Appendix – The 2017 Regional Health Assessment Midpoint Data Update

What is the 2017 Regional Health Assessment (RHA) midpoint data update?

The RHA midpoint data update is an appendix to the 2015 Central Oregon Regional Health Assessment. The update is not a comprehensive community assessment; rather, it serves as a data update to the existing 2015 RHA.

Data updates are provided for each major section of the 2015 RHA. An introductory section, summarizing major changes or concerns, is also included. Indicators from the 2016-2019 Regional Health Improvement Plan (RHIP) and Oregon Public Health Modernization are also highlighted throughout the document.

What is a health assessment?

A health assessment is a snapshot of the health of a community at a point in time. It describes a variety of health topics, as well as social and economic factors that influence health. These comprehensive reports are intended to guide communities and organizations to strategically address health-related issues with partners working together to maximize the use of resources and target populations most at risk. Assessing the health of a community or region is an ongoing process that involves not only monitoring population health, but also measuring progress toward improving it.

How do I use the RHA and RHA update?

Stakeholders gather regularly and deliberate about how to best address issues that have been described in the RHA. The RHA is a resource to ground deliberations in data and to focus resources on important health issues for which effective services, programs, and interventions can be applied. The RHA is not an exhaustive collection of health indicators for our region. Readers are encouraged to dig deeper and use additional information as Central Oregon health partners continue to construct a more in-depth understanding of the health of the population.

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Demographics

Demographics Section Highlights

Since the 2015 RHA was published:

- The population sizes of Crook, Deschutes, and Jefferson Counties have all increased. Of the three Central Oregon counties, Jefferson County was the fastest growing county by percentage.
- Median annual household income increased by $1,014 and $2,993 in Deschutes and Jefferson Counties, respectively, and decreased by $1,659 in Crook County.
- The percentage of residents who own their homes decreased in Crook and Deschutes Counties, but increased in Jefferson County.
- The percentage of students who experienced homelessness increased in Crook County, but decreased in Deschutes and Jefferson Counties as a whole. The Sisters school district in Deschutes County had an increase in the percentage of students experiencing homelessness.

Population

Table 1. Population of Central Oregon counties, American Community Survey (ACS), 2015

	Oregon	Crook	Deschutes	Jefferson
2015 Population	3,939,233	20,956	166,622	22,061
Population change from 2010 to 2015	4.7%	-2.6%	7.8%	1.9%
Population change from 2013 (estimate used for the 2015 RHA) to 2015	0.2%	0.7%	0.4%	4.3%

Figure 1. Age group characteristics of Central Oregon counties, ACS, 2015

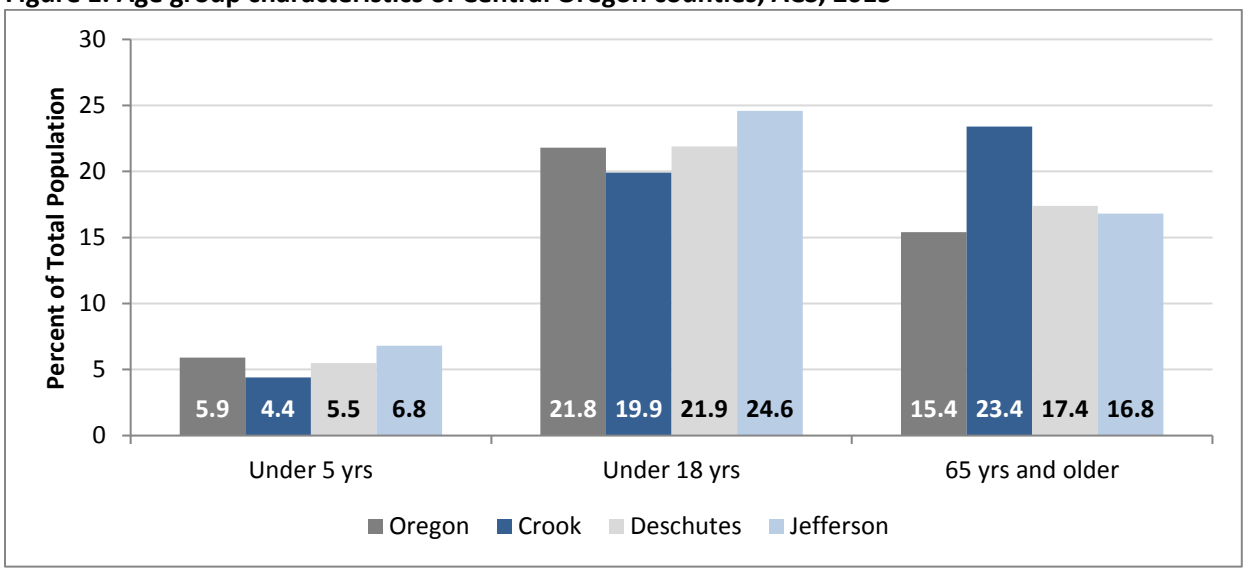


Figure 2. Race characteristics of Central Oregon Counties, ACS, 2015.

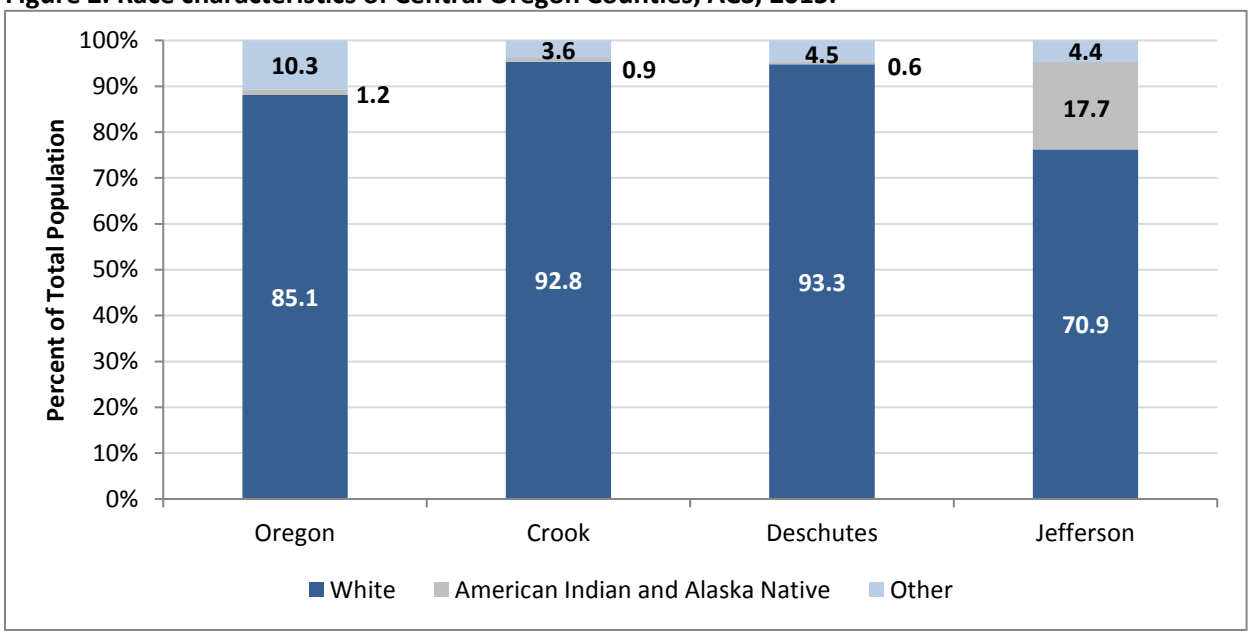


Figure 3. Ethnicity characteristics of Central Oregon counties, ACS, 2015.

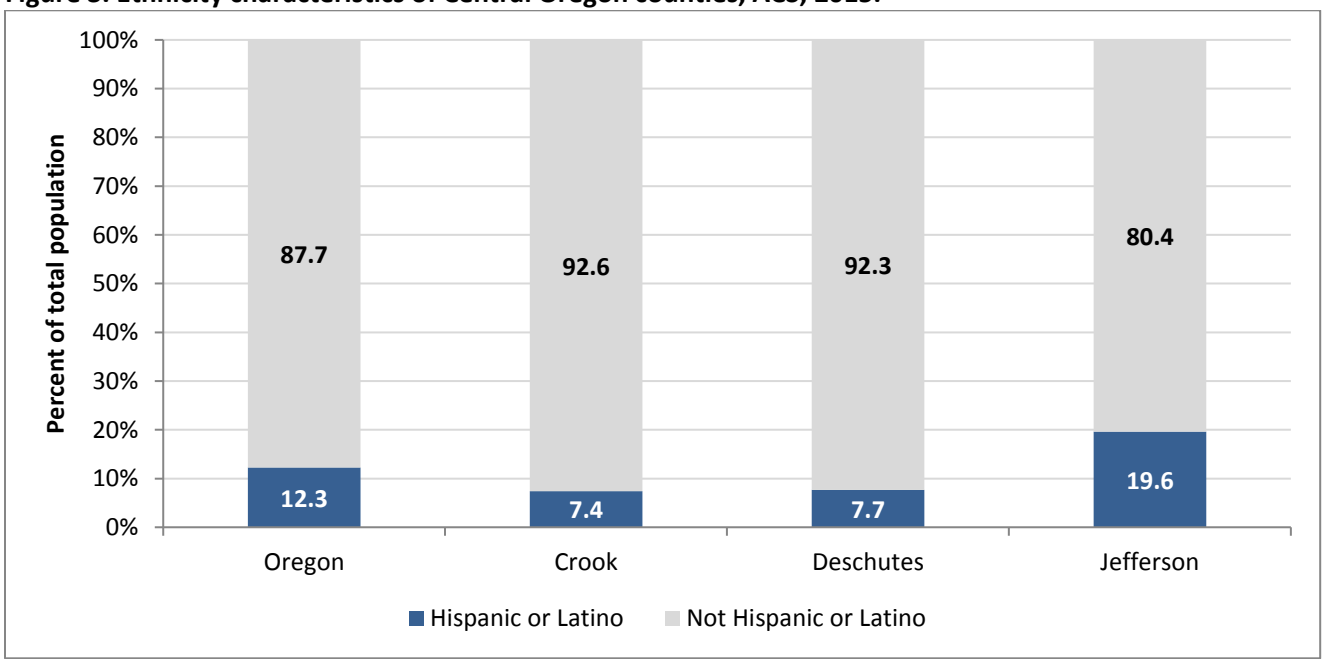


Table 2. Socioeconomic status of Central Oregon counties, ACS, 2015				
	Oregon	**Crook**	**Deschutes**	**Jefferson**
Household income				
Median household income	$51,243	$37,106	$51,223	$46,366
Percent owning their home	61.3	68.7	64.7	66.8
Poverty				
Percent of persons below poverty level	16.5	19.4	14.6	20.5
Education				
Percent Bachelor's degree or higher (among people aged 25+)	30.8	15.5	32.6	16.0
Percent high school graduate or higher (among people aged 25+)	89.8	87.1	93.5	83.9
Employment				
Unemployment rate	9.3	13.5	9.4	14.4
WIC enrollment*				
Number of families served	N/A	695	3,364	647
Percent of families with at least one wage-earning family member	N/A	64	75	78

*WIC data from local WIC agency fact sheets (2016).

Table 3. Percent of the population living with a disability, ACS 5-year estimates, 2011-2015				
	Oregon	**Crook**	**Deschutes**	**Jefferson**
Total, non-institutionalized population	14.4%	21.9%	12.6%	16.9%
Sex				
Male	14.5%	23.6%	13.6%	18.1%
Female	14.3%	20.3%	11.6%	15.8%
Ethnicity/Race				
White, non-Hispanic	15.6%	23.0%	13.4%	20.4%
Hispanic (of any race)	8.3%	10.5%	5.5%	9.3%
Age Group				
<18	4.6%	7.7%	4.8%	3.4%
18-64	12.2%	19.3%	9.9%	16.0%
65+	37.6%	40.4%	32.1%	40.4%

Homelessness

The 2017 Central Oregon Point-in-Time homeless count occurred on January 25th, 2017. Results indicated 778 people experienced homelessness in Central Oregon, which was a 31% increase compared to the last full count in 2015. The primary reported causes of homelessness were the inability to pay rent and unemployment (Central Oregon Homeless Leadership Coalition, 2017). The Central Oregon Point-in-Time homeless count included those living in weekly motels, shelters, or transitional housing; those "doubled up" with other families; or those camping/sleeping in cars or other places not designed for human habitation.

Table 4. Number and percent of students grades K-12 who were homeless or in an unstable housing situation, by school district, Oregon Department of Education, 2015-2016		
School District	**Number of students**	**Percent of district enrollment**
Crook County		
Crook	84	2.8
Deschutes County		
Bend-La Pine	579	3.3
Redmond	393	5.3
Sisters	38	3.5
Jefferson County		
Ashwood	0	0
Black Butte	0	0
Culver	53	7.7
Jefferson Co	77	2.6

For data in the above table, homeless students are defined as those lacking a "fixed, regular, and adequate nighttime residence." This might include residence in an emergency shelter, transitional housing unit, shared housing, or motel, among others.

Causes of Death and Quality of Life

Causes of Death Section Highlights

Since the 2015 RHA was published:

- Age-adjusted all-cause mortality rates increased in Crook County but decreased in Deschutes and Jefferson Counties.
- In Central Oregon, life expectancy of American Indian/Alaska Natives was still significantly lower than total life expectancy in the region. Life expectancy of Hispanic Central Oregonians is now significantly higher than total life expectancy in Central Oregon.
- The percentage of adults who reported excellent, very good, or good general health decreased in Jefferson County.

Figure 4. Age-adjusted all-cause mortality rate per 10,000 population by race and ethnicity, OPHAT, 2011-2015

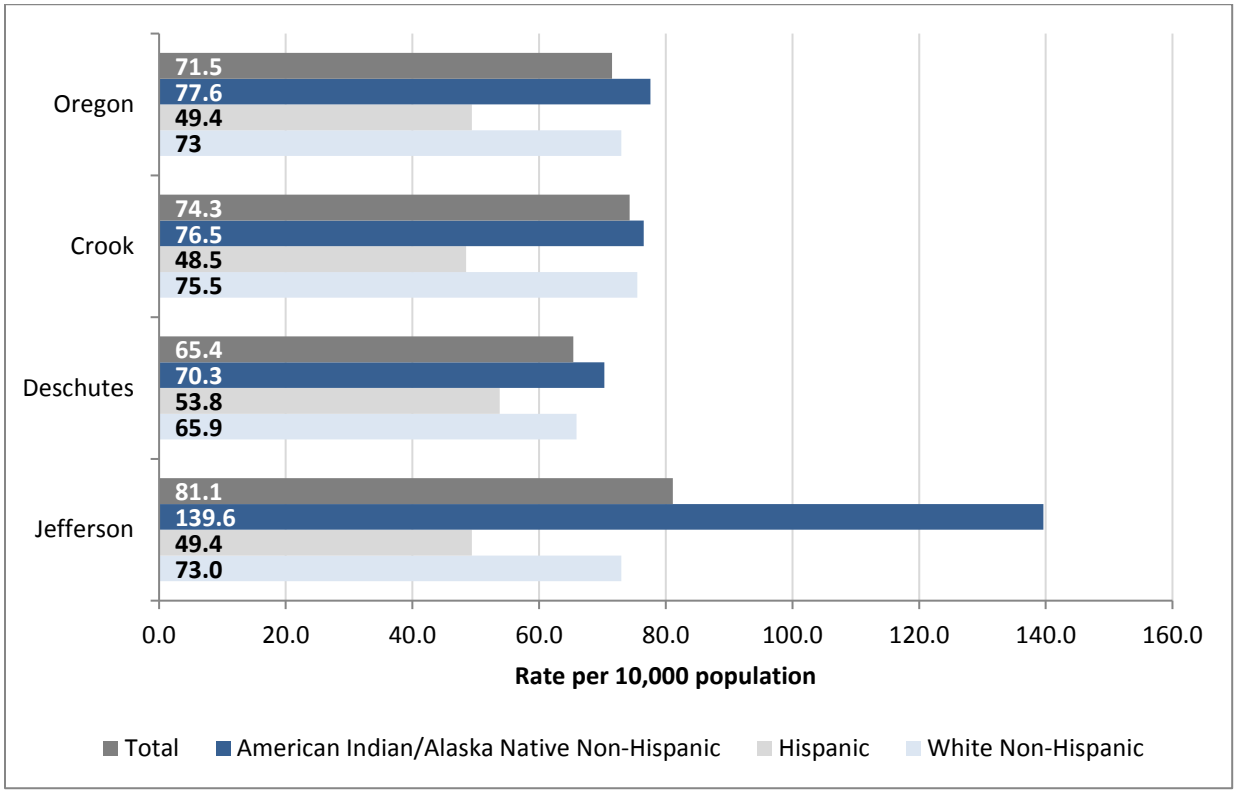
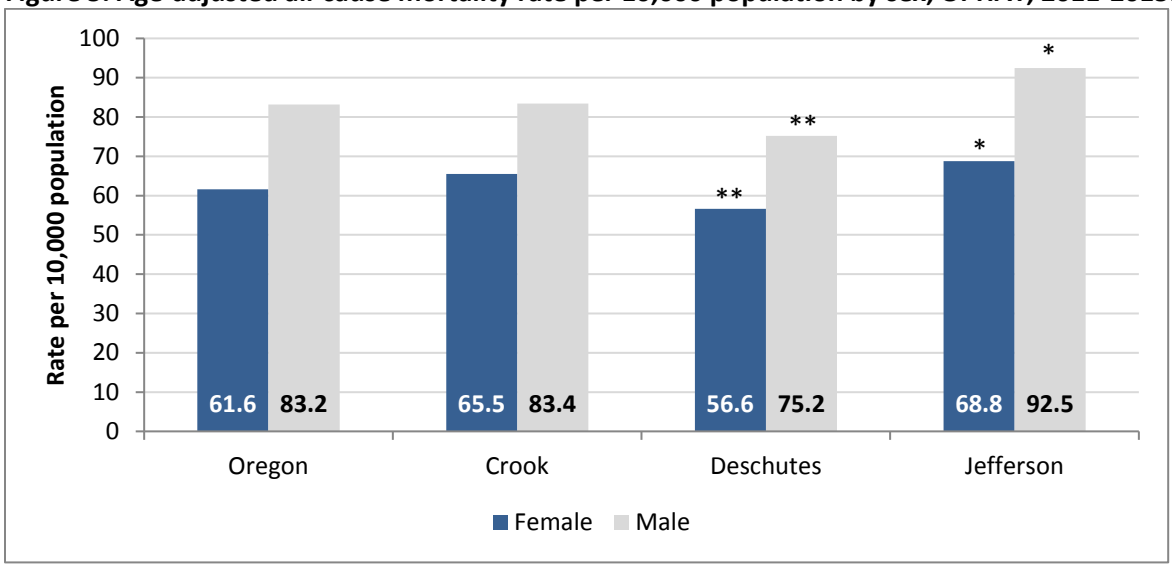


Figure 5. Age-adjusted all-cause mortality rate per 10,000 population by sex, OPHAT, 2011-2015.



*Significantly higher than Oregon sex-specific rate.
**Significantly lower than Oregon sex-specific rate.

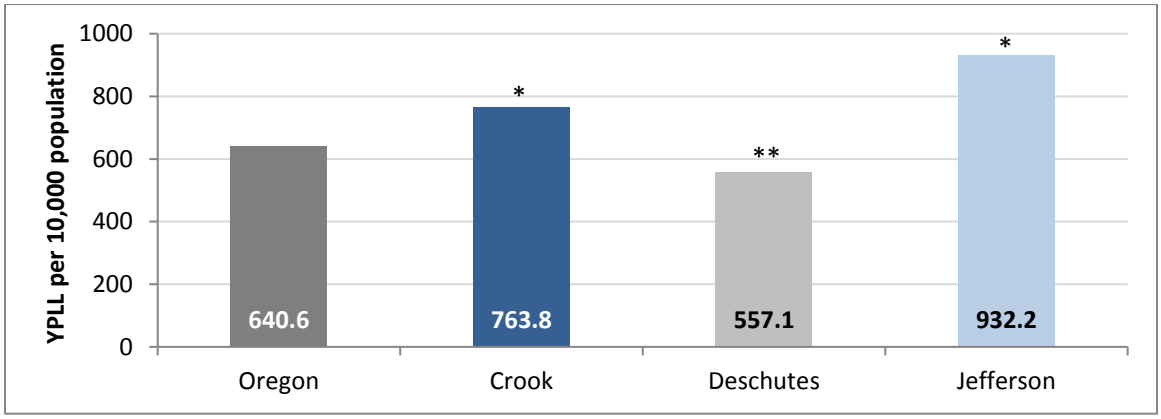
Table 5. Life expectancy (in years) at birth by race and ethnicity, OPHAT, 2015

	Oregon	Crook	Deschutes	Jefferson	Central Oregon
American Indian/Alaska Native Non-Hispanic	77.5			66.7	71.3
Hispanic	87.0	76.7	84.4	77.5	84.0
White NH	79.2	77.6	81.0	78.2	80.4
Total	79.6	77.7	81.0	77.2	80.3

	Significantly lower than geography-specific total life expectancy
	Significantly higher than geography-specific total life expectancy

Note: Blank cells indicate too few individuals to calculate an accurate life expectancy.

Figure 6. Years of potential life lost (YPLL) before the age of 75 per 10,000 population, OPHAT, 2011-2015



*Significantly higher than Oregon YPLL
**Significantly lower than Oregon YPLL

Quality of Life

Figure 7. Age-adjusted prevalence of self-reporting excellent, very good, or good general health, Oregon BRFSS, 2010-2013

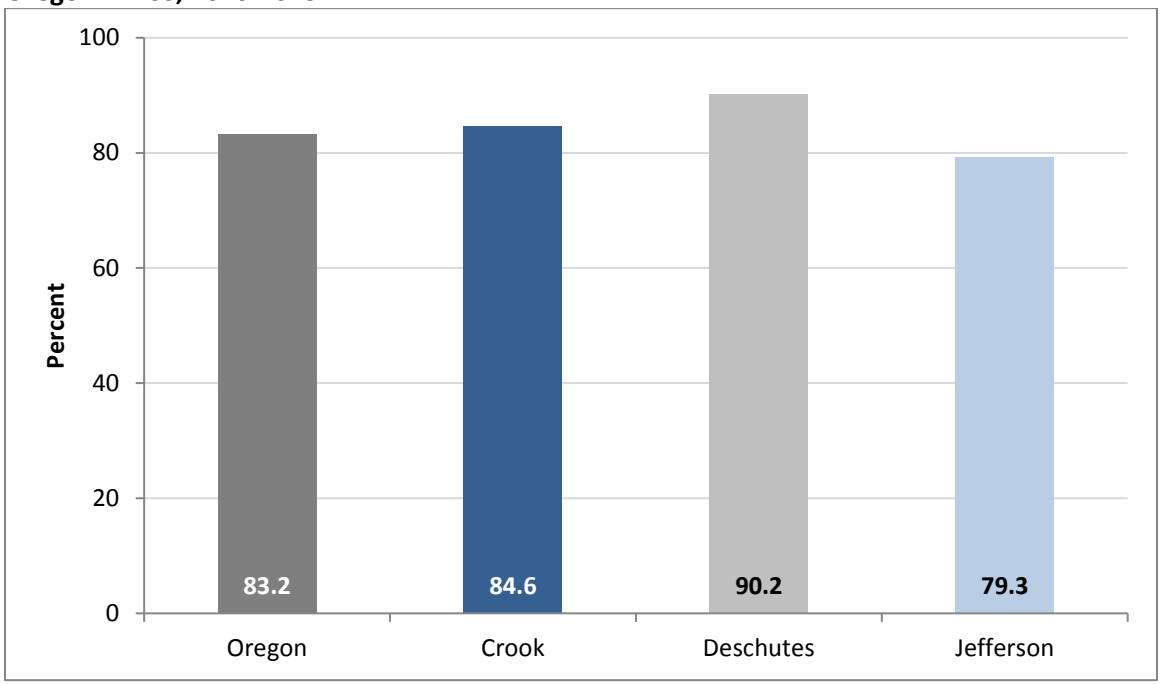
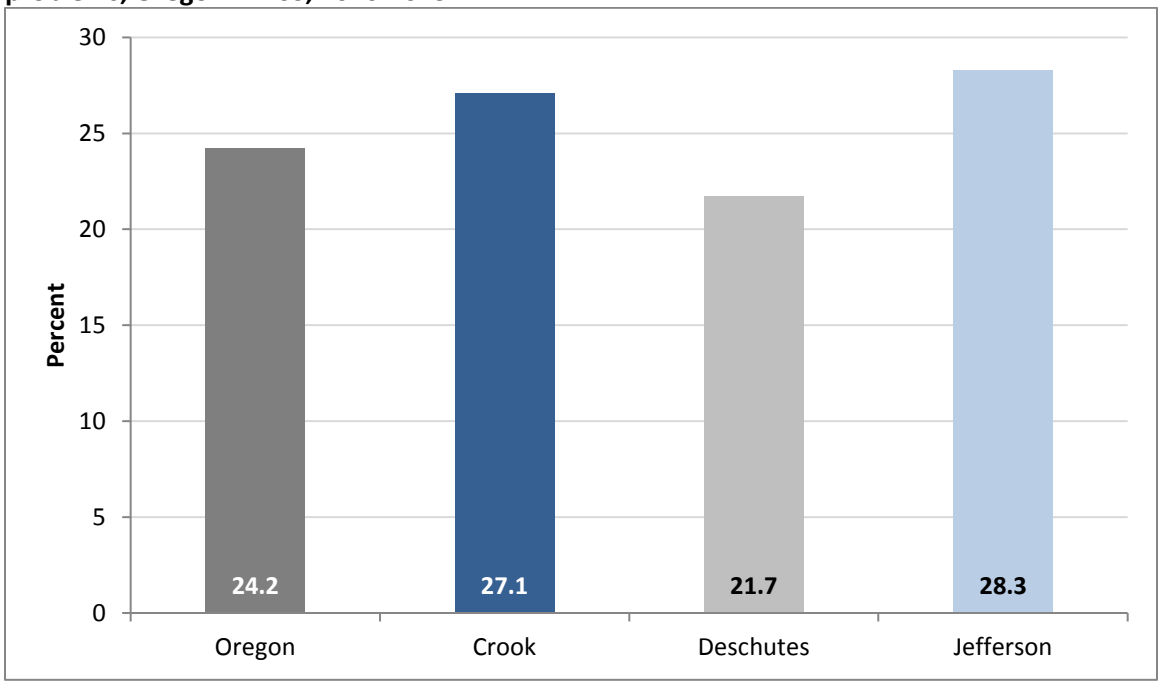


Figure 8. Age-adjusted prevalence of having any limitations due to physical, mental, or emotional problems, Oregon BRFSS, 2010-2013



Chronic Diseases

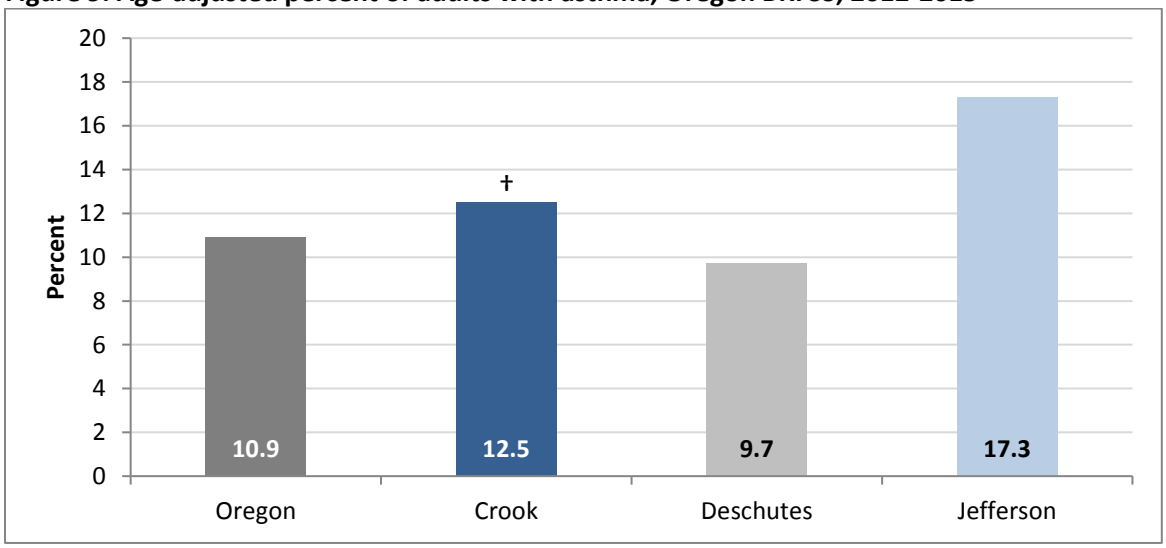
Chronic Diseases Section Highlights

Since the 2015 RHA was published:

- The percentage of adults who reported a diagnosis of asthma increased in Jefferson County.
- *For the topic of cancer:*
  - Overall cancer mortality rate increased in Crook County. Crook County's rate is no longer significantly lower than Oregon's rate. In Crook County, the cancer mortality rate for males is now significantly higher than the cancer mortality rate for females.
  - Breast cancer mortality rates in Crook and Jefferson County are no longer significantly lower than the Oregon rate.
  - The overall cancer incidence (new diagnosis) rate among Jefferson County females is now significantly lower than the Oregon female rate.
- Diabetes prevalence in Crook County is significantly higher than prevalence in Oregon as a whole; however, Crook County estimates were calculated using a small sample size and should be interpreted with caution.
- *For the topic of chronic disease risk factors and screenings:*
  - The prevalence of smoking among Jefferson County adults decreased.
  - The prevalence of obesity among adults decreased in all three Central Oregon counties.
  - The prevalence of high blood pressure decreased in Crook and Jefferson Counties.
  - The prevalence of having had a cholesterol check in the past five years increased in Crook County.
  - The prevalence of having had a mammogram in the past two years decreased in Crook County.

