-14 year olds by race, three year moving averages, Washington, 1990-2012.**



**Figure 2.3: Trends in birth rates for 15-19 year olds by race, three year moving averages, Washington, 1990-2012.**



Note: The shaded rectangles show the time periods where rates may be affected by changes in Washington's birth certificate.

# Infant Mortality

From 2010-2012, the infant mortality rate for AI/AN in Washington was 10.3 deaths per 1,000 live births (Figure 2.4). This was 2.4 times higher than the rate for NHW in the state (4.3 deaths per 1,000 live births). Over half of infant deaths for AI/AN and NHW occurred during the first 27 days of life (neonatal period). Deaths during the neonatal period accounted for 57% of infant deaths for AI/AN and 66% for NHW. AI/AN had a higher proportion of deaths during the postneonatal period compared to NHW (42% vs. 34% for NHW).

Deaths during the neonatal period are often related to prematurity (i.e., short gestation and/or low birthweight), complications during pregnancy, and birth defects. Postneonatal deaths are often from accidents, infections, and sudden infant death syndrome (SIDS).<sup>1</sup>

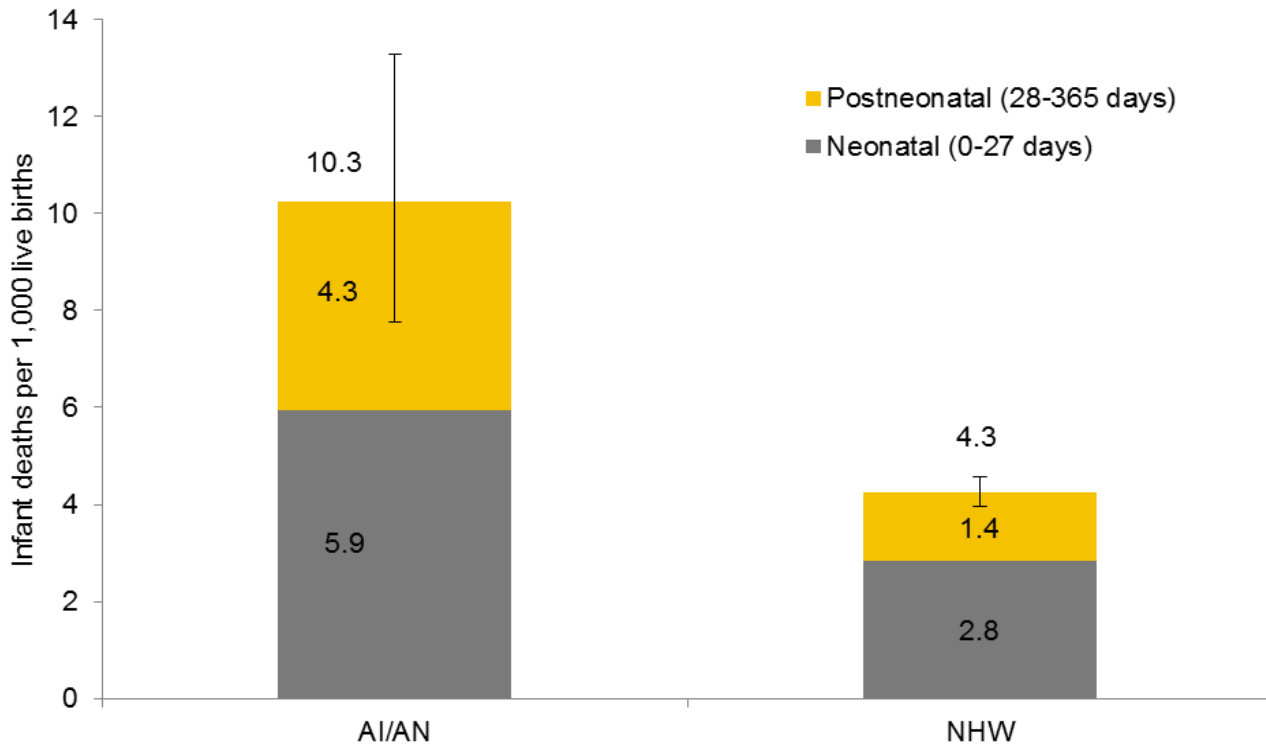
<sup>1</sup>Centers for Disease Control and Prevention. QuickStats: Leading Causes of Neonatal and Postneonatal Deaths, United States, 2002. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5438a8.htm>.

