

# Central Oregon Regional Health Assessment Expanded Early Childhood Wellbeing Data Report

 Early Learning

 Education &

 Wellness

Fall 2016

This report made possible through funding  
from Deschutes County Health Services



**LAST A LIFETIME**

**EARLY LEARNING HUB  
OF CENTRAL OREGON**

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# Introduction

## Purpose

The purpose of this document is to:

- Describe the conditions, health/well-being, and education of children in Central Oregon.
- Understand differences by race/ethnicity, and geographical location.
- Compile and provide data for partners to use in their reporting, planning and grant writing.
- Inform the work of the Early Learning Hub and its partners.

## Overview

The following document focuses specifically on children, youth and families and describes a variety of health and education topics, as well as social and economic factors, that influence long term health and educational outcomes. The following report is a snapshot of the health of the region's children and families at a point in time. It digs a little deeper and builds upon the 2016-2019 Regional Health Assessment developed by the Central Oregon Health Council. The document includes information for Crook, Deschutes, and Jefferson Counties and was developed with data, input and information from a wide variety of sources, community-based organizations and community partners.

## Created in Partnership with:

The Central Oregon Health Council

PacificSource

Crook, Deschutes and Jefferson Counties

OSU-Cascades

Portland State University

Better Together

NeighborImpact – Child Care Resources

High Desert ESD

Wellness and Education Board of Central Oregon

Many other Community Based Organizations, early learning partners & stakeholders

# Approach

The expanded data report on the following pages was created by utilizing the 2015 Central Oregon Regional Health Assessment (RHA) as the foundational starting place, emphasizing focus on the early childhood and family well-being sections. Where possible, data was also updated and enhanced in the following three ways:

- 1) Dr. Kevin Cherry from Portland State University located and extracted additional data from the American Community Survey to supplement several areas of the RHA in order to provide breakdowns by race/ethnicity and county. These data are not readily accessible, and some are not available from the most recent years. For example, the most recent data available regarding poverty rates by race/ethnicity for the counties in Central Oregon were from 2006-2010. Some of the data from the American Community Survey are presented as five-year estimates (e.g. 2006 to 2010) rather than from one specific year. Additionally, data for some race/ethnic groups in certain locations (counties, and/or school districts) are not reported because there were too few children of to provide reliable estimates.
- 2) Dr. Shannon Lipscomb from Oregon State University-Cascades utilized her expertise in research related to child and family development to analyze and interpret the data throughout the document. She and her research assistant, Emiko Goka-Dubose, also updated select data tables with more recent data and added additional indicators to the document that were important to understanding the conditions, health/well-being, and education of children in Central Oregon.
- 3) Jenny Faith, PhD, epidemiologist from Deschutes County Health Services, reviewed the document from an epidemiological lens and provided input on the description, presentation, and interpretation of data throughout the document.

## Location of Data Tables

To keep the size of this document manageable it includes key highlights and summaries, using data tables and figures. Additional tables are also available at: [earlylearninghubco.org](http://earlylearninghubco.org).

# Population of Children in Central Oregon

Demographic factors like population density, education level, household income/poverty, age, race/ethnicity, among others, are linked in important ways with the health of the population.

Population density has an impact on maternal health and other social services (Hanlon, M. et al., 2012). Rural areas of Oregon have a significantly higher percentage of their population under the Federal Poverty Level compared with urban areas and to a lesser extent, Oregon overall (Oregon Health Authority, 2010). Other demographic factors such as socioeconomic status, education level, and race and ethnicity are linked with children health and school readiness outcomes (Brown et al., 2004). Demographic factors highlight disparities in maternal and child health (Oregon Health Authority, 2013).

The population of children in Central Oregon comes from the three counties of Crook, Jefferson, and Deschutes. Jefferson County includes the majority of the Warm Springs Native American Tribes. However, since part of the Warm Springs reservation is also located in Wasco county the numbers included in this document do not include all of the children from the Warm Springs tribes.

## Number of Children

- There are approximately 46,080 children ages 0-17 years in Central Oregon (Tables 1a-b).
- 44.8% of the children are ages 0-8 years.
- More than 3/4 of the children in Central Oregon reside in Deschutes County.

Table 1a. Child population estimates by age groups: Central Oregon & Oregon (2014)

Age	Central Oregon					Oregon		
	Number	Percent	% from Crook	% from Deschutes	% from Jefferson	Number	Percent	% of OR children from C.O.
0 to 3	10,044	21.80%	7.10%	81%	11.90%	180,495	21%	5.60%
4 to 6	6,511	14.10%	9.20%	76.80%	14%	141,454	16.50%	4.60%
0 to 6	16,653	36.10%	8.40%	78.90%	12.70%	321,949	37.50%	5.20%
7 to 8	4,027	8.70%	11%	73.80%	15.20%	100,073	11.60%	4%
0 to 17	46,080	100%	8.80%	79.50%	11.60%	859,220	100%	5.40%

Central Oregon percentages: In the % column, an example would be that 21.8% of all children in Central Oregon are 0-3 years old. Looking at the % from Crook column, an example would be that 7.1% of Central Oregon's 0-3 population resides in Crook County. Oregon percentages: In the % column, an example would be that 11.6% of children in Oregon are 7-8 years old. In the % of OR children from Central Oregon column, an example would be that 5.4% of all children 0-17 in Oregon reside in Central Oregon. Data sources: Oregon and Deschutes- 2014 ACS via DataFerrett; Crook and Jefferson- 2014 ACS via FactFinder (averaging method used for all except 0-17)

# Number of Children Continued

Table 1b. Child population estimates by age groups: Central Oregon counties (2014)

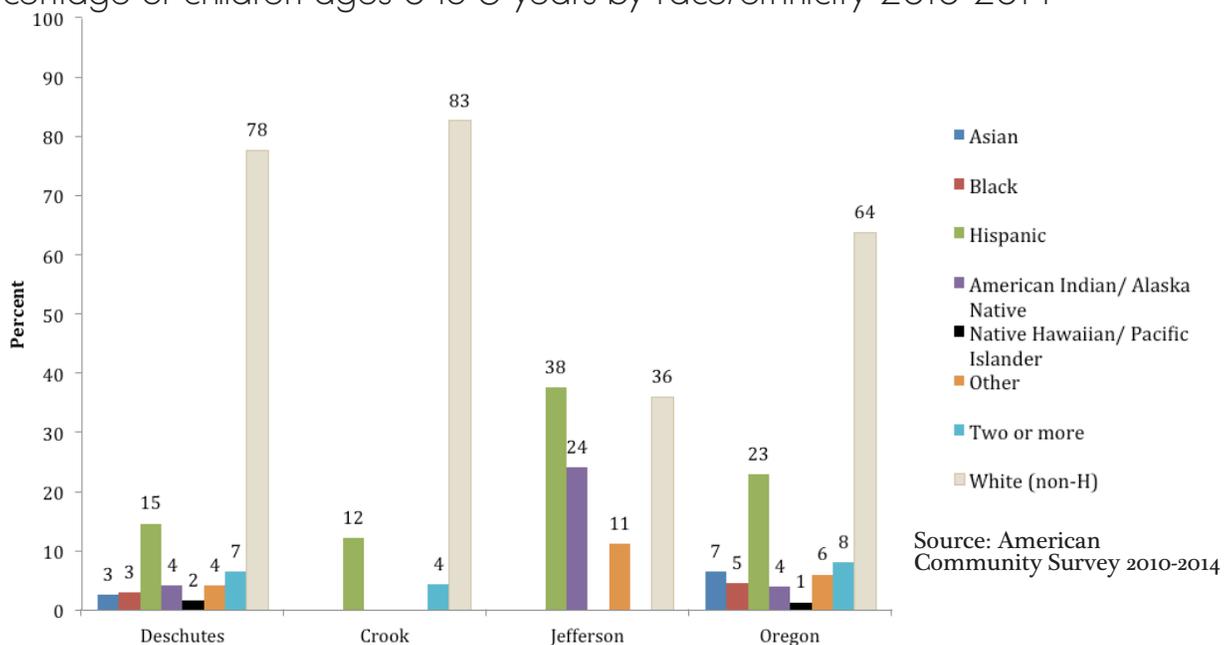
Age	Crook		Deschutes		Jefferson	
	Number	Percent	Number	Percent	Number	Percent
0 to 3	715	17.6	8,131	22.2	1,198	22.4
4 to 6	600	14.8	5,002	13.6	909	17
0 to 6	1400	34.4	13,133	35.8	2,120	39.6
7 to 8	443	10.9	2,971	8.1	613	11.4
0 to 17	4,065	100	36,656	100	5,359	100

Percentages: Looking at Crook County 0-3 for example, this would mean that 17.6% of children in Crook County are 0-3 years old. Data sources: Deschutes- 2014 ACS via DataFerrett; Crook and Jefferson- 2014 ACS via FactFinder (averaging method used for all except 0-17)

## Race and Ethnicity

- The majority (73.1%) of children in Central Oregon are White-non-Hispanic; this is higher than the state (63.8%; Figure 1). The proportion of children who are White-non-Hispanic is highest in Crook (77.6%) and Deschutes (83.7%) counties.
- Jefferson County has a higher proportion of Hispanic (37.6%) and American-Indian/Alaska Native (24.1%) children than the state and the rest of the region.
- These trends are similar across age groups. Additional data table for children of other age ranges are available online: [earlylearninghubco.org](http://earlylearninghubco.org).

Figure 1. Percentage of children ages 0 to 6 years by race/ethnicity 2010-2014

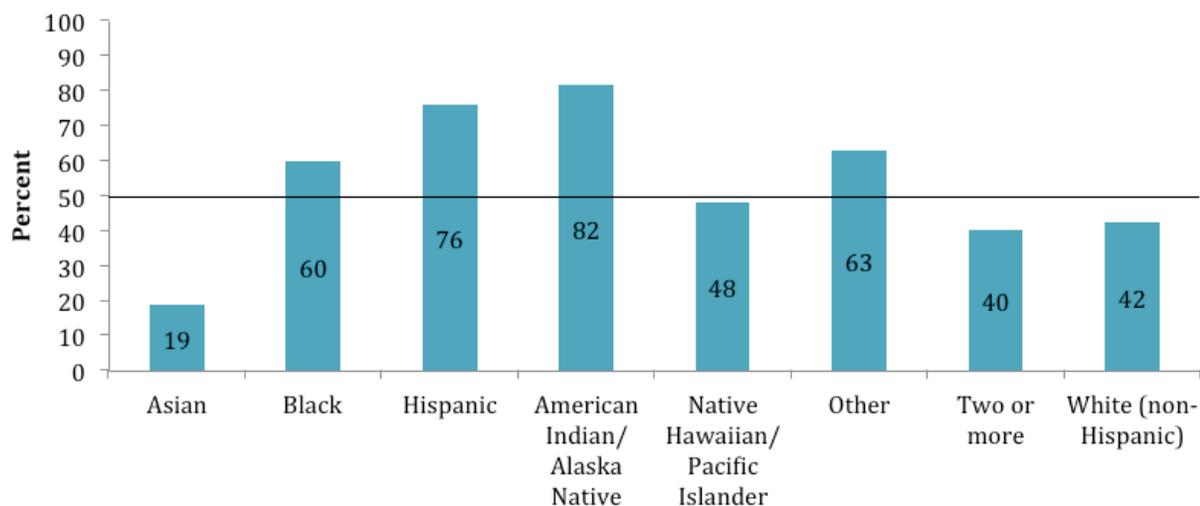


Source: American Community Survey 2010-2014

# Low Income by Race/Ethnicity

- 60.8% (9,822) of children ages 0-6 years in Central Oregon (Crook, Deschutes, and Jefferson Counties combined) are low-income, which is defined as 200% of the Federal Poverty Level. This compares the Oregon proportion of 48.5% (2010-2014 ACS; data table available online).
- In Central Oregon the proportion of children living in poverty or low-income varies widely by race/ethnicity (2006-2010 ACS; data table available online). For example, a higher proportion of children ages 0-6 years who are identified as Black, Hispanic, American-Indian/Alaska Native, and Other race/ethnicity are from low-income families compared to the total population of children ages 0-6 years (Figure 2).

Figure 2. Percent of children ages 0-6 years below 200% FPL in Central Oregon by Race/Ethnicity



Dash line represents the average percentage (49.3%) for all Central Oregon children aged 0 to 6.

Source: American Community Survey 2006-2010

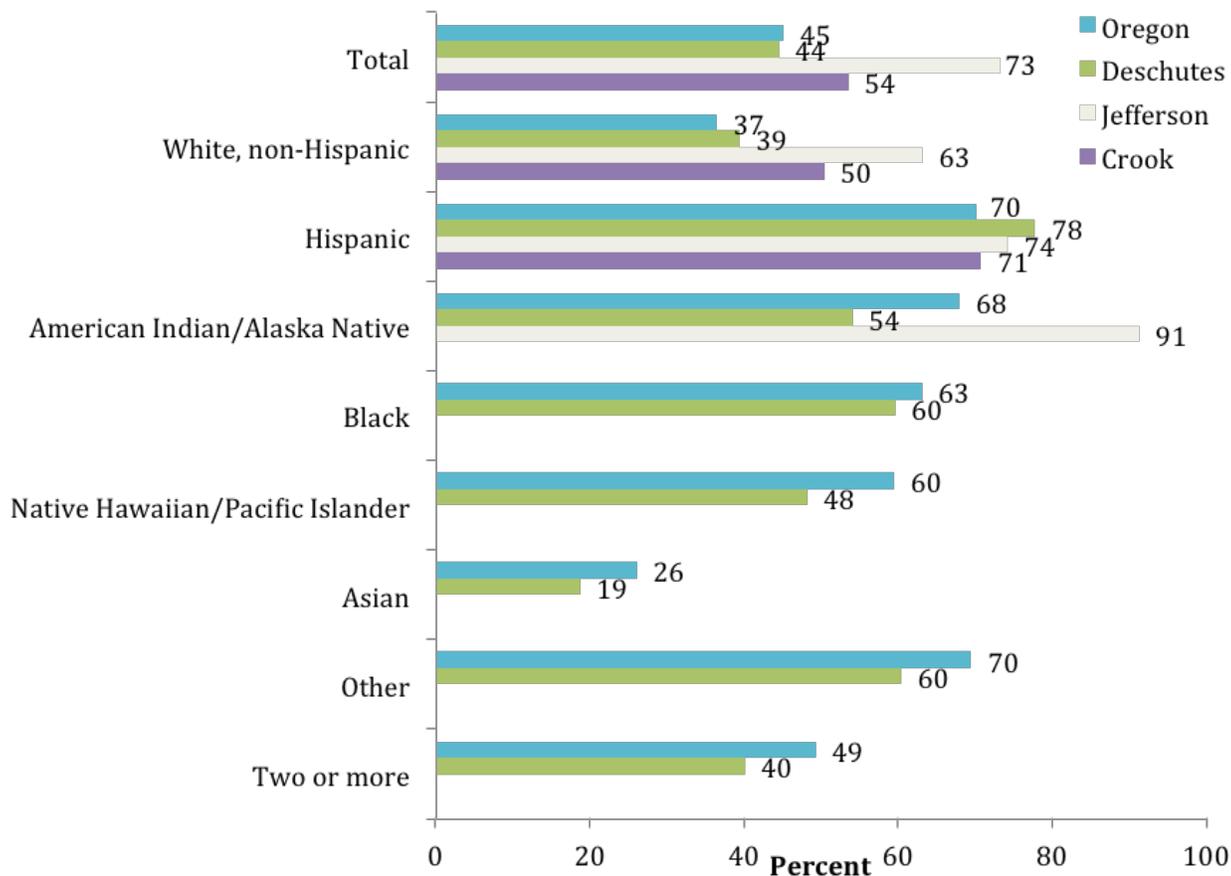
More recent data for poverty/low-income were not available by race/ethnicity for Crook & Jefferson counties.



# Poverty by Race/Ethnicity and County

- There are disparities in income by race/ethnicity and county in Central Oregon for children aged 0-6 years (Figure 3).
- In all racial and ethnic groups that could be reliably measured in Jefferson County, there is a higher proportion of low-income children when compared to the state.
- Crook County also has a higher proportion of low-income children among Non-Hispanic White children when compared to the state
- Over 70% of Hispanic children are from low-income homes in all three counties. This proportion is similar to the state.
- The proportion of Native American/Alaska Native children who are low-income is lower in Deschutes County (54%) than in Jefferson County (91%).
- The proportion of White non-Hispanic children who are low-income varies by county of residence: 63% in Jefferson, 50% in Crook, and 39% in Deschutes.