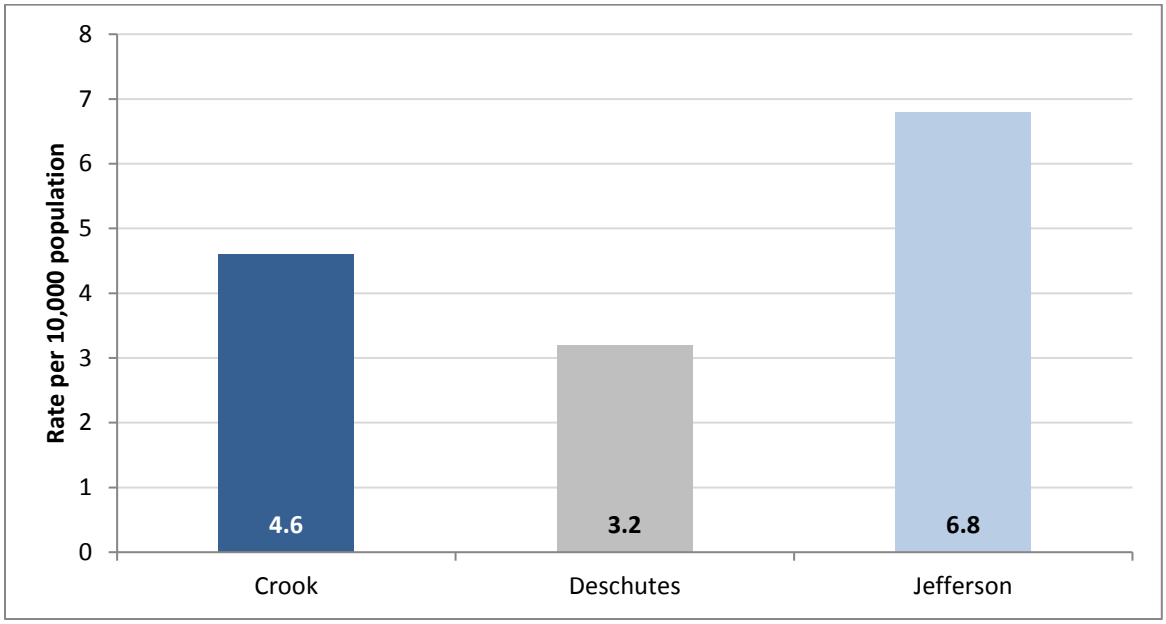
Asthma

Figure 9. Age-adjusted percent of adults with asthma, Oregon BRFSS, 2012-2015



†Note: Crook County estimate was calculated using a small sample size and should be interpreted with caution.

Figure 10. Age-adjusted rate of persons hospitalized for asthma, Oregon Hospital Discharges Dataset, 2012-2014



Cancer

Figure 11. Age-adjusted cancer mortality rate per 100,000 population, OPHAT, 2000-2015

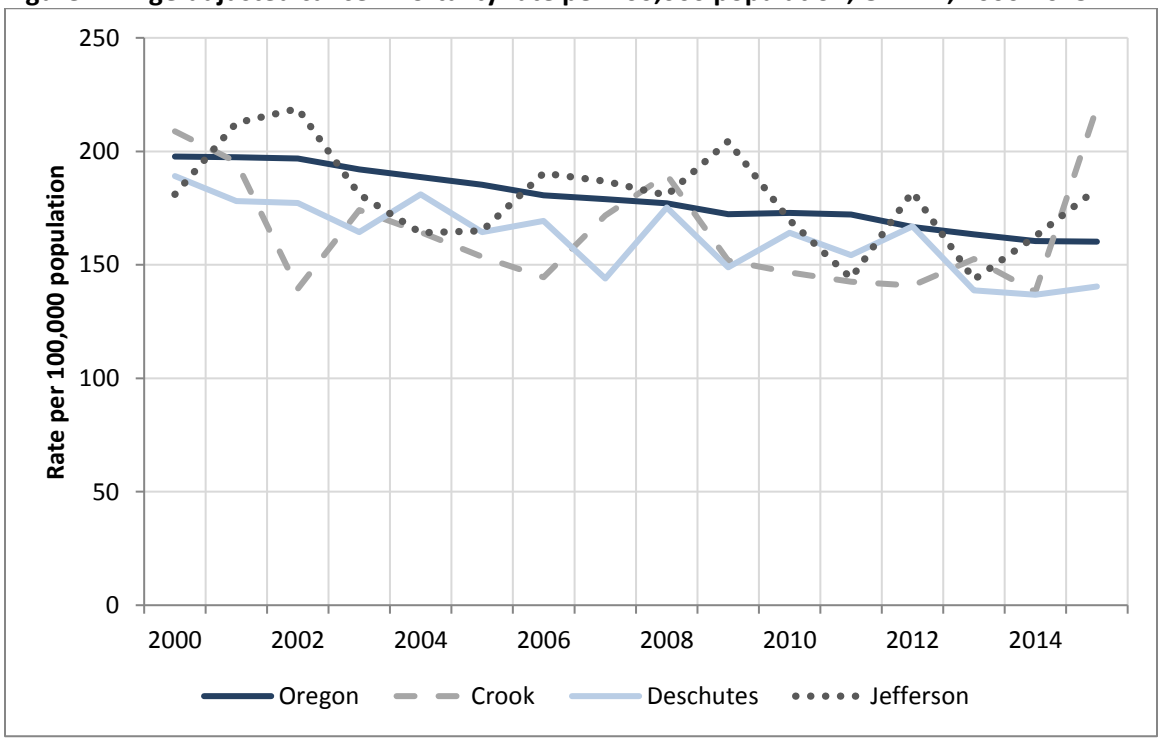
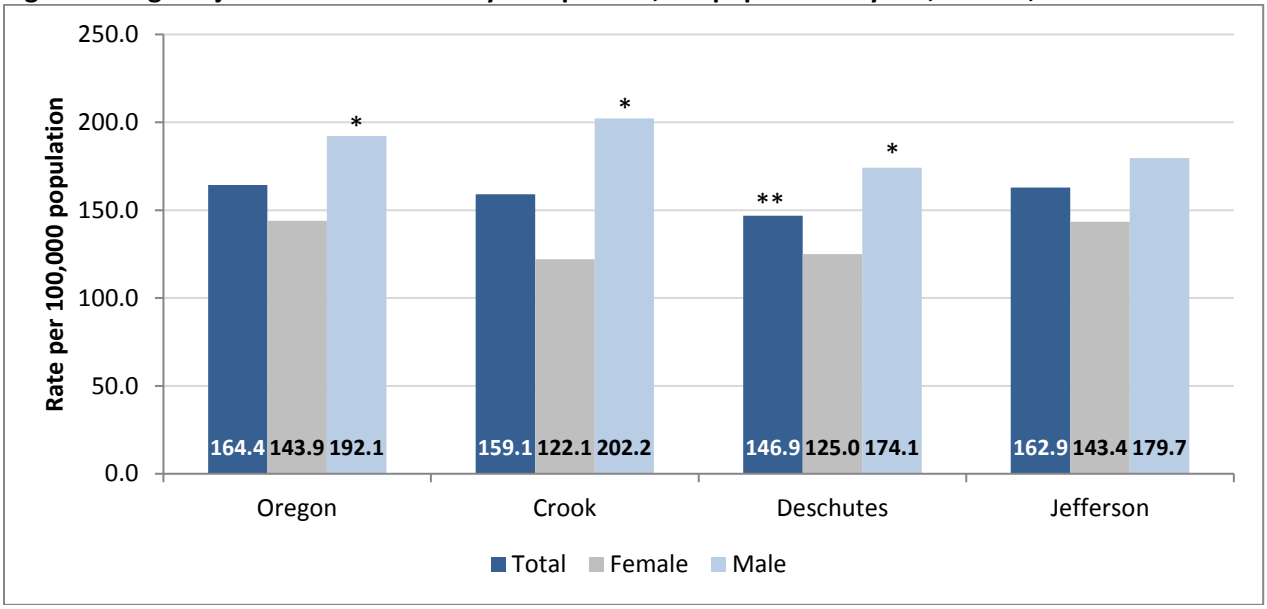


Figure 12. Age-adjusted cancer mortality rate per 100,000 population by sex, OPHAT, 2011-2015



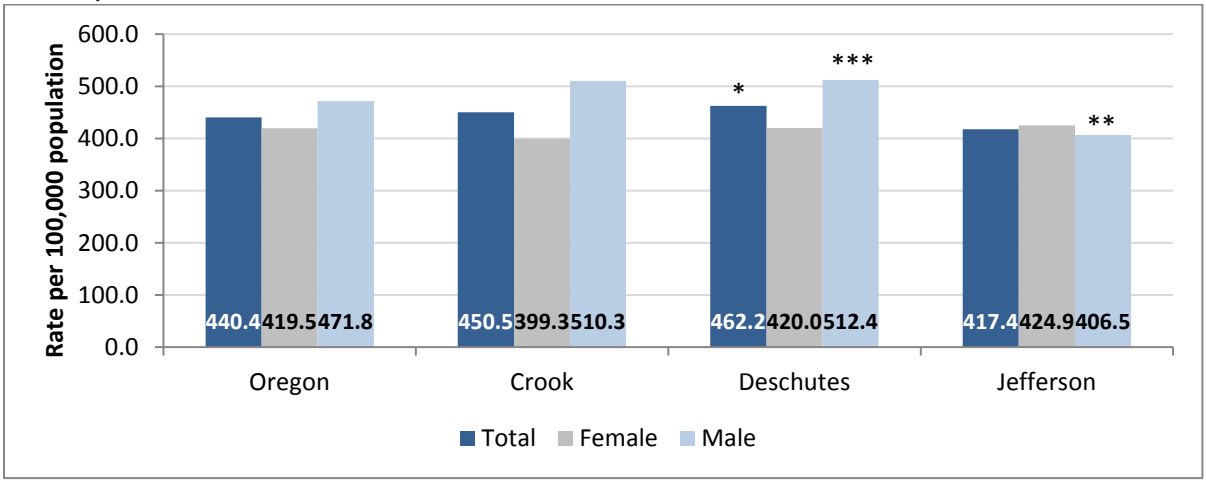
*Indicates male rate is significantly higher than female rate for the specified geography.
**Indicates that rate is significantly lower than Oregon total rate.

Table 6. Age-adjusted cancer mortality rates per 100,000 population, OPHAT, 2011-2015.

Cancer Site	Oregon	Crook	Deschutes	Jefferson
Colorectal	14.1	16.2	13.1	17.0
Lung	42.1	40.6	33.5	45.0
Melanoma	3.0	4.8	2.9	2.8

Significantly lower than Oregon rate.

Figure 13. Age-adjusted cancer incidence rates per 100,000 population by sex, Oregon State Cancer Profiles, 2009-2013.



*Significantly higher than Oregon total rate.
**Significantly lower than Oregon sex-specific rate.
***Significantly higher than Oregon sex-specific rate.

Figure 14. Age-adjusted cancer incidence rate per 100,000 population by cancer site, Oregon State Cancer Profiles, 2009-2013.

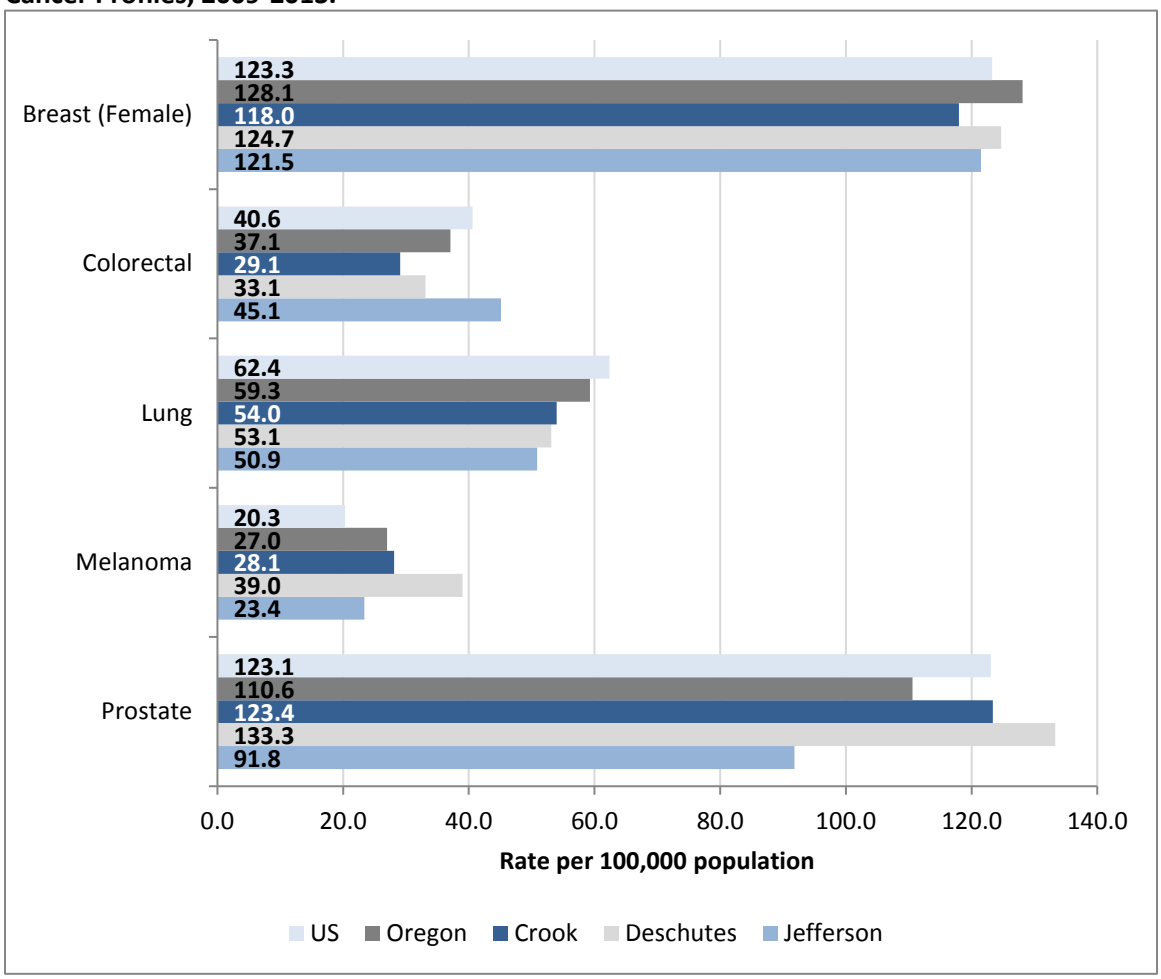
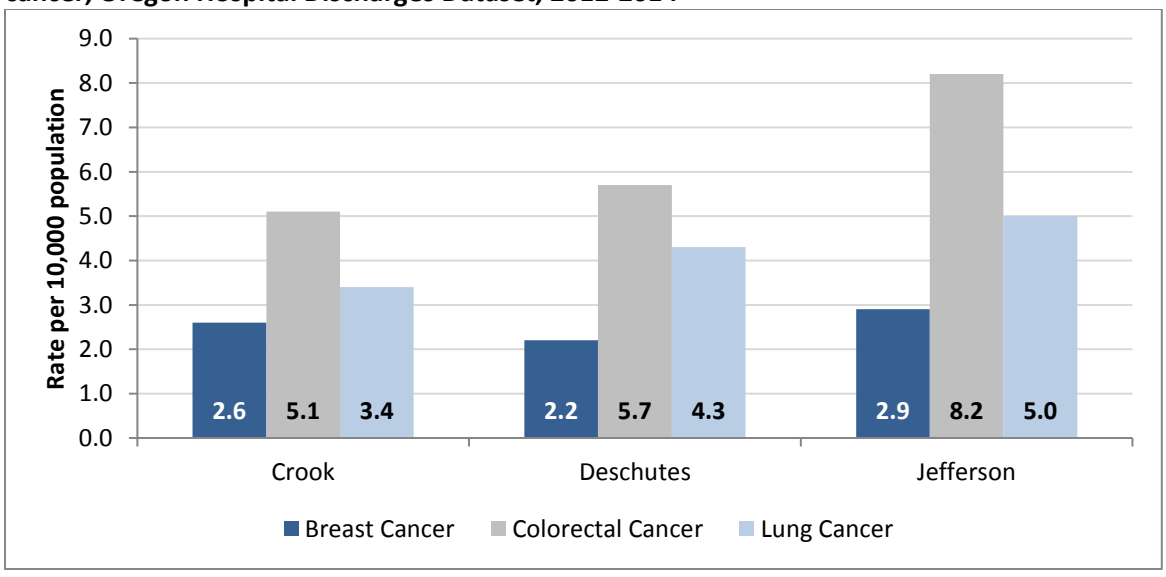


Figure 15. Age-adjusted rate of persons hospitalized for breast cancer, colorectal cancer, and lung cancer, Oregon Hospital Discharges Dataset, 2012-2014



Cardiovascular disease

Figure 16. Age-adjusted ischemic heart disease mortality rate per 100,000 population, OPHAT, 2000-2015.

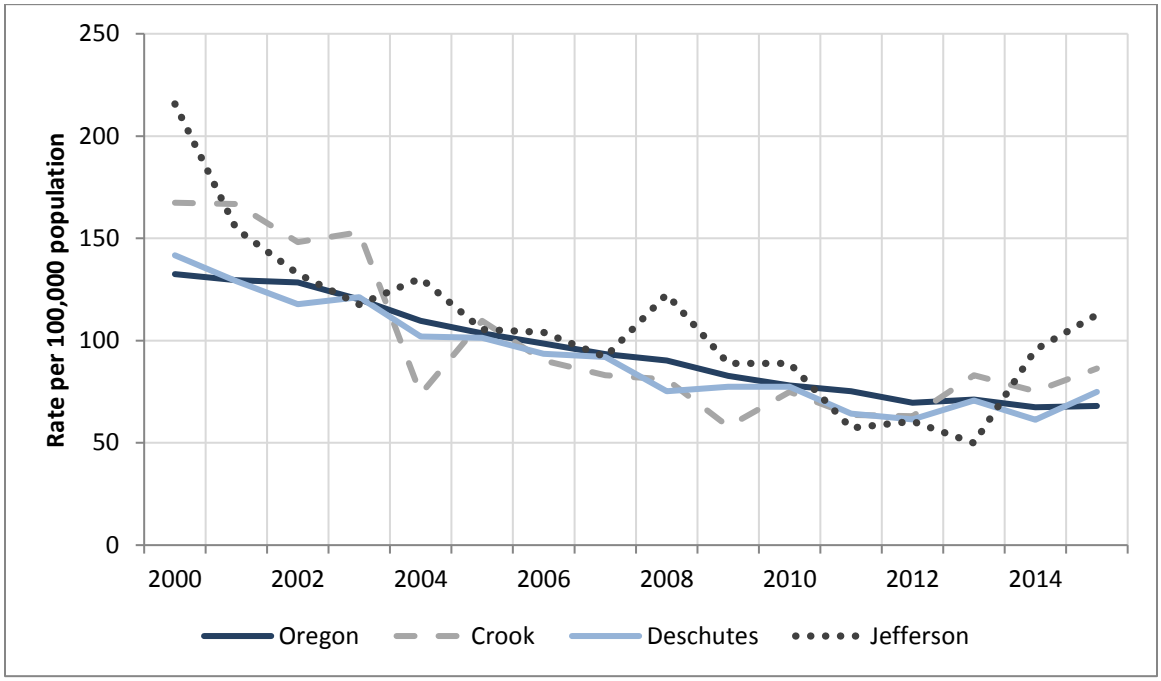
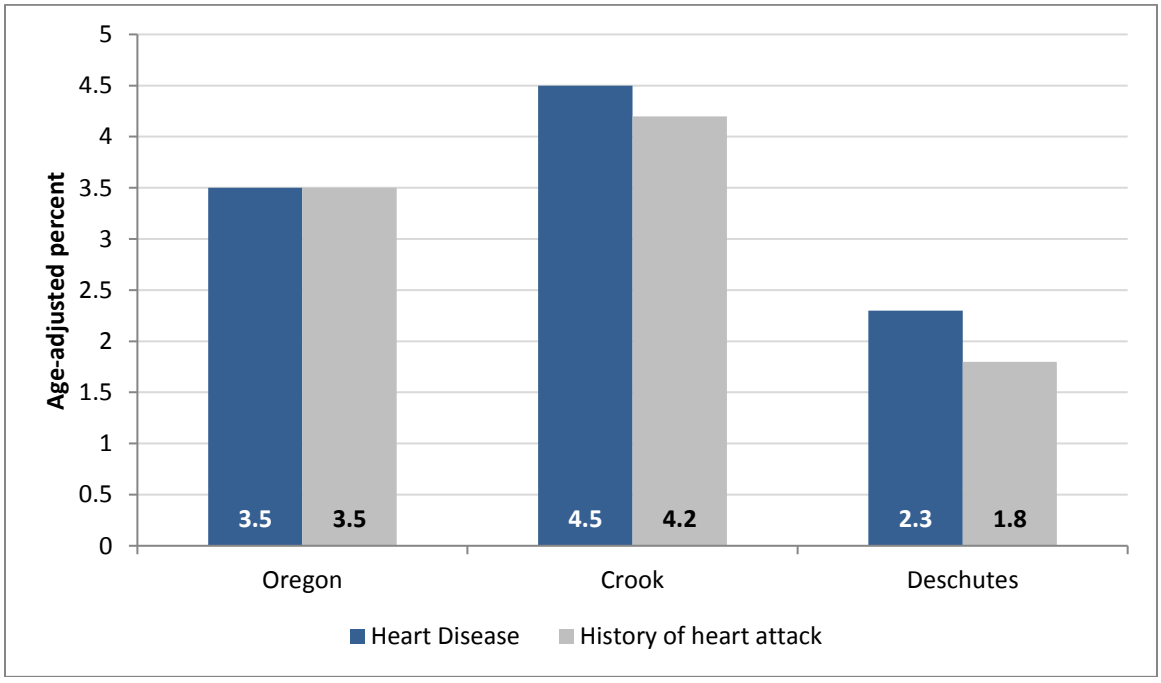
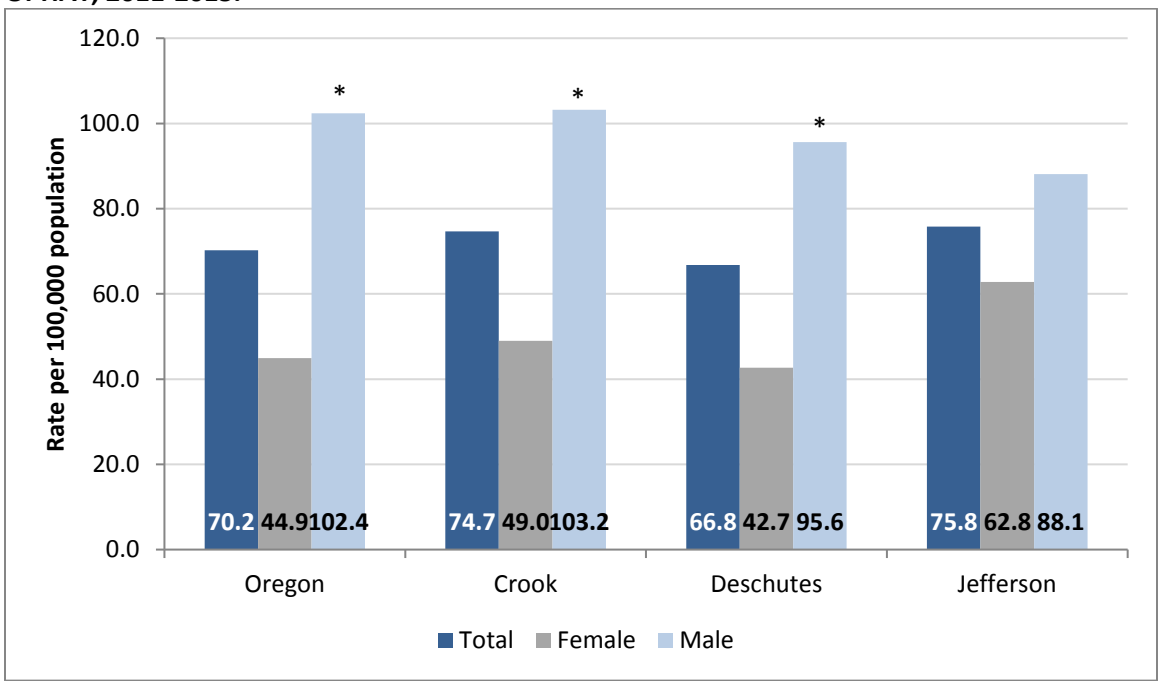


Figure 17. Age-adjusted prevalence of heart disease or a history of a heart attack, Oregon BRFSS 2012-2013.



Note: Jefferson County data not included because estimates may be inaccurate due to a small sample size.

Figure 18. Age-adjusted mortality rate of ischemic heart disease by sex per 100,000 population, OPHAT, 2011-2015.



*Male rate significantly higher than female rate for the specified geography.

Figure 19. Age-adjusted cerebrovascular disease mortality rate per 100,000 population, OPHAT, 2000-2015.

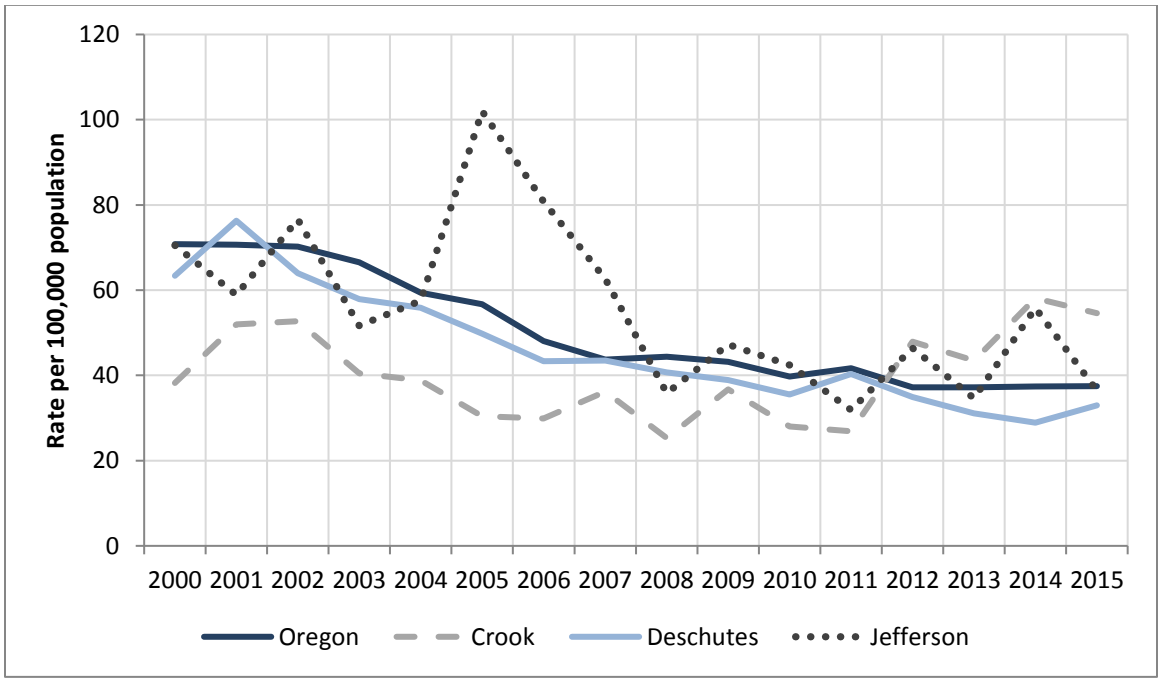
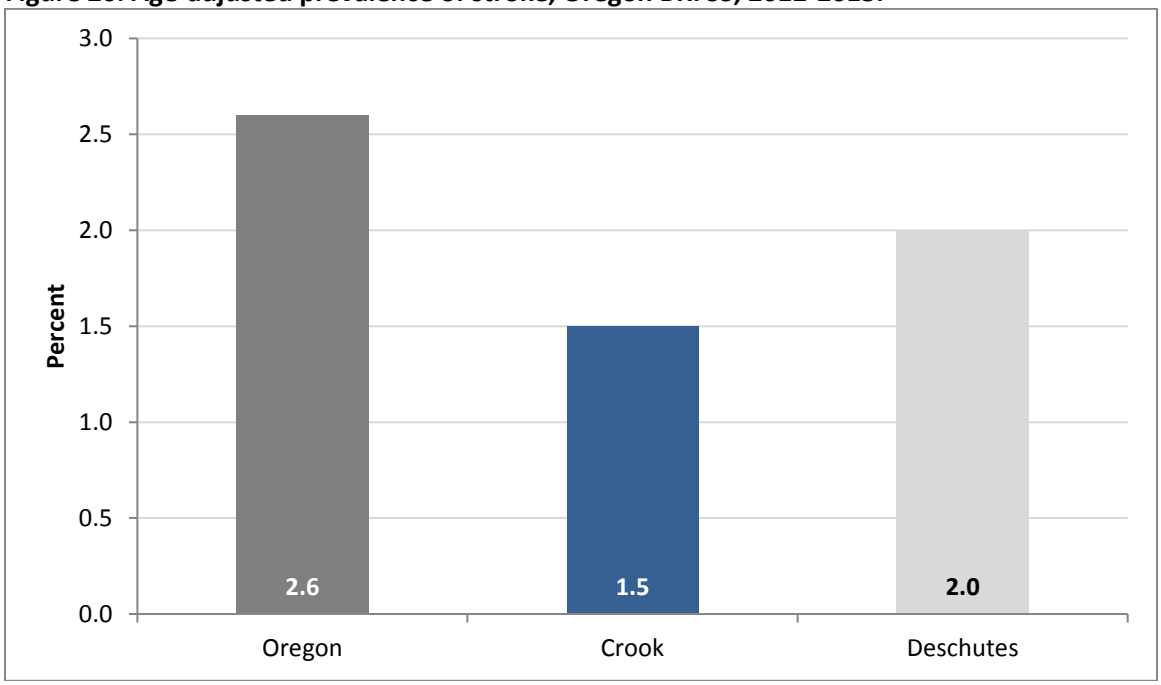


Figure 20. Age-adjusted prevalence of stroke, Oregon BRFSS, 2012-2015.