**Data Source:** Washington State Department of Health, Center for Health Statistics Birth Certificate and Linked Birth and Death files. Data accessed using Washington's Community Health Assessment Tool.

**Data Notes:** AI/AN data are not corrected for misclassified race.



**Figure 2.4: Infant mortality rates by race and infant's age at death, Washington, 2010-2012.**



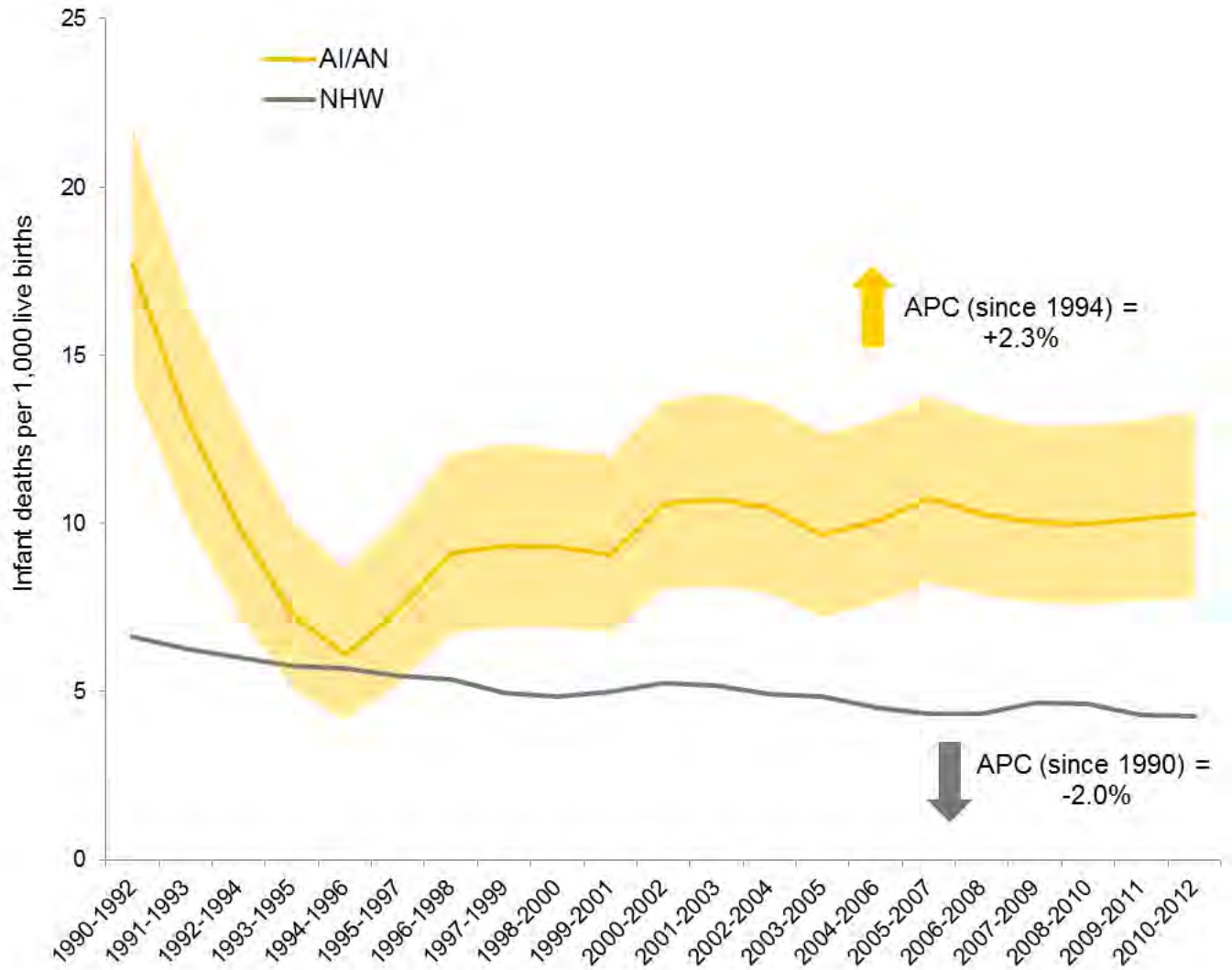
# Infant Mortality Trends

The infant mortality rate for AI/AN in Washington dropped rapidly during the early 1990s, and was almost the same as the NHW rate by the middle of the decade (Figure 2.5). Since that time, the AI/AN rate has increased by 2.3% per year. The infant mortality rate for NHW in the state has steadily decreased by 2% per year since the 1990s. The gap between AI/AN and NHW has widened over time.

**Data Source:** Washington State Department of Health, Center for Health Statistics Birth Certificate and Linked Birth and Death files. Data accessed using Washington's Community Health Assessment Tool.

**Data Notes:** AI/AN data are not corrected for misclassified race. APC = Annual Percentage Change.

**Figure 2.5: Trends in infant mortality rates by race, three year moving averages, Washington, 1990-2012.**



# Maternal Risk Factors

Table 2.1 shows selected maternal risk factors during pregnancy for AI/AN and NHW mothers in Washington. AI/AN women have higher risks for some factors, which could affect their babies' health and the outcomes of their pregnancies. These factors include the following:

- Over 25% of AI/AN women reported smoking during their pregnancy. This was 1.8 times higher than the smoking rate among NHW pregnant women.
- Almost 40% of AI/AN mothers had a pre-pregnancy body mass index (BMI) in the obese category, compared to 24% of NHW women.