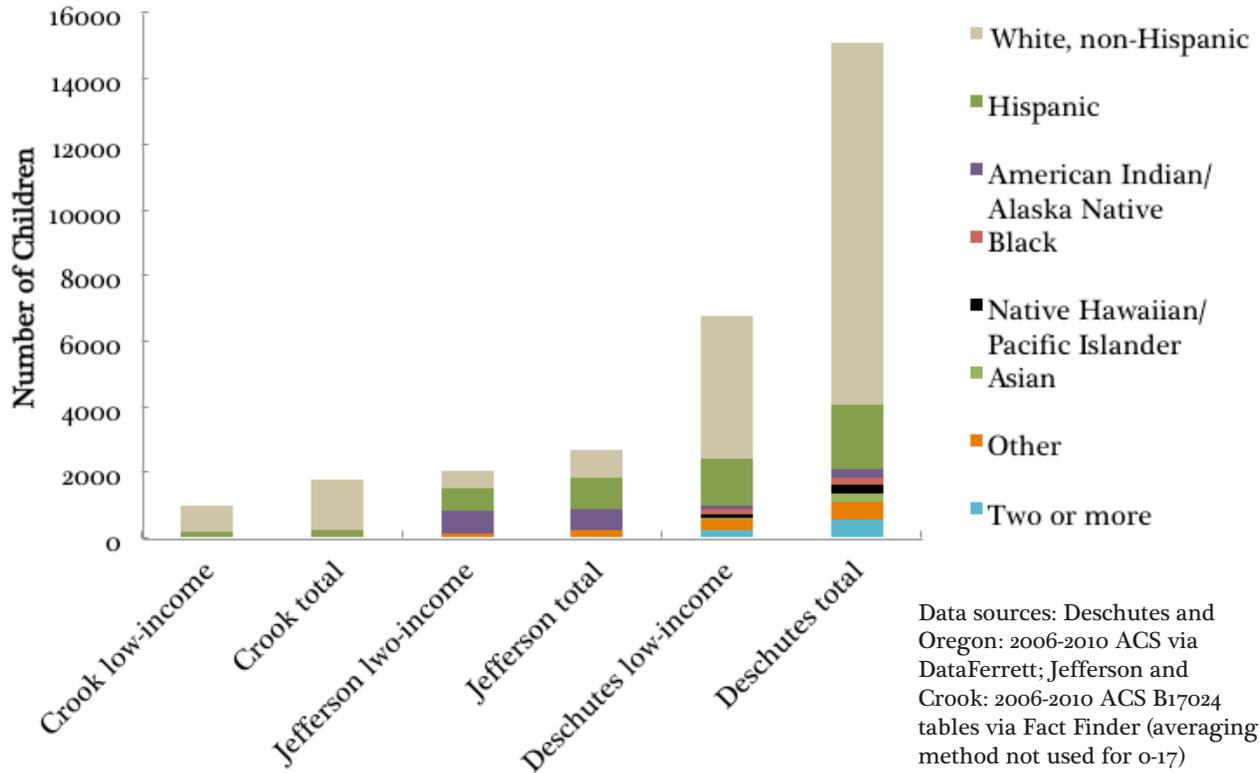
Figure 3. Percent of children ages 0-6 who are identified as low-income (below 200% FPL), by race/ethnicity and county (2006-2010)



Data sources: Deschutes and Oregon: 2006-2010 ACS via DataFerrett; Jefferson and Crook: 2006-2010 ACS B17024 tables via Fact Finder (averaging method not used for 0-17)

- Despite these substantial disparities by race/ethnicity and county, the majority of low-income children in Central Oregon are White (64%) and reside in Deschutes County (69%) (2006-2010 ACS; data tables available online) because the majority of children in Central Oregon are White and reside in Deschutes County.

Figure 4. Children ages 0-6 years by low-income (200% FPL) status, county, and race/ethnicity.



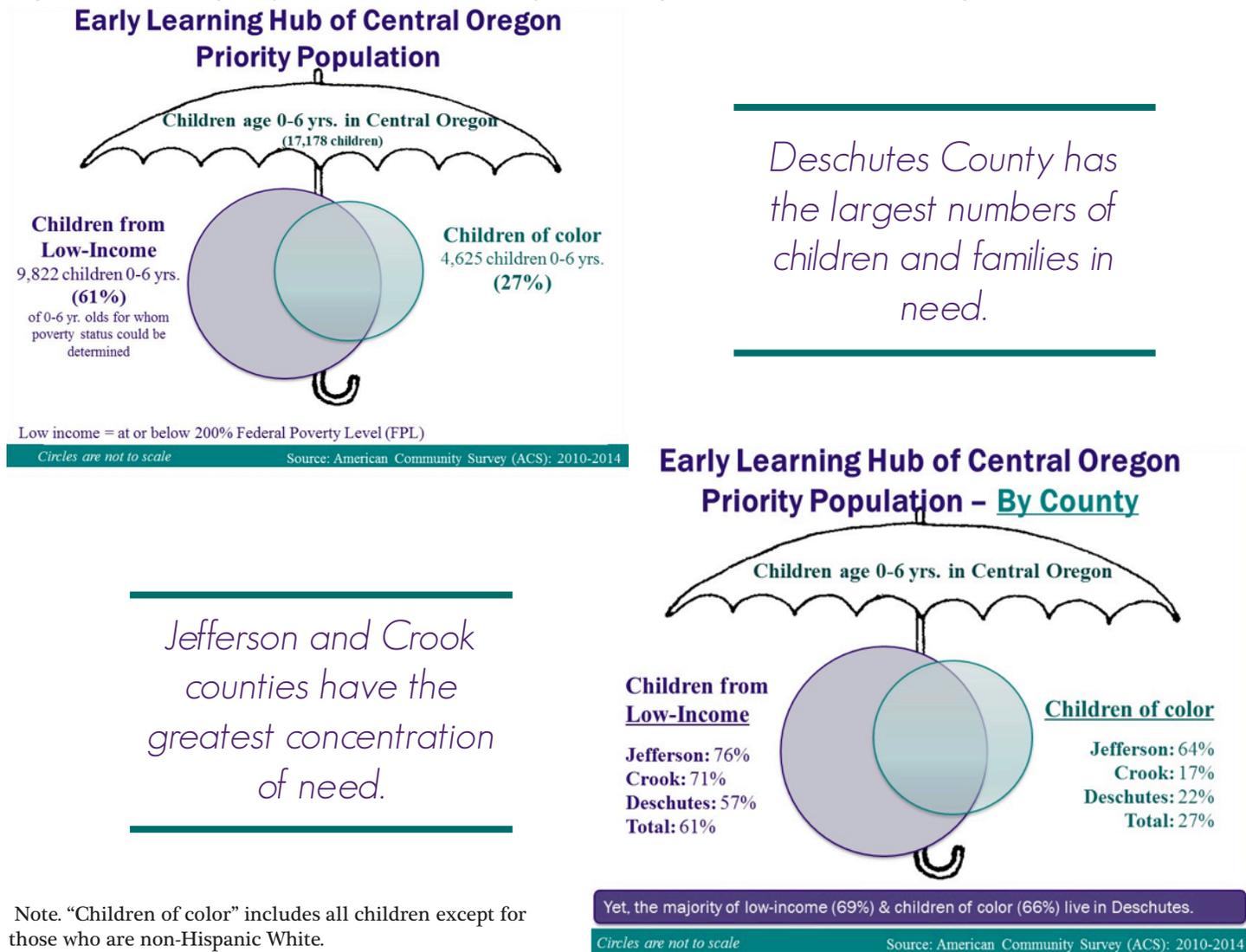
## Priority Population of the Early Learning Hub of Central Oregon

The Early Learning Hub of Central Oregon (EL Hub) seeks to create an efficient and effective early learning system to ensure that all children in Central Oregon receive the opportunities and supports they need to enter school healthy, prepared and ready for success. The target population for the Early Learning Hub of Central Oregon is infants and children, prenatal through age eight, with emphasis on vulnerable families defined as: low-income, from rural under-resourced communities, children with cultural and linguistic needs, differently abled children, children in disruptive and unstable family environments and children at risk for adverse effects of toxic stress and trauma. To achieve these goals the EL Hub has both universal and target strategies.

# Priority Population of the Early Learning Hub of Central Oregon Continued

The figures below illustrate both the entire umbrella of children ages 0-6 years in Central Oregon and the numbers and percentages of those children who meet two of the criteria for target populations: low-income and children of color. These figures are based on five year averages from 2010 to 2014; they differ slightly from the 2014 estimates of the population of children ages 0-6 from Table 1a. The partially overlapping circles show that many of the children of color are also low-income, and a proportion of those children who are low-income are also children of color. Yet the majority (64%) of low-income children in Central Oregon are White. Additional data tables with estimates of children living under the poverty line rather than “low-income” are available online at [cohealthcouncil.org/regional-assessments](http://cohealthcouncil.org/regional-assessments).

Figure 5: Priority Population of the Early Learning Hub of Central Oregon

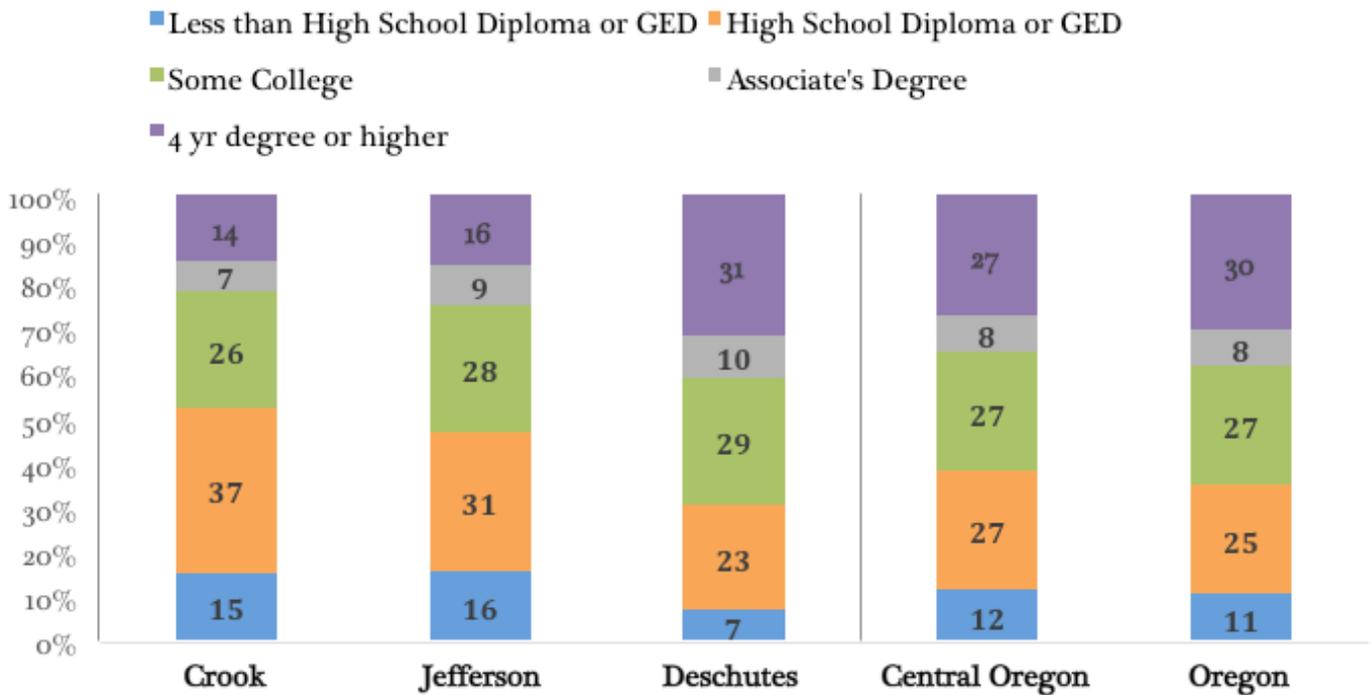


Note. “Children of color” includes all children except for those who are non-Hispanic White.

# Education Level by County, Race and Ethnicity

- Overall educational attainment in Central Oregon and Deschutes County mirrors that of Oregon (Figure 6).
- 36% of adults ages 25 and older in Central Oregon have the equivalent of a high school education or less.
- Crook and Jefferson Counties have higher percentages with lower educational attainment than Central Oregon and Oregon overall. They have a higher proportion of adults who have either the equivalent of a high school degree or less, and a lower proportion adults who have completed an Associate’s degree or higher. Interestingly, the percent of those attaining “some college” are fairly similar across the three counties, Central Oregon overall, and the State. This pattern suggests that strategies to boost educational attainment in Crook and Jefferson Counties should focus not only on increasing the number of people that graduate high school and attend college but also targeting completion of an Associate’s degree or higher.

Figure 6. Percent of Population 25 years and over by Educational Attainment 2010-2014

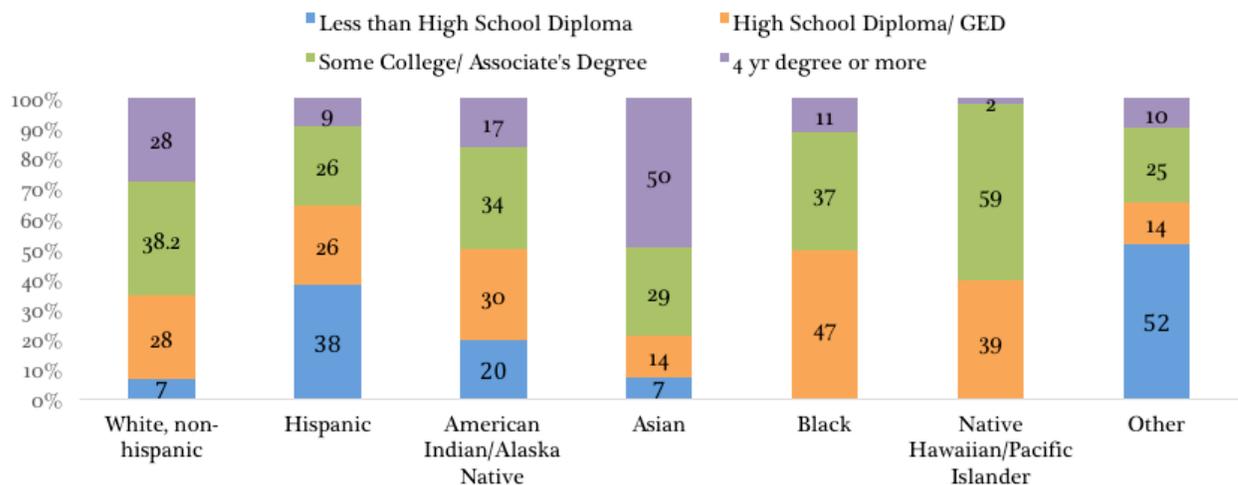


Note: Education levels are read from the bottom (less than high school diploma/GED) to the top (4 yr. degree or higher).  
 Data sources: 2010-2014 ACS via S1501 tables in Fact Finder