Note: Jefferson County data not included because sample size is too small to calculate estimates.

Figure 21. Age-adjusted rate of persons hospitalized for heart disease, including heart attack, Oregon Hospital Discharges Dataset, 2012-2014

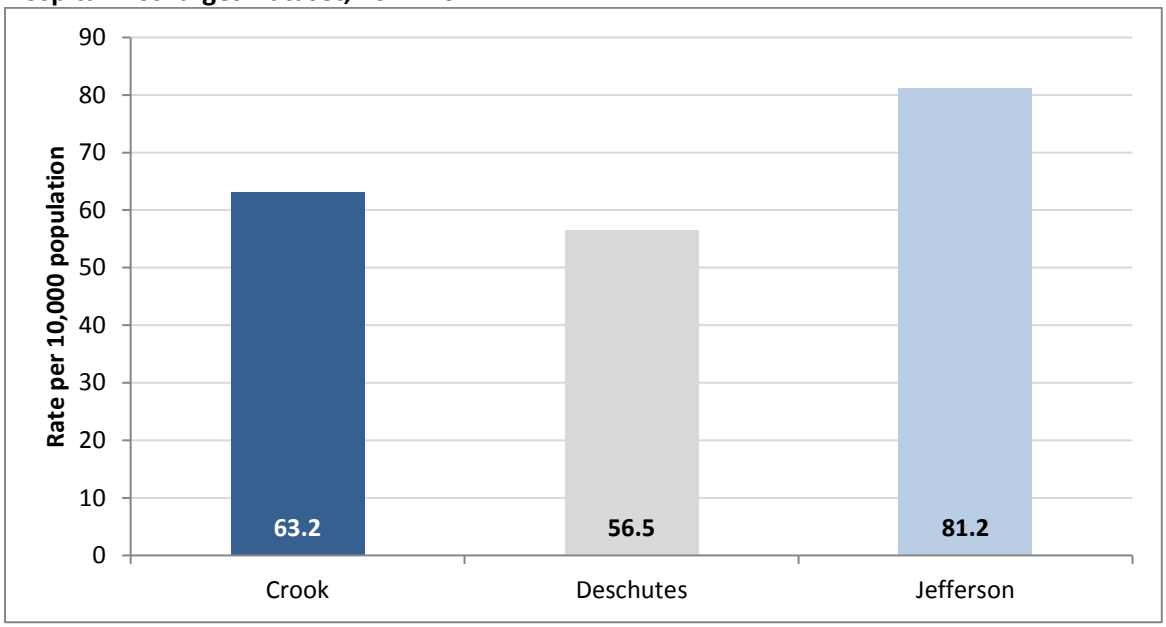


Figure 22. Age-adjusted rate of persons hospitalized for heart attack, Oregon Hospital Discharges Dataset, 2012-2014

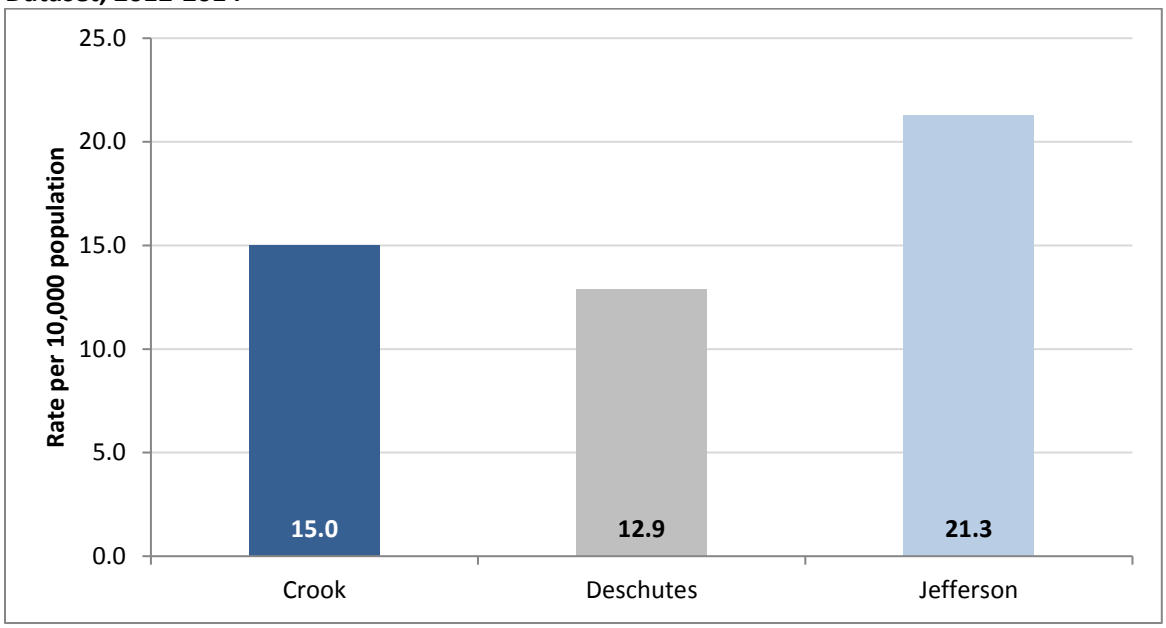
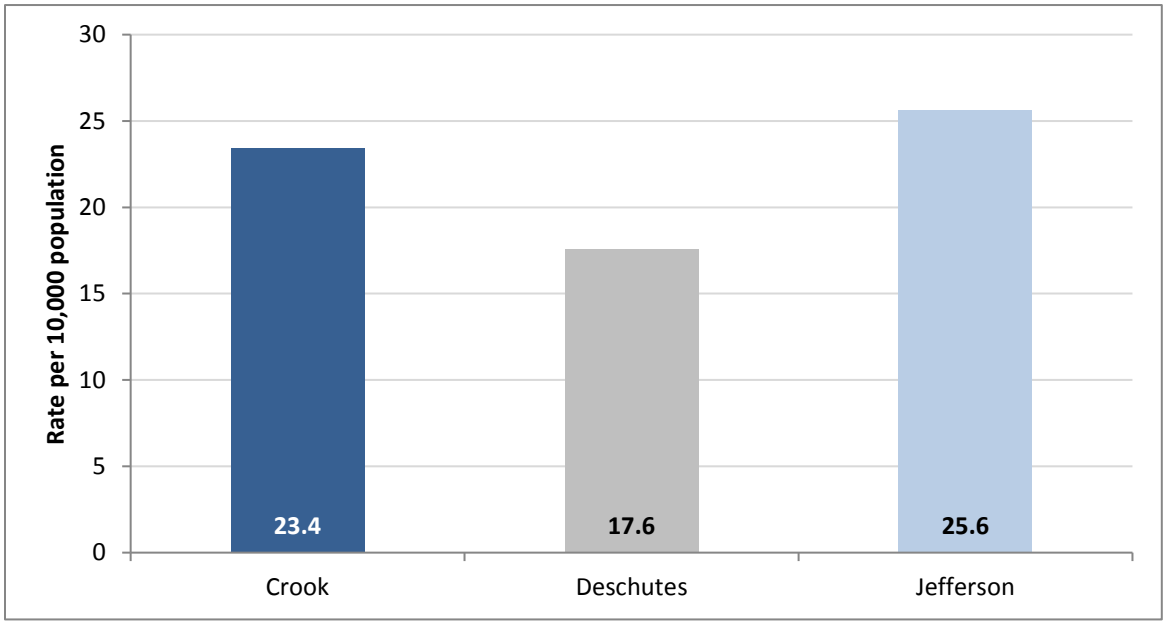
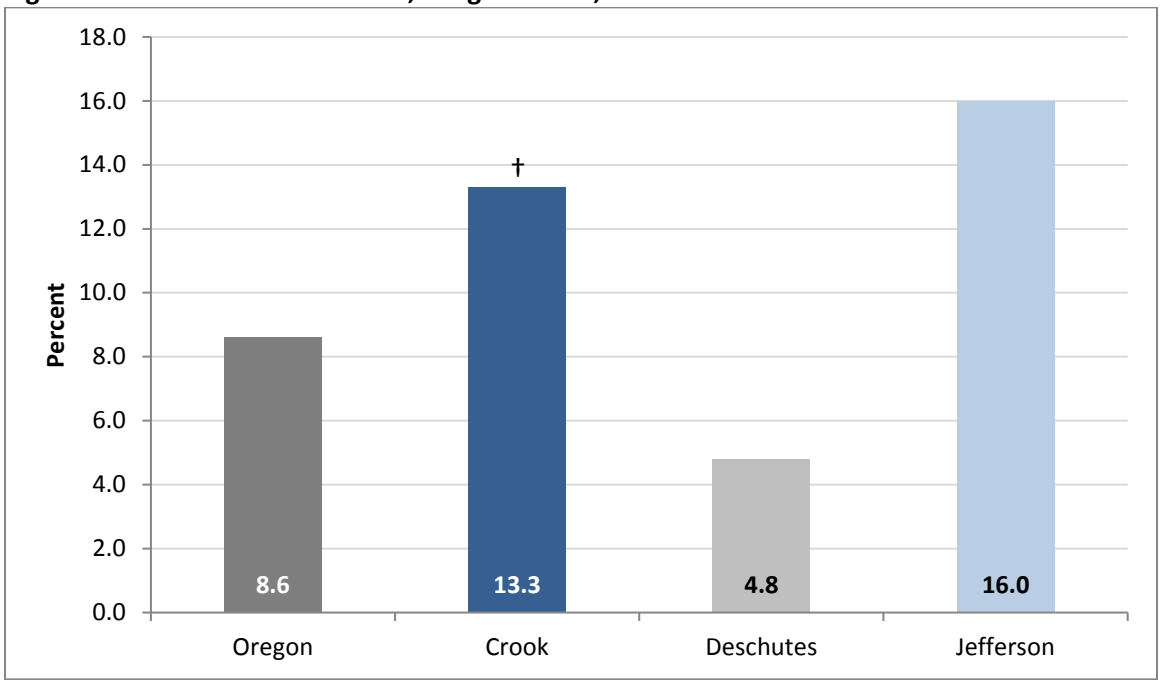


Figure 23. Age-adjusted rate of persons hospitalized for stroke, Oregon Hospital Discharges Dataset, 2012-2014



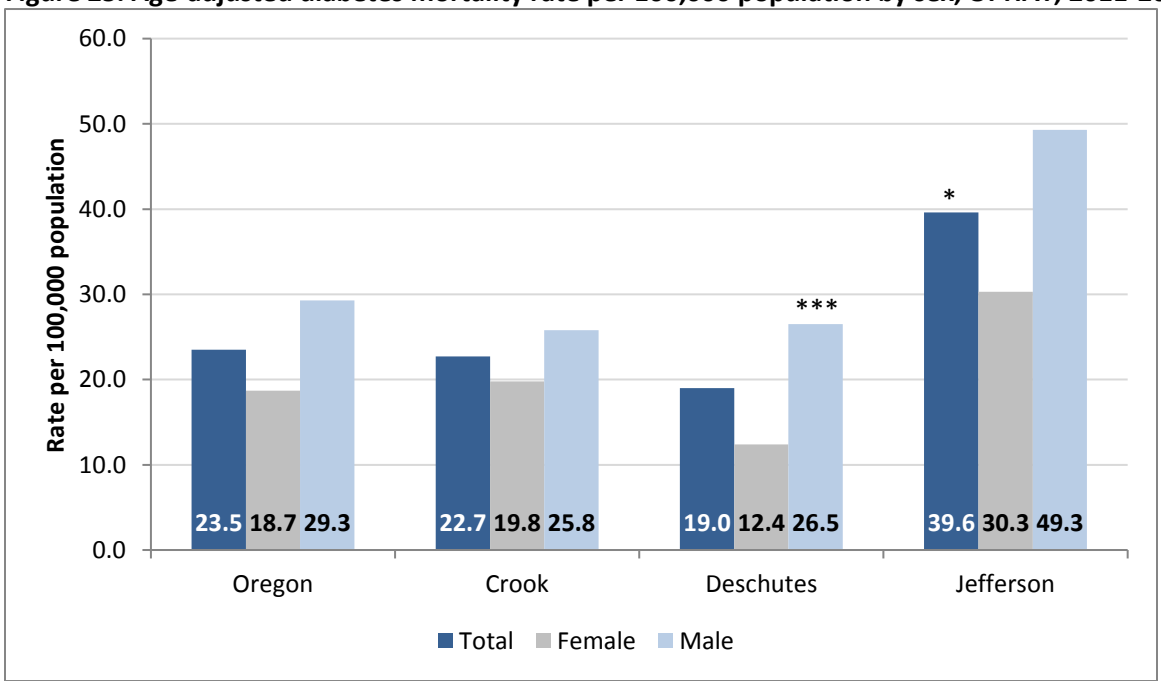
Diabetes

Figure 24. Prevalence of diabetes, Oregon BRFSS, 2012-2015.



†Estimate calculated using a small sample size and should be interpreted with caution.

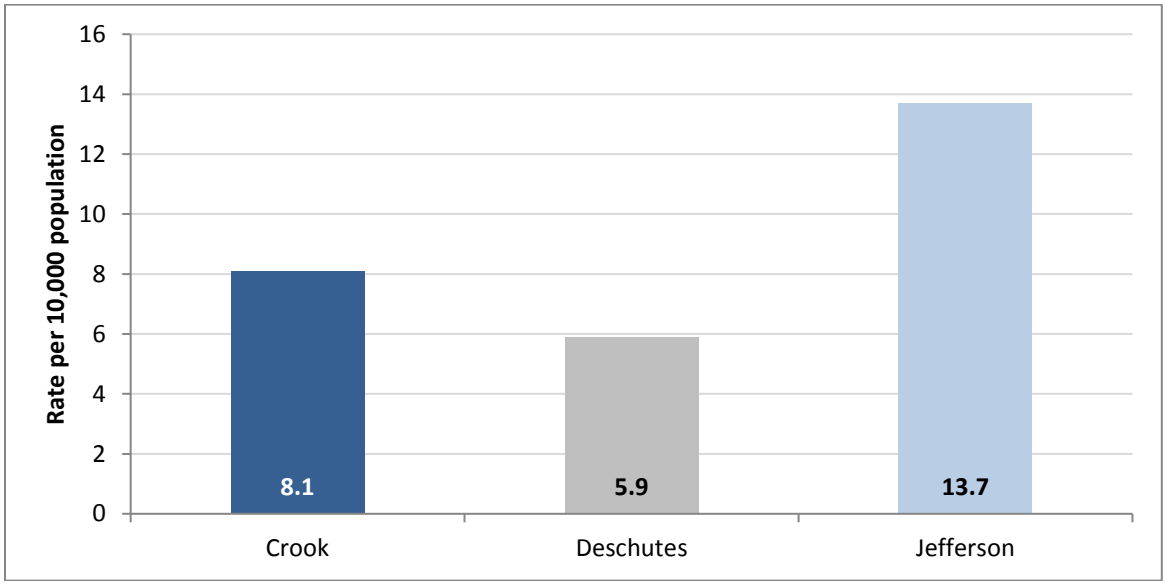
Figure 25. Age-adjusted diabetes mortality rate per 100,000 population by sex, OPHAT, 2011-2015.



*Significantly higher than Oregon total rate

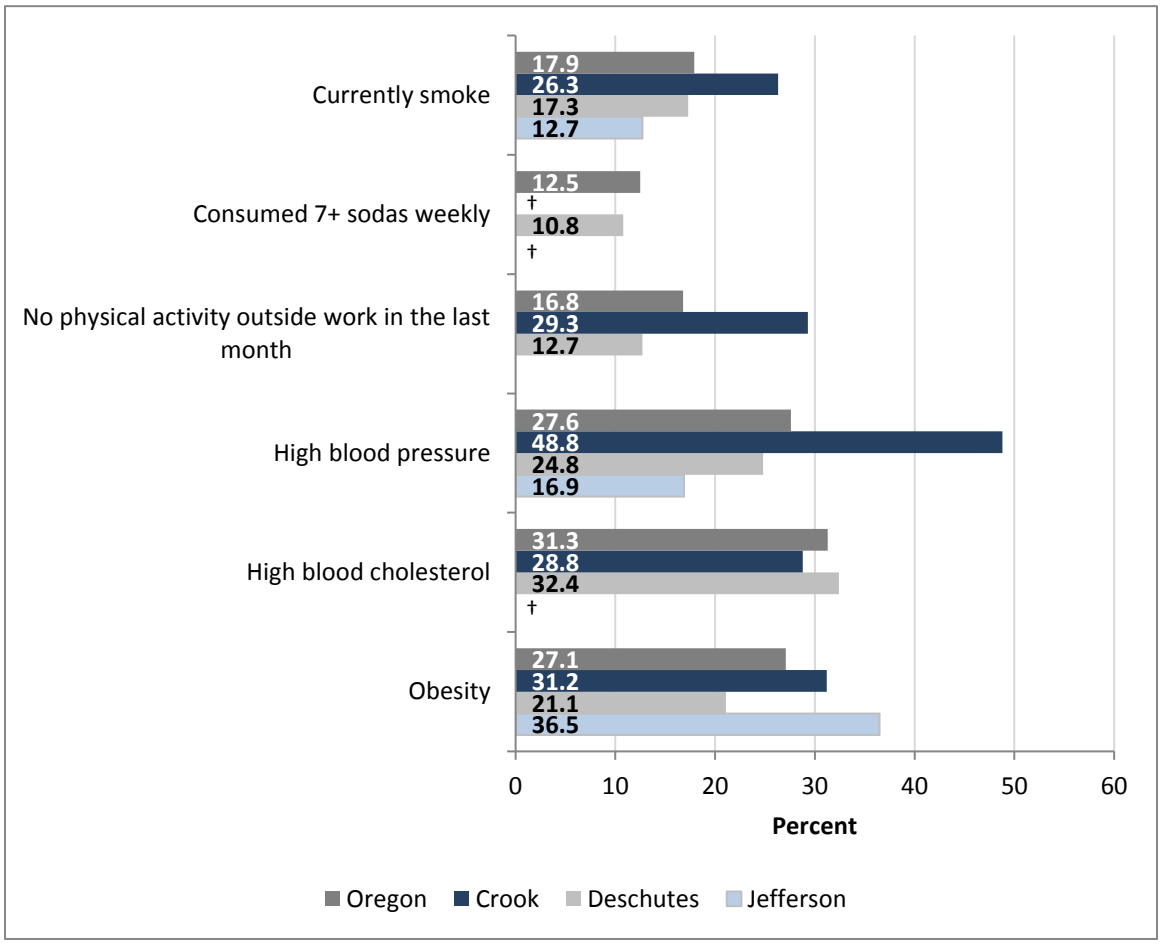
***Significantly higher than female rate for the specified geography

Figure 26. Age-adjusted rate of persons hospitalized for diabetes, Oregon Hospital Discharges Dataset, 2012-2014



Chronic disease risk factors

Figure 27. Age-adjusted percent of adults who reported chronic disease risk factors, Oregon BRFSS, 2012-2015.



†Indicates sample size is too small to calculate estimates.

2016-2019 RHIP Indicator: Cardiovascular Disease #4.

Decrease the prevalence of adults who report no leisure time physical activity from 16% in Crook County, 14% in Deschutes County, and 17% in Jefferson County to 14%, 12%, and 15%, respectively.

As shown in the figure above, the combined 2012-2015 Oregon BRFSS indicated that 29.3% of adults in Crook County and 12.7% of adults in Deschutes County reported no leisure time physical activity in the past month. Jefferson County estimates of leisure-time physical activity are unavailable for this iteration of BRFSS due to a small sample size.

Oregon Public Health Modernization Metric: Adults Who Smoke Cigarettes

As shown in the figure above, according to the 2012-2015 combined Oregon BRFSS, the percentage of adults in Crook, Deschutes, and Jefferson Counties who smoked cigarettes was 26.3%, 17.3%, and 12.7%, respectively.

Figure 28. Age-adjusted prevalence of having had a cholesterol check in the last 5 years, Oregon BRFSS 2012-2015.

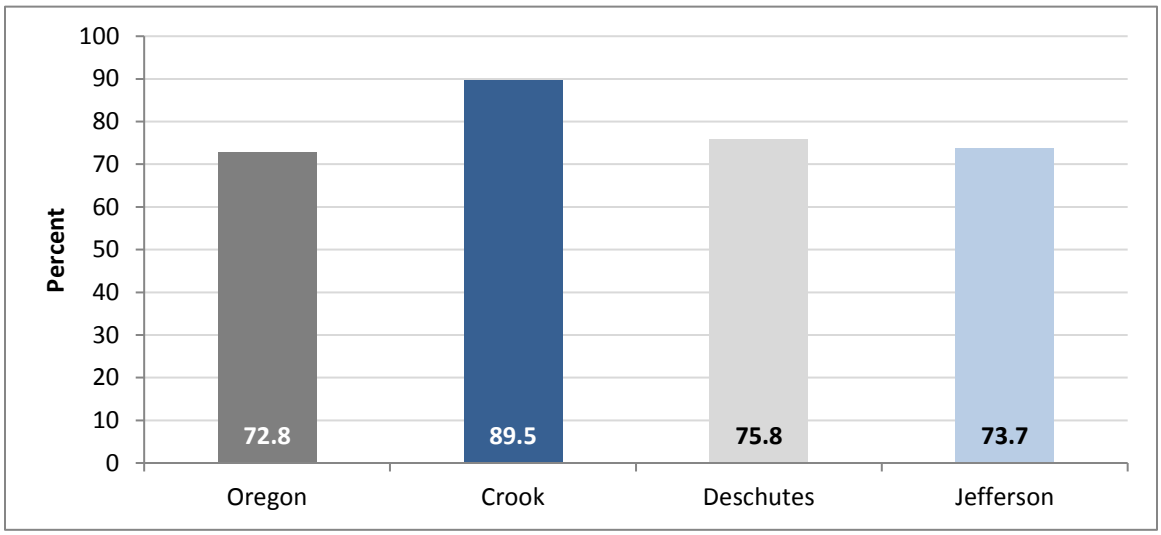
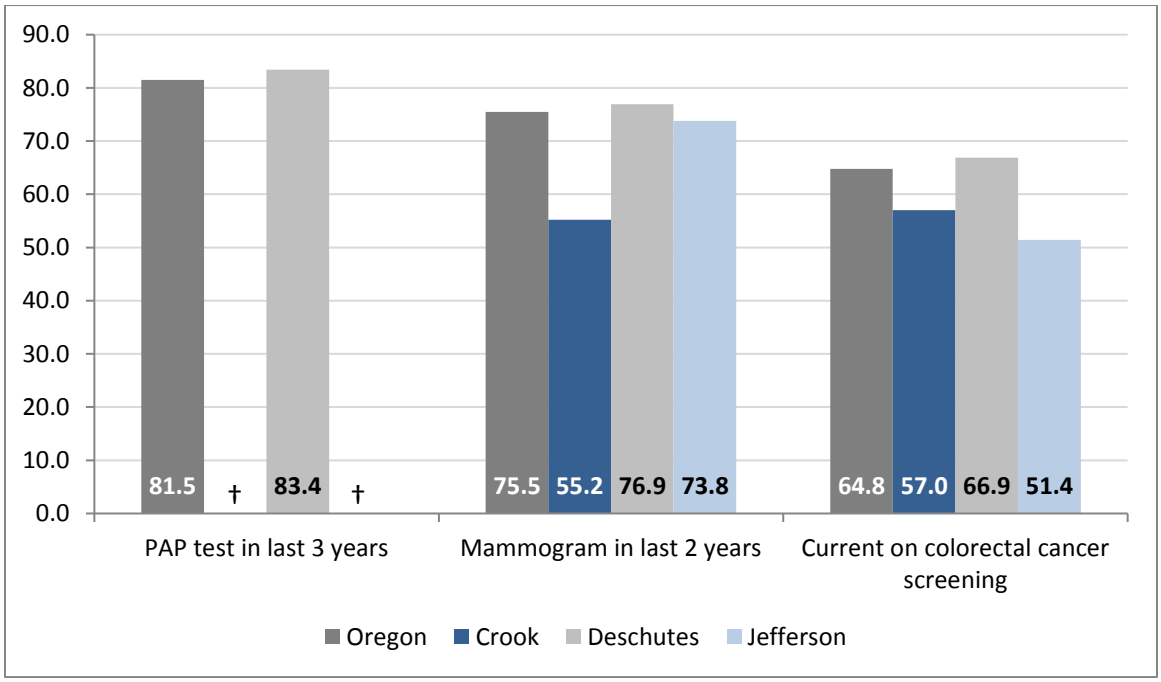


Figure 29. Age-adjusted prevalence of having received select cancer screenings, Oregon BRFSS 2012-2015.



†Sample size is too small to calculate estimates.

Communicable Diseases

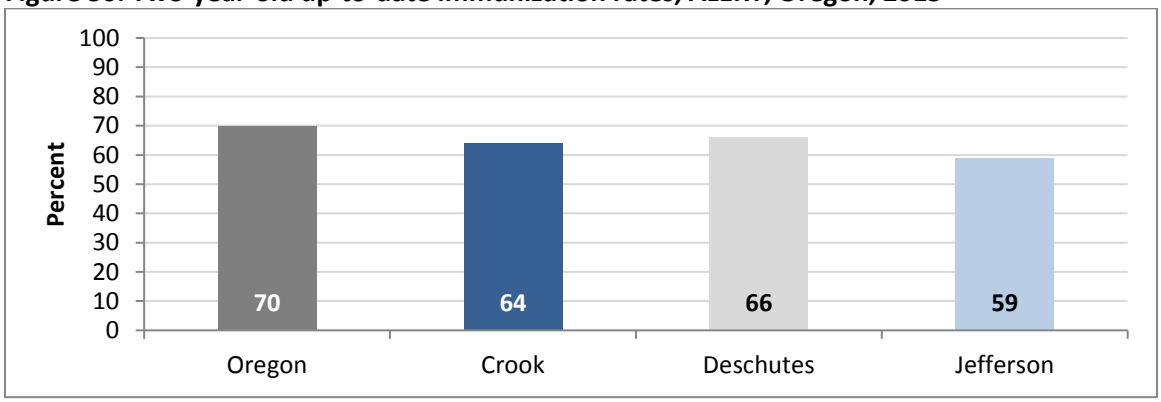
Communicable Diseases Section Highlights

Since the 2015 RHA was published:

- The two-year-old up-to-date immunization rate increased in Crook and Deschutes Counties, but decreased in Jefferson County.
- Adolescent (aged 13-17) immunization rates for Tdap and meningococcal increased in all three Central Oregon counties. Immunization rates for influenza decreased in all Central Oregon counties.
- 10-year pertussis rates doubled in Central Oregon; rates were still significantly lower than Oregon overall.
- The 10-year hepatitis C rate in Central Oregon is now significantly lower than the Oregon rate.
- *For the topic of sexually transmitted infections:*
    - Chlamydia incidence rates in Jefferson County are significantly higher than Oregon rates among 15-17 year olds, 18-19 year olds, 20-24 year olds, 25-29 year olds, and 30-34 year olds. Chlamydia incidence rates among 15-17 year olds in Crook County are now significantly lower than rates among Oregon 15-17 year olds.
    - 5-year gonorrhea rates increased in all three Central Oregon counties. Despite this increase, gonorrhea rates in Crook and Deschutes County are significantly lower than the Oregon rate.
- 10-year campylobacteriosis rates are now significantly higher in all three Central Oregon counties than in Oregon.
- Over half of all hantavirus cases in Oregon over the past 10 years were in Central Oregon.