- Only 26.1% of AI/AN mothers gained the recommended amount of weight during pregnancy. About 26% of women gained less than the recommended amount, and 48% gained more than the recommended amount.
- Compared to NHW, a lower percentage of AI/AN women began prenatal care during the early stages of their pregnancy (69.4% vs. 83.0%). Almost 3% of AI/AN mothers received no prenatal care. Around 61% of AI/AN women received adequate prenatal care (i.e., had at least 80% of the prenatal care visits expected, based on when they started prenatal care).

**Data Source:** Washington State Department of Health, Center for Health Statistics Birth Certificate file. Data accessed using Washington's Community Health Assessment Tool.

**Data Notes:** AI/AN data are not corrected for misclassified race.

Table 2.1: Maternal risk factors by race, Washington, 2010-2012.

	AI/AN (%)	NHW (%)
<b>Smoked during pregnancy</b>	25.3	13.8
<b>Pre-pregnancy BMI</b>		
Underweight (<18.5)	1.7	2.6
Normal (18.5-24.9)	31.6	47.9
Overweight (25.0-29.9)	27.0	25.5
Obese (30.0-39.9)	31.1	19.5
Morbidly Obese (40.0 - 99.8)	8.6	4.5
<b>Weight Gain During Pregnancy</b>		
Below Recommended Amount	26.4	18.8
Recommended Amount	26.1	30.8
Above Recommended Amount	47.5	50.4
<b>Diabetes</b>		
Pre-pregnancy	1.0	0.6
Gestational	6.2	5.2
<b>Hypertension</b>		
Pre-pregnancy	1.8	1.4
Gestational	6.3	5.9
<b>Prenatal Care Initiation</b>		
First Trimester	69.4	83.0
Second Trimester	21.3	12.9
Third Trimester	6.4	3.1
No Care	2.9	1.0
<b>Received Adequate Prenatal Care (&gt;=80% of expected visits)</b>	61.1	71.6

N (total number of birth certificates): AI/AN = 5,557; NHW = 166,772

% of records missing data for indicator (AI/AN, NHW):