# Education Level by County, Race and Ethnicity continued

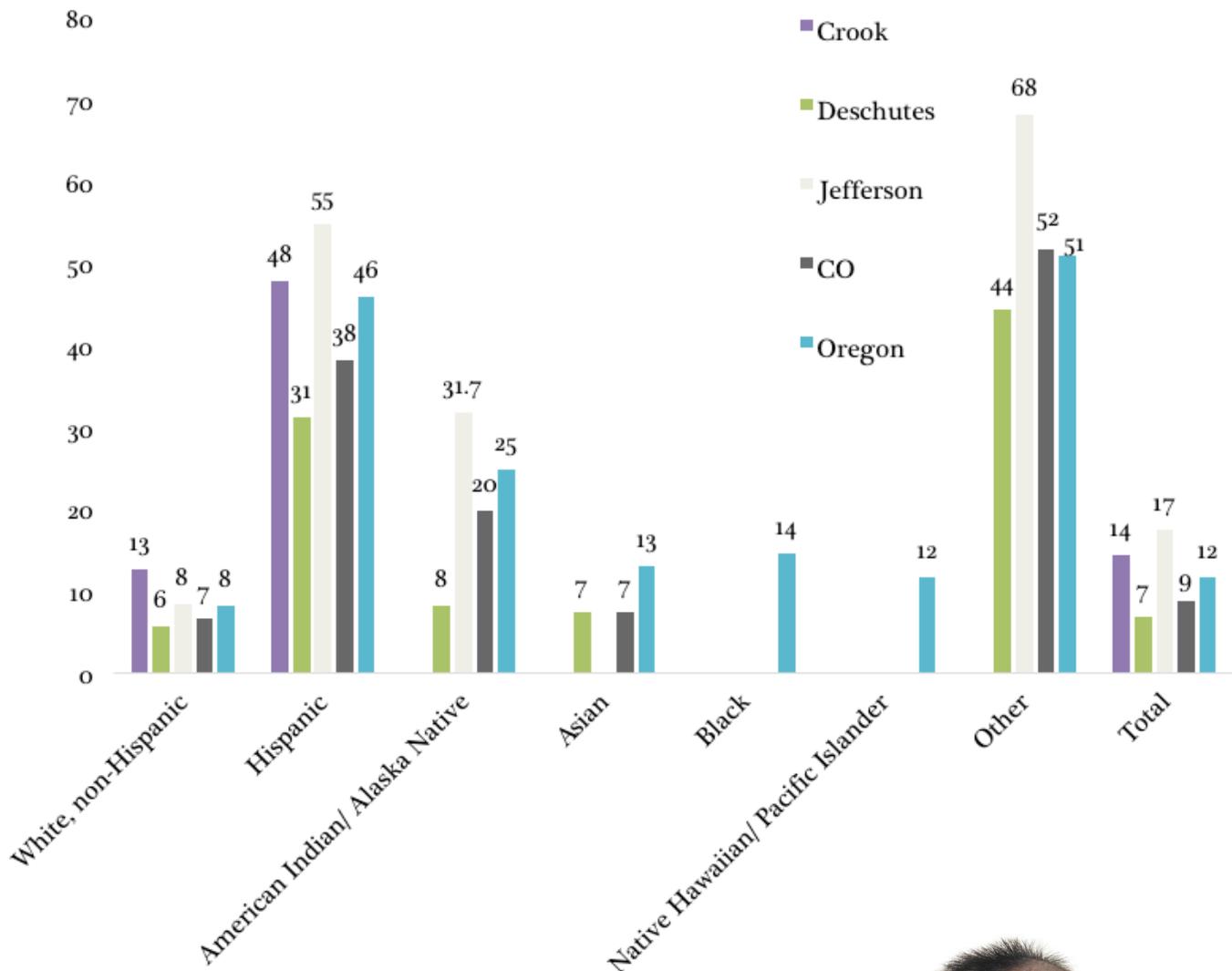
- More than 30% of adults in Central Oregon have a high school diploma/GED or less across all racial/ethnic groups other than Asian (21.2%) (Figure 7).
- Educational attainment varies dramatically by race and ethnicity, yet the county in which one lives is also related to differences in attainment across racial and ethnic groups (Figure 7). For example, the proportion of American Indian/Alaska Natives not completing high school is in Central Oregon overall is 19.7%; (Figure 7). When examined by county, the proportion is dramatically lower in Deschutes County (8.1%) than in Jefferson County (31.7%; Figure 8).
- The proportion of adults with less than a high school diploma/GED in Central Oregon is the highest for Hispanic (38%) and other race/ethnic groups (51.5%). Even though the percentages in these two groups vary by county, they exceed 30% for Hispanics and 44% for Other across all three counties.

Figure 7. Educational Attainment of Population 25 yrs. and over in Central Oregon by Race/Ethnicity



Data sources: 2010-2014 ACS via S1501 tables in Fact Finder

Figure 8. Percent of adults 25 years and over with less than a High School Diploma/GED



Data sources: 2010-2014 ACS via S1501 tables in Fact Finder



# Maternal & Infant Health

The health of a child begins with a healthy mother and a healthy pregnancy. Factors like not using tobacco, alcohol, or other drugs, maintaining a healthy weight, receiving prenatal care, maintaining good oral health, breastfeeding, and preventing injuries and adverse childhood experiences (ACEs) are key for starting an infant's life in a healthy manner. See the Adverse Childhood Experiences section of this document for more information on this topic.

Several programs exist to support mothers and infants. One program is the Women, Infants, and Children (WIC) Program, a special supplemental nutrition program that “provides supplemental foods, healthcare referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to five years of age who are found to be at nutritional risk” (USDA). Another program is the Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Program. Home visiting is an evidence-based strategy for strengthening families and improving the health status of women and children. There are a variety of home visiting programs available in Central Oregon, including: Maternity Case Management, Nurse Family Partnership, Babies First!, CaCoon, MountainStar Family Relief Nursery, Early Intervention – Early Childhood Special Education, Early Head Start and Healthy Families Oregon.

## Population of Potential Mothers

In 2013, there were 770,514 women of childbearing age (15-44 years) in Oregon and 36,801 in Central Oregon representing 19.6% and 17.7% of the total population, respectively. The total number of women of childbearing age in Central Oregon counties are:

- o 3,177 in Crook County
- o 30,069 in Deschutes County
- o 3,555 in Jefferson County

## Prenatal Care

Prenatal care is the healthcare a woman receives during pregnancy. Beginning early in pregnancy, visits to a healthcare provider are recommended based on a specific schedule. A dental visit is also recommended after the first trimester. Prenatal care helps healthcare providers detect problems early to improve the health of the mother and baby and may even prevent or cure some conditions.

### *HIV testing during pregnancy*

About 3 out of every 4 Central Oregon mothers (77%, with a 95% Confidence Interval [CI] of 68.2%-85.2%) said that they received an HIV test sometime during their most recent pregnancy or delivery. This was slightly higher than the proportion for Oregon overall: 68.8% (95% CI 66.6%-71.0%) (PRAMS, 2009-2011).

## Vaccinations during pregnancy

Approximately 60.9% (95% CI 51.4%-70.4%) pregnant mothers in Central Oregon report that they were offered an influenza vaccine or were told to get one by a doctor, nurse, or other health care worker during their pregnancy; this is significantly lower than in Oregon as a whole (77.8%, with a 95% CI 76.0%-79.6%) (PRAMS, 2009-2011).

## Timeliness of prenatal care

- Overall, Central Oregon is on track to meet the Healthy People 2020 Maternal, Infant, and Child Health goal of 77.9% of pregnant women receiving early prenatal care (Table 4).
- The Kotelchuck index measures the initiation and amount of prenatal care (Kotelchuck, 1994). Adequate prenatal care is defined as having received at least 80% of expected prenatal visits. Jefferson County had a lower proportion of adequate prenatal care (as indicated by the Kotelchuck index), and a lower percent of births with prenatal care starting in the first and second trimesters (Table 4) than Oregon overall.

Table 4. Timeliness of prenatal care, Oregon, OPHAT, 2013

Percent of births							
	Oregon	Crook	Deschutes	Jefferson	Central Oregon	HP 2020	Paid by OHP <sup>§</sup>
Adequate Prenatal Care-Kotelchuck Index	72.2	70.3	69.9	55.5*	68	No measure	66.6
Prenatal care started in 1st trimester	77.8	68.6	81	66.3*	77.9	77.9	72.7
Prenatal care started in 2nd trimester	17.9	27.6	15.9	29.3*	18.8	No measure	22.9
Prenatal care started in 3rd trimester	3.6	3.8	2.8	4	3.1	No measure	4.1
No prenatal care	0.7	†	†	†	0.3	No measure	†

\* Significantly different than the state overall

† Too few births to report

§ Percent of births in Central Oregon paid by the Oregon Health Plan

## Unintended Pregnancy

Unintended pregnancy refers to pregnancies that are mistimed, unplanned, or unwanted. About 51% of pregnancies in the U.S. are unintended (Guttmacher Institute, 2015). Measuring the prevalence of unintended pregnancy helps gauge a population's needs of contraception and family planning. Unintended pregnancy is associated with increased risk of health problems for the baby, as the mother may not be in good health or delay prenatal care upon learning of the pregnancy (CDC Unintended Pregnancy Prevention, 2015).

# Unintended Pregnancy Continued

- 41.7% (95% CI 32.4%-51.0%) of pregnancies in Central Oregon were considered unintended. The proportion for the rest of the state was 37.9% (95% CI 35.9%-40.0%) (PRAMS, 2009-2011).
- During the past 20 years, Oregon's abortion rate per 1,000 for women aged 15 to 44 years has generally declined from a high of 21.4 in 1991 to a low in 2013 of 10.6 (Oregon Vital Statistics Annual Report, 2013). Contraceptive failure is not the reason for the majority of abortions in Central Oregon. For about 3 of 4 abortions, no contraceptive was used (Vital Statistics, 2011-2013).

## Teen Pregnancy

Teen parents and their children experience long-term negative impacts that lead to significant socioeconomic costs. Teen pregnancy and birth contributes to high school drop-out and increased risk factors for children of teen parents, including lower socioeconomic status and academic achievement with an increase in health problems, adolescent incarceration, and subsequent teen pregnancy (Hoffman, 2008; Perper et al., 2010).

- The majority (65.5%) of teenage pregnancies in Central Oregon occur among White-non-Hispanic mothers (Table 5). This is lower than the percent of the overall female population ages 10-17 who were White-non-Hispanic in Central Oregon (2010-2014 ACS), indicating a higher proportion of teenage pregnancy among non-White mothers.
- This 65.5% of teenage pregnancies to White-non-Hispanic mothers is higher than the 51.7% of teenage pregnancies among White-non-Hispanic mothers in Oregon overall (Table 5).
- In Jefferson county, a higher proportion of teenage pregnancies occur among Hispanic (47.4%) and American Indian (21.1%) mothers than is seen in Central Oregon or the state overall (Table 5).

Table 5. Teenage pregnancy for those ages 10-17 by race/ethnicity 2012-2014 as percentage of geographic unit

Teenage pregnancy 10-17	Crook	Jefferson	Deschutes	Central OR	Oregon	Central OR as % of state
Total female population 10-17	839	1,107	7,825	9,771	189,613	5.20%
Total pregnant	15	19	105	139	3,160	4.40%
White (Non-Hispanic)	12 (80%)	5 (26.3%)	74 (70.5%)	91 (65.5%)	1,634 (51.7%)	5.60%
Black	0	0	2 (1.9%)	2 (1.4%)	109 (3.4%)	1.80%
AI/AN	0	4 (21.1%)	2 (1.9%)	6 (4.3%)	62 (2%)	9.70%
Asian	0	0	1 (1%)	1 (.7%)	42 (1.3%)	2.40%
Other / multiple races	1 (6.7%)	1 (5.3%)	13 (12.4%)	15 (10.8%)	200 (6.3%)	7.50%
Hispanic	2 (13.3%)	9 (47.4)	13 (12.4%)	24 (17.3%)	1113 (35.2%)	2.20%

County/region/state % indicates the proportion of all teenage pregnancy in that region that is represented by that racial/ethnic category. For example, in Crook County, 12 white teenagers ages 10-17 were pregnant in ; this constitutes 80% of all teenage pregnancy in this county.

Central OR as % of state indicates the proportion of all pregnant teenagers in Oregon who resided in Central Oregon. For example, among Hispanic teenagers who were pregnant in Oregon between 2012-2014, 2.2% resided in Central Oregon.

Data sources: Pregnancy data: Oregon Vital Statistics 2012-2014 <https://public.health.oregon.gov/BirthDeathCertificates/VitalStatistics/TeenPregnancy/Documents/teenrace/teenrace2014.pdf>

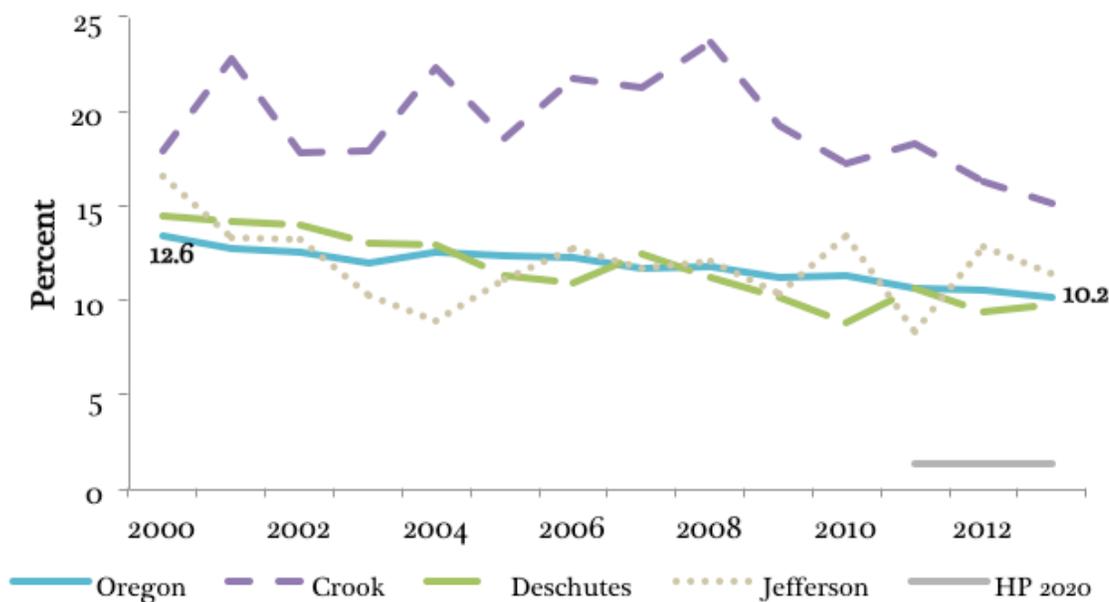
Total population data: 2011-2013 American Community Survey B01001 tables

# Substance Use During Pregnancy

Use of tobacco, alcohol, certain medications, and controlled substances during pregnancy has been related to poor pregnancy outcomes, such as miscarriage, preterm birth, birth defects, increased risk for Sudden Infant Death (SIDS) and intellectual and developmental disabilities (CDC, 2015; National Abandoned Infants Assistance Resource Center, 2012; SAHMSA, 2007).

- In Central Oregon 4.7% of mothers reported that they drank alcohol in the last 3 months of their pregnancy (95% CI 0.9%-8.6%). This was lower than the prevalence of 8.2% for the state (95% CI 7.0%-9.5%) (PRAMS, 2009-2011).
- Though not statistically significant, Crook County had a higher proportion of mothers who smoked during pregnancy than the other Central Oregon Counties (Figure 9). The percent of mothers who smoked during pregnancy in Crook County peaked in 2008 and has been declining since (OPHAT, 2000-2013). However, the proportion is still much higher than the HP 2020 goal of 1.4%.
- The prevalence of smoking during pregnancy was six times higher among women enrolled in OHP in Central Oregon than those with private insurance (OHA, 2010-2012).

Figure 9. Percent of mothers who smoked during pregnancy, Oregon, OPHAT, 2000-2013



# Other Pregnancy Risk Factors and Complications

Other factors like poor nutrition during pregnancy, health and age at conception, depression, and existing health conditions may also complicate a pregnancy (Healthy People, 2020).

- One in four new mothers in Oregon report symptoms of prenatal, perinatal or postpartum depression (Oregon Health Authority, 2010).
- Pregnancy risk factors occurred at similar percentages among mothers enrolled in OHP and the general Central Oregon population. Yet the proportion of pre-pregnancy diabetes is significantly higher among Oregon mothers who gave birth while enrolled in OHP than in Oregon overall (Table 6).
- The prevalence of gestational diabetes nearly doubled between 2004 and 2013 (OPHAT, 2004-2013).