Immunizations

Figure 30. Two-year-old up-to-date immunization rates, ALERT, Oregon, 2015



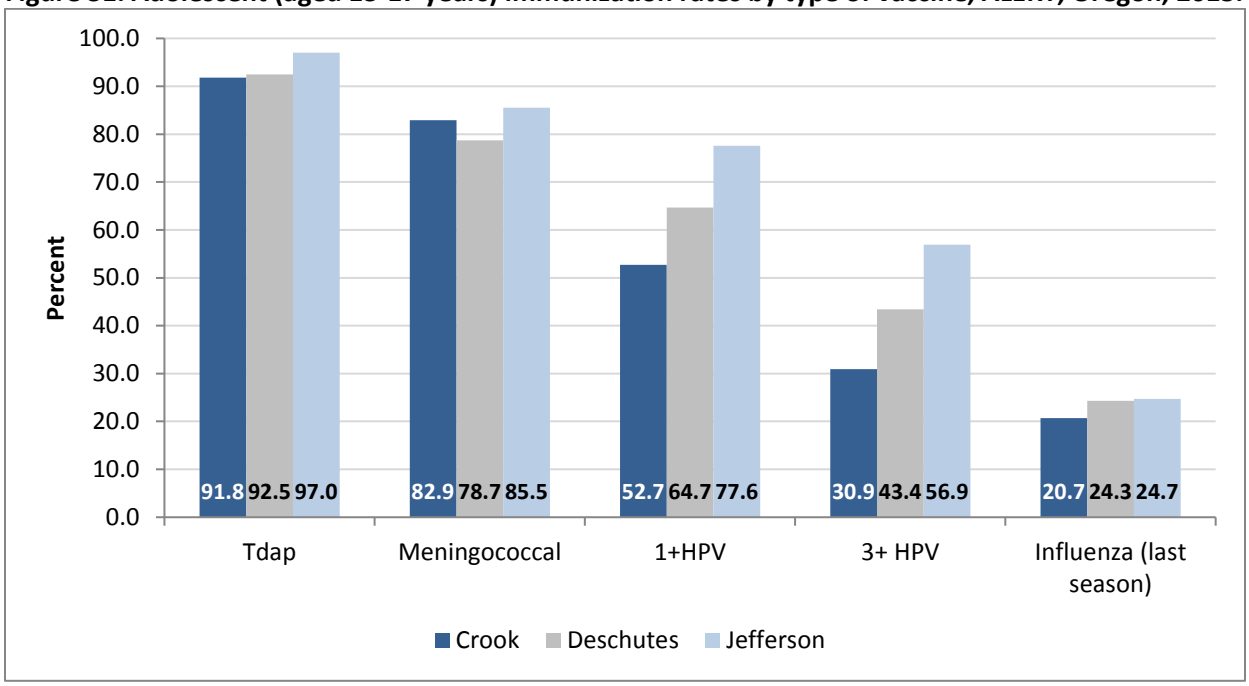
Note: Up-to-date rates refer to the 4:3:1:3:3:1:4 series of immunizations, which includes 4 DTaP, 3 Polio, 1 MMR, 3 HepB, 3 Hib, 1 Varicella, and 4 PCV.

Oregon Public Health Modernization Metric and 2016-2019 RHIP Indicator: Reproductive & Maternal Child Health #5.

By 2019, increase the Central Oregon Performance Measure - Child Immunization Status rate (0-24 months) (NQF 0038) from 62.1% to 80%.

As shown in the figure above, the percentage of 2-year olds who were up-to-date for the 4:3:1:3:3:1:4 immunization series in Crook, Deschutes, and Jefferson Counties was 64%, 66%, and 59%, respectively.

Figure 31. Adolescent (aged 13-17 years) immunization rates by type of vaccine, ALERT, Oregon, 2015.



Vaccine Preventable Diseases

Table 7. Age-adjusted rate per 100,000 population of select vaccine preventable diseases, OPHAT, 2006-2015

	Oregon Rate per 100,000 (# of cases)	Central Oregon Rate per 100,000 (# of cases)
Haemophilus influenzae	1.7 (711)	1.8 (40)
Meningococcal disease	0.8 (301)	1.3 (25)
Pertussis (whooping cough)	10.7 (3,665)	7.7 (140)

Significantly lower than Oregon rate

Hepatitis

Table 8. Age-adjusted rate per 100,000 population of hepatitis, OPHAT, 2006-2015

	Oregon Rate per 100,000 (# of cases)	Central Oregon Rate per 100,000 (# of cases)
Hepatitis A	0.6 (235)	0.7 (16)
Hepatitis B (acute)	1.1 (436)	0.9 (17)
Hepatitis B (chronic)	12.1 (4,665)	3.7 (79)
Hepatitis C (acute)	0.6 (229)	0.7 (12)
Hepatitis C (past or present)	131.9 (54,272)	112.8 (2,506)

Significantly lower than Oregon rate

Sexually Transmitted Infections

Figure 32. Age-adjusted chlamydia incidence rate per 100,000 population, OPHAT, 2004-2014

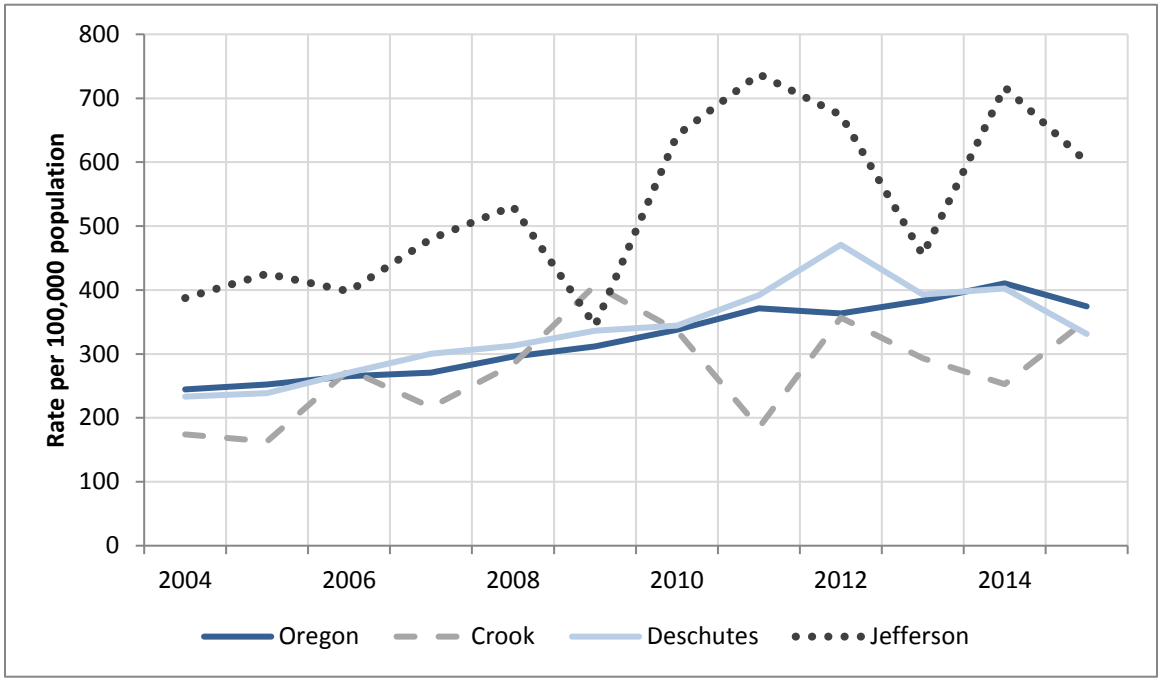
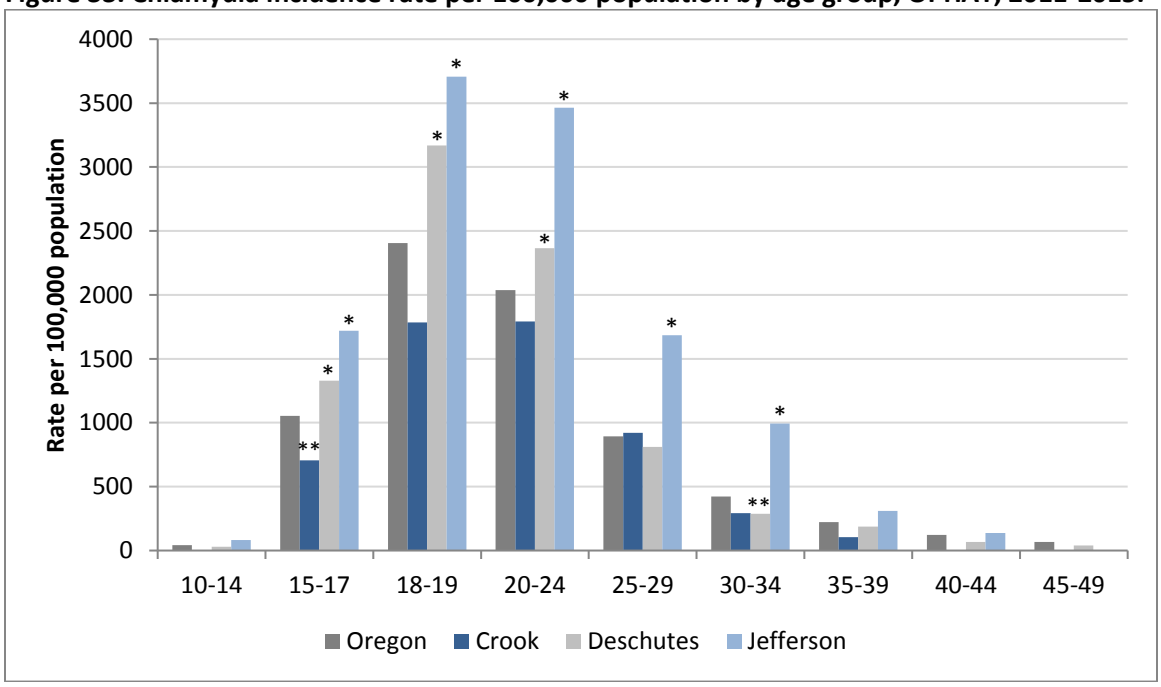


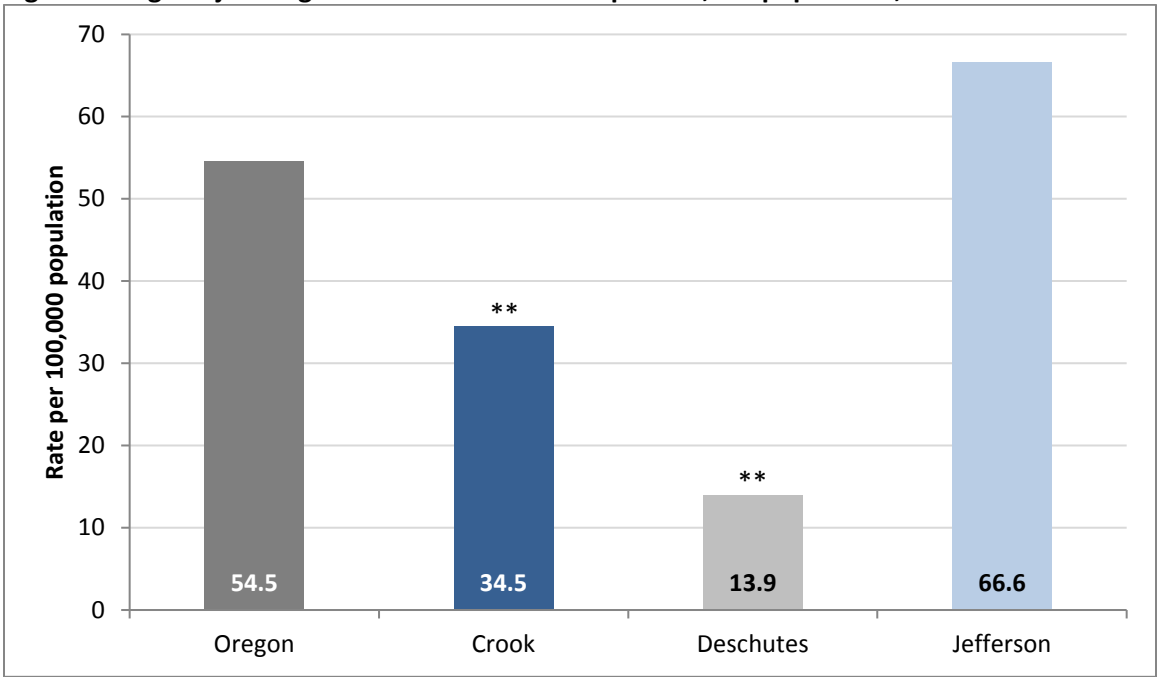
Figure 33. Chlamydia incidence rate per 100,000 population by age group, OPHAT, 2011-2015.



*Significantly higher than Oregon age-specific rate

**Significantly lower than Oregon age-specific rate

Figure 34. Age-adjusted gonorrhea incidence rate per 100,000 population, OPHAT 2011-2015



**Significantly lower than Oregon rate.

Oregon Public Health Modernization Metric: Gonorrhea Rates

As shown in the figure above, gonorrhea rates in Jefferson County over the past 5 years were similar to those seen across Oregon as a whole. Gonorrhea rates in Crook and Deschutes Counties were significantly lower than rates in Oregon.

HIV

Between 2007-2015, an average of five people were diagnosed with HIV each year in Central Oregon.

Vector Borne Diseases

Table 9. Number of vector borne diseases reported in Oregon and Central Oregon, OPHAT, 2006-2015

	Oregon	Central Oregon
Colorado tick fever	7	<5
Dengue fever	46	<5
Hantavirus	13	7
Lyme disease	407	12
Malaria	151	8
Rocky mountain spotted fever	19	<5
West Nile virus	168	<5

Reported diseases (e.g., malaria) may have been acquired outside of the indicated geographic area.

Diarrheal Disease

Table 10. Age-adjusted incidence rate per 100,000 population of water-borne diseases, OPHAT, 2006-2015					
	Oregon Rate (# of cases)	**Crook Rate (# of cases)**	**Deschutes Rate (# of cases)**	**Jefferson Rate (# of cases)**	**Central Oregon Rate (# of cases)**
Campylobacteriosis	21.2 (8,211)	30.4 (57)	29.5 (477)	32.1 (68)	29.7 (602)
Cryptosporidiosis	4.7 (1,795)	5.4 (9)	1.2 (19)	<5 cases	1.5 (30)
E. coli (STEC)	3.8 (1,392)	11.5 (21)	5.1 (76)	4.3 (9)	5.6 (106)
Giardiasis	10.9 (4,071)	4.7 (10)	17.0 (266)	10.1 (21)	15.1 (297)
Legionellosis	0.6 (264)	<5 cases	0.5 (5)	<5 cases	0.2 (6)
Listeriosis	0.3 (127)	<5 cases	<5 cases	<5 cases	<5 cases
Salmonellosis (non-typhoidal)	11.1 (4,197)	13.1 (26)	10.3 (165)	9.3 (19)	10.5 (207)
Shigellosis	2.1 (771)	<5 cases	0.8 (12)	9.4 (20)	1.7 (32)
Vibriosis (non cholera)	0.5 (191)	<5 cases	0.6 (11)	<5 cases	0.6 (13)
Yersinosis	0.5 (202)	<5 cases	0.4 (5)	<5 cases	0.4 (7)
	Significantly higher than Oregon rate				
	Significantly lower than Oregon rate				

Note: STEC refers to shiga-toxin producing E.Coli.

Maternal Health and Pregnancy

Maternal Health and Pregnancy Section Highlights

Since the 2015 RHA was published:

- *For the topic of prenatal care:*
    - The adequacy of prenatal care (as measured by the Kotelchuck Index) is now significantly lower in Jefferson County than in Oregon as a whole.
    - The percentage of births for which prenatal care was started in the 1st trimester is still significantly lower in Jefferson County than in Oregon.
    - The percentage of births for which prenatal care was started in the 2nd or 3rd trimester was significantly lower in Deschutes County than in Oregon.
- Fertility rates among American Indian/Alaska Natives in Jefferson County were significantly higher than American Indians/Alaska Natives in Oregon. White non-Hispanic fertility rates in Crook and Jefferson Counties were significantly higher than white non-Hispanic rates in Oregon.
- The percent of births paid for by OHP was higher in Central Oregon as a whole than in Oregon. In Crook County, the percent of births paid for by OHP among 25-29 year olds, 30-34 year olds, and 35-39 year olds was higher than Oregon rates in those age groups.
- *For the topic of pregnancy risk factors:*
    - The percent of women who smoked during pregnancy decreased in Crook County.
    - The percent of births to women with gestational diabetes is now significantly lower in Central Oregon than in Oregon as a whole.
    - The percent of births to women with pre-pregnancy hypertension is now significantly lower in Central Oregon than in Oregon as a whole.
- The percent of preterm births (<36 weeks and 32-36 weeks) decreased among Central Oregon OHP members; the percent of preterm births among Central Oregon OHP members is no longer significantly higher than the percentage in Oregon as a whole.

Prenatal Care

Table 11. Timeliness of prenatal care, OPHAT, 2015						
	Percent of births					
	Oregon	Crook	Deschutes	Jefferson	Central Oregon: total births	Central Oregon: births paid by OHP
Adequate Prenatal Care-Kotelchuck Index	75.5	78.3	77.4	61.8	75.6	71.8
Prenatal care started in 1st trimester	79.0	78.8	83.1	68.1	80.9	72.7
Prenatal care started in 2nd trimester	16.5	17.8	14.3	26.2	16.1	22.9
Prenatal care started in 3rd trimester	3.8	2.9	2.1	5.0	2.5	4.1
No prenatal care	0.7	†	0.5	†	0.5	†

	Significantly higher than the state overall
	Significantly lower than the state overall
†	Too few births to report

2016-2019 RHIP Indicator: Reproductive & Maternal Child Health #1.
By 2019, increase the number of women in Central Oregon who receive prenatal care beginning in the first trimester from 86% to 90%.

As shown in the table above, in Central Oregon 80.9% of women began prenatal care in the first trimester in 2015. The percentage in Crook, Deschutes, and Jefferson Counties were 78.8%, 83.1%, and 68.1%, respectively.

Births

Figure 35. Fertility rate per 1,000 women aged 15-44 years, OPHAT, 2000-2015

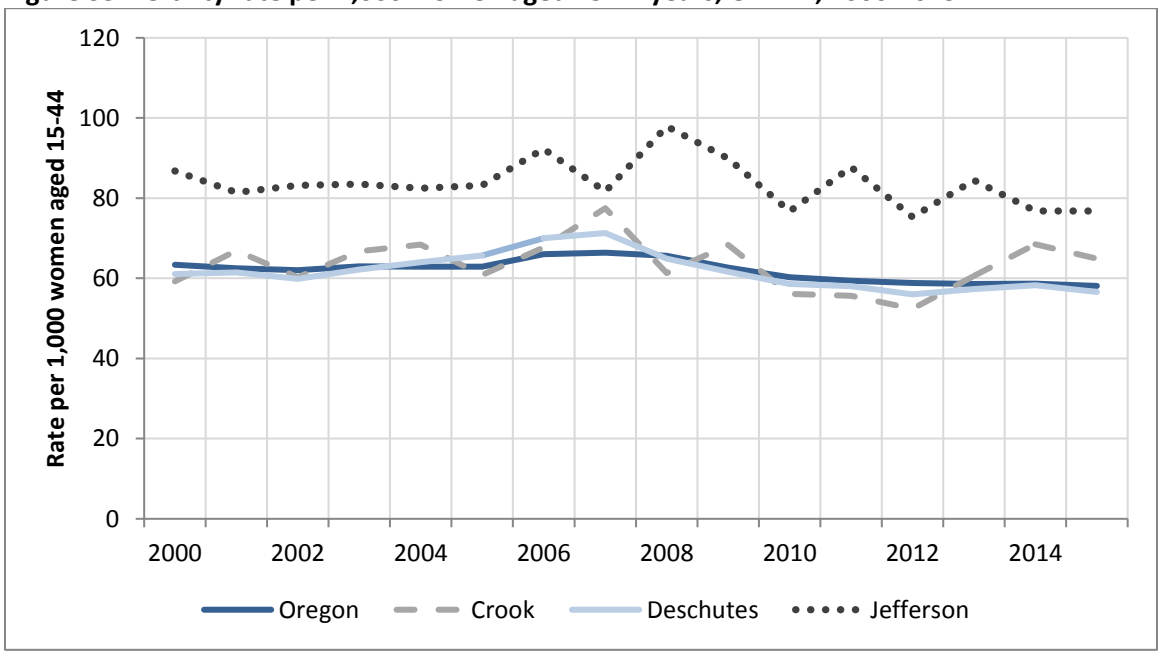
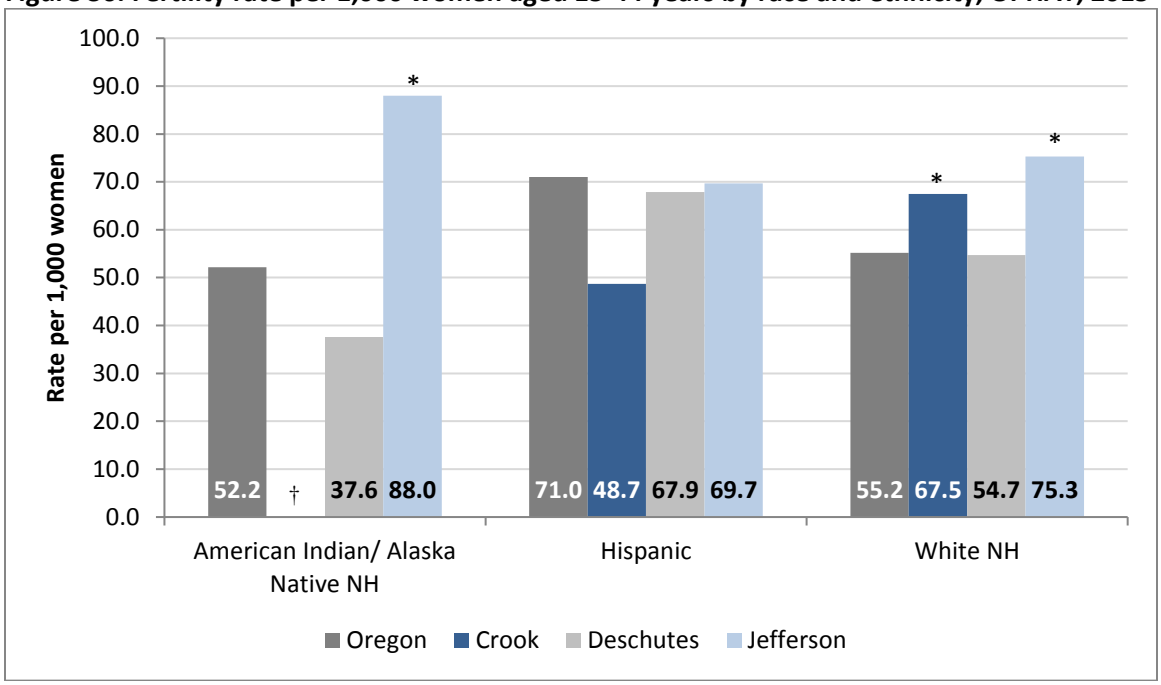
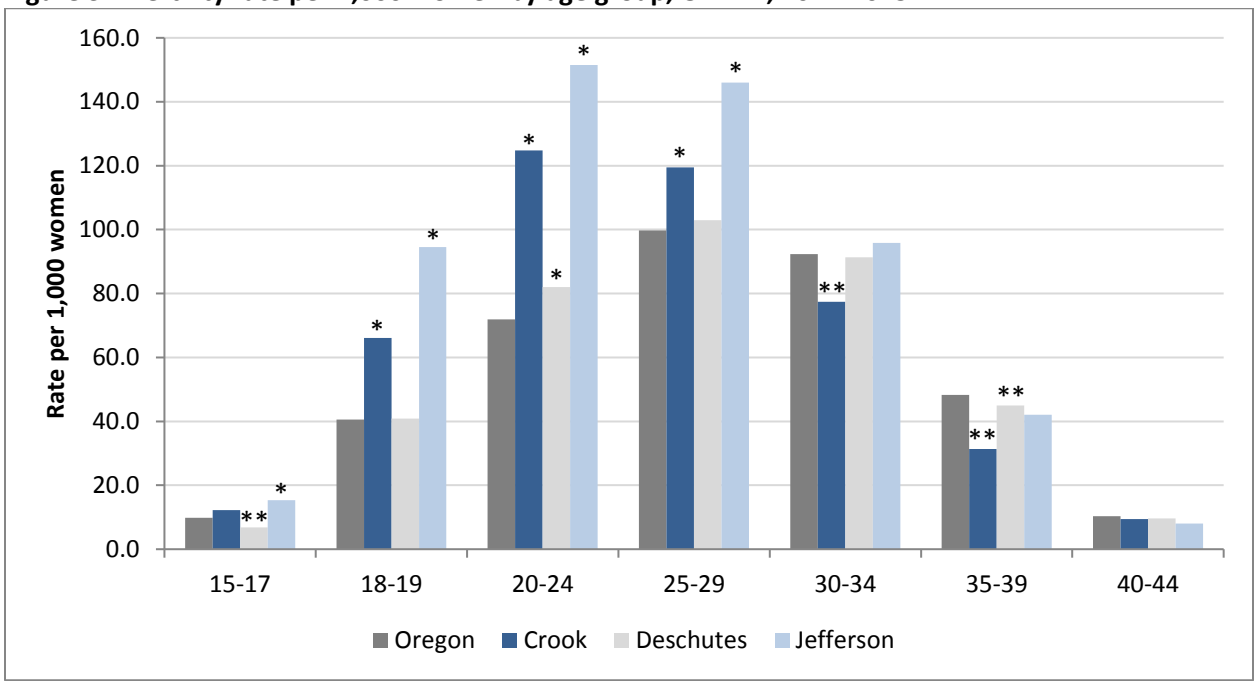


Figure 36. Fertility rate per 1,000 women aged 15-44 years by race and ethnicity, OPHAT, 2015



† Too few births to report a rate for American Indians/Alaska Natives in Crook County.
*Significantly higher than Oregon race- or ethnicity-specific rate

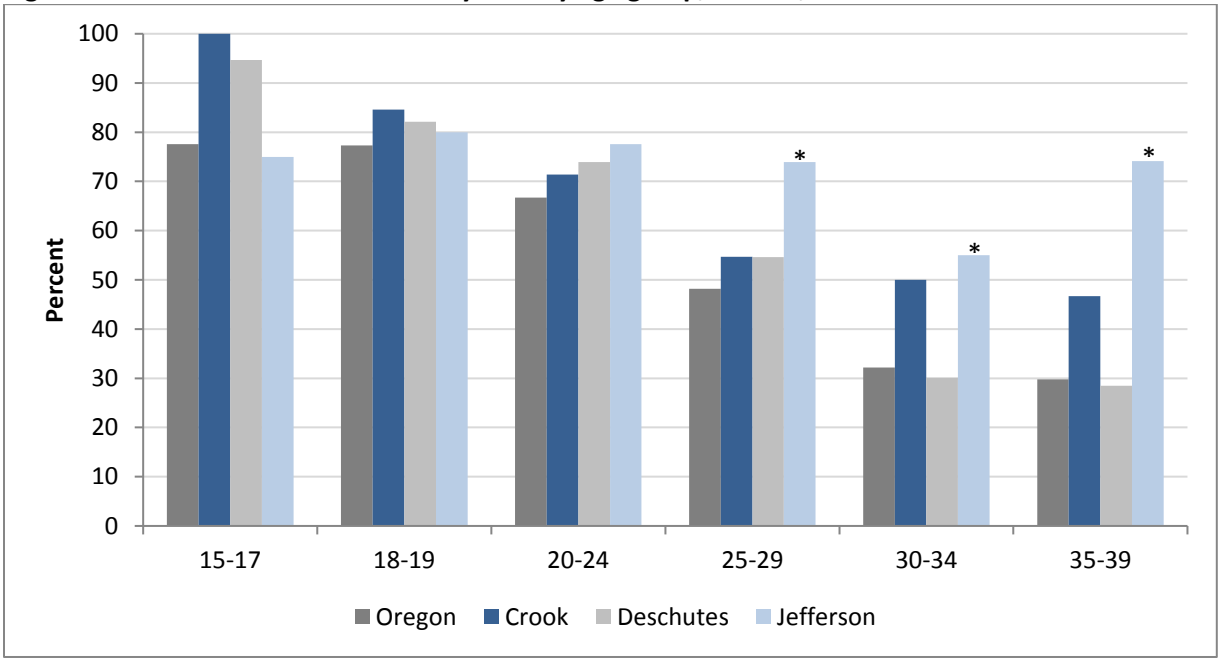
Figure 37. Fertility rate per 1,000 women by age group, OPHAT, 2011-2015.