Smoking (0.9%, 0.7%); BMI (7.4%, 5.1%); Weight gain (7.4%, 5.1%); Diabetes/Hypertension (0%, 0%);

Prenatal care initiation (8.8%, 5.8%); Adequacy of prenatal care (14.5%, 9.8%)

# Birth Outcomes: Birth Weight & Prematurity

From 2010-2012, the majority of AI/AN and NHW babies in Washington were born with normal weight at birth. About 12% of AI/AN and NHW infants were born with high birth weight (Figure 2.6). A larger percentage of AI/AN babies had low weight at birth (7.8% vs 5.7% for NHW).

From 2010-2012, 15.4% of AI/AN babies were born premature (before 37 weeks gestation) (Figure 2.7). Most of these premature births were moderately premature (from 32 to less than 37 weeks), and 2.5% were very premature (less than 32 weeks). For NHW, 7.6% of babies were moderately premature and 1.3% were very premature.

**Data Source:** Washington State Department of Health, Center for Health Statistics birth certificate file. Data accessed using Washington's Community Health Assessment Tool.

**Data Notes:** AI/AN data are not corrected for misclassified race.

Figure 2.6: Birth weight by race, Washington, 2010-2012.

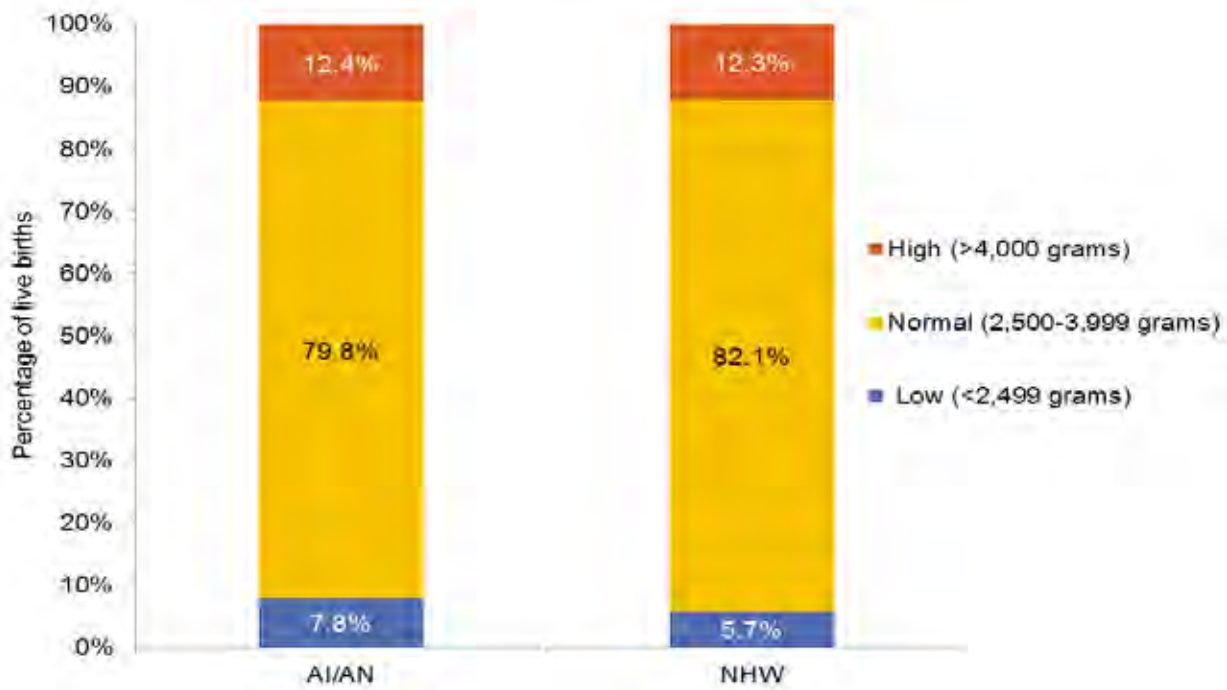
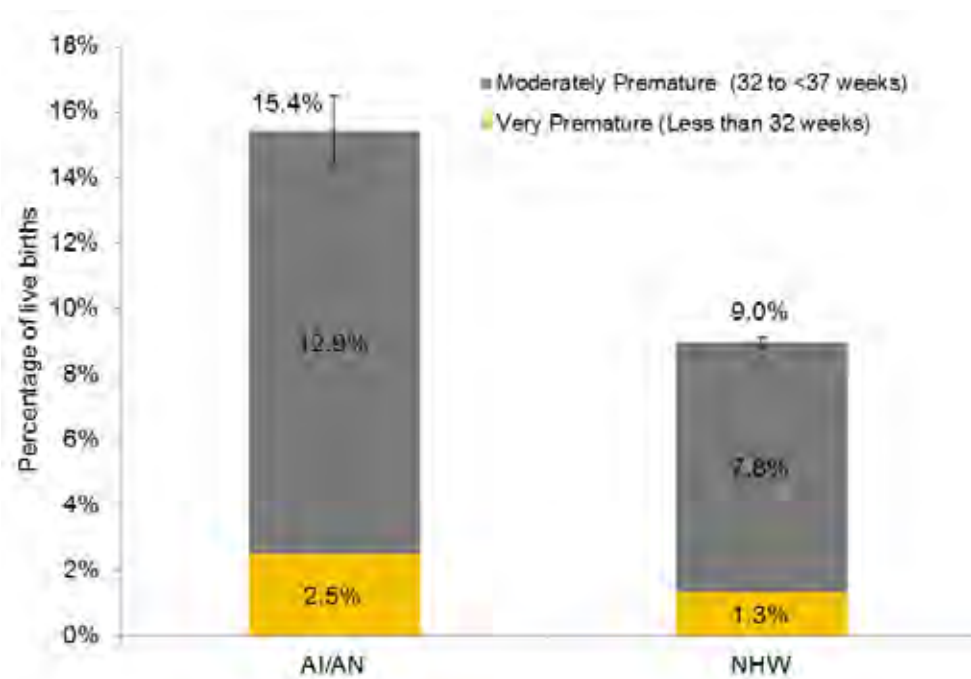