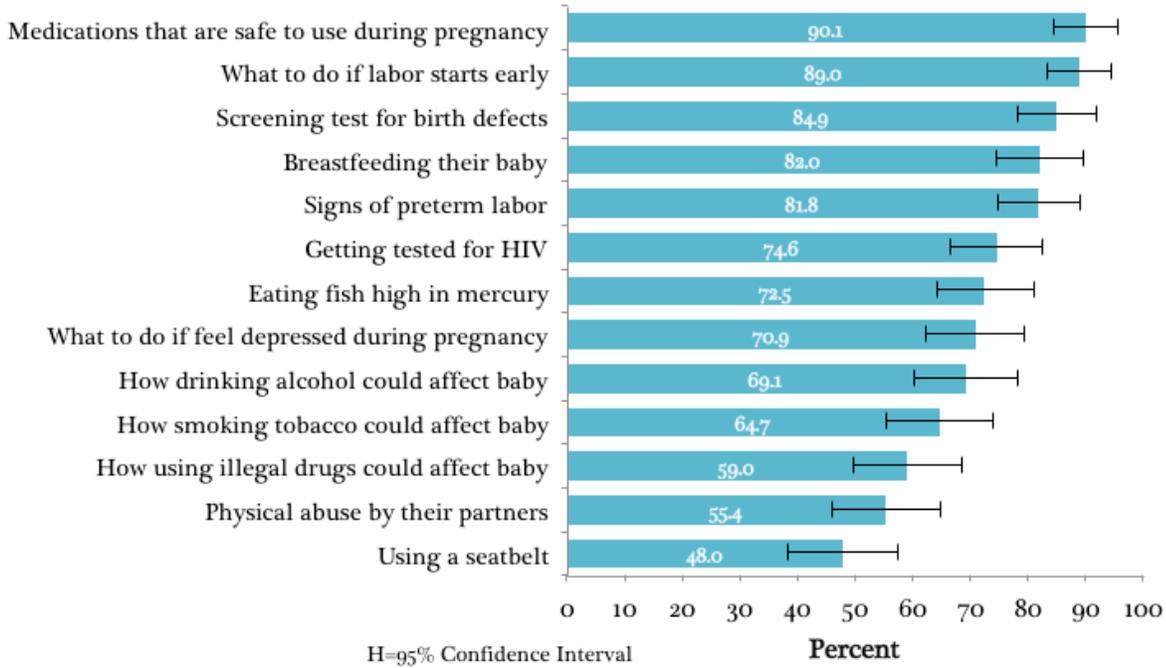
Table 6. Percent of births with specific pregnancy risk factor, Oregon, OPHAT, 2013

	Oregon	Oregon-OHP	Central Oregon	Central Oregon-OHP
<b>Gestational diabetes</b>	7.6	8	6.4	7.2
<b>Pre-pregnancy diabetes</b>	0.9	1.2*	0.9	0.9
<b>Eclampsia</b>	0.8	0.9	0.7	0.9
<b>Gestational hypertension</b>	6.1	5.8	6.4	5.9
<b>Pre-pregnancy hypertension</b>	1.6	1.6	1.2	1.2

\* Significantly different than the state overall

- Healthcare providers discuss several topics during prenatal visits to ensure a mother and her baby are kept safe (Figure 10). The percent of mothers reporting their healthcare provider discussed the topics in Figure 10 was not significantly different in Central Oregon than in the remainder of the state (data not shown; PRAMS, 2009-2011).
- Given that fewer than 75% of mothers reported that their health care professionals discussed topics with them such as HIV testing, depression, using alcohol, smoking, abuse, etc., (Figure 10), there is substantial room for improvement in these areas.

Figure 10. Percent of mothers who state their health care professional discussed topics with them about most recent pregnancy, Central Oregon, PRAMS, 2009-2011



*Fewer than 75% of mothers reported that their health care professionals discussed HIV testing, depression, using alcohol, smoking, or abuse by partners.*

## Births

Healthcare is important during and immediately after birth. At this point, breastfeeding can be implemented and safety topics can be addressed. Reviewing the birth rates in an area can help identify a specific population’s fertility patterns and identify the need for reproductive health services.

- There are approximately 45,000 births each year in Oregon and 2,200 in Central Oregon (Table 7).

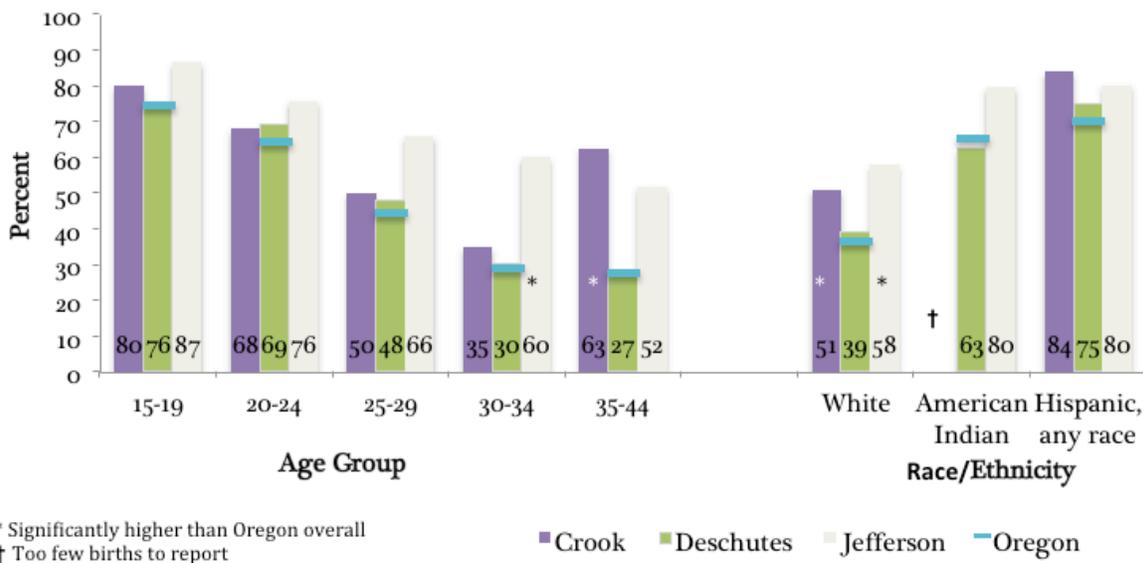
Table 7. Total number of births and percent of births by payer, OHA Birth Certificate Data, 2013

	Oregon	Central Oregon	Crook	Deschutes	Jefferson
<b>Number of births</b>	45,136	2,216	192	1,723	301
<b>Percent of births paid by OHP</b>	43.6	49.1	55.5	44.9	68.9
<b>Percent of mothers with less than a high school education</b>	15.3	14.2	16.2	11.6	27.9

# Births Continued

- Jefferson County has the highest prevalence (27.9%) of mothers with less than a high school education in Central Oregon (Table 7).
- Around half of the births in Central Oregon were paid for by the Oregon Health Plan (OHP) (Table 7), Oregon’s Medicaid program, which offers insurance to adults who earn 138% of the Federal Poverty Level. Enrollment in OHP can be considered both a marker of financial need and also potentially as a resource, given that it shows access to health care. The percent of births paid by OHP is particularly high in Jefferson County (68.9%).
- In Central Oregon the percent of births paid for by the Oregon Health Plan (OHP) varies by age group, race/ethnicity, and county. The groups with the highest proportion of births paid by OHP are younger women, and those that identify as American Indian and Hispanic (Figure 6).
- Crook and Jefferson counties also have a significantly higher percentage of births paid by OHP among White women compared to the state overall. This is consistent with other evidence in this document that Central Oregon has an elevated need among not only families of color but also among low-income White families.

Figure 11. Percent of births paid for by OHP by age group and race/ethnicity, Oregon, OPHAT, 2013



- The prevalence of preterm birth is higher among women enrolled in OHP in Central Oregon than the state overall (Table 8).

Table 8. Percent of births by gestational age at birth and birth weight, Oregon, OPHAT, 2013

		Oregon	Oregon-OHP	Central Oregon	Central Oregon-OHP	HP 2020 Goal
<b>Preterm birth</b>	<b>&lt;36 weeks</b>	7.8	8	7.6	10.1*	11.4
	<b>32-36 weeks</b>	6.4	6.7	7.1	9.2*	
<b>Birth Weight</b>	<b>&lt;32 weeks</b>	1.2	1.3	0.7	0.9	1.2
	<b>&lt; 2500 grams (low birth weight)</b>	6.3	6.9	6.4	8.1	7.8
	<b>&gt;=4000 grams (high birth weight)</b>	10.6	9.1	8	6.2	

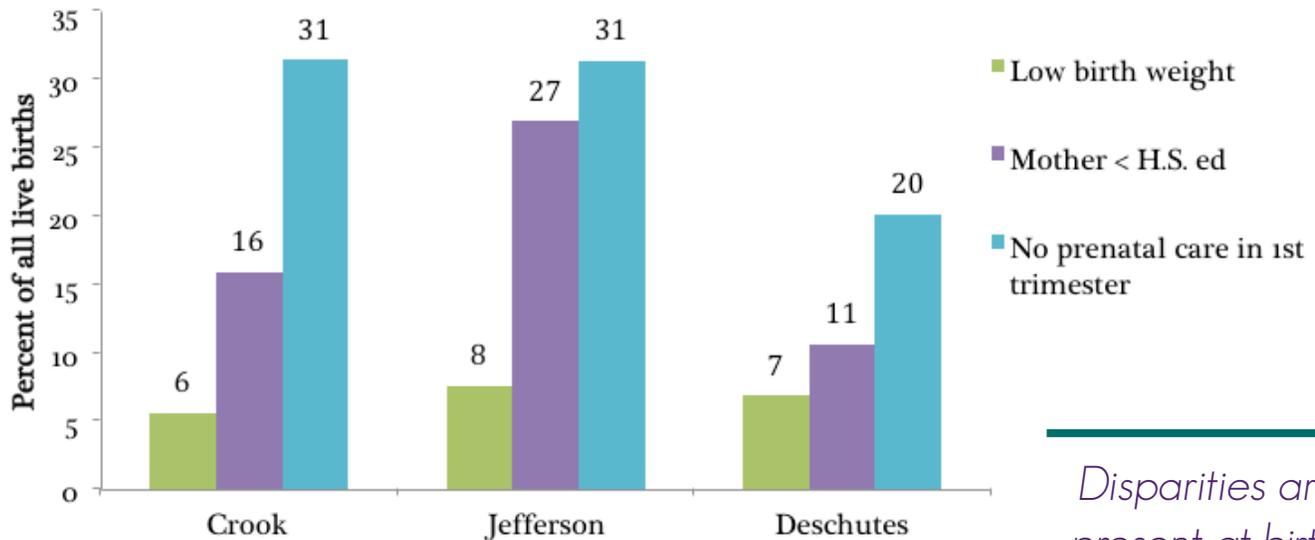
\* Significantly higher than the Oregon total

## Maternal and Infant Health Indicators by Race/Ethnicity and County

- A few maternal and infant health indicators are available by race/ethnicity and county within Central Oregon. They are summarized in Figures 12 and 13, with additional data available online at [cohealthcouncil.org/regional-assessments](http://cohealthcouncil.org/regional-assessments).
- These data reinforce those presented in the Population section of this document, illustrating that disparities in the conditions in which children develop are already present at birth.
- A higher proportion of mothers in Jefferson and Crook counties have less than a high school education and lack of prenatal care when compared to Deschutes County (Figure 12).
- As noted in the Population section of this document, although Jefferson and Crook counties have higher proportions of children and families exhibiting risk factors (e.g. low-income, low education), Deschutes County is home to the largest numbers of children and families with these risks. As a percentage of the overall numbers for Central Oregon, Deschutes County is home to 79% of the babies with low-birth weight, 63% of the mothers with less than a High School education/GED, and 70% of the mothers who lack of prenatal care in the first trimester.

# Maternal and Infant Health Indicators by Race/Ethnicity and County Continued

Figure 12. Risk factors as a percent of all live births by county

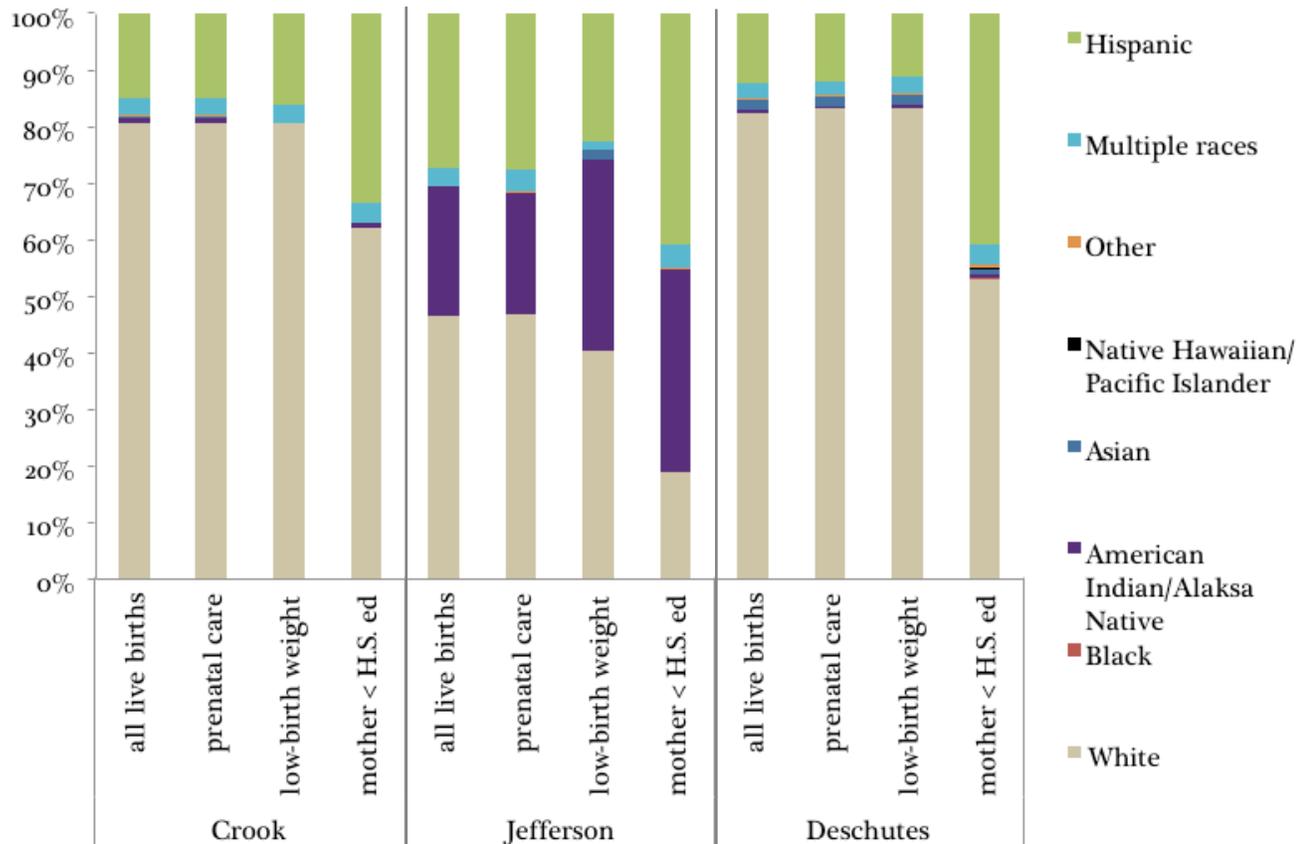


*Disparities are present at birth.*

Source: 2012-2014 Oregon Vital Statistics

- The racial and ethnic distribution across maternal and infant health risk factors and across counties varies when compared to the racial and ethnic distribution of live births, (Figure 13).
- In Jefferson County, there is a higher proportion of American Indian and Alaska Native babies with low-birth weight and mothers with less than a high school education/GED, compared to the proportion of American Indian and Alaska Native live births. This suggests that American Indian and Alaska Native babies are disproportionately born with low birth weight and to mothers with less than a high school education/GED.

Figure 13. Racial/ethnic Distribution of Live Births and Maternal and Infant Health Indicators in Central Oregon Counties.



Note: Each bar in this figure shows the racial/ethnic distribution of mothers/infants for that indicator. For example, approximately 80% of the infants born with low birth weight in Crook County were White.  
 Source: Data source: 2012-2014 Oregon Vital Statistics

## Breastfeeding

Breastfeeding is an important source of nutrition for a baby with several health benefits for the mother and the baby. A mother’s milk can deliver important antibodies to an infant to help fight infections and has been shown to decrease incidence of allergies and asthma. Breastfeeding is also a low cost method for feeding infants that promotes bonding between a mother and baby. Breastfeeding for longer periods and exclusively can increase the health benefits for both the mother and the baby. American The Academy of Pediatrics recommends exclusively breastfeeding a baby for at least six months and then supplementing solid food with breast milk. Many mothers initiate breastfeeding, but several barriers lead to discontinuation or decreased breastfeeding as the infant grows (American Academy of Pediatrics, 2012).