*Significantly higher than Oregon age-specific rate
**Significantly lower than Oregon age-specific rate

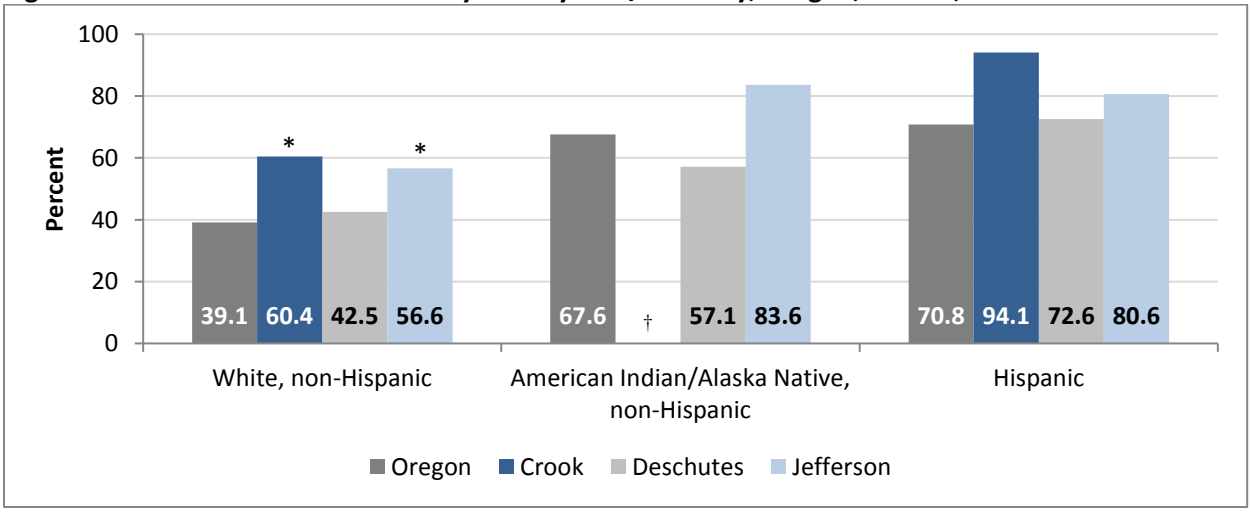
Table 12. Total number of births by county and payer, Oregon, OHA Birth Certificate Data, 2015					
	Oregon	Central Oregon	Crook	Deschutes	Jefferson
Total number of births	45,580	2,267	216	1,768	283
Percent of births paid by OHP	45.5	50.9	62.5	46.4	70.3
	Significantly higher than Oregon percent of births				

Figure 38. Percent of births covered by OHP by age group, OPHAT, 2015



*Significantly higher than Oregon age-specific percentage

Figure 39. Percent of births covered by OHP by race/ethnicity, Oregon, OPHAT, 2015.

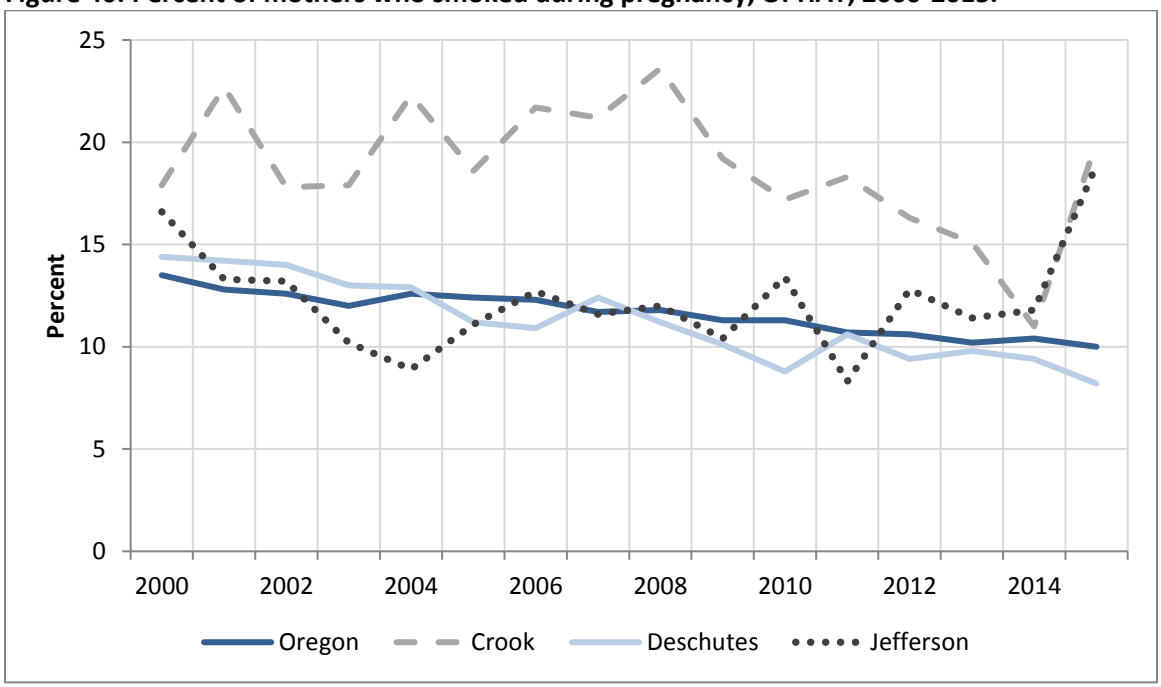


†Too few births to report

* Significantly higher than Oregon race- or ethnicity-specific percentage

Pregnancy Risk Factors

Figure 40. Percent of mothers who smoked during pregnancy, OPHAT, 2000-2015.

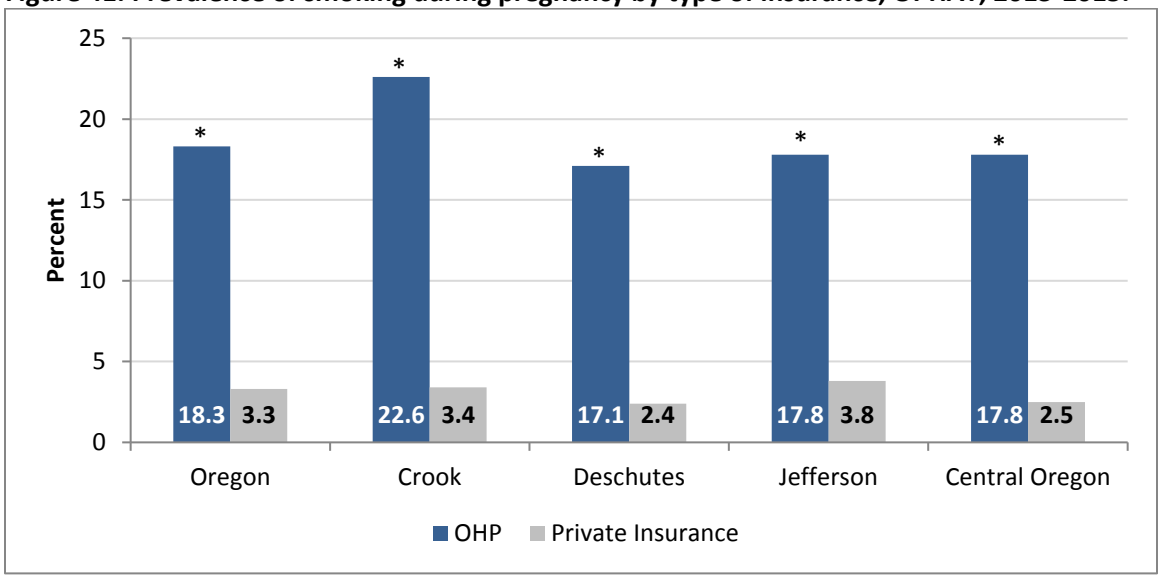


2016-2019 RHIP Indicator: Reproductive & Maternal Child Health #2.

By 2019, decrease the percent of tobacco use among Central Oregon pregnant women from an average of 12.1% to 7.0%.

As shown in the figure above, the percentage of pregnant women who smoked in 2015 in Crook, Deschutes, and Jefferson Counties was 20%, 8.2%, and 18.9%, respectively.

Figure 41. Prevalence of smoking during pregnancy by type of insurance, OPHAT, 2013-2015.

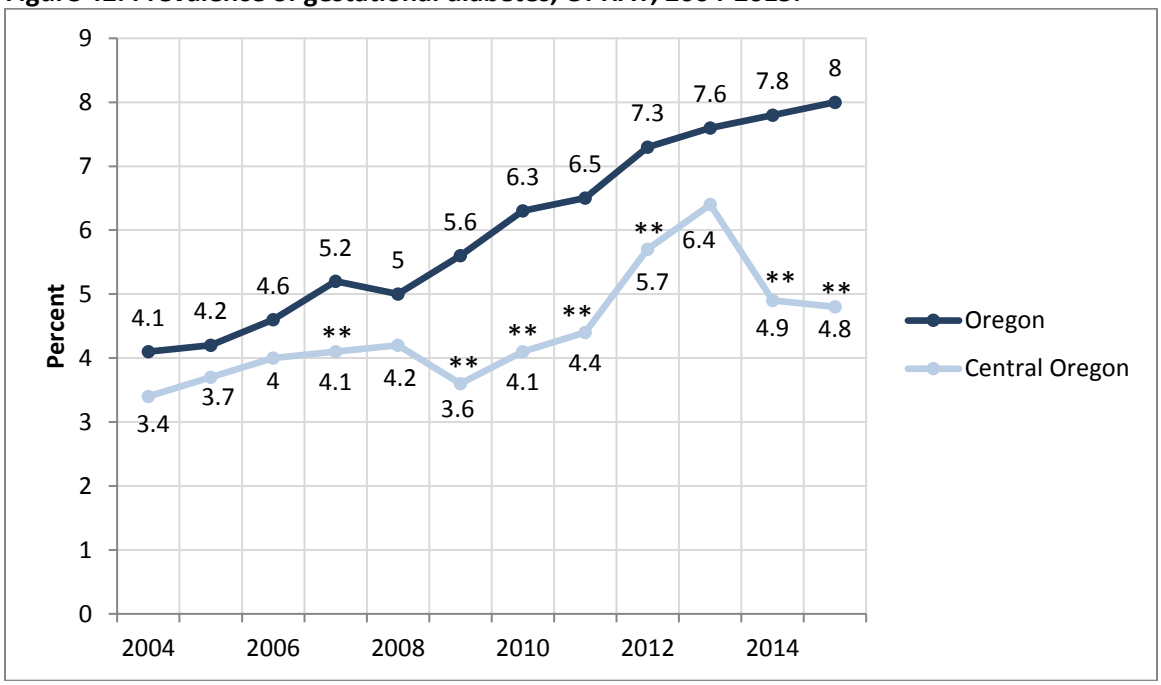


*Significantly higher than percentage among those with private insurance

Table 13. Percent of births with specific pregnancy risk factors, OPHAT, 2015				
	Oregon	**Oregon-OHP**	**Central Oregon**	**Central Oregon-OHP**
Gestational diabetes	8.0	8.6	4.8	4.9
Pre-pregnancy diabetes	0.9	1.1	1.0	1.2
Eclampsia	0.7	0.8	0.9	1.1
Gestational hypertension	6.9	6.3	7.0	6.8
Pre-pregnancy hypertension	1.9	2.0	1.1	1.3

	Significantly higher than Oregon total
	Significantly lower than Oregon total
	Significantly lower than Oregon-OHP

Figure 42. Prevalence of gestational diabetes, OPHAT, 2004-2015.



**Significantly lower than Oregon percent

Table 14. Percent of births by gestational age at birth and birth weight, OPHAT, 2015					
		Oregon	Oregon OHP	Central Oregon	Central Oregon OHP
Preterm Birth	<36 weeks	7.6	8.0	7.1	7.6
	32-36 weeks	6.4	6.8	6.2	6.6
	<32 weeks	1.1	1.3	1.0	1.0
Birth Weight	<2500 grams (low birth weight)	6.4	7.0	6.5	7.7
	>=4000 grams (high birth weight)	10.4	9.4	9.0	8.7
	Significantly lower than Oregon percentage				

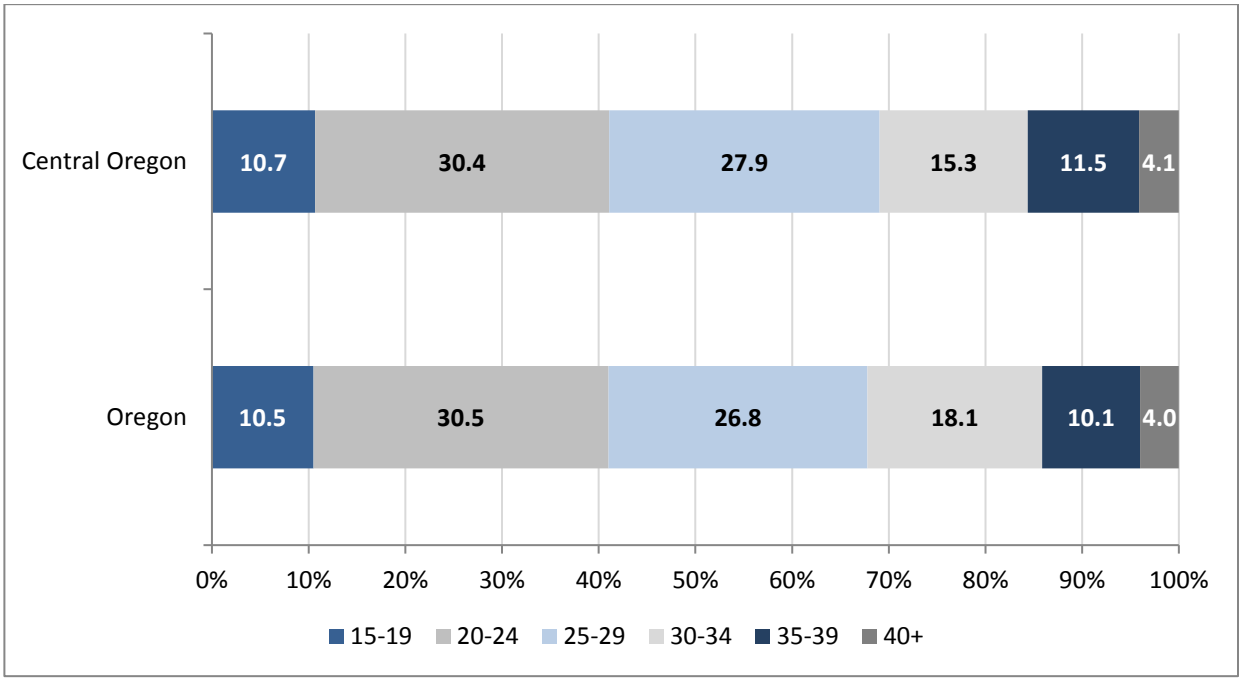
2016-2019 RHIP Indicator: Reproductive & Maternal Child Health #3.
By 2019, reduce low birth weight (LBW) (less than 2500 g) to an incidence of no more than 5% of live-born infants in Central Oregon.

As shown in the table above, 6.5% of live-born infants were born weighing less than 2500 grams in the Central Oregon region in 2015.

Unintended Pregnancy and Abortion

In 2015, there were 359 induced terminations of pregnancy in Central Oregon.

Figure 43. Percent of all induced terminations of pregnancy by age group, Oregon Vital Statistics, 2015.



Child and Adolescent Health

Child and Adolescent Health Section Highlights

Since the 2015 RHA was published:

- The percent of all babies who were breastfed at birth decreased in all three Central Oregon counties. The percent of babies who were breastfed at birth by WIC-enrolled mothers, however, increased in Crook and Jefferson Counties, and remained the same in Deschutes County.
- The rate of child victims of abuse or neglect decreased in Crook County, and increased slightly in Deschutes County.
- The four- and five-year high school graduation rates improved in Crook County and in the Bend-La Pine and Redmond school districts.
- *For the topic of child and adolescent risk behaviors:*
    - The percent of 11th graders who reported ever having sexual intercourse decreased in all three Central Oregon counties.
    - The percent of 11th graders who drove a vehicle at least once after drinking alcohol in the past 30 days increased in all three Central Oregon counties.
    - The percent of 8th and 11th graders who reported drinking alcohol in the past 30 days decreased in Crook and Deschutes Counties, but increased in Jefferson County.
    - Marijuana use among 11th graders increased in Crook and Deschutes County, but decreased in Jefferson County.
    - The percent of 11th grade students who reported smoking in the past month decreased in all three Central Oregon counties.

Infant, Childhood and Adolescent Mortality

Table 15. Infant and child mortality in Central Oregon, OPHAT, 2006-2015

Age Group	Average annual deaths in Central Oregon (2006-2015)	Leading causes of death
Infants aged <1	11	1. Congenital malformations 2. Unintentional injuries 3. Sudden infant death syndrome 4. Disorders related to short gestation/LBW
Children/adolescents aged 1-17	9	1. Unintentional Injuries 2. Suicide 3. Malignant neoplasms

- Between 2006 and 2015, the leading causes of unintentional injury-related deaths for children and adolescents aged 1-17 in Central Oregon remained motor vehicle crashes and drownings.

Breastfeeding

Table 16. Number and percent of babies breastfed, Oregon birth certificates, 2013-2015

	Oregon	Crook	Deschutes	Jefferson
Breastfeeding indicated on birth certificate	125,213	537	4,350	707
Total births between 2013-2015	136,349	630	5,283	865
Percent breastfed	91.8%	85.2%	82.3%	81.7%

Table 17. Percent of mothers enrolled in WIC who breastfed and number of WIC clients served in Central Oregon, WIC County Data Reports, 2016				
	Oregon	**Crook**	**Deschutes**	**Jefferson**
Number of individuals served	145,599	1,148	5,681	1,055
Percent initiated breastfeeding	N/A	91	95	92
Percent still breastfeeding at six months	N/A	31	43	30
N/A: data not available at state level				

Child and family support

Table 18. Information related to child and family support, 2016				
	Oregon	**Crook**	**Deschutes**	**Jefferson**
Number in SNAP (Food stamps)	264,223	1,576	9,455	2,795
Number in TANF (Cash assistance)	42,044	204	758	626
Average monthly number of children in employment related day care program	14,583	38	472	96
Percent of children in food insecure house	24.5	30.5	25.1	28.3
Percent of students eligible for free or reduced lunch	49.3	61.2	47.8	76.0
Rate of child victims of abuse or neglect per 1,000 children under age 18	12.1	11.1	11	9.1
Percent of children in foster care	1.3	1.8	0.7	1.5
Rate of referrals to juvenile justice per 1,000 children aged 0-17 years	14.7	32	23.9	20.9

Data from Children First for Oregon report: http://datacenter.kidscount.org

Childhood health and education

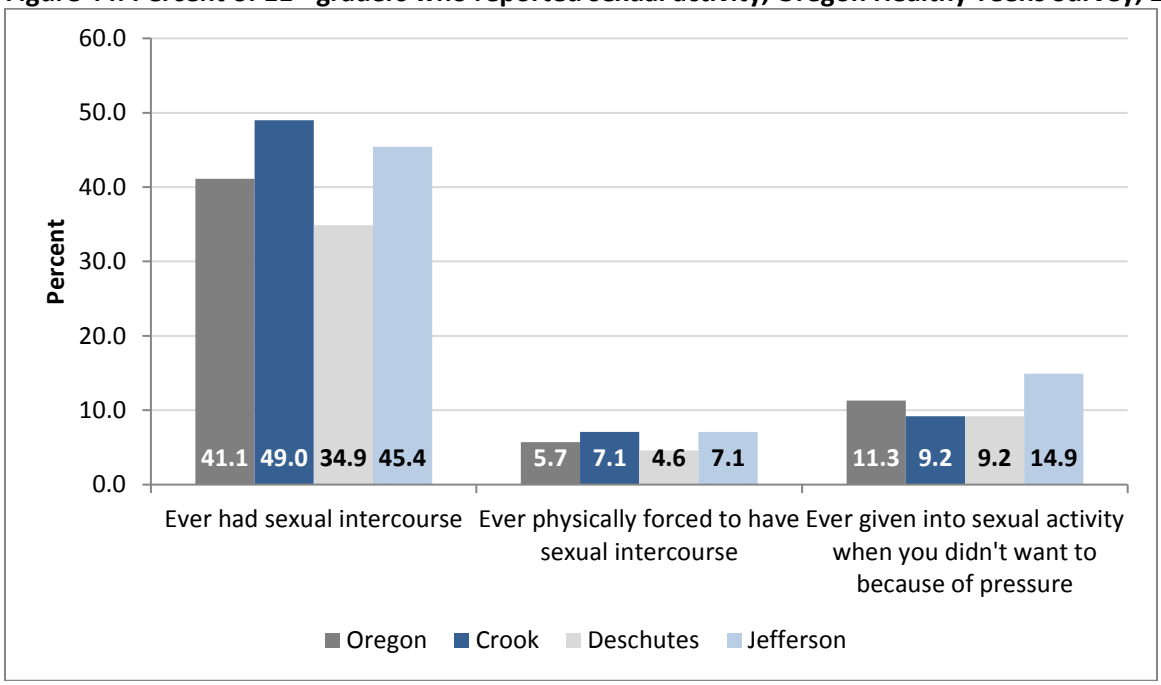
- In 2016 in Crook, Deschutes, and Jefferson County, an estimated 46.8%, 35.5%, and 32.3%, respectively, of 3-4 year olds were enrolled in early education, compared to 41.1% in Oregon.

Table 19. Proficiency for math and English for 3rd and 8th graders.				
	3rd grade math proficiency	3rd grade English language arts proficiency	8th grade math proficiency	8th grade English language arts Proficiency
Crook County	37.6%	41.7%	43.3%	57.4%
Deschutes County	53.1%	51.3%	46.2%	63.8%
Jefferson County	24.2%	30.5%	21.5%	39.4%
Oregon	45.6%	45.6%	42.9%	56.9%

Table 20. Percent of students who graduated high school in four and five years, by school district, ODE, 2015-2016.		
School District	4-year percent *Students completed high school in four years or less*	5-year percent *Students completed high school in 5 years or less*
Oregon	74.8	77.8
Crook County		
Crook	67.7	87.6
Deschutes County		
Bend-La Pine	86.1	88.3
Redmond	78.8	77.2
Sisters	86.4	88.4
Jefferson County		
Ashwood	100	--
Culver	74.0	91.0
Jefferson Co	60.3	71.1

Child and Adolescent Health Risk Factors

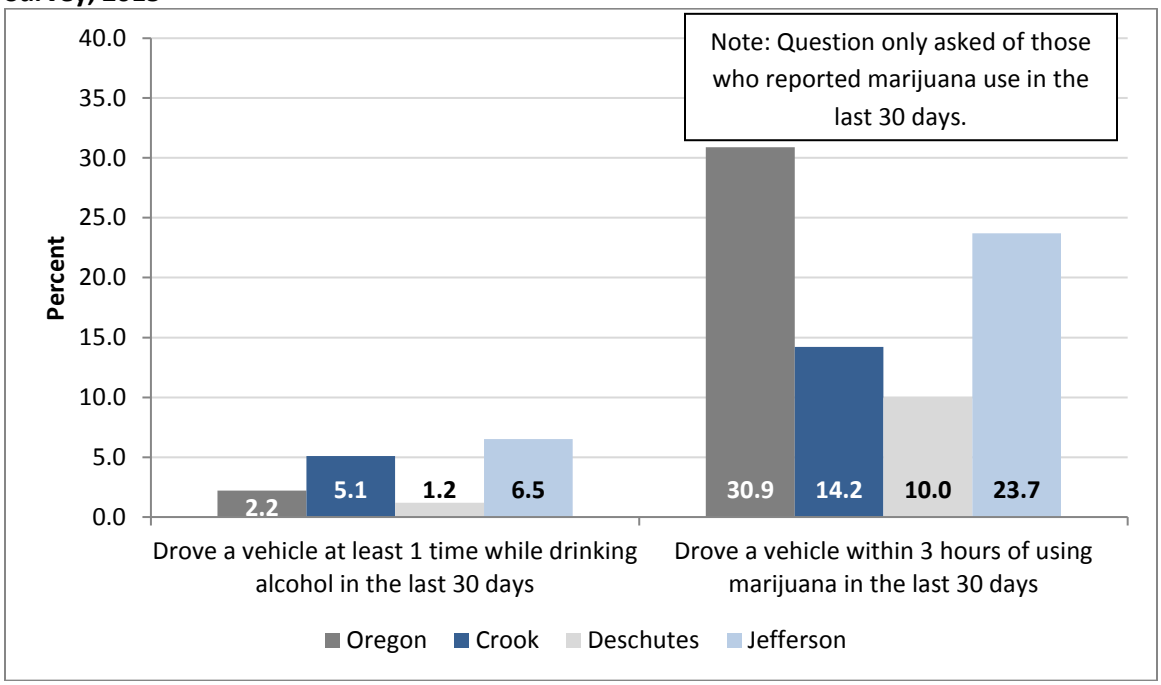
Figure 44. Percent of 11th graders who reported sexual activity, Oregon Healthy Teens Survey, 2015



Note: Deschutes County estimates may not be representative of the county as a whole.

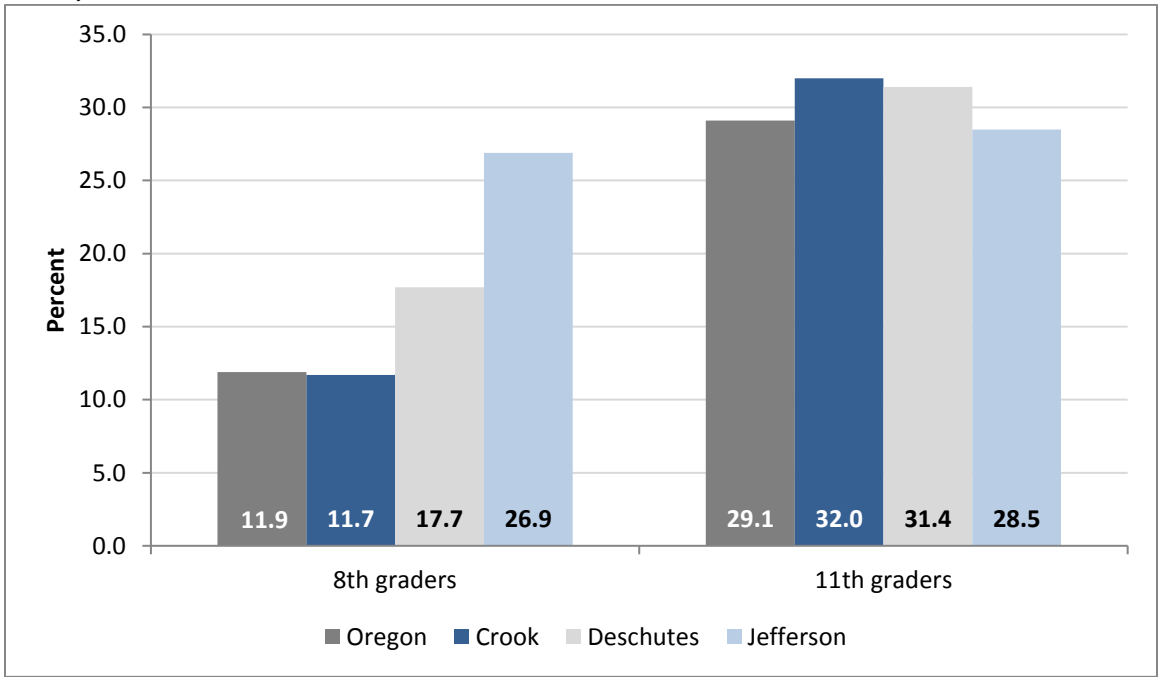
- In 2015, the percent of 8th graders who have ever had sexual intercourse was 5.5%, 9.3%, and 11.3% in Crook, Deschutes, and Jefferson County, respectively.