Figure 2.7: Premature births by race, Washington, 2010-2012.





## ***Program Spotlight: Native CARS***

NPAIHB's Native CARS (Native Children Always Ride Safe) is working with tribal communities to design, implement and test the effectiveness of tribal interventions to improve the use of child safety seats among AI/AN children.

Working in partnership with the six Northwest tribes, Native CARS sought to identify the barriers to and facilitators of proper and consistent use of child restraints. The study partnership used this information to design and implement community-level interventions. The interventions resulted in significant reductions in the percentage of children riding completely unrestrained in motor vehicles from 29% in 2009 to 14% in 2013 and increased proper restraint from 49% in 2009 to 60% in 2013. NATIVE CARS is

currently working to disseminate its evidence-based protocols and intervention materials through the **Native CARS Atlas**, which can be used by other tribes in the Northwest and nationwide.

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## ***Program Spotlight: Northwest Tribal Fetal Alcohol Spectrum Disorder (FASD) Project***



The consumption of alcohol during pregnancy is one of the leading preventable causes of birth defects and childhood disabilities in the United States. The Northwest Tribal FASD Project seeks to reduce the incidence of FASD and to assist tribal communities to improve the quality of life of those living with FASD by providing prevention education about the effects of fetal exposure to alcohol. The project also provides training for community members in diagnosing FASD, and works with communities to develop services that support and protect community members already

affected by FASD.

The Northwest FASD

Project has worked with Northwest Tribes to develop tribal coalitions, develop long-term goals, and implement interventions to address FASD within their communities.

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[http://www.npaihb.org/programs/the\\_northwest\\_tribal\\_fetal\\_alcohol\\_spectrum\\_disorders\\_project](http://www.npaihb.org/programs/the_northwest_tribal_fetal_alcohol_spectrum_disorders_project)