# Breastfeeding Continued

- In the Maternity Practices and Infant Nutrition and Care (mPINC) survey Oregon ranked as 5 out of 53, with 1 being the highest rank, among state and territory respondents (2013). The rank is based on supportive practices of hospitals and birth centers to promote, encourage, and support breastfeeding practices as recommended by Healthy People 2010. Oregon demonstrates that breastfeeding is a public health priority.
- Breastfeeding as reported on the birth certificate was similar in Crook and Deschutes Counties (90.5%, 90.3%, respectively) as it was in Oregon (89.2%). Jefferson County's breastfeeding percentage at birth was slightly lower (85.0%) (Birth Certificates, 2011-2013). All three Central Oregon counties are meeting the HP 2020 goal of 81.9%.

# Child Health

Children are exposed to and react to environmental and physical exposures differently than adults. Adolescents are entering a time in their life when they are exploring and establishing health patterns and behaviors. Ensuring their safety and knowledge of health behaviors is vital to their overall health. This document includes highlights from the Regional Health Assessment for this topic; additional information is available from the full RHA, and also from additional data tables online at [cohealthcouncil.org/regional-assessments](http://cohealthcouncil.org/regional-assessments).

# Health Insurance Coverage for Children

- The most recent estimates of health insurance coverage for children available by age and county are from 2008-2012 (ACS). These estimates suggest that about 1400 children in Central Oregon did not have health insurance coverage (Table 9).
- The percent of children covered by the Oregon Health Plan (OHP) varies by age and county (Table 10). The overall proportion of children ages 0-6 years covered by OHP is highest in Crook County (53%), followed by Jefferson County (48%), and Deschutes County (41%).
- The proportion of children in Central Oregon covered by OHP is highest among children ages 0-3 years (50%), which drops to 40% among children ages 4-6 years and 34% of children ages 7-8 years (Table 10).
- Data that break these proportions down by race/ethnicity within County are scarce. Deschutes County has a higher percentage of White children, and lower percentages of children from all other race/ethnic groups on OHP than does Oregon. These differences are likely due, in part, to the higher proportion of low-income White children in Deschutes County when compared with Oregon, but may also reveal something about access to/connection with OHP among racial/ethnic minority children. Additional details are available online at: [cohealthcouncil.org/regional-assessments](http://cohealthcouncil.org/regional-assessments).

Table 9. Health insurance coverage of children under 6 years of age, Oregon, ACS, 2008-2012

	Crook	Deschutes	Jefferson	Oregon
Total population under 6 years:	1413	11287	1929	281447
No health insurance coverage	109	1078	232	16823
No health insurance coverage, percent	7.70%	9.60%	12.00%	6.00%

Table 10. Children on OHP by age as a percent of geographic unit and percent of Central Oregon

OHP Enrolled	Crook			Deschutes			Jefferson			Central OR		
	#	% of County	% of Central OR	#	% of County	% of Central OR	#	% of County	% of Central OR	#	% of Central OR	% of OR
0 to 3	530	73.4	12.9	2,921	47	71.4	642	53.3	15.7	4,093	50.3	4.9
4 to 6	398	50.3	11.3	2,627	36.3	74.9	482	61.4	13.7	3,507	39.7	5.7
0 to 6	928	52.6	12.2	5,548	41.2	73	1124	47.7	14.8	7,600	44.8	5.2
7 to 8	220	35.7	12.8	1,267	32.2	74	226	43	13.2	1,713	33.7	4.7
0 to 17	2113	50.6	13.5	11,246	31.3	71.7	2320	43.4	14.8	15,679	34.5	4.8

% of county indicates the proportion of children in that age category who receive OHP. For example, 35.7% of 7-8 year olds in Crook County receive OHP.

% of Central OR indicates the proportion of all children who receive OHP in Central Oregon in that age and county category. For example, 12.8% of 7-8 year olds receiving OHP in Central Oregon reside in Crook County.”

Central OR as % of State indicates the proportion of all children who receive OHP in Oregon in that age category. For example, 4.7% of all children ages 7-8 receiving OHP in the State of Oregon reside in Central Oregon.

Data Source: Crook and Jefferson: 2011-2013 ACS via Fact Finder tables B27007 (averaging method used for all but 0-17); Deschutes and Oregon: 2011-2013 ACS via DataFerrett

## Injury and Death

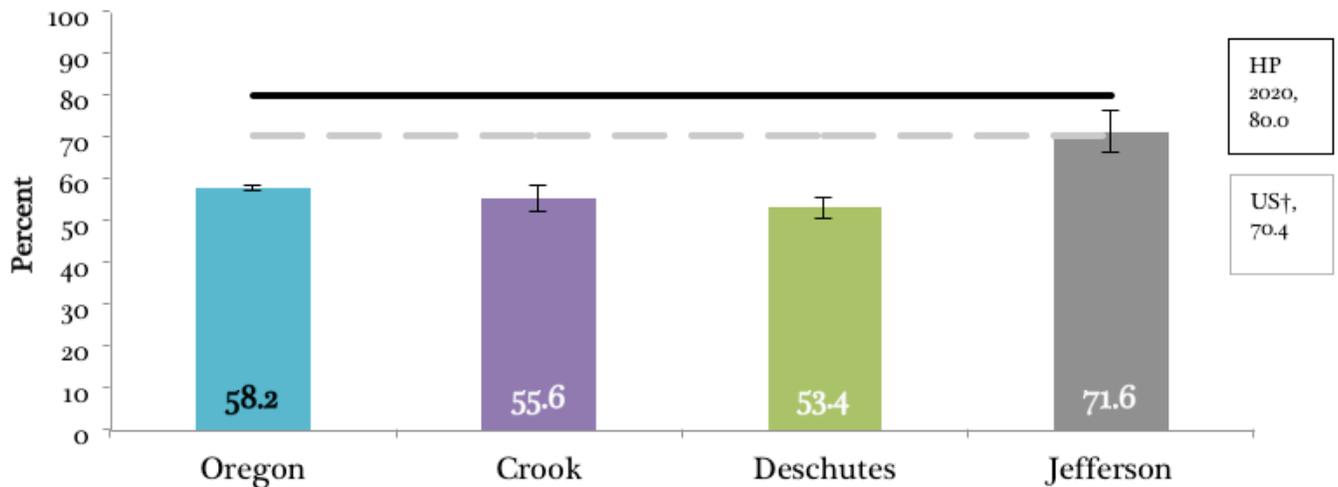
- From 2004 to 2013, the average number of infant deaths each year in Central Oregon was 11. The leading causes of death for infants were conditions originating in the perinatal period, congenital malformations, and unintentional injuries (OPHAT, 2004-2013).
- Between 2004 and 2013, there was an average of 10 deaths per year among children and adolescents (1-17 years) in Central Oregon. The three leading causes of death for children and adolescents were unintentional injuries, suicide, and malignant neoplasms (cancer) (OPHAT, 2004-2013).
- The leading causes of unintentional injury-related death for children and adolescents (1-17 years) were motor vehicle crash and drowning in Central Oregon and Oregon overall (OPHAT, 2004-2013).

# Immunizations

A series of immunizations is delivered to children to ensure their immunity to many diseases. Some immunizations require several doses to establish immunity. To be up-to-date, children should receive 4 doses of Diphtheria, Tetanus, and acellular Pertussis (DTaP), 3 doses of Polio vaccine, 1 dose of Measles, Mumps and Rubella (MMR), 3 doses of Haemophilus Influenzae Type b (HiB), 3 doses of Hepatitis B, 1 dose of Varicella, and 4 doses of pneumococcal conjugate vaccine (PCV) by their second birthday (CDC, 2016) .

- Oregon, and all three Central Oregon Counties are behind the Healthy People 2020 goal of 80% of two-year-olds being up to date with immunizations (Figure 14).
- A higher proportion of two-year-olds in Jefferson County were up to date with immunizations than were two-year-olds in the other Central Oregon Counties and the state overall (Figure 14).

Figure 14. Two-year old up-to-date\* immunization rates, ALERT, Oregon, 2013



\* 4 doses DTaP, 3 doses IPV, 1 dose MMR, 3 doses Hib, 3 doses HepB, 1 dose Varicella, 4 doses PCV  
I=95% confidence interval  
† National Immunization Survey, 2013

# CCO Measures

- Figure 7 contains the maternal and infant-related CCO measures. The Central Oregon CCO has met the goals for postpartum care visits and elective delivery and prenatal care.
- Both Oregon and Central Oregon lag behind in the goals of children receiving 6 or more well-child visits by 15 months of age (Figure 15), as well as adolescents and young adults (ages 21-21 years) receiving well-care visits (Figure 16).
- Central Oregon CCO has met the goal for screening children for developmental, behavioral and social delays in the first three years of life (Figure 16).

Figure 15. Central Oregon CCO quality measures related to maternal and infant health, June 2014

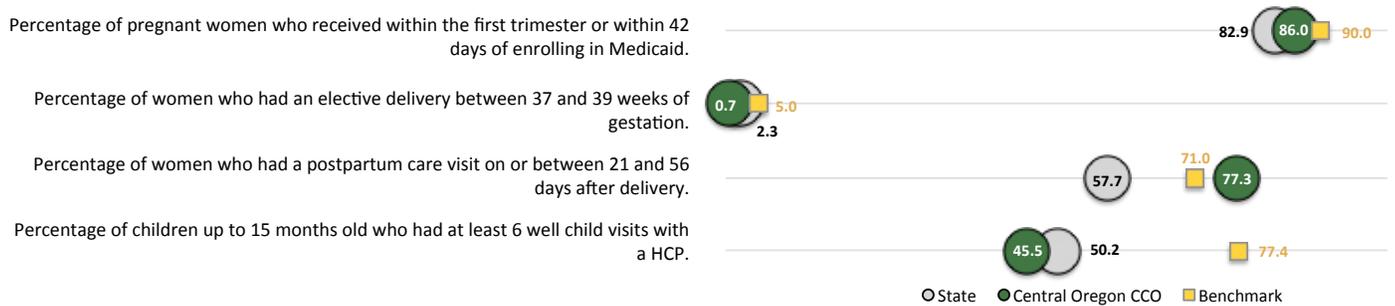
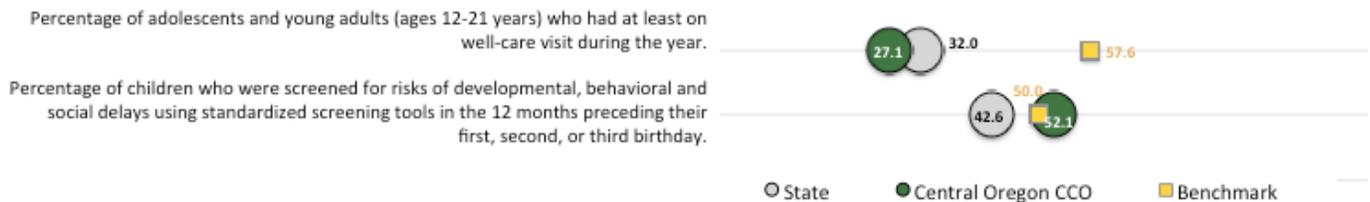


Figure 16. Central Oregon CCO quality measures related to child and adolescent health, June 2014

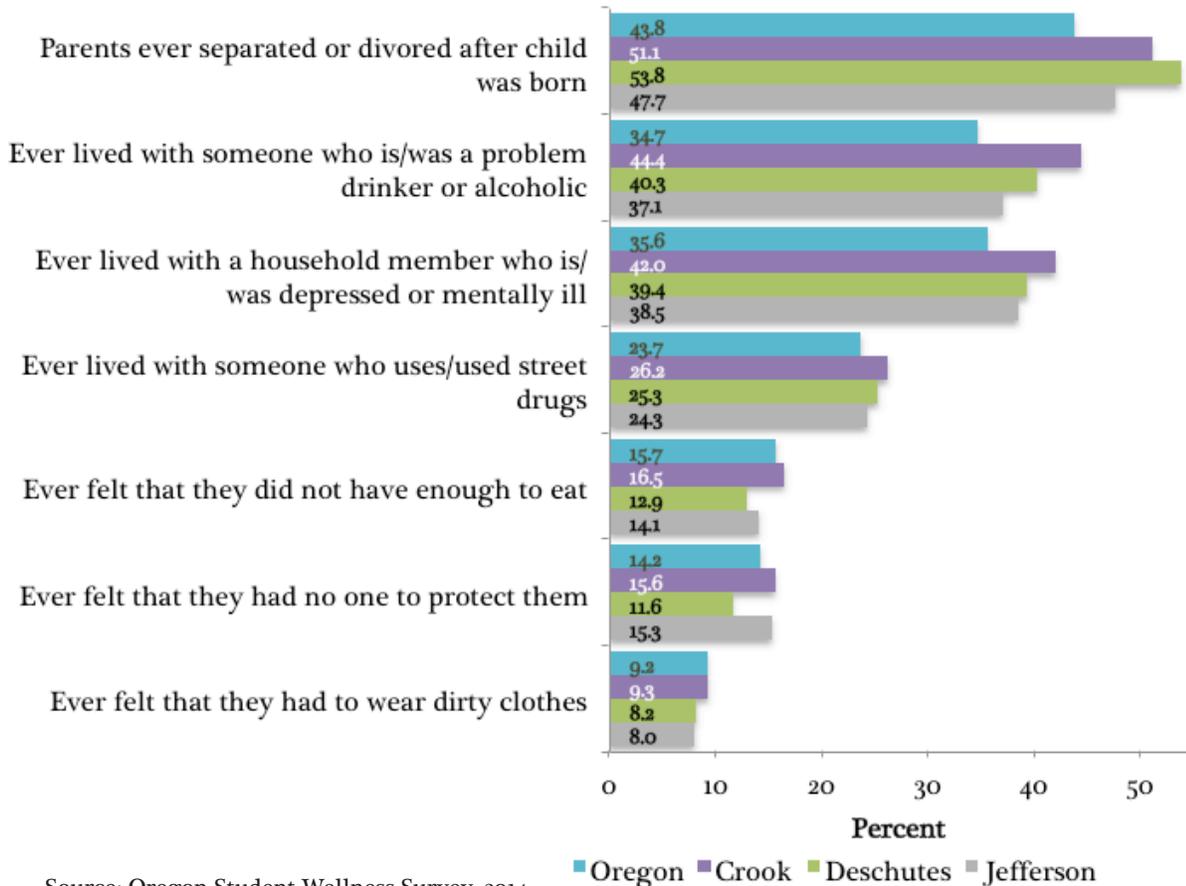


# Adverse Childhood Experiences (ACEs)

ACEs refer to physical, emotional, and sexual abuse, parental substance abuse, adult mental illness, a missing parent at home due to separation, divorce or incarceration, and intimate partner violence experienced before the age of 18 years. Research has shown that experiencing several ACEs, especially early in life, is associated with increased risk for chronic disease, substance abuse, poor mental health, and other risky health behaviors. Children in non-parental care, such as living with grandparents or in foster care, are particularly likely to have experienced a high number of ACEs compared to children living with two biological parents. These experiences may have contributed to their current living situation (CDC Data Brief, 2014). In order to prevent ACEs, families should be encouraged and supported in order to provide nurturing and supportive environments for children.

- Similar to the original ACEs study published in 1998, the most common ACEs during childhood in Oregon were (Oregon ACEs Report, 2012):
  - Living with someone who was a problem drinker or alcoholic, or using illegal drugs or abusing prescription medications
  - Having a parent or adult swear at, insult, or put them down more than once
  - Experiencing physical abuse
  - Living with a family member who has a mental illness
- 16% of Oregon adults reported 4 or more ACEs. In the original study, 12.5% of adults in the US reported 4 or more ACEs.
- Over a third (35.6% 95% CI 30.7%-40.9%) of adults enrolled in OHP in Central Oregon reported a high ACEs score (based on 11-point scale). For reference, one fifth of the total Oregon population reported a high ACEs score (MBRFSS, 2014).
- Youth in Central Oregon report elevated rates of Adverse Childhood Experiences, particularly for divorce, living with a problem drinker, and living in a household with mental illness (Oregon Student Wellness Survey, 2014). These experiences, reported by 11th graders, can occur anytime during childhood.

Figure 17. Percent of 11th graders in Central Oregon who report ACEs



Source: Oregon Student Wellness Survey, 2014

## Homelessness

- The Oregon Department of Education tracks the number of students who are homeless or in an unstable housing situation (Table 11).
- The percent of Homelessness was zero or undetectable in the very small districts of Ashwood and of Black Butte. It was also fairly low in Crook County and Sisters.
- Yet, nearly 1 in 5 students in the Culver School District in Jefferson County were homeless or in unstable housing situations at the time of survey.
- Most of the children who experience homelessness or unstable housing, however, attend schools in Bend La Pine or Redmond.