Figure 45. Percent of 11th grade students who drove after using substances, Oregon Healthy Teens Survey, 2015



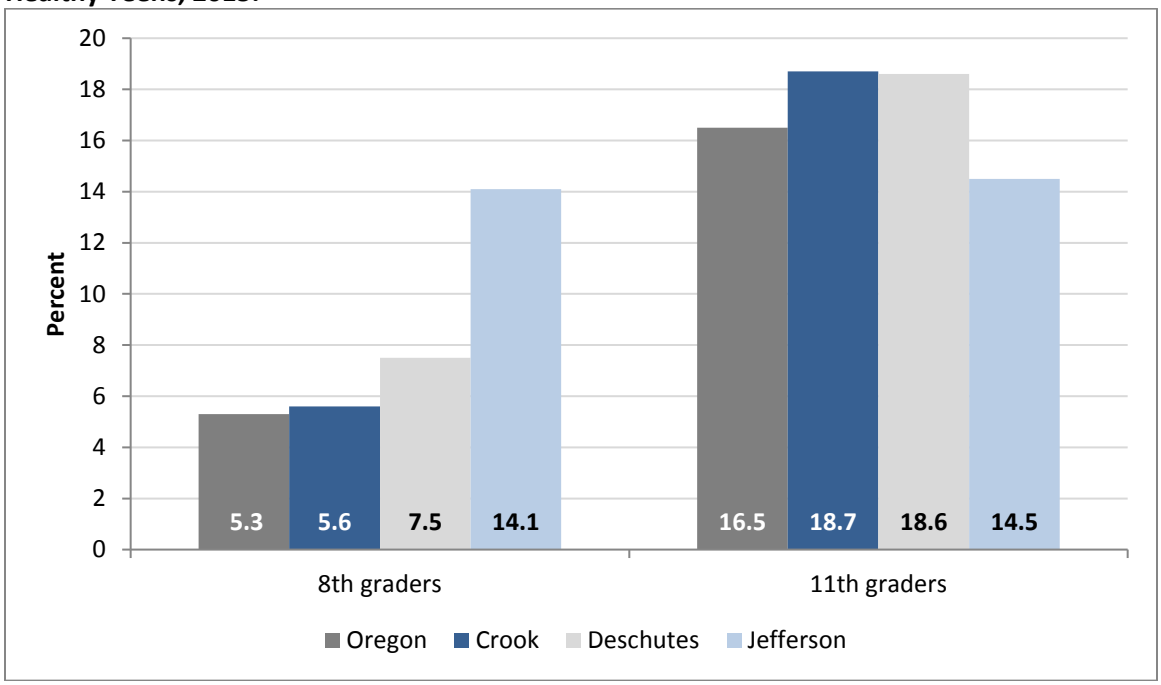
Note: Deschutes County estimates may not be representative of the county as a whole.

Figure 46. Percent of students who drank alcohol on at least 1 day in the last 30 days, Oregon Healthy Teens, 2015.



Note: Deschutes County estimates may not be representative of the county as a whole.

Figure 47. Percent of students who binge drank alcohol on at least 1 day in the last 30 days, Oregon Healthy Teens, 2015.



Binge drinking is defined as having five or more drinks of alcohol in a row/within a few hours.
Note: Deschutes County estimates may not be representative of the county as a whole.

Figure 48. Type of alcohol used by 11th grade alcohol users by county, Oregon Healthy Teens, 2015.

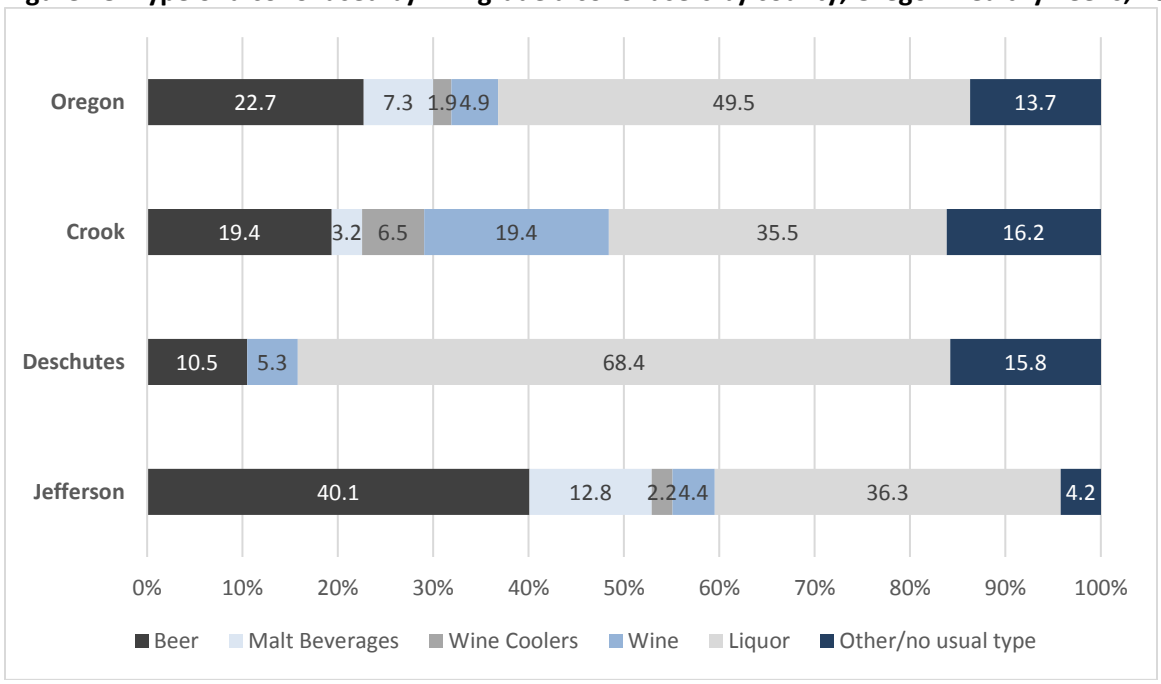
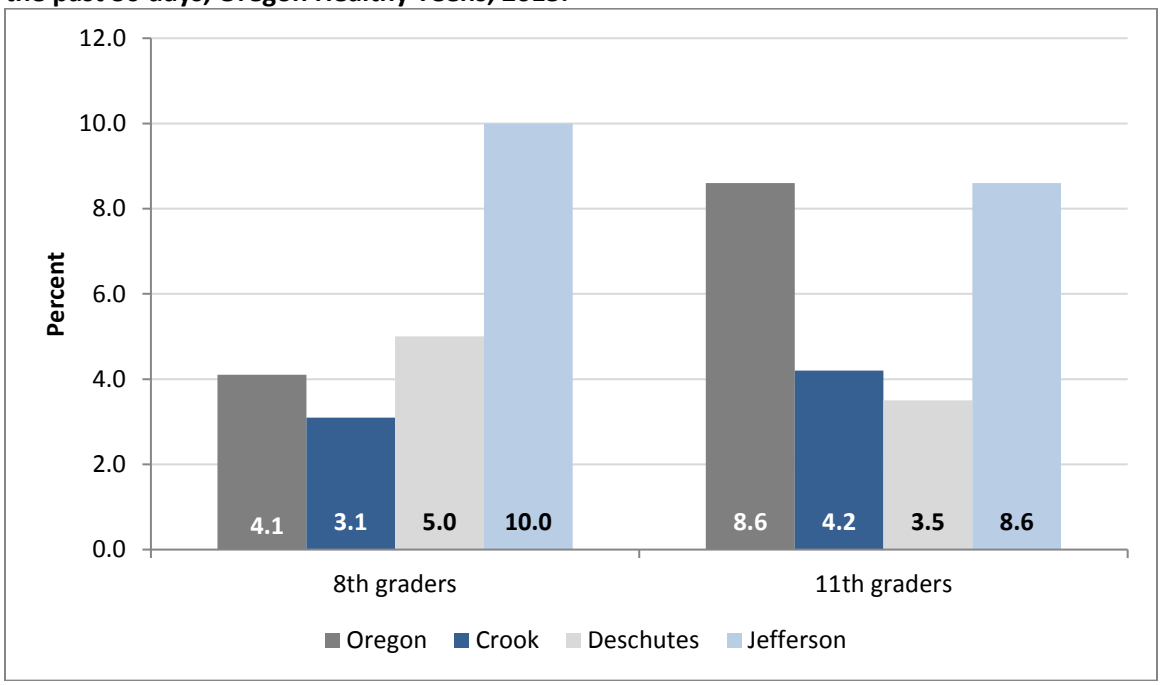
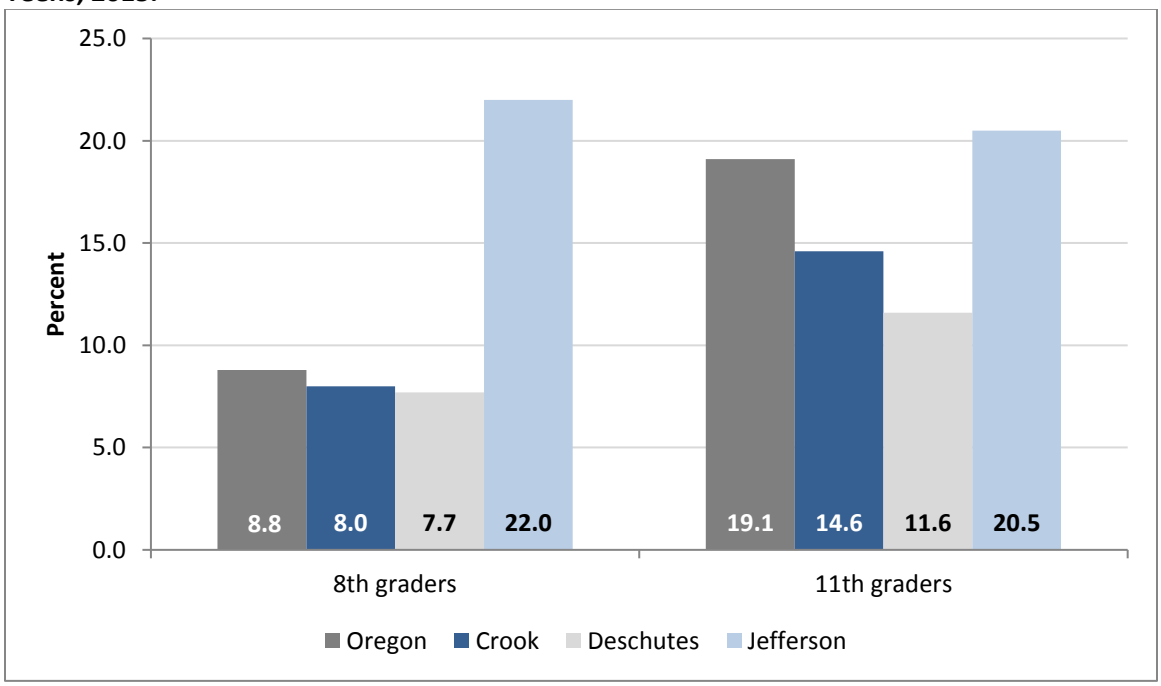


Figure 49. Percent of students who used prescription drugs without a doctor's orders at least once in the past 30 days, Oregon Healthy Teens, 2015.



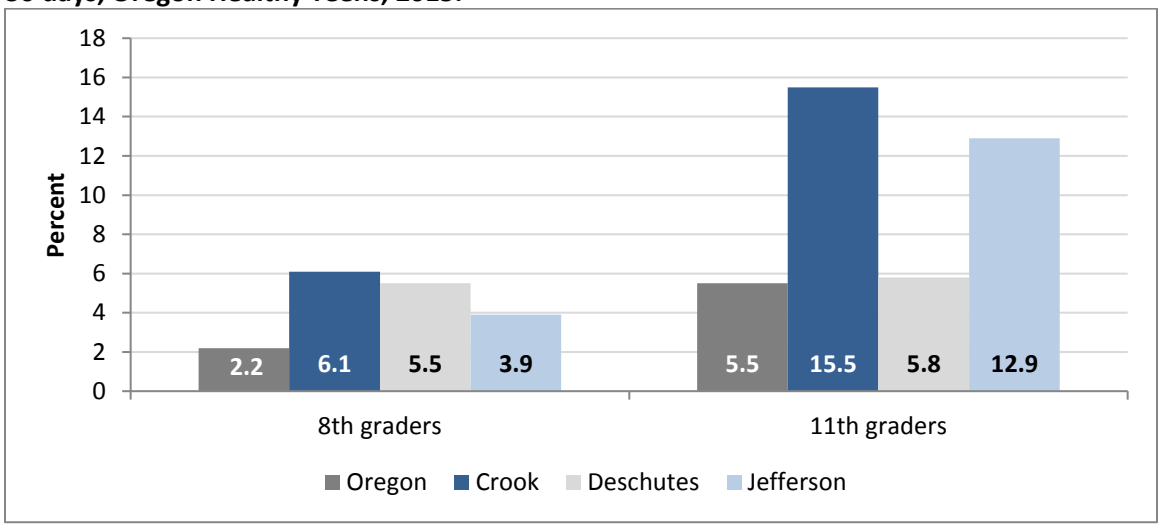
Note: Deschutes County estimates may not be representative of the county as a whole.

Figure 50. Percent of students who used marijuana at least once in the past 30 days, Oregon Healthy Teens, 2015.



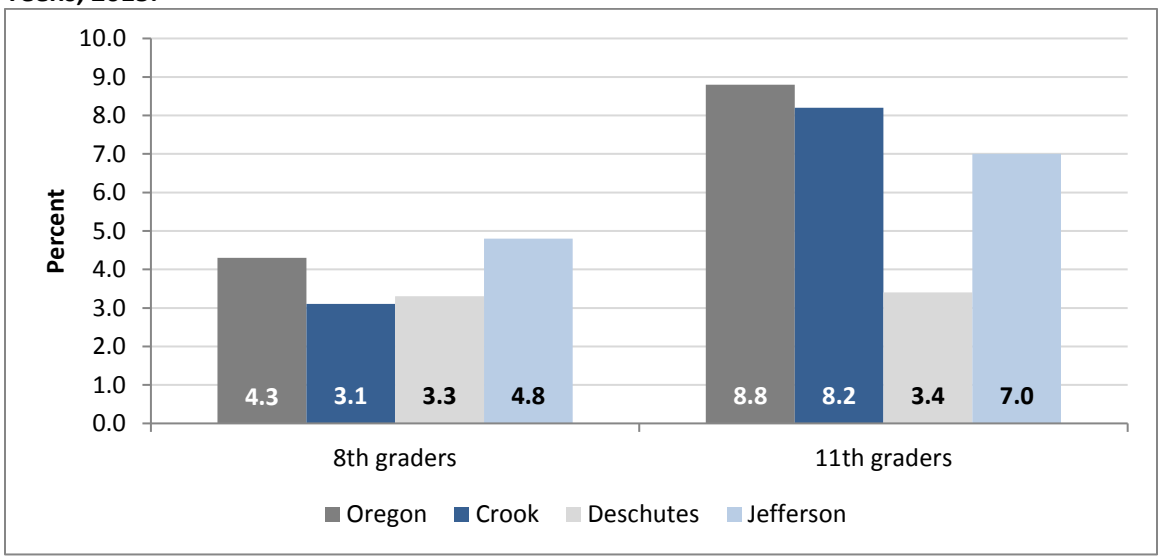
Note: Deschutes County estimates may not be representative of the county as a whole.

Figure 51. Percent of students who used chewing tobacco, snuff, dip, or snus at least once in the past 30 days, Oregon Healthy Teens, 2015.



Note: Deschutes County estimates may not be representative of the county as a whole.

Figure 52. Percent of students who used cigarettes at least once in the past 30 days, Oregon Healthy Teens, 2015.



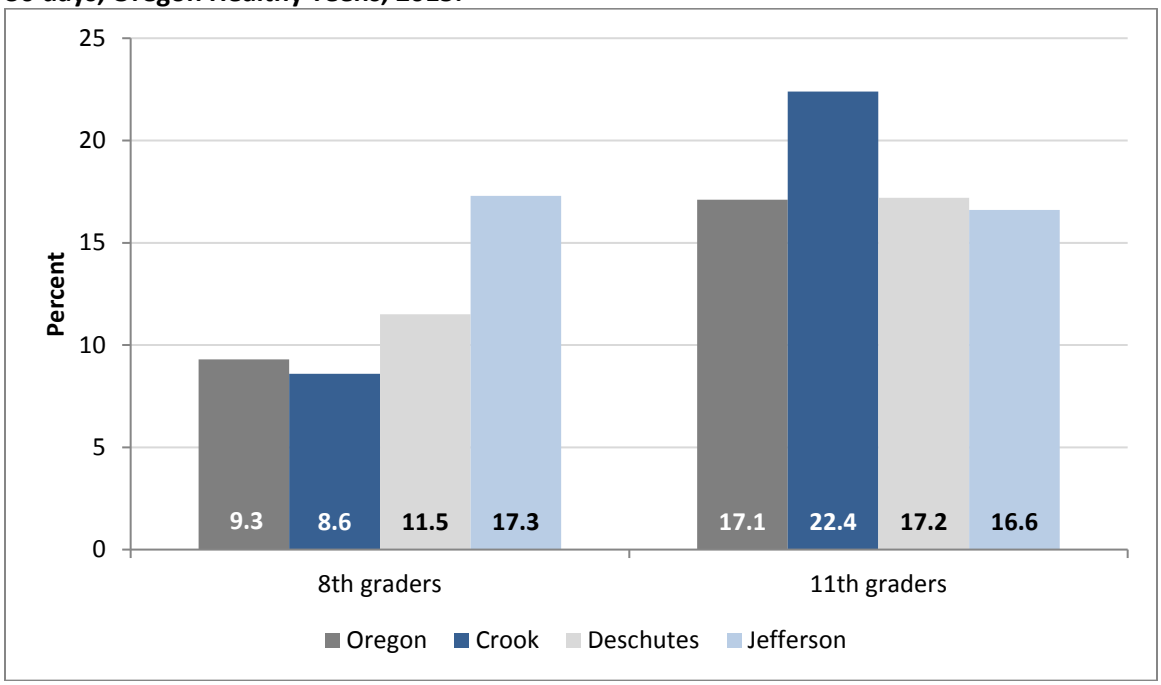
Note: Deschutes County estimates may not be representative of the county as a whole.

2016-2019 RHIP Indicator: Cardiovascular Disease #3.

Decrease the prevalence of smoking among 11th and 8th graders from 12% and 6%, respectively, to 9% and 3%, respectively.

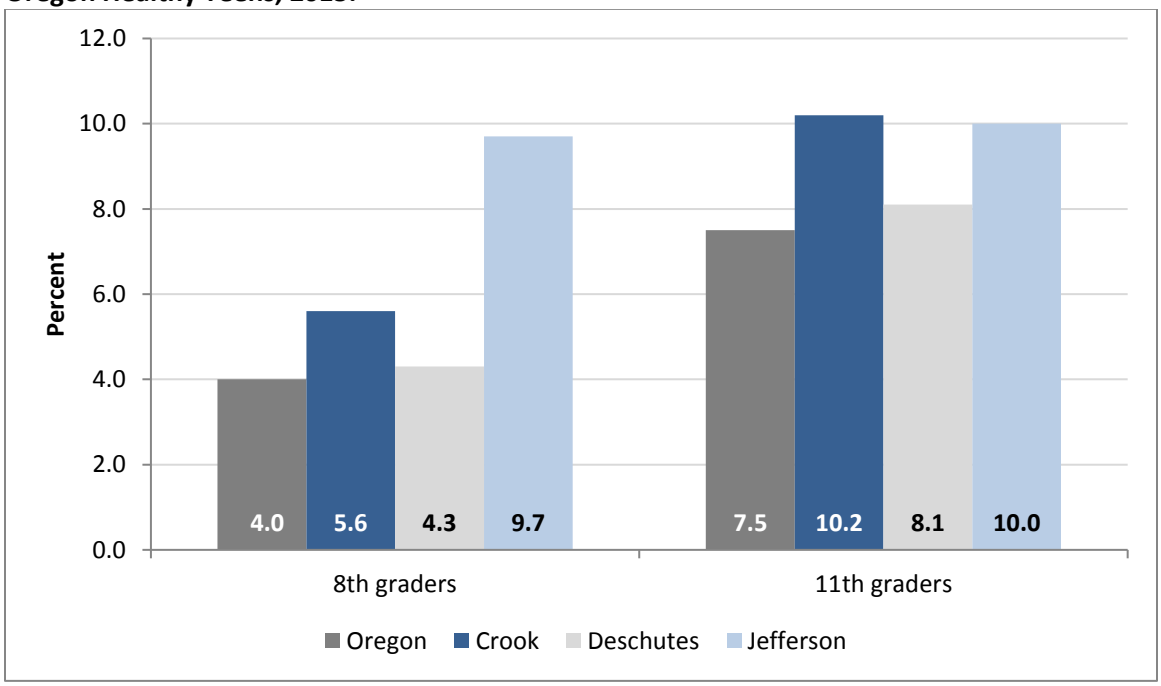
As shown in the figure above, the 2015 Oregon Healthy Teens Survey indicated that 3.1%, 3.3%, and 4.8% of 8th graders in Crook, Deschutes, and Jefferson County, respectively, smoked cigarettes in the past month. Among 11th graders in Crook, Deschutes, and Jefferson Counties, the percentage who smoked in the past month was 8.2%, 3.4%, and 7%, respectively.

Figure 53. Percent of students who used e-cigarettes or other vaping products at least once in the past 30 days, Oregon Healthy Teens, 2015.



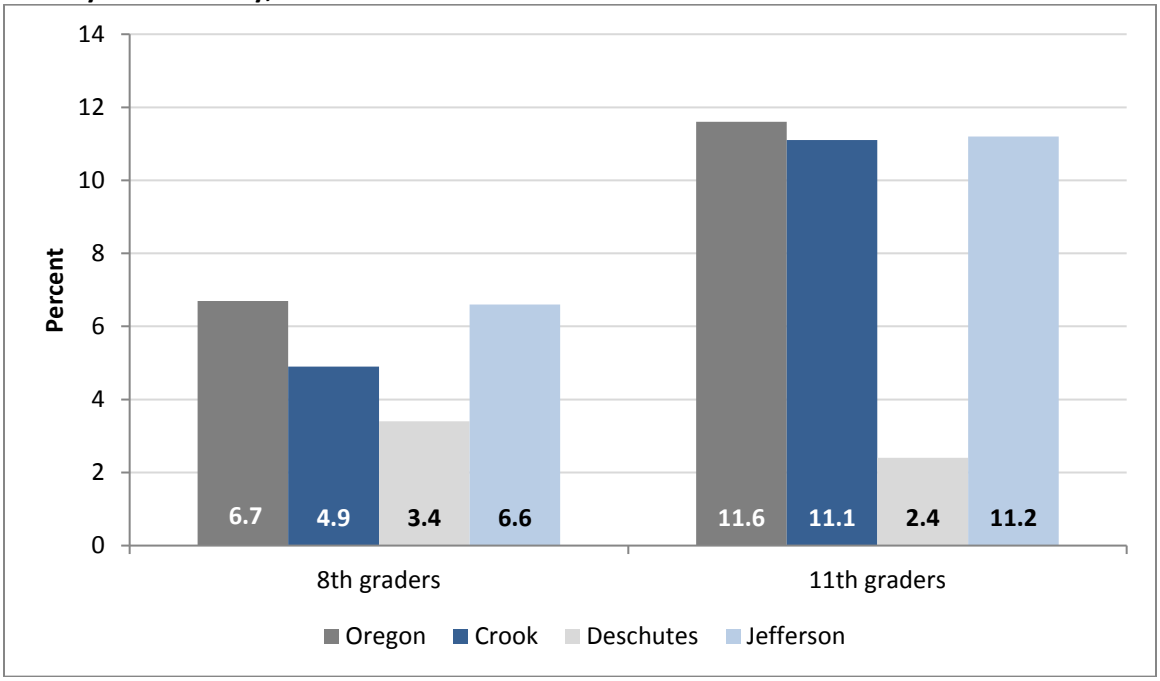
Note: Deschutes County estimates may not be representative of the county as a whole.

Figure 54. Percent of students who smoked tobacco in a hookah at least once in the past 30 days, Oregon Healthy Teens, 2015.



Note: Deschutes County estimates may not be representative of the county as a whole.

Figure 55. Percent of students who reported zero days of physical activity in the past 7 days, Oregon Healthy Teens Survey, 2015.



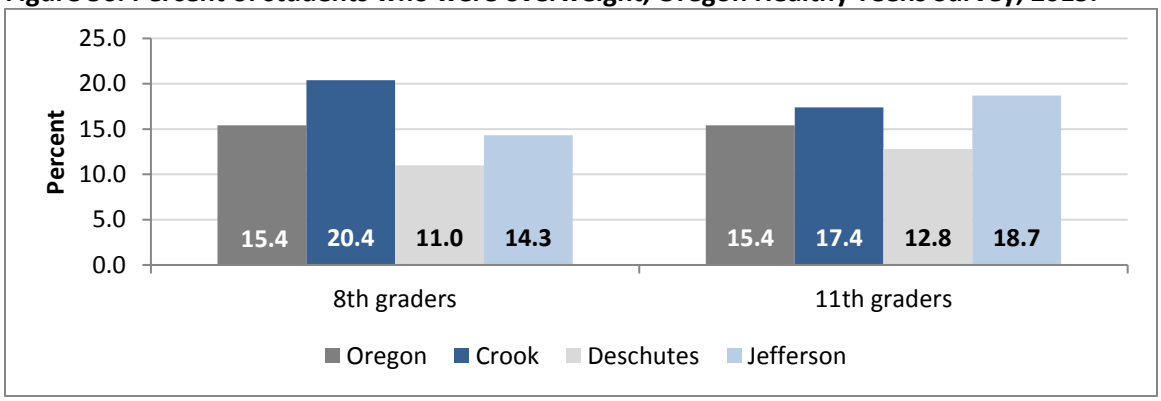
Note: Deschutes County estimates may not be representative of the county as a whole.

2016-2019 RHIP Indicator: Cardiovascular Disease #5.

Decrease the prevalence of 11th graders and 8th graders who have zero days of physical activity from 11% and 6% to 10% and 5%, respectively.

As shown in the figure above, the 2015 Oregon Healthy Teens Survey indicated that 4.9%, 3.4%, and 6.6% of 8th graders in Crook, Deschutes, and Jefferson County, respectively, reported zero days of physical activity in the previous week. Among 11th graders in Crook, Deschutes, and Jefferson Counties, the percentage who reported zero physical activity in the past week was 11.1%, 2.4%, and 11.2%, respectively

Figure 56. Percent of students who were overweight, Oregon Healthy Teens Survey, 2015.



Note: Deschutes County estimates may not be representative of the county as a whole.

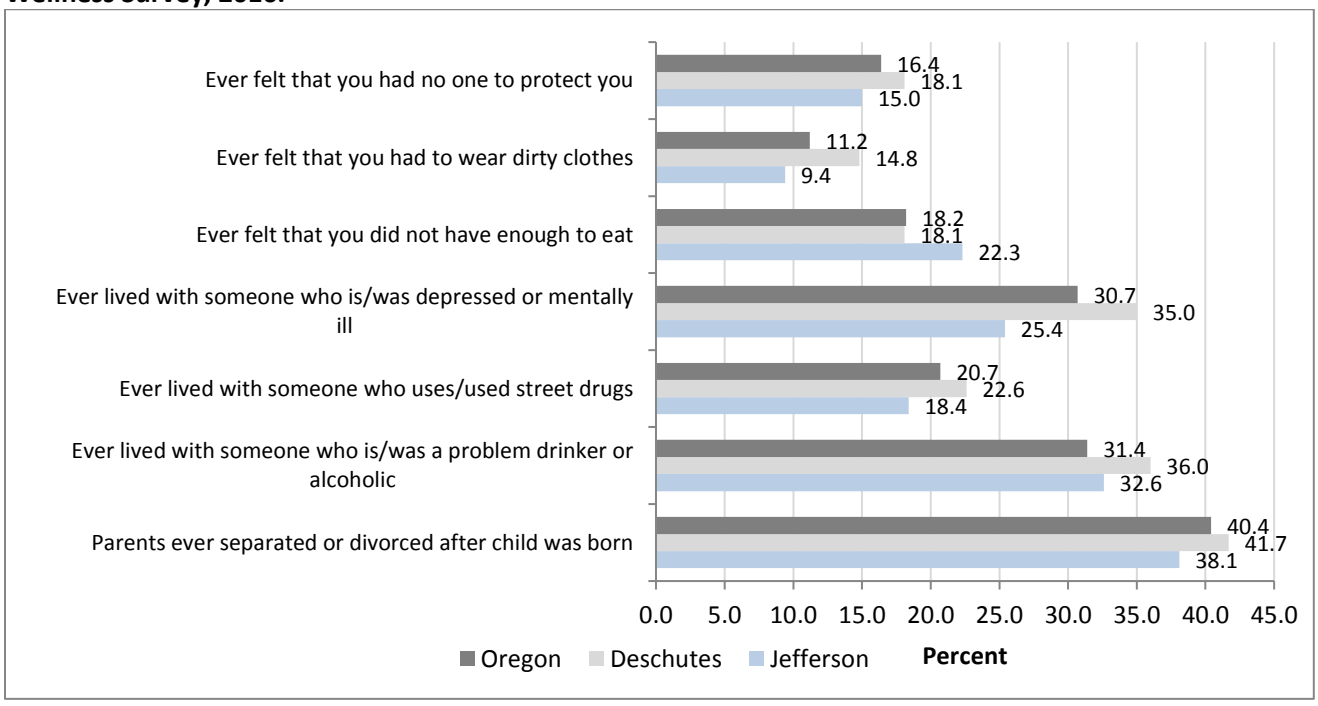
2016-2019 RHIP Indicator: Diabetes #2

Decrease the prevalence of 11th graders and 8th graders who are overweight from 14% and 16%, respectively, to 13% and 14%, respectively.