Table 11. Number and percent of students grades K-12 who were homeless or in an unstable housing situation, by school district, ODOE, 2013-2014

School District	Number	Percent
<b>Crook County</b>		
Crook	52	1.6
<b>Deschutes County</b>		
Bend-La Pine	650	3.9
Redmond	545	7.7
Sisters	30	2.6
<b>Jefferson County</b>		
Ashwood	0	0
Black Butte	0	0
Culver	126	18.6
Jefferson Co	114	3.9

# Child Abuse and Neglect

- A reported 480 children in Central Oregon were confirmed to have experienced abuse or neglect in 2014 (Table 12). The rate per 1,000 children is highest in Crook County (20.7), while the largest total number (345) of children abused and/or neglected resided in Deschutes County.

Table 12. Child abuse and neglect rates (confirmed) per 1,000 children less than 18 years, Oregon, DHS, 2014

	Oregon	Central Oregon	Crook	Deschutes	Jefferson
<b>Rate child abuse &amp; neglect</b>	11.6	10.5	20.7	9.5	9.6
<b>Number child abuse &amp; neglect</b>	10,010	480	84	345	51

The foster care system links children with temporary living arrangements during times when their biological parents cannot care for them. Children are often in foster care due to abuse and neglect. Other children are protected in their homes; in-home care includes case management, safety assessment, and additional wraparound family services (Oregon DHS, 2015).

- The percent of children living in foster care is lower in Central Oregon Counties, compared to Oregon, overall (Table 13).
- 73% of children received mental health, physical health, and dental appointments within 60 days of entering foster care (Pacific Source, May, 2015).

Table 13. Percent and number of children (<18 years) living in poverty, in foster care (Point-in-time) Child Welfare Data Book, 2014

	Oregon	Crook	Deschutes	Jefferson
<b>Number children in foster care</b>	7,599	54	161	34
<b>Percent children in foster care</b>	1.5	1.2	0.4	0.6

# Child and Family Support

Many children and families need extra support to help them overcome the barriers presented by the disparities in living conditions depicted earlier in this document. A few of the most common supports include Nutrition assistance (Supplemental Nutrition Assistance Program (SNAP); free or reduced lunch programs), cash assistance (Temporary Assistance for Needy Families (TANF), and child care subsidies (Employment-Related Daycare (ERDC)). These programs aim to provide support for low-income families and individuals and help them to become self-sufficient

- The WIC Program supports families with supplemental nutrition and promotes breastfeeding. In 2014, WIC served over 8,200 individuals in Central Oregon in 2015 (Table 14).
- Although a very high percentage of mothers enrolled in WIC initiate breastfeeding in Central Oregon Counties, the proportion decreases dramatically by 6 months after birth. This represents an area in which families may benefit from more or different types of support to facilitate longer breastfeeding durations.

Table 14. Percent of mothers enrolled in WIC who breastfeed and number of WIC clients served in Central Oregon, WIC County Data Reports, 2015

	Oregon	Crook	Deschutes	Jefferson
<b>Number of individuals served</b>	161,335	1119	5998	1116
<b>Percent initiated breastfeeding</b>	93†	91	95	91
<b>Percent still breastfeeding at six months</b>	N/A	33	44	35

†2013 data    N/A=data not available

- Families qualify for SNAP at 130% federal poverty level as well as by being engaged in employment-based activities. The state of Oregon serves 73% of those eligible. The percent of eligible served is 70% in Crook, 75% in Deschutes, and 99% in Jefferson Counties (Oregon Hunger, 2013-2014).
- The percent of students eligible for free or reduced lunch is substantially higher in Jefferson county (61%) than in Crook (54%), Deschutes (50%), or Oregon overall (51%) (Table 15).
- Between 26% and 32% of children live with food insecurity in Central Oregon (Table 15).
- The rate of available child care slots per 100 children is quite low in Crook County (21), which is only ½ as many slots as in Deschutes County (Table 15).

Table 15. Information related to child and family support, Oregon 2014

	Oregon	Crook	Deschutes	Jefferson
<b>Number in SNAP (Food stamps)</b>	285,063	1,696	11,125	3,025
<b>Number in TANF (Cash assistance)</b>	57,664	355	1,929	881
<b>Percent of children in food insecure house†</b>	25.9	32.1	26.5	30.1
<b>Percent of students eligible for free or reduced lunch</b>	51.1	54.1	50.3	60.6
<b>Number of children enrolled in employment related day care</b>	15,258	32	530	92
<b>Rate of available child care slots per 100 children under 13 years††</b>	17	10	20	19

<http://datacenter.kidscount.org>

†2013 data

††2010 data

# Early Care and Education

Children in Oregon attend various types of Early Care and Education (ECE) Programs. There are three primary types of licensed programs: Certified Centers (includes Head Start, preschools, center-based child care programs), Certified Family (larger home-based programs; up to 16 children), and Registered Family (small home-based programs; up to 10 children).

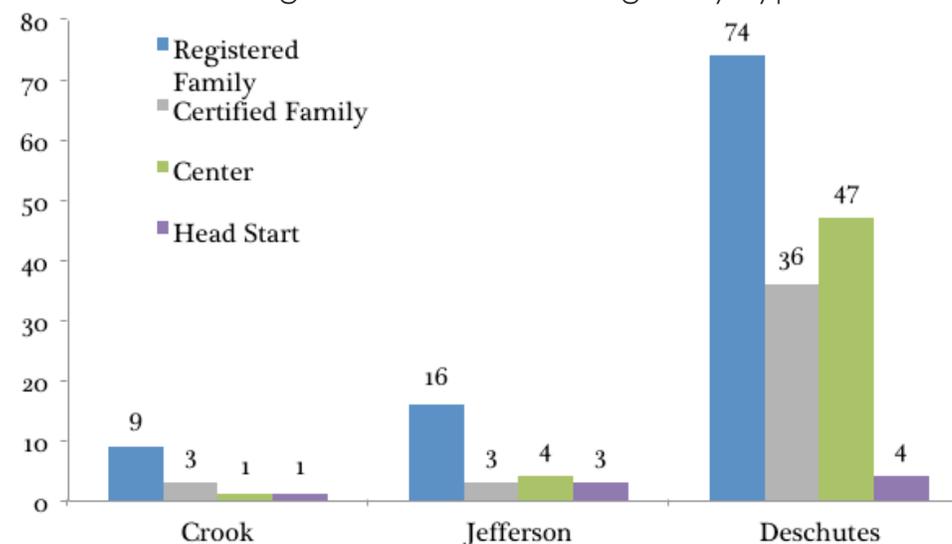
Additionally, children are cared for by providers who are exempt from licensing (e.g. Family, Friend, and Neighbor care). A recent national survey estimated that, “the majority of home-based providers are unlisted”; they are not licensed or otherwise monitored by the state (National Survey of Early Care and Education Project Team, 2016). Thus, the current document is not able to include these license-exempt or unlisted providers.

Prior research shows that the type, quality, and quantity of children’s ECE programs are important predictors of their school readiness outcomes (Pianta & the NICHD Early Child Care Research Network, 2007). This document includes information regarding type and quality.

## Types of ECE Programs

- The largest percentage of licensed ECE programs in Central Oregon are Registered Family providers (49%), followed by Certified Centers (26%), Certified Family (21%), and Head Start programs (4%) (QRIS Data Facts, 2016).
- The percent of licensed programs that are Registered Family providers is highest in Crook County (64%), followed by Jefferson (62%), and then Deschutes (46%).
- The percent of licensed programs that are Registered Family providers is highest in Crook County (64%), followed by Jefferson (62%), and then Deschutes (46%).

Figure 18. Number of ECE Programs in Central Oregon by Type and County



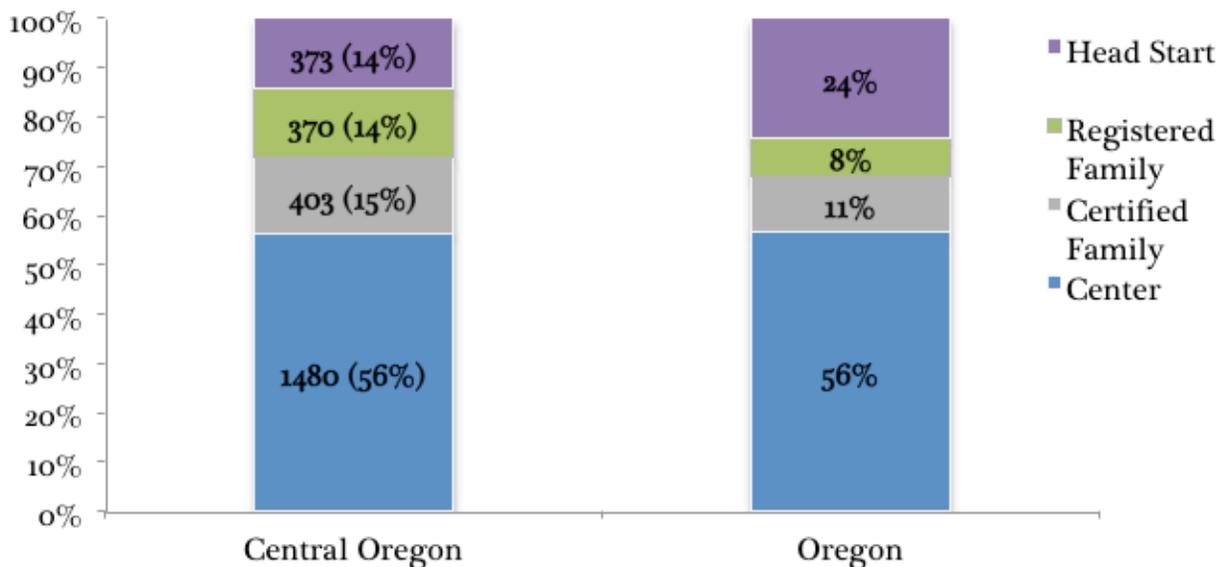
Source: Oregon’s Quality Rating and Improvement System County Data Facts, 2016

# Children Served in ECE Programs

Two primary sources of information are available to estimate the number of children serviced by ECE programs: parent-report via the American Community Survey, and enrollment numbers tracked through administrative records. Administrative records have the advantage of being precise and delineated by type of program, but they are limited to children attending licensed programs. Parent-report is advantageous because it can include unlicensed programs, and can be linked with children's race/ethnicity, but does not specify type of program.

- Administrative records show that the majority (56%) of children in Central Oregon who attend licensed ECE programs are served in Centers. This mirrors the estimate for Oregon overall (Figure 19).
- Compared with the state overall, a higher percent of children in Central Oregon attend registered family providers, and a substantially lower percent attend Head Start (Figure 19).

Figure 19. Children served in Licensed ECE by Program Type



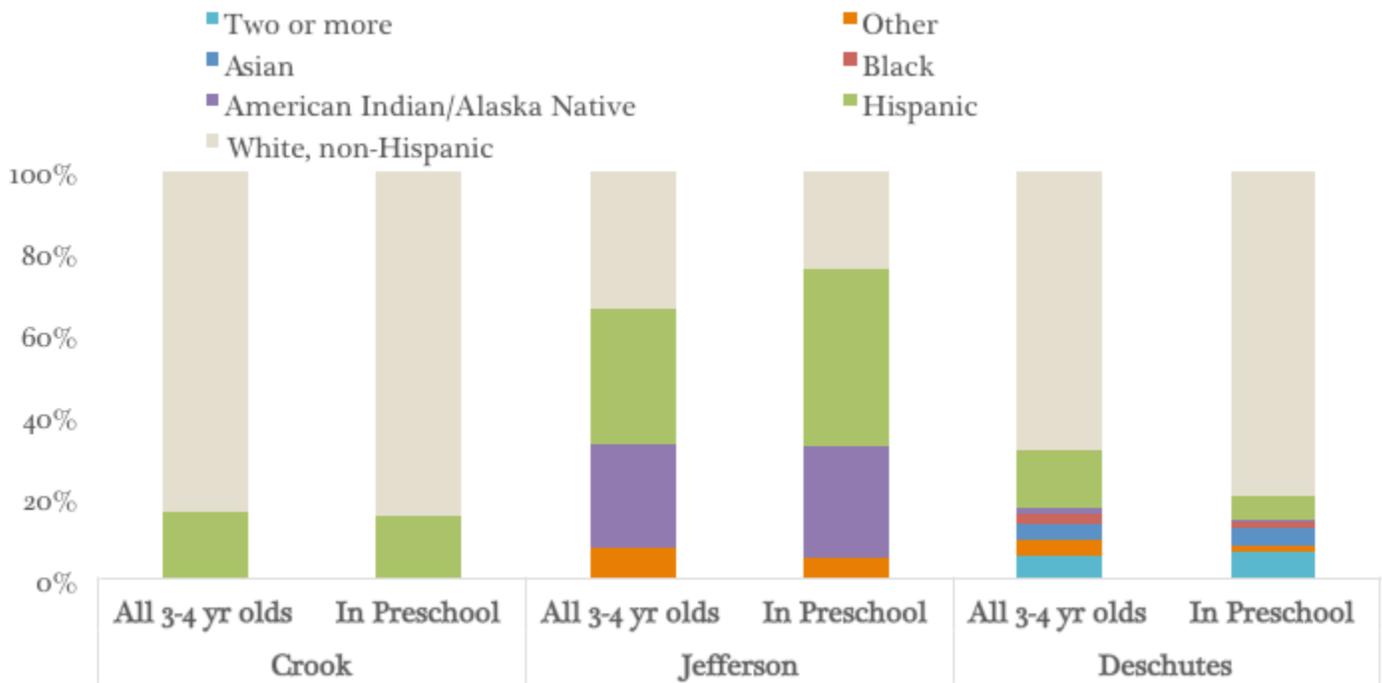
Source: Oregon's Quality Rating and Improvement System County Data Facts, 2016

- According to parents' reports, children in Central Oregon attend ECE at lower rates than the state of Oregon overall. An estimated 37%, 39%, 26% of 3 and 4-year-olds were enrolled in early education in Crook, Deschutes, and Jefferson Counties, respectively. The frequency was 41% in Oregon (Children First for Oregon, 2015).
- The American Community Survey provides estimates of preschool participation by race/ethnicity and county. Parents of children were asked whether each of their children had attended any school during the current term or school year, including "nursery or preschool". Figure 20 shows the percent of the children reported to have been attending preschool or nursery school from each race/ethnicity, by county. Presented along side these estimates are the percentages of all children ages 3-4 years of age (the age range most closely aligned with preschool) for comparison. The estimates for preschool attendance were not reported as a direct subset of all 3-4 year old children. Yet they do provide a general picture of differences in preschool attendance by race/ethnicity, compared with the race/ethnic makeup of similarly aged children in each county.

# Children Served by ECE programs continued

- Deschutes County shows a higher percentage of White children attending preschool than White children ages 3-4 years old in the county. Jefferson County shows a higher percent of Hispanic children attending preschool than Hispanic children ages 3-4 years in the county (Figure 20; American Community Survey, 2010-2014).

Figure 20. Parent-report of children attending preschool by race/ethnicity.