As shown in the figure above, the 2015 Oregon Healthy Teens Survey indicated that 20.4%, 11.0%, and 14.3% of 8th graders in Crook, Deschutes, and Jefferson County, respectively, were overweight. Among 11th graders in Crook, Deschutes, and Jefferson Counties, the percentage who were overweight was 17.4%, 12.8%, and 18.7%, respectively

Adverse Childhood Experiences

Figure 57. Percent of 8th grade students who reported adverse childhood experiences, Oregon Student Wellness Survey, 2016.



Note: Crook County estimates unavailable for 2016.

Mental Health

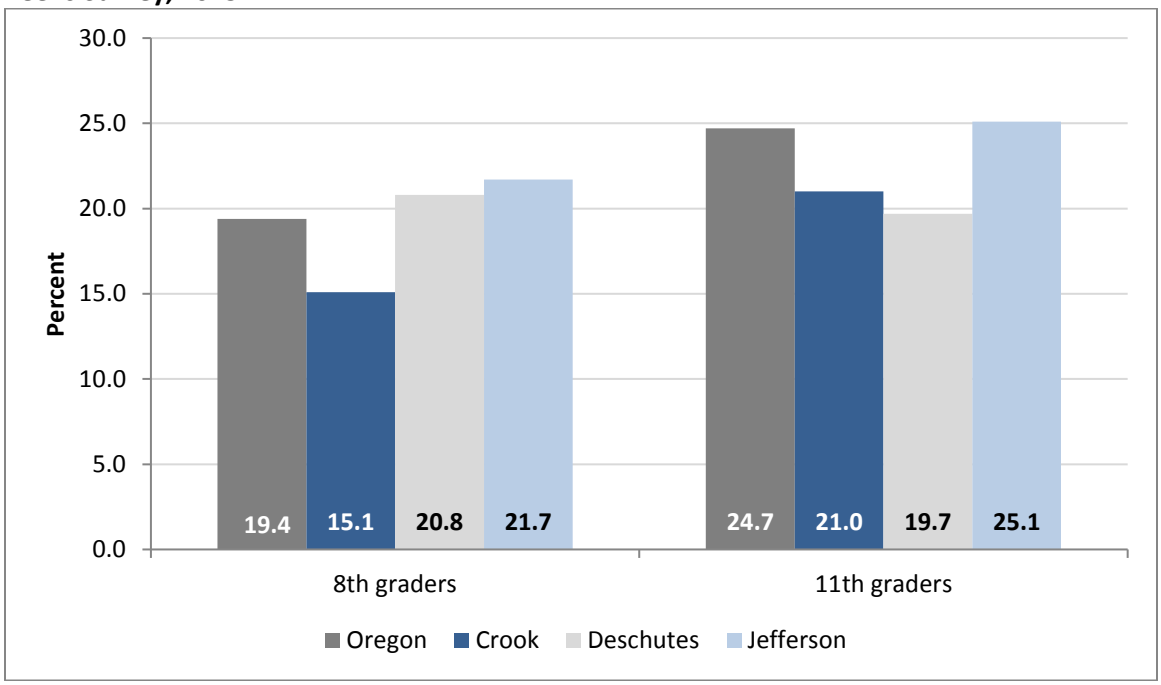
Mental Health Section Highlights

Since the 2015 RHA was published:

- The percent of 11th graders who reported fair or poor emotional/mental health increased in all three Central Oregon counties.
- The percent of 11th graders who seriously considered attempting suicide decreased in Deschutes County and increased in Jefferson County.
- The percent of adults with depression increased in all three Central Oregon counties.
- The 10-year age-adjusted suicide mortality rate in Central Oregon was still significantly higher than Oregon as a whole. The age-adjusted suicide mortality rate among Central Oregon Hispanics is now significantly lower than rates among American Indian/Alaska Native and White non-Hispanic Central Oregonians. Age-adjusted suicide mortality rates among men in Central Oregon were significantly higher than rates among women in Central Oregon.
- The 5-year suicide mortality rate among 15-24 year olds in Central Oregon is still significantly higher than the rate among Oregon 15-24 year olds.

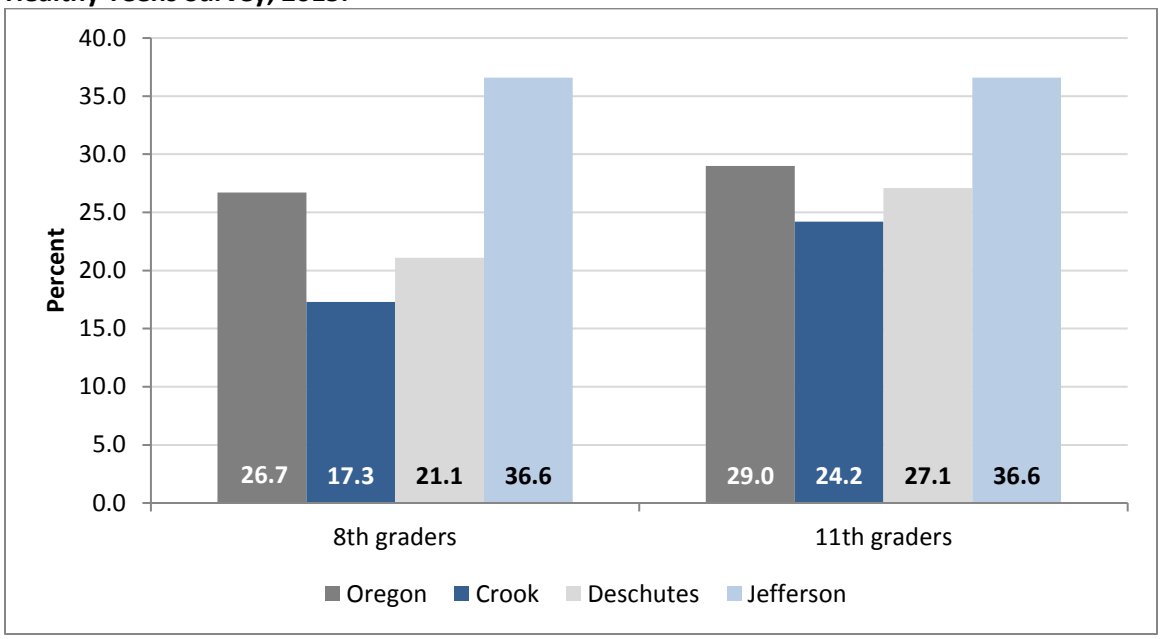
Youth

Figure 58. Percent of students who reported fair/poor emotional/mental health, Oregon Healthy Teens Survey, 2015.



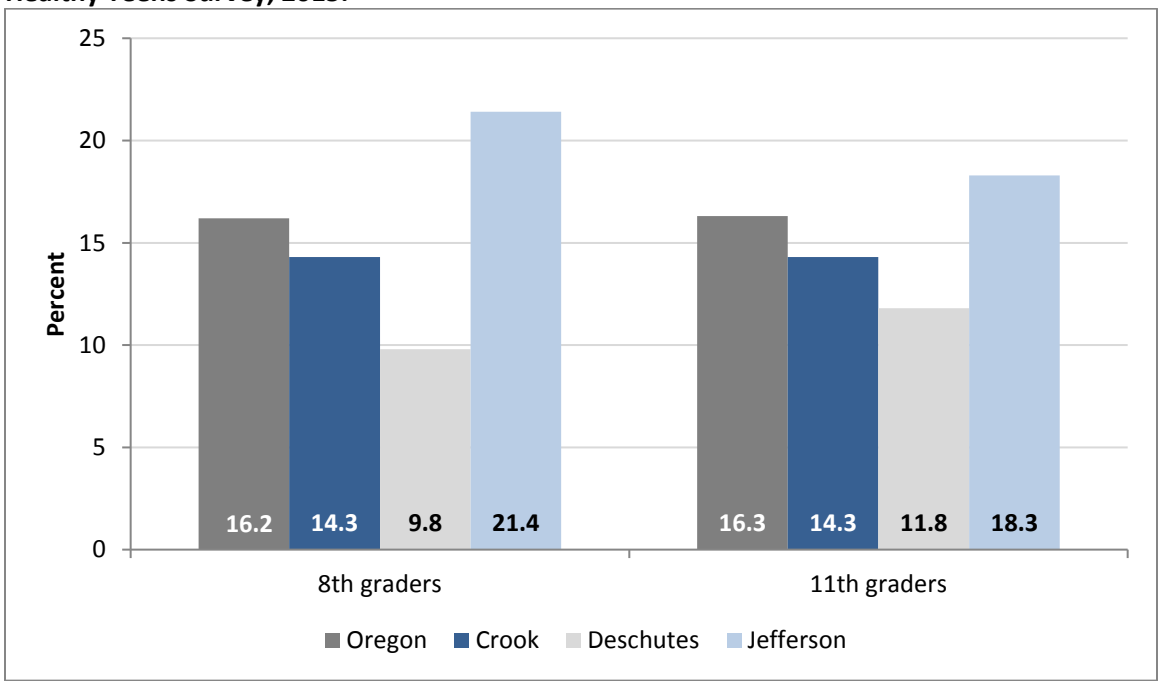
Note: Deschutes County estimates may not be representative of the county as a whole.

Figure 59. Percent of students who reported, during the past 12 months, feeling so hopeless almost every day for two weeks or more in a row that he/she stopped doing some usual activities, Oregon Healthy Teens Survey, 2015.



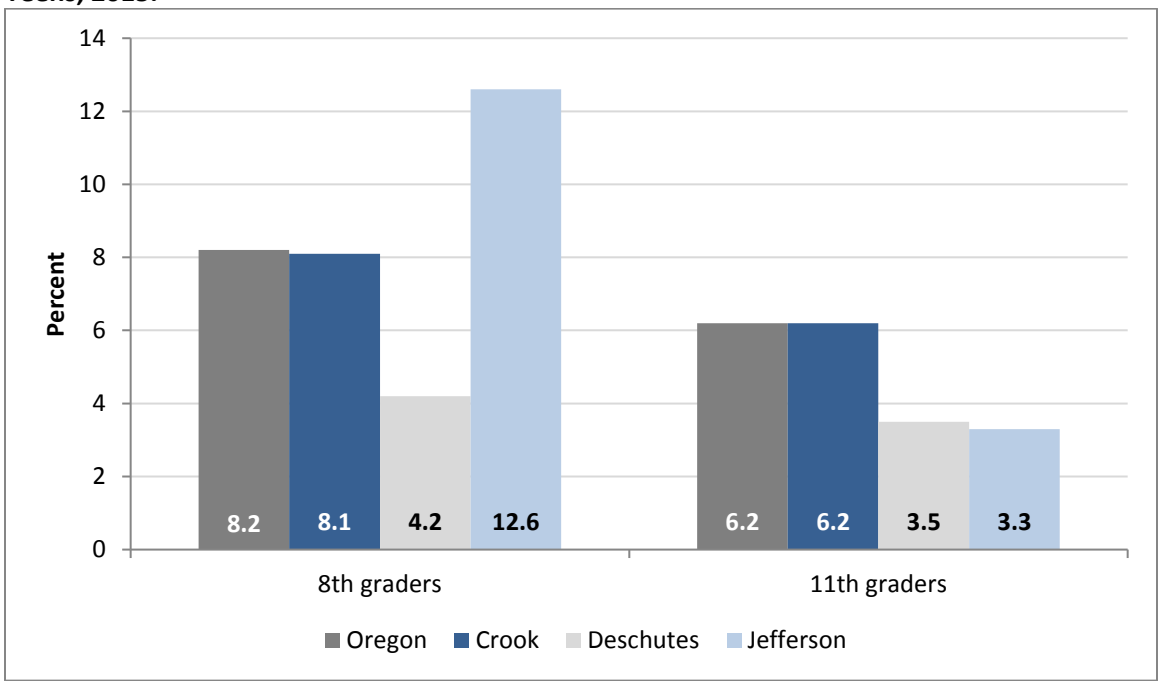
Note: Deschutes County estimates may not be representative of the county as a whole.

Figure 60. Percent of students who seriously considered attempting suicide over the past year, Oregon Healthy Teens Survey, 2015.



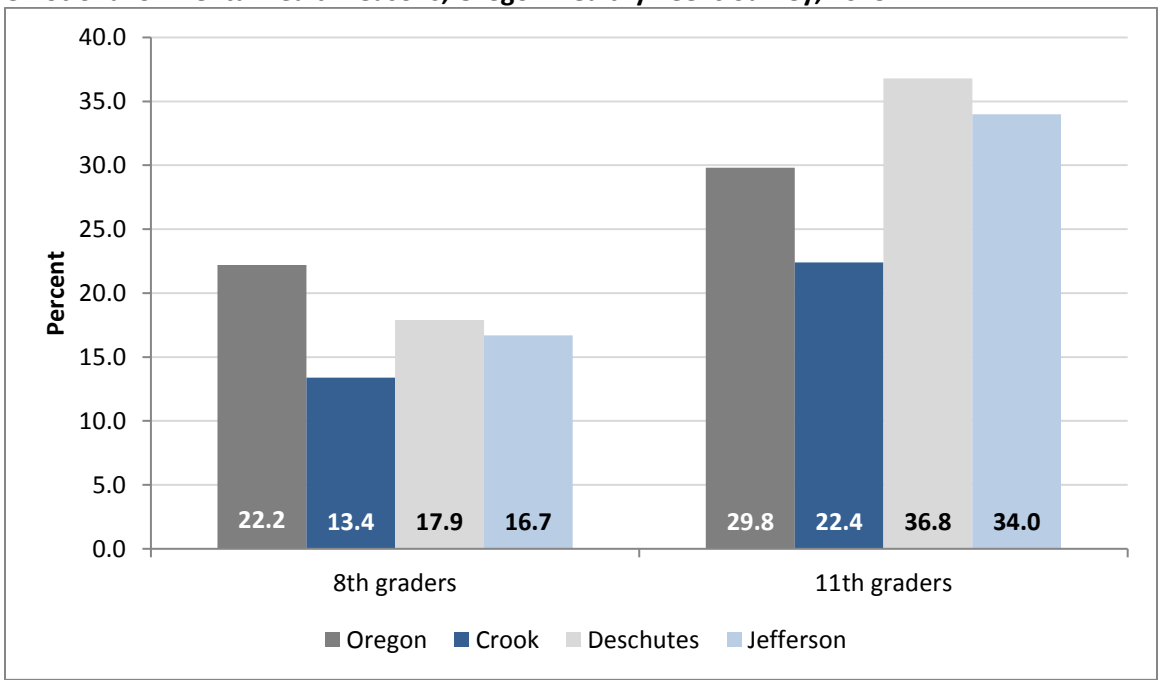
Note: Deschutes County estimates may not be representative of the county as a whole.

Figure 61. Percent of students who attempted suicide at least once over the past year, Oregon Healthy Teens, 2015.



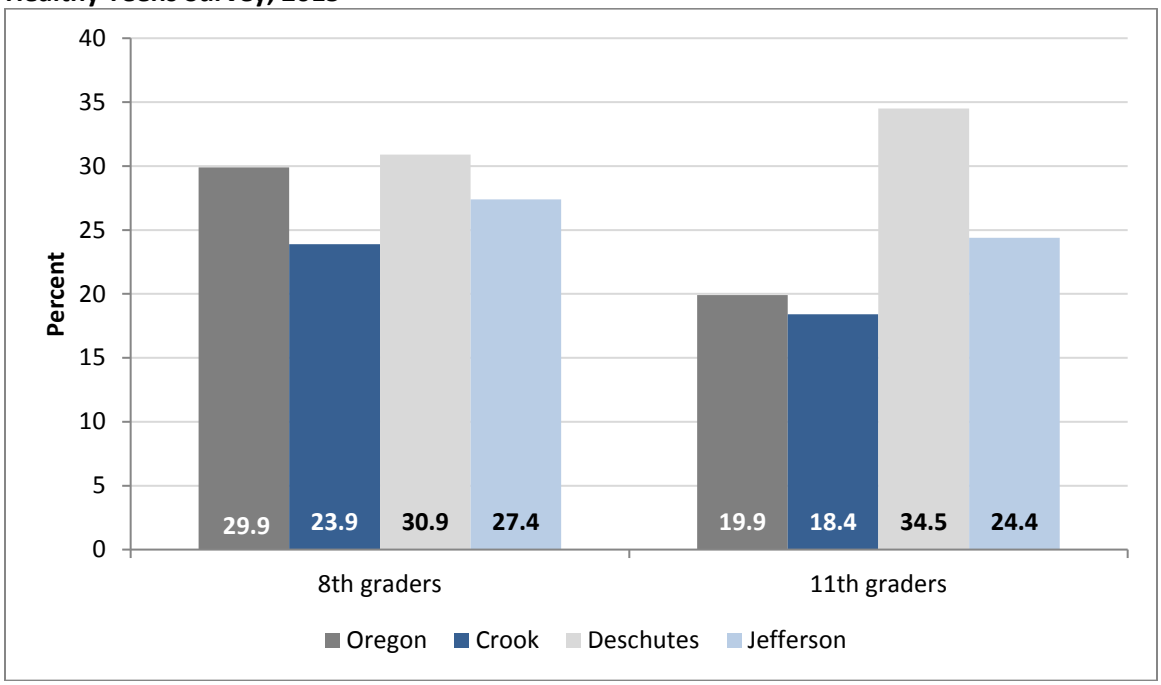
Note: Deschutes County estimates may not be representative of the county as a whole.

Figure 62. Percent of students who missed at least one day of school over the past year because of emotional or mental health reasons, Oregon Healthy Teens Survey, 2015



Note: Deschutes County estimates may not be representative of the county as a whole.

Figure 63. Percent of students who were bullied at school for any reason in the last 30 days, Oregon Healthy Teens Survey, 2015



Note: Deschutes County estimates may not be representative of the county as a whole.

Adults

Figure 64. Age-adjusted percent of adults with depression, Oregon BRFSS 2012-2015.

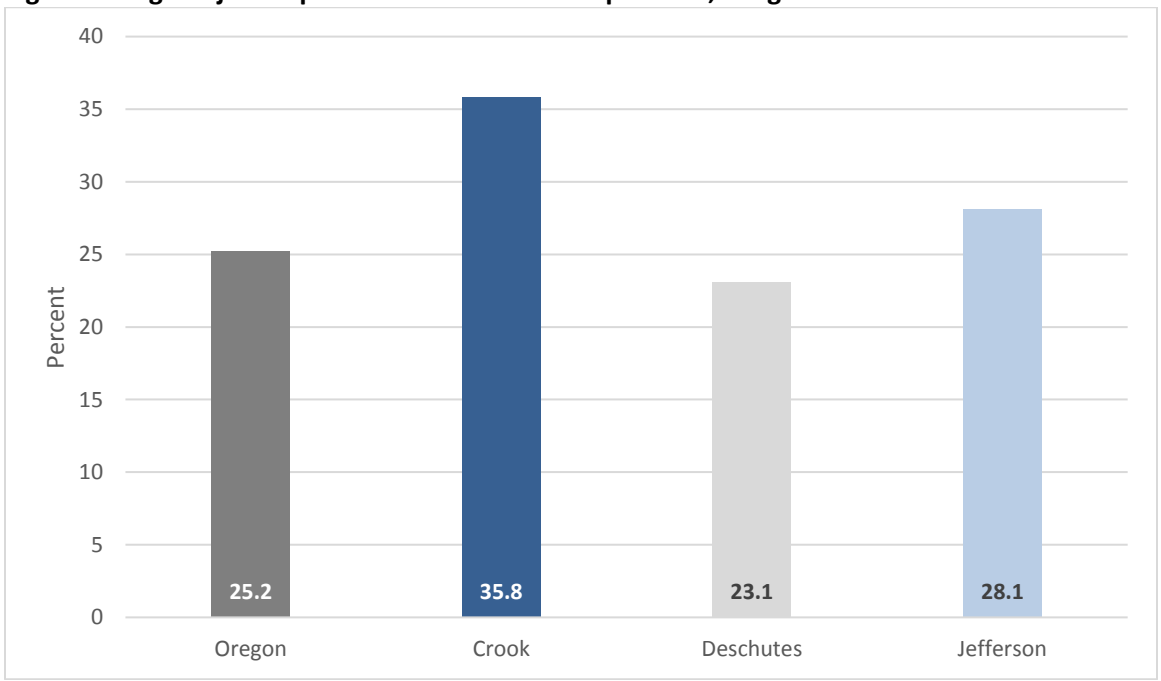


Figure 65. Age-adjusted suicide mortality rate per 100,000 population, OPHAT, 2000-2015

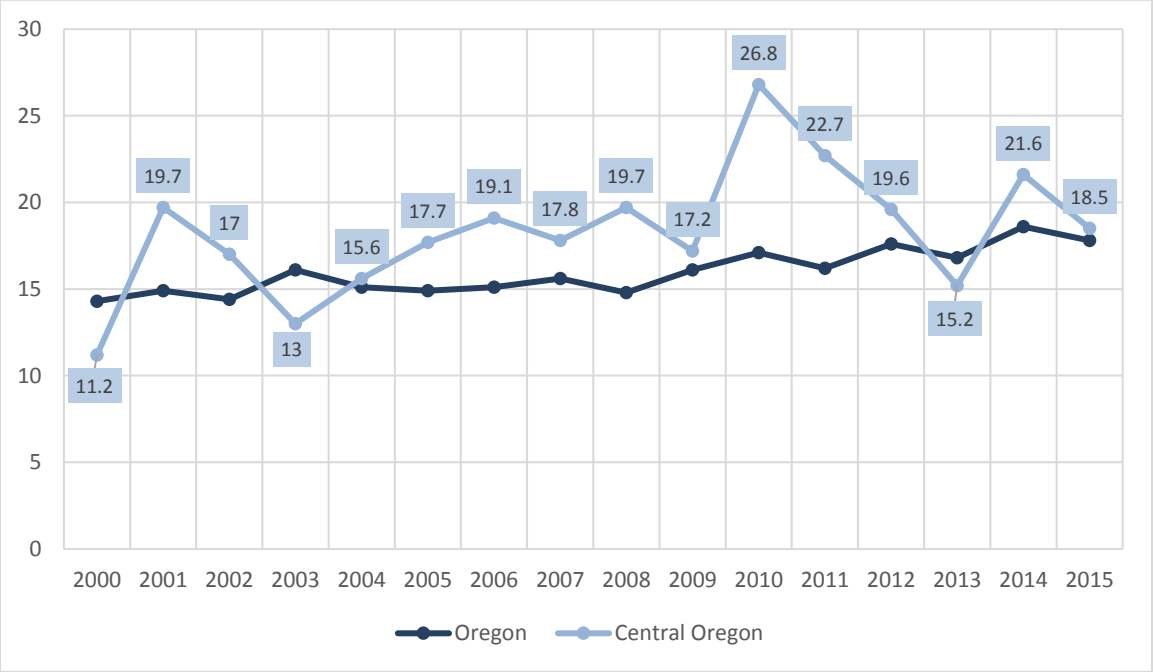
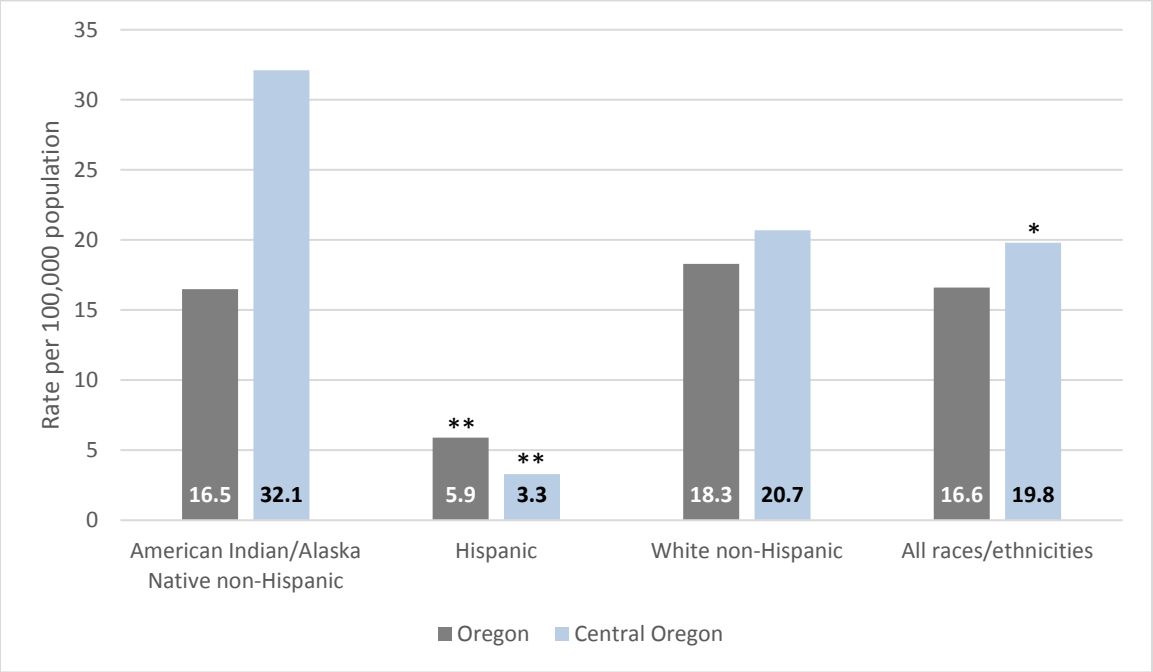


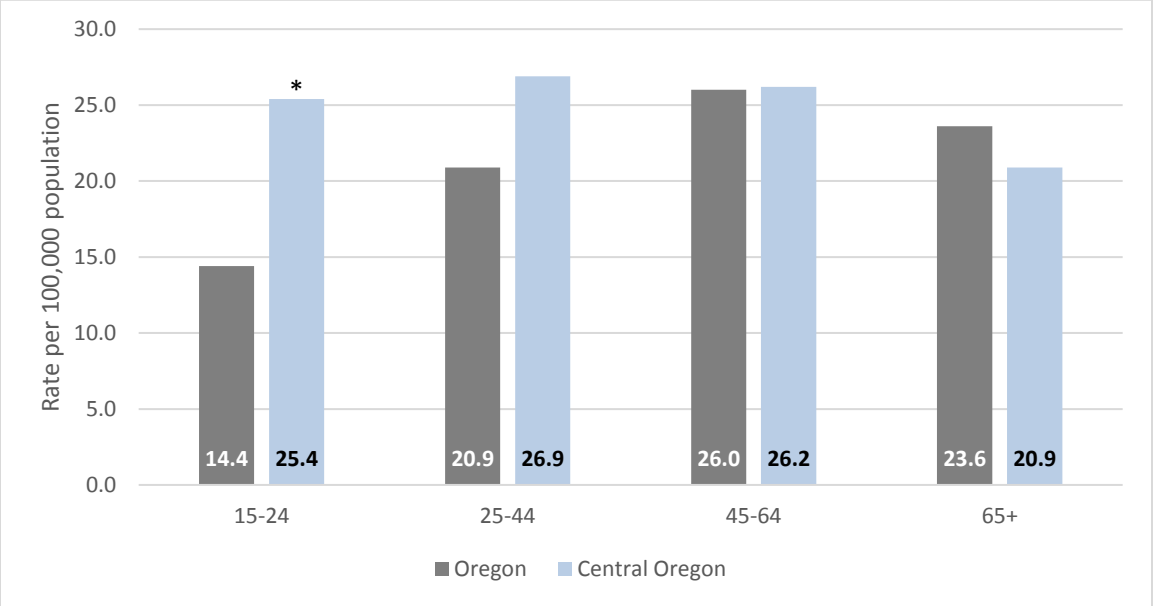
Figure 66. Age-adjusted suicide mortality rate per 100,000 by race/ethnicity, OPHAT, 2006-2015



*Significantly higher than Oregon total

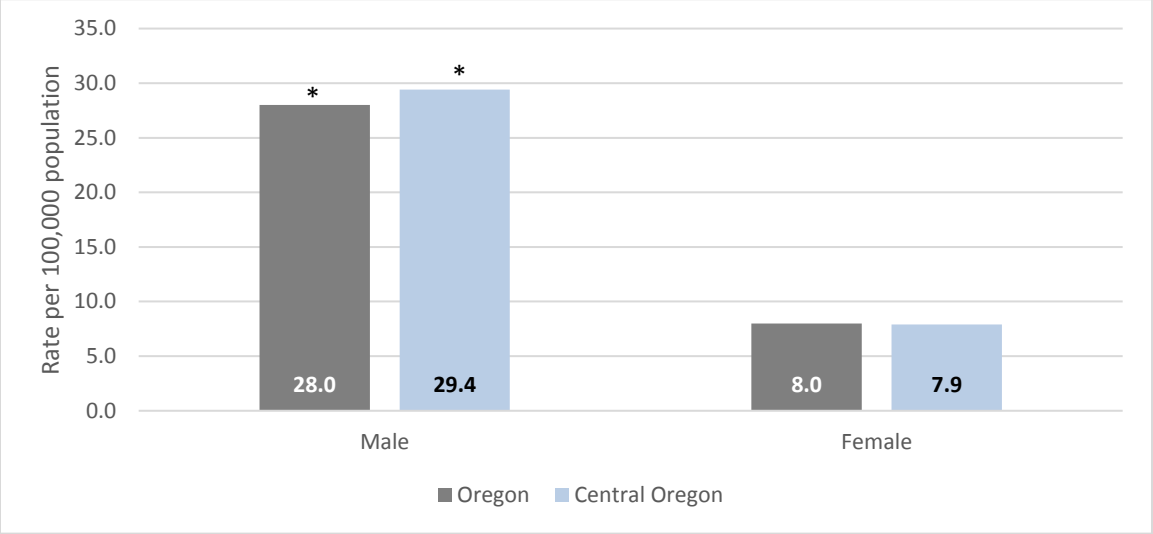
**Significantly lower than other American Indian/Alaska Native and White non-Hispanic rates for the specified geography

Figure 67. Age-specific suicide mortality rate, OPHAT, 2010-2015



*Significantly higher than Oregon age-specific rate

Figure 68. Age-adjusted suicide mortality rate by sex, OPHAT, 2013-2015.