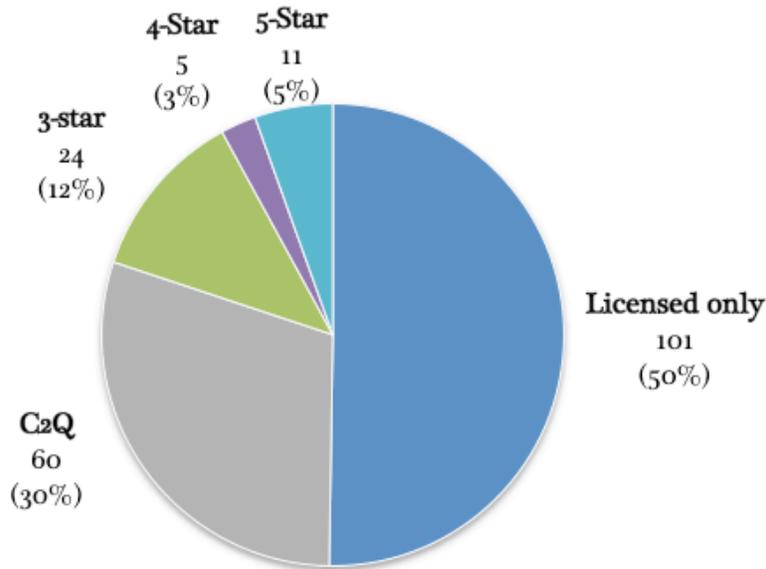
Source: 2010-2014 ACS

## Quality of ECE Programs

Oregon uses a Quality Rating and Improvement System (QRIS) to document the quality of licensed ECE programs. The QRIS starts with licensing, and then moves to Commitment to Quality (C2Q), and 3-star, 4-star, and 5-star ratings. To achieve a star-rating, programs must submit evidence that they meet standards in five domains: Learning and Development, Health and Safety, Personnel Qualifications, Family Partnerships, and Administration and Business Practices. Participation in the QRIS beyond the licensed only level is voluntary. The C2Q category represents providers who have attended training about the QRIS but have not yet submitted documentation of meeting the standards for a star rating. Thus, the quality of the programs at the “licensed only” and the “C2Q” levels is unknown; it is not necessarily low. To learn more about Oregon’s QRIS see <http://triwou.org/projects/qrisc>

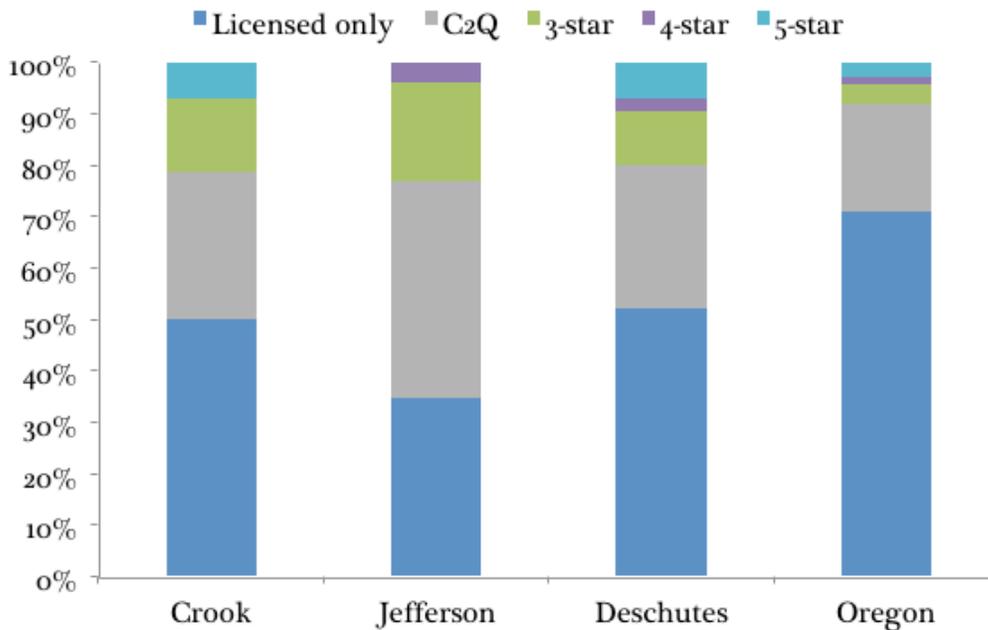
- Approximately ½ of licensed ECE programs in Central Oregon overall are participating in the QRIS, at the C2Q level or higher (Figure 21). The percent of licensed programs participating at the C2Q level or higher is highest in Jefferson County (Figure 22).
- Only 20% of licensed ECE programs in Central Oregon have achieved a 3-star rating or higher (Figure 21). Although this is a higher percentage than the state overall (Figure 22), it reveals substantial room for improvement.

Figure 21. Quality Ratings of ECE Programs in Central Oregon



Source: Oregon’s Quality Rating and Improvement System County Data Facts, 2016

Figure 22. Quality Ratings of ECE Programs by County



Source: Oregon’s Quality Rating and Improvement System County Data Facts, 2016

# Educational Outcomes

Three overarching measures of children’s educational outcomes include: school readiness upon entry to Kindergarten, proficiency during elementary school (particularly 3rd grade reading), and graduation from high school.

## School Readiness

In Oregon, children’s school readiness is measured by the Kindergarten Assessment (KA). The Oregon KA measures children’s skills in three areas: approaches to learning (social skills and self-regulation), literacy (letter names and letter sounds), and math (numbers and early operations). Approaches to

*The Kindergarten Assessment reflects children’s experiences and skills upon Kindergarten entry. It does not indicate the quality of Kindergarten instruction.*

Learning is rated by teachers on a modified version of the Child Behavior Rating Scale (CBRS; Bronson, Tivnan, & Seppanen, 1995). The CBRS uses a scale from 1 (never) to 5 (always) with higher scores representing more skills. Literacy and math are measured by the easyCBM testing and assessment system (Anderson et al., 2014). Literacy is assessed as the number of letter names, and letter sounds a child can identify within 1 minute each, and math is assessed by the number of questions answered correctly, out of 16. For more information about the Oregon Kindergarten Assessment see <https://oregonearlylearning.com/kindergarten-assessment/>

Since the KA is conducted within the first few weeks of school it reflects children’s experiences and skills around the time they enter Kindergarten. It does not reflect the quality of their Kindergarten experiences.

## Overall Kindergarten Readiness

On average, Kindergarten Assessment (KA) scores for Central Oregon are slightly above scores for the State of Oregon, and fairly stable over time.

Table 16. Kindergarten Assessment scores for Central Oregon (CO) and Oregon

Year	Approaches to Learning		Math		Literacy			
	OR	CO	OR	CO	Letter Names		Letter Sounds	
	OR	CO	OR	CO	OR	CO	OR	CO
2013	3.6	3.6	8	8.5	18.5	19.8	6.7	7.36
2014	3.7	3.6	8	8.5	17.7	19.8	6.6	7.6
2015	3.6	3.6	8.5	8.8	18.5	20.1	7.4	8.4

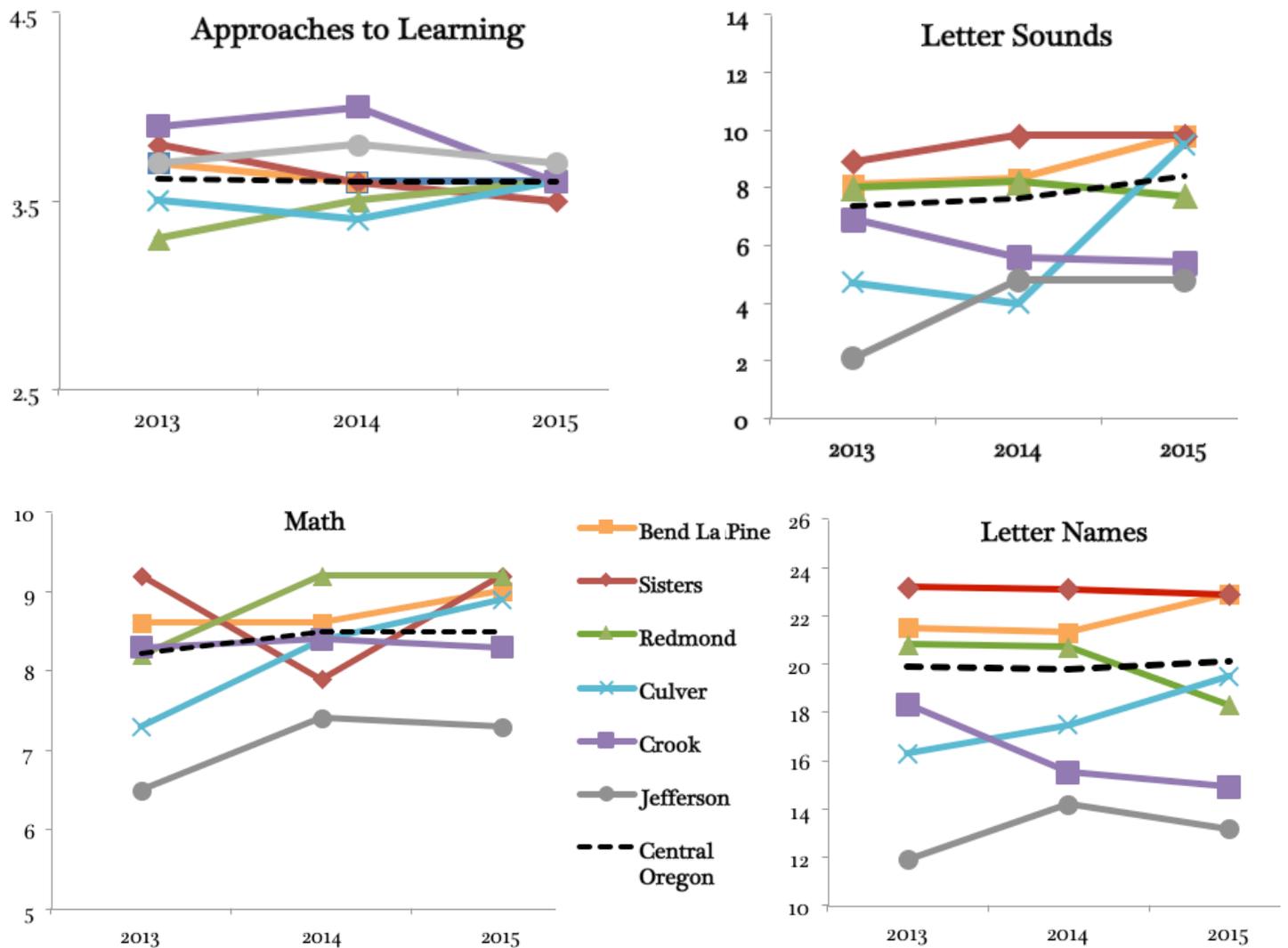
Source: Oregon Department of Education

# Trends in Kindergarten Readiness by Location

Kindergarten Assessment (KA) Scores in some districts are improving; others are not. Scores for approaches to learning do not vary much by district or year. The following summarize the trends in literacy and math in the school districts within Central Oregon from 2013 to 2015 (Oregon Department of Education, 2013-2015).

- Crook: KA scores are low and decreasing in literacy and average in math.
- Jefferson: KA scores are low in literacy and math but improved from 2013-2014.
- Culver: KA scores were low in 2013 but improved by 2015.
- Redmond: KA scores improved in math but declined in literacy.
- Bend La Pine: KA scores improved in math but declined in literacy.
- Sisters: KA scores are above average, with a slight increase in literacy and math.
- Sisters: KA scores are high in literacy but somewhat unstable over time in math.

Figure 23. Oregon Kindergarten Assessment 2013-2015



Source: Oregon Department of Education

# Kindergarten Readiness Continued

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*Kindergarten Assessment scores reveal differences in children's early life opportunities and conditions.*

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Kindergarten Assessment scores vary substantially across school catchment areas within the same district.

- For example, ½ of the schools in the generally more advantaged Bend-La Pine school district have letter sounds scores below not only the district average (9.8) but also the Central Oregon average (8.4).
- Related work shows that Oregon's KA scores vary much more from one school catchment area to the next than across districts and counties. (Lipscomb, Miao, Finders, Pears, Kothari, & Hatfield, 2015).

## Kindergarten Readiness by Race/Ethnicity

Racial/ethnic gaps in Kindergarten Assessment (KA) scores across Central Oregon are substantial. Without clear benchmarks for proficiency, it is impossible to estimate the percentages of children from each race/ethnic group meeting expectations so their scores must be compared with one another. Because White children comprise the overwhelming majority of the population in Central Oregon, their scores drive the averages and overall trends. Looking forward toward 3rd grade reading and other proficiencies it is clear that improvements must be made in across all race/ethnic groups, in order to improve outcomes later on. The following summarize overall trends in KA scores by race/ethnicity. Figures showing trends for each

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*The largest differences in Kindergarten Assessment scores in Oregon exist across school catchment areas within the same district.*

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*Kindergarten Assessment scores show sizeable disparities by race/ethnicity and location, and a hint of improvement over time*

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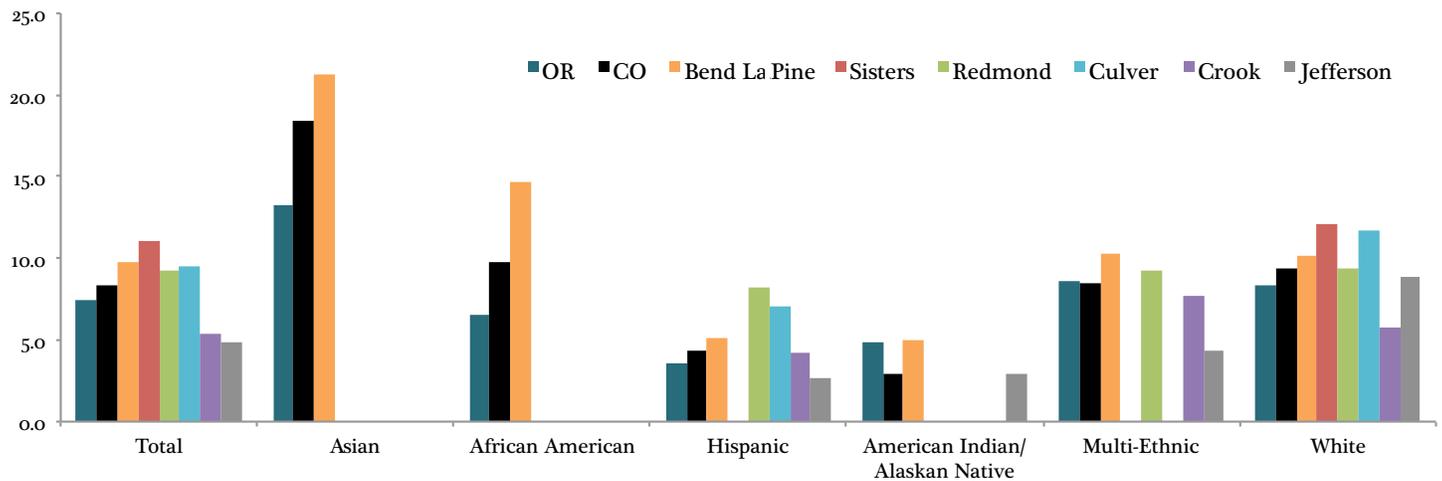
race/ethnic group can be obtained at [cohealthcouncil.org/regional-assessments](http://cohealthcouncil.org/regional-assessments). Specific numbers are also available from the Oregon Department of Education website: <http://www.ode.state.or.us>

- Asian children show strong scores in all areas.
- Hispanic and American Indian children are rated by teachers about average in approaches to learning but score low in literacy and math.
- African American children score about average in literacy, and have improved in math and approaches to learning, which were low in 2013-2014.
- Children from multiple race/ethnic backgrounds score about average in all areas, with a slight decline over time.

Differences in KA scores by race/ethnicity vary by location. Figure x depicts some of these patterns using Letter Sounds as an example. More specifics are available from the Oregon Department of Education website: <http://www.ode.state.or.us>

- Hispanic children score higher in Redmond (on letter sounds) or Culver (on letter names and math). They consistently score lower in Jefferson.
- American Indian children score higher in Bend-La Pine than in Jefferson, although the number of American Indian children in Bend-La Pine is quite small.
- White children score lower in Crook (on letter names and letter sounds).
- Multi ethnic children score higher in Bend La Pine (on letter names and letter sounds).
- African American and Asian children score above state and regional averages. They are all in Bend La Pine.

Figure 24. Letter sounds kindergarten assessment scores by district



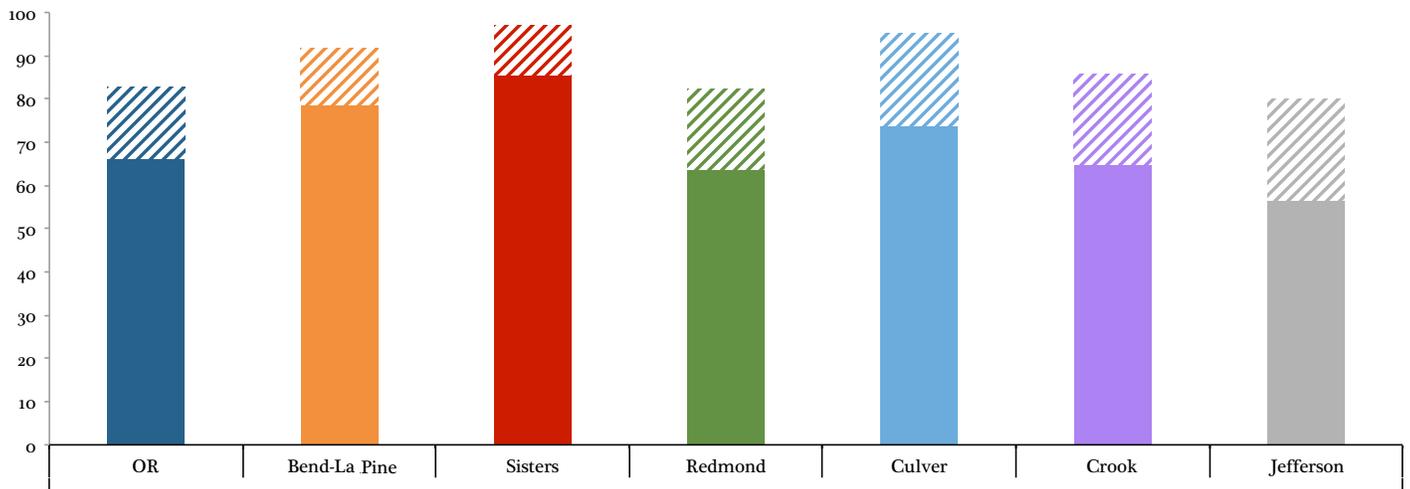
Source: Oregon Department of Education, 2013-2014. Dotted line represents the Central Oregon average. Sample size for some of these groups within districts are very small. They are presented to illustrate a pattern only.



# Reading, Math and Science Proficiency

- Across school districts in Central Oregon, 80-97% of 3rd grade children either “meet or exceed” or “nearly meet” proficiency in reading (Figure 25). Of these, 12 - 24% “nearly meet”. Such substantial percentages of children nearly meeting proficiency represents an important opportunity. With additional support it is likely these children could reach proficiency, greatly improving the overall proficiency rates for Central Oregon.
- 3rd grade reading proficiency varies greatly by school district. In Central Oregon, Redmond, Jefferson, and Crook districts all have < 70% of children meeting or exceeding proficiency (Figure 25).

Figure 25. Percent of children who “meet or exceed” (solid) or “nearly meet” (striped) 3rd grade reading proficiency



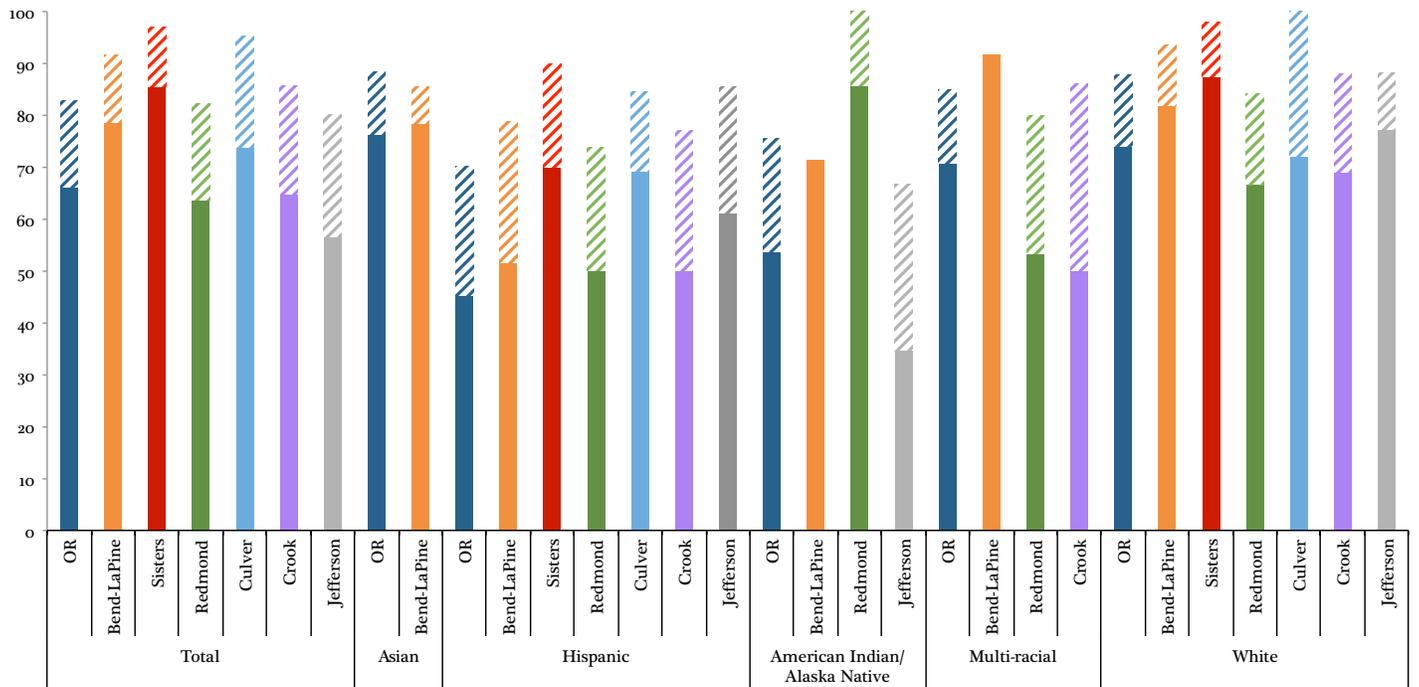
Source: Oregon Department of Education 2013-2014

*3rd grade reading scores show continued disparities, but also opportunity.*

*Large percentages of children “nearly” meet proficiency.*

- Racial/ethnic gaps in 3rd grade reading scores are sizeable, but they also vary by district.
- The following groups have approximately 50% or fewer children meeting or exceeding 3rd grade reading proficiency: Hispanic children in Bend-La Pine, Crook, and Redmond; American Indian/Alaska Native children in Jefferson, and Multi-racial children in Crook.
- Figure 20 highlights both disparities and opportunities. The districts and race/ethnic groups with the lowest percentages of children meeting or exceeding proficiency also have the largest percentages of children who “nearly” meet proficiency.
- Writing skills are 39%, 64%, and 41% for Crook, Bend-La Pine, and Jefferson, respectively (ODE, 2014).

Figure 26. Percent of third grader who “meet or exceed” (solid) or “nearly meet” (striped) reading proficiency for their grade level in Central Oregon by Race/Ethnicity and District.

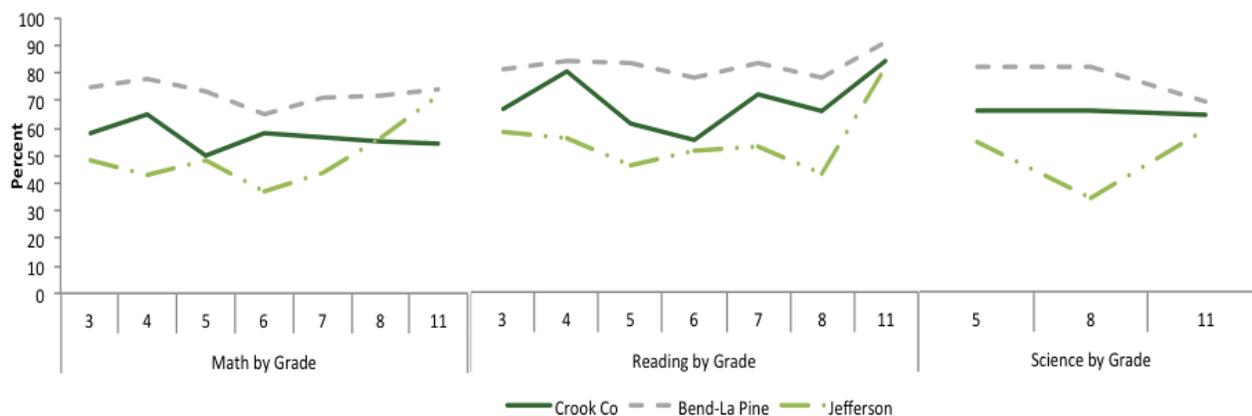


Source: Oregon Department of Education, 2013-2014.

*The districts and race/ethnic groups with the lowest % of children meeting proficiency also have the largest % of children who nearly meet proficiency.*

- Overall, across grades, Bend-La Pine schools has consistently had a higher percent of students meeting or exceeding standards in reading, math, and science than the other Central Oregon school districts (Figure 27).
- In Central Oregon, 72% of 3rd graders meet or exceed reading standards and 68% of 8th graders are math proficient (ODE, 2013-2014).

Figure 27. Percent of students that meet or exceed standards for math, reading, science by grade, Central Oregon, ODE, 2014



## High School Graduation

- The percent of students graduating from High School in four-years for Central Oregon (67.6%) is lower than the percent for Oregon (72%). The percentages for those graduating within five-years are nearly identical (ODE, 2013-2014). These estimates vary substantially by school district (Table 17).
- The proportion of students graduating from High School within four years is substantially lower for students who are economically disadvantaged (59%) or are from a racial or ethnic minority (53%) ([Better Together Baseline Report, 2015](#)).

Table 17. Percent of students who graduate high school in four and five years, by Central Oregon school district, ODE, 2013-2014

School District	4 year percent	5 year percent
<b>Oregon</b>	72	75.9
<b>Central Oregon</b>	67.6	76.9
<b>Crook County</b>		
<b>Crook</b>	30.5 <sup>§</sup>	53.7
<b>Deschutes County</b>		
<b>Bend-La Pine</b>	77.2	82
<b>Redmond</b>	70.5	75.2
<b>Sisters</b>	82.8	90.9
<b>Jefferson County</b>		
<b>Ashwood</b>	100	--
<b>Culver</b>	76.6	88.9
<b>Jefferson Co</b>	57.5	75.9

§ May be artificially low due to an error when the data were reported

Although the percent of students graduating from High School within 4 years in Jefferson is quite low (58%), the percent graduating within 5 years is dramatically higher and is equal to the state average (76%).

# Summary and Interpretation

Data presented in this Regional Health Assessment (RHA) Expansion are being used to guide efforts to improve the health, well-being, and education of children in Central Oregon. The Early Learning Hub and its partners employ both universal and targeted strategies. Targeted strategies focus on two overlapping populations of children: a) children from low-income families (< 200% of the FPL) and b) children of color (all children except White-non-Hispanic).

The patterns in the data from the RHA Expansion can be summarized from either a deficit or an opportunity perspective. This integrative summary focuses on opportunities, and aims to inspire and inform change to better support children and families to maximize their potential.

## Key themes from the data are as follows:

- Sizeable proportions of the children who are not yet reaching intended educational outcomes (e.g. 3rd grade reading proficiency and graduating High School within four-years) are nearly there. With additional and/or more effective supports these children have the potential to reach these outcomes, which could dramatically improve the overall educational outcomes of the region.

For example, although the proportion of students who graduate from High School within four years in Jefferson County is only 58%, children and the adults who support them stick with it, evidenced by 76% graduation within 5 years, which is equivalent to the state average.

In the face of pervasive low-income and low education in Crook and Jefferson Counties over ½ of 3rd graders meet or exceed reading proficiency, and close to another ¼ “nearly meet” proficiency. Similar trends exist in other areas with high rates of low-income and/or education (e.g. Redmond), as well as among children of color. Large percentages of children are almost within grasp of a key educational benchmark.

The districts and race/ethnic groups with the lowest percentages of children meeting 3rd grade reading proficiency are also those with the largest percentages of children “nearly meeting” proficiency.

# Key themes from the data continued:

- Disparities by race/ethnicity vary by location (e.g. county, district, and/or school). This suggests that more vs. less effective strategies exist right here within Central Oregon.

Approximately 70% of young Hispanic children come from low-income families in each of the three counties, yet their Kindergarten Assessment (KA) scores and 3rd grade reading scores vary substantially by location. KA scores, which reflect children's early life experiences and opportunities, are highest for Hispanics living in Culver and Redmond. 3rd grade reading proficiency for Hispanics is highest in Sisters, Culver, and Jefferson.

Kindergarten Assessment scores are improving in some groups and/or locations. Since this assessment is new it is difficult to gauge the stability of such trends but if they continue they would help to identify areas in which successful strategies are underway.

Despite nearly pervasive low-income and education in Jefferson County, White children in Jefferson score consistently better on the Kindergarten Assessment and 3rd grade reading than do White children in Crook County. They often parallel the state and regional averages. The reasons for this remains unknown. Income and education among White families in Jefferson are similar to those among White families in Crook. Crook County, however, has higher percentages of risks such as maternal smoking and adverse childhood experiences (living with problem drinker/alcoholic, child abuse and neglect, living with adult with depression or mental illness). Crook also has higher prevalence of food insecurity, smaller percentages of those eligible being served by SNAP, and fewer child care slots per 1,000 children. Future work should examine how addressing these concerns in Crook County might bolster children's learning and development. Looking to effective strategies in Jefferson County, which has similarly high levels of low-income and education, might be informative.

- The county with the largest percentages of children of color struggling on educational outcomes (Jefferson) has strengths to draw upon. Jefferson County has much more racial and ethnic diversity than Crook and Deschutes. This is due, in part, to the Warm Springs Native American Tribes that are located partially within Jefferson County. In Jefferson County, approximately 1/3 of the young children are Hispanic, 1/3 White, and 1/3 either American Indian/Alaska Native (24%) or Other (11%).

Strategic efforts could consider how to utilize this relatively balanced racial/ethnic diversity as a key strength. For example, efforts to recruit and retain people of color from within the community in both leadership and direct service positions would help to ensure that services, supports, and education are culturally responsive, and to provide successful role models for young people.

Evaluation of the current status of such efforts are beyond the scope of the current document. Yet data presented here are suggestive of inequities in children's early life opportunities.

White children in Jefferson County score similarly to Central Oregon averages on both the Kindergarten Assessment and 3rd grade reading. Children of color in Jefferson County do not; American Indian/Alaska Native children particularly struggle. Future efforts must closely investigate the sources and potential solutions of these inequities, drawing upon the strengths of the racial and ethnic groups within Jefferson County.

- The county with the largest numbers of children and families with low-income and/or of color (Deschutes) is also the most affluent. Although Jefferson and Crook have larger proportions of children from low-income than Deschutes, Deschutes County is home to the largest numbers of children from low-income homes. Given that Deschutes County is home to 66% of the young children of color and 69% of young children in low-income in Central Oregon, Deschutes County must also be a priority.

Future work should examine how the lower percentage of low-income in Deschutes County could be leveraged to reduce low-income among children of color and improve their outcomes. Why is the percent of children from low-income homes among Hispanic children just as high in Deschutes as it is in Jefferson and Crook counties when the overall percent of low income in Deschutes is much lower?

Deschutes County also has a higher proportion of adults with higher educational attainment among all race/ethnic groups than Jefferson and Crook Counties. Future work could consider how this strength could be utilized to address concerns such as low 3rd grade reading scores in Redmond, and that ½ of elementary catchment areas in Bend-La Pine have literacy scores on the Kindergarten Assessment below the average of the entire region.

- High proportions of pregnant women receiving prenatal care mean that young children and families are connected with professionals who could help link them with supportive services before children are even born. There is much work to be done, however, given trends such as fewer than 75% of mothers reporting that their health care professionals discussed topics with them such as HIV testing, depression, using alcohol, smoking, and abuse. Timeliness of prenatal care in Jefferson is also a concern.



# Implications

Addressing children’s health, well-being, and educational outcomes requires improving their early life conditions. Efforts must support the adults that children live with to help them build resilience in the face of adversity, and they must do so in a way that is culturally responsive, and accessible to those with low education.

Evidence increasingly points toward “two-generation approaches” that support both children and their families (Aspen Institute, 2013; Schmit, Matthews, & Golden, 2014). A true two-generation approach involves substantial investment in parents/caregivers as both workers and parents. This involves supporting parents/caregivers to advance their education and careers, goals not often aligned with early learning and/or health promotion efforts. Although challenging, two generation approaches hold great promise in light of consistent evidence that “parent and child well-being are inextricably linked” (Schmitt et al., 2014).

The goals and strategies of the Early Learning Hub (Appendix) are closely aligned with the child health, well-being, and education outcomes summarized in this RHA Expansion. They are also consistent with several aspects of a two-generation approach. Goal 1 is focused on improving the early childhood system, including accessibility and partnering with culturally-specific community-based organizations. Goal 2 is targeted directly toward improving children’s early learning opportunities, and Goal 3 strives to support families so they in turn can best support their children. Data presented in this RHA Expansion highlights a remarkable ongoing need, and reveals key opportunities for improvements in all three of these ambitious goals.

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