*Significantly higher than female rate for the specified geography

Table 21. Three leading mechanisms of suicide in Central Oregon, OPHAT, 2011-2015.

	Oregon		Central Oregon	
	Count	Age-adjusted mortality rate per 100,000	Count	Age-adjusted mortality rate per 100,000
Firearms	1887	9.0	112	10.3
Suffocation	821	4.2	42	4.3
Poisoning	594	2.8	35	3.1

Alcohol, Tobacco, and Other Drug Use

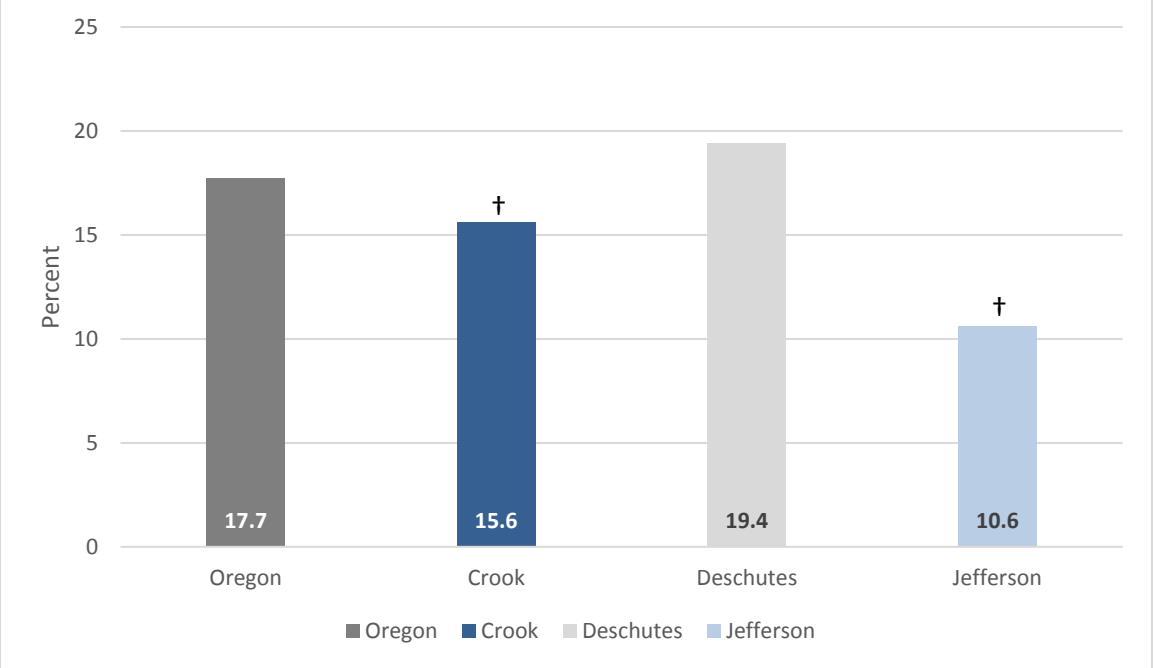
Alcohol, Tobacco, and other Drug Use Section Highlights

Since the 2015 RHA was published:

- The percent of adults who reported binge drinking within the past month decreased in Crook and Jefferson counties. Both estimates, however, were calculated using a small sample size and should be interpreted with caution.
- The total number of deaths from tobacco increased in the Central Oregon region.
- Crook County had the highest percent of adult residents in Central Oregon who were tobacco users (34.7%) and who were cigarette smokers (26.3%).
- Hispanics in Crook County and Deschutes County had significantly lower mortality rate from tobacco-related causes than their respective county rates as a whole.
- 5-year opioid-related poisoning mortality rates were lower in Deschutes County than in Oregon. The Crook County rate opioid-related poisoning mortality rate was higher than the Oregon rate, but this estimate was calculated using a small sample size and should be interpreted with caution.
- Crook County had the highest rate of opioid prescription fills per 1,000 population in Central Oregon.

Alcohol

Figure 69. Percent of adults who reported binge drinking within the past month, BRFSS 2012-2015.

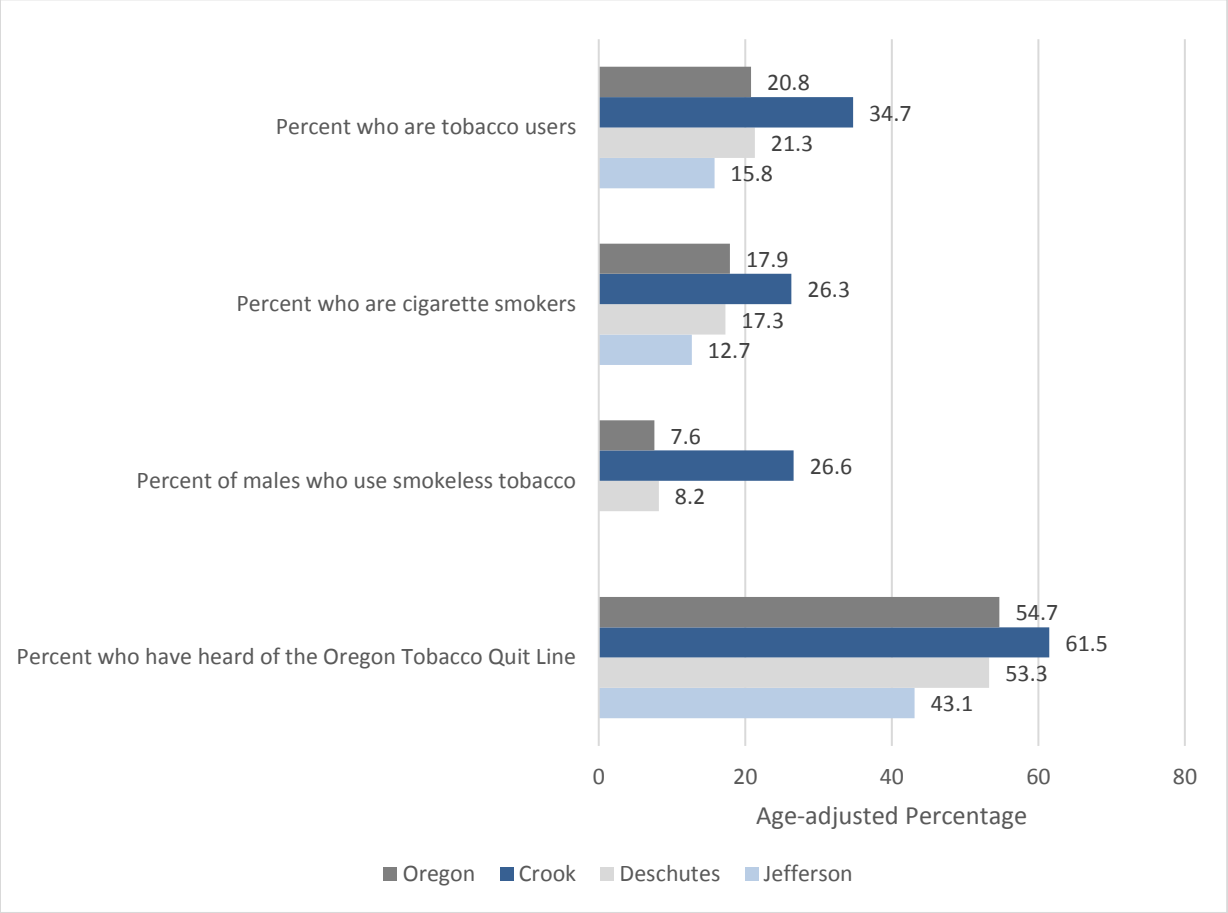


Binge drinking is consuming 5+ drinks for men or 4+ drinks for women on one occasion.

†Estimates were calculated using a small sample size and should be interpreted with caution.

Tobacco

Figure 70. Tobacco use and related topics among adults, BRFSS 2012-2015

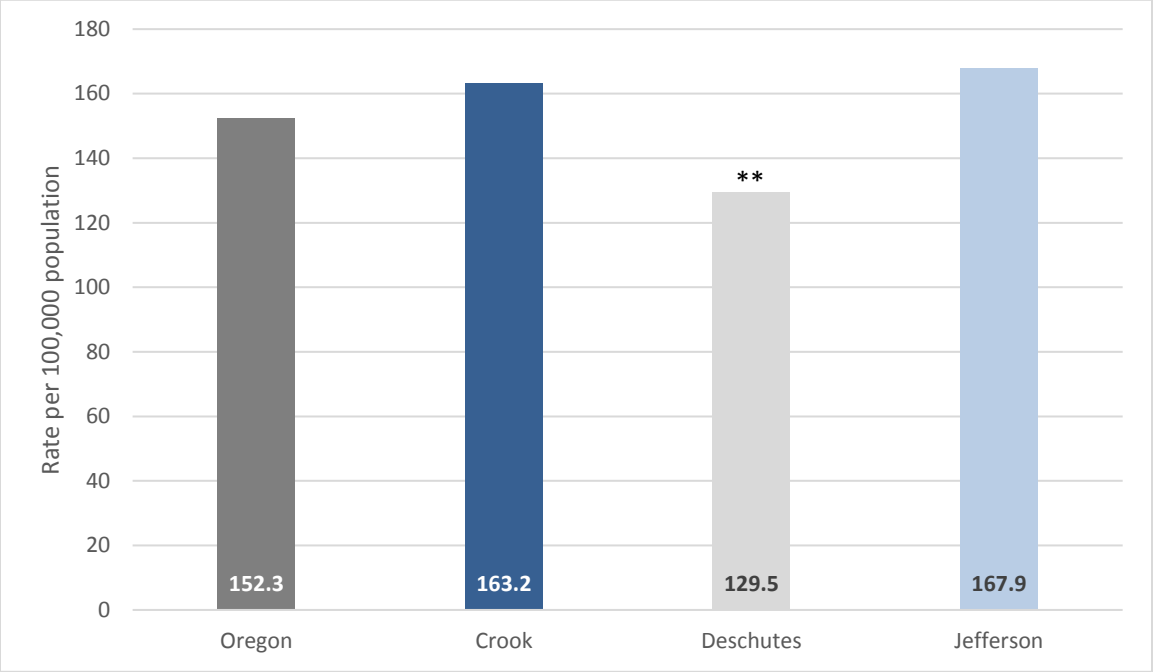


2016-2019 RHIP Indicator: Cardiovascular Disease #2.
Decrease the prevalence of cigarette smoking among adults from 18% to 16%.

As shown in the figure above, combined data from the 2012-2015 Oregon BRFSS indicates that the percentage of adults in Crook County who smoke cigarettes is 26.3%. In Deschutes and Jefferson Counties, the prevalence of smoking cigarettes is 17.3% and 12.7%, respectively.

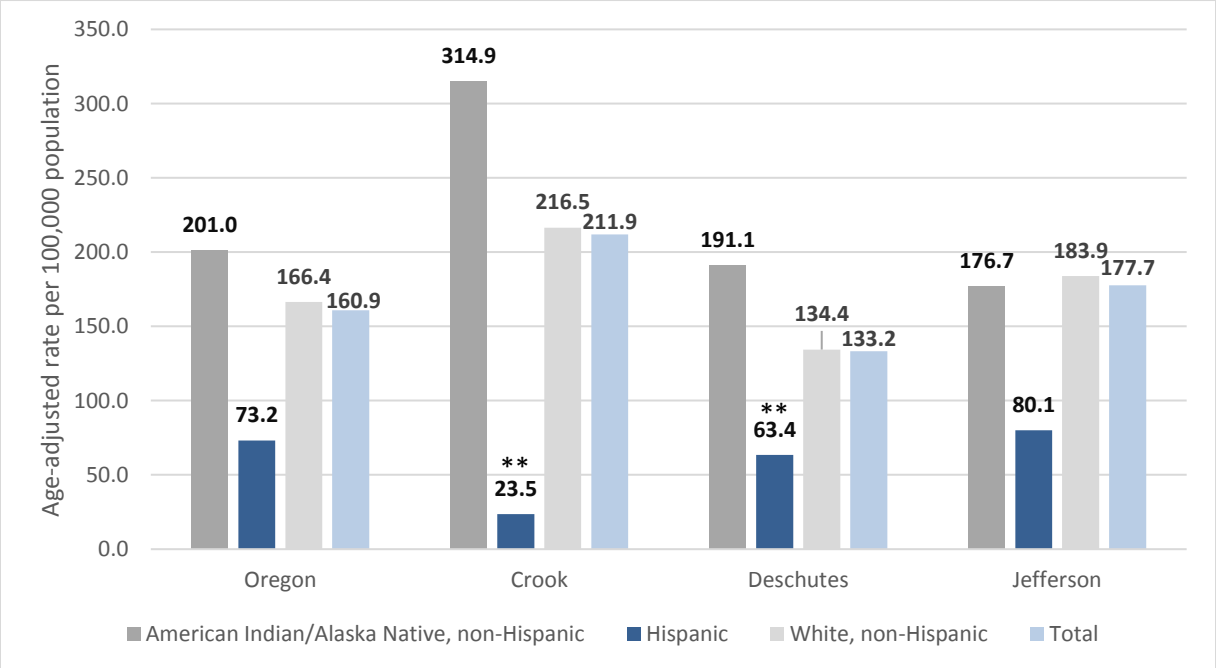
- In 2015, the number of deaths in Crook, Deschutes, and Jefferson counties that were tobacco-related were 62, 305, and 48, respectively.

Figure 71. Age-adjusted mortality rate from tobacco-related causes, OPHAT, 2015.



**Significantly lower than Oregon rate.

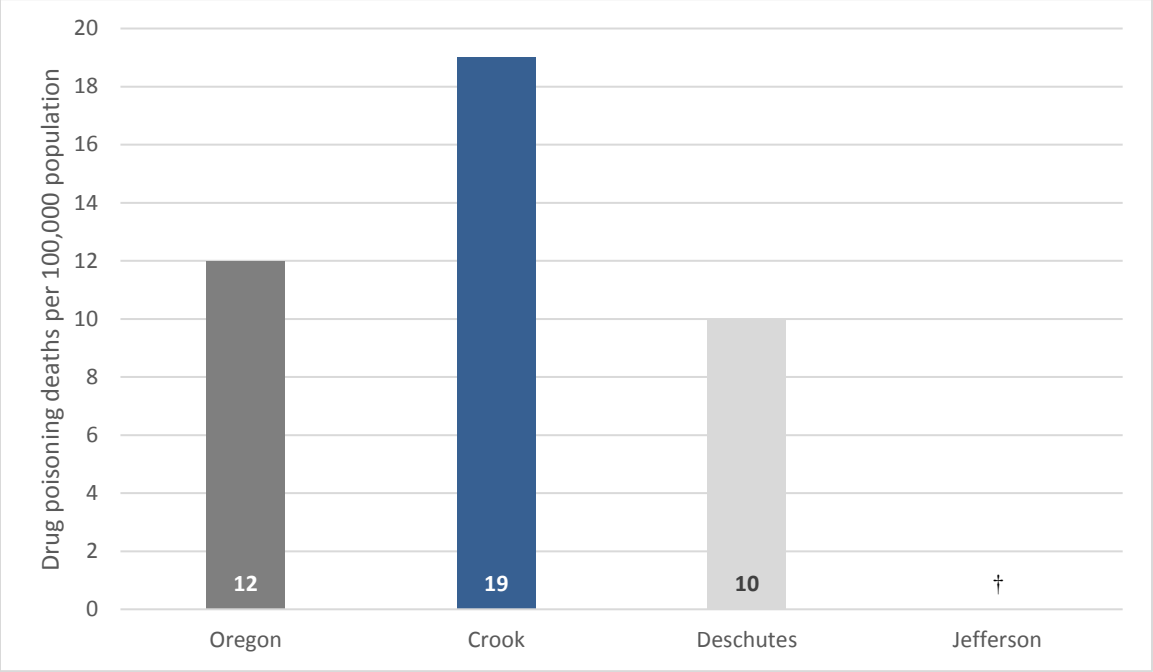
Figure 72. Age-adjusted mortality rate from tobacco-related causes by race/ethnicity, OPHAT, 2006-2015.



**Significantly lower than total rate for the specified geography.

Opioids and other drugs

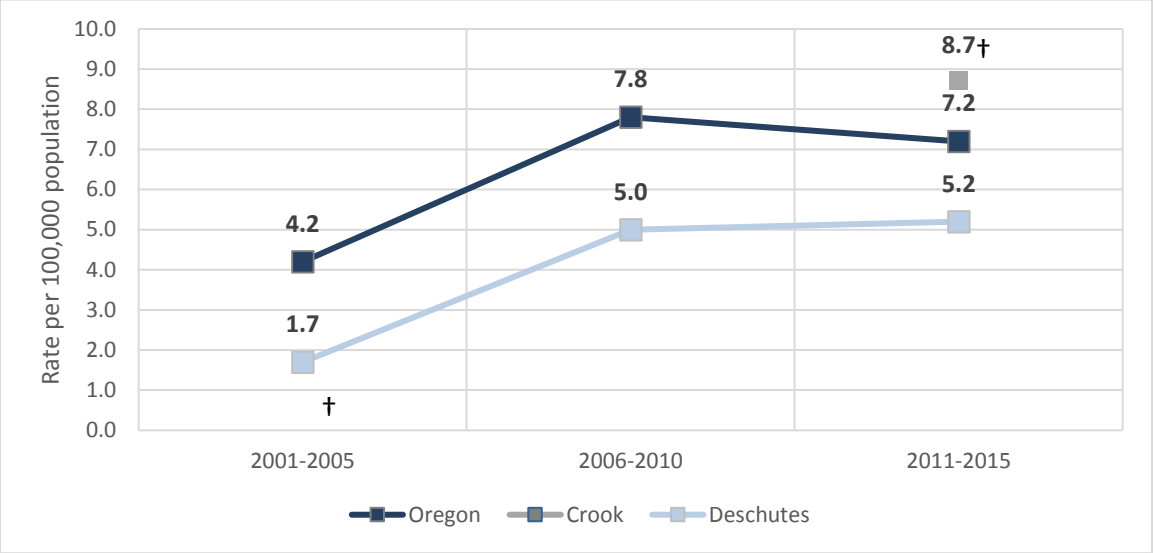
Figure 73. Drug poisoning deaths per 100,000 population, CDC WONDER mortality database, 2013-2015.



Note: Includes accidental, intentional, and undetermined poisonings

†Sample size too small to calculate estimates

Figure 74. Age-adjusted opioid-related poisoning mortality rate per 100,000 population, Oregon Opioid Data Dashboard.



†Rate calculated using a small sample size and should be interpreted with caution.
Jefferson County data suppressed due to a small number of cases.

Oregon Public Health Modernization Metric: Opioid mortality

As shown in the figure above, according to the Oregon Opioid Data Dashboard, in 2011-2015 opioid-related poisoning mortality was lower in Deschutes County than in Oregon as a whole. The Crook County opioid-related poisoning mortality rate was higher than the Oregon rate; however, the Crook County rate was calculated using a small sample size and should be interpreted with caution. Jefferson County data is unavailable for opioid-related poisoning mortality due to a small number of cases.

Figure 75. Opioid prescription fills per 1,000 residents, Oregon Opioid Data Dashboard, 2015 Q1-2017 Q2.

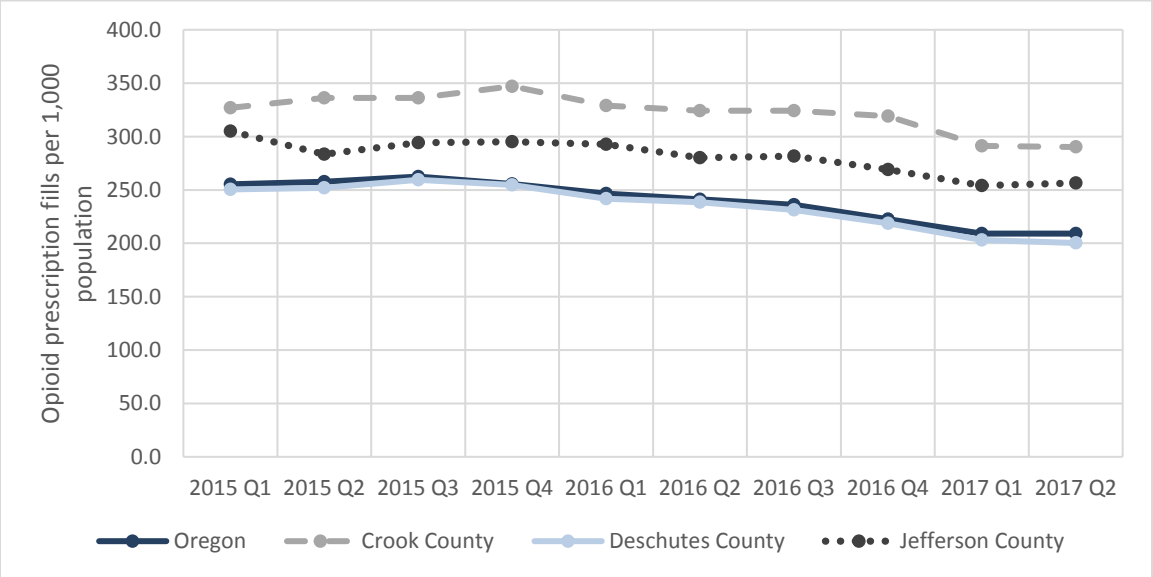


Figure 76. Number of individuals receiving an opioid prescription, Oregon Opioid Data Dashboard, 2015 Q1-2017 Q2.

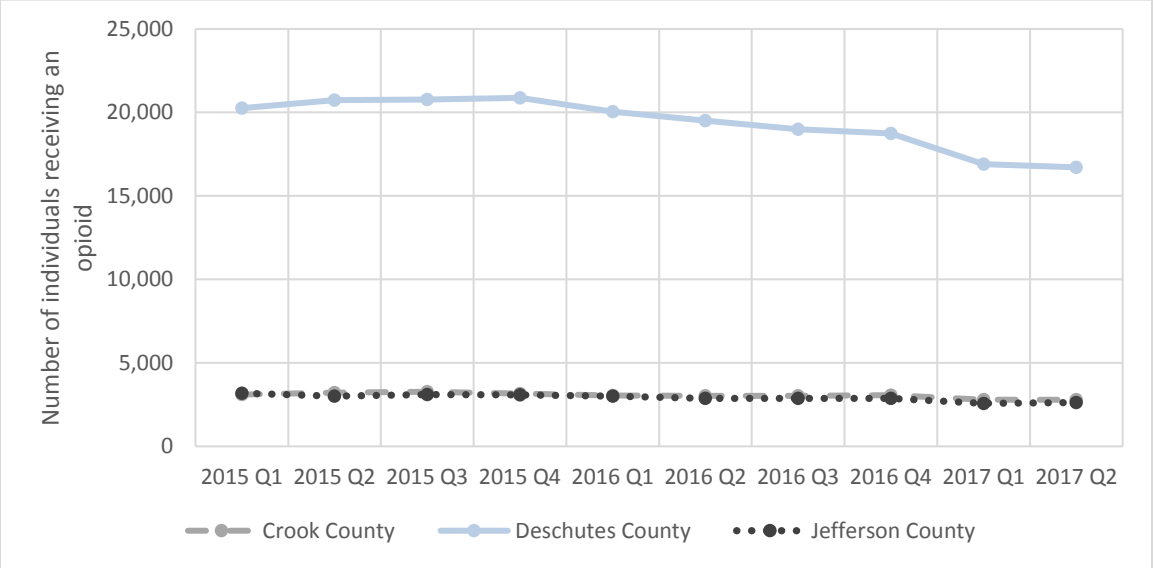
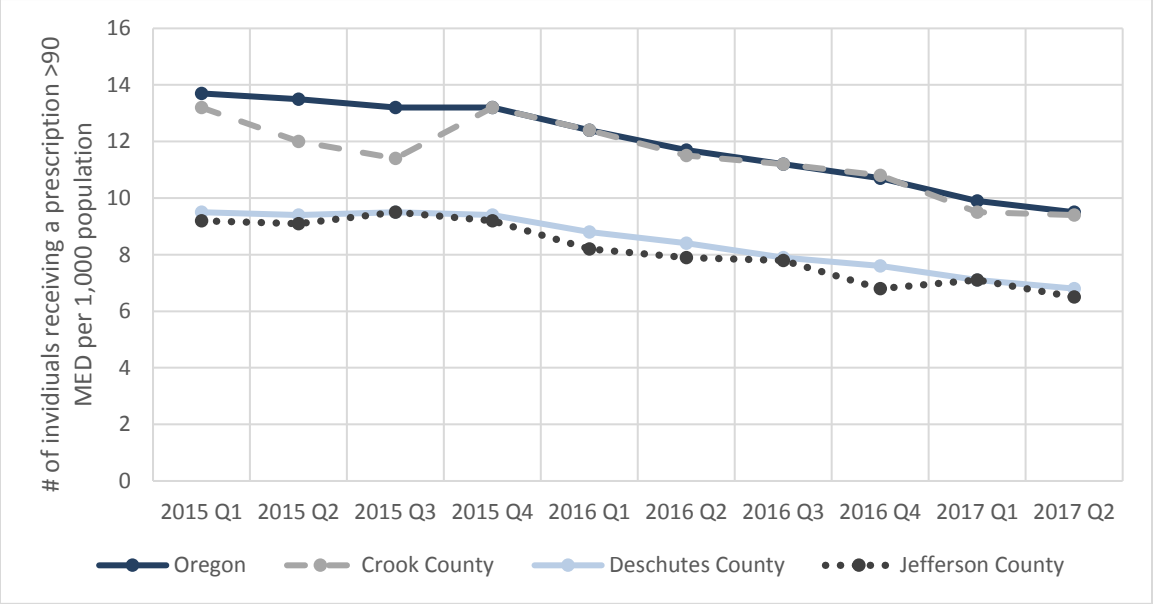


Figure 77. Number of individuals receiving a prescription >90 MED (morphine equivalent dose) from a single prescription fill per 1,000 residents, Oregon Opioid Data Dashboard, 2015 Q1-2017 Q2.



2016-2019 RHIP Indicator: Behavioral Health Substance Use and Chronic Pain #3.

Develop a baseline for the number of people receiving >120 morphine equivalent for more than 3 months.

Risky prescribing measures are monitored by the Oregon Prescription Drug Monitoring Program. In the first quarter (January 1-March 31) of 2017, 3.7 per 1,000 residents in Central Oregon received greater than 120 morphine equivalent dosing (MED) from a single prescription fill. This is lower than the rate in Oregon as a whole (5.8 per 1,000 residents).

Unintentional Injuries

Unintentional Injuries Section Highlights

Since the 2015 RHA was published:

- The unintentional injury-related mortality rate in Jefferson County was significantly higher than the Oregon and Deschutes County rates.
- 10-year mortality rates from motor vehicle crashes remained significantly higher in Jefferson County than in Oregon. In Deschutes and Jefferson Counties, 10-year mortality rates from motor vehicle crashes remained significantly higher among men than among women.
- 10-year unintentional poisoning rates are now significantly lower in Deschutes County than in Oregon.
- The 10-year unintentional poisoning rate among Deschutes County males is now significantly lower than the Oregon male rate. The male rate in Jefferson County is now significantly higher than the Oregon male rate.
- 5-year mortality rates for falls among those aged 65+ remained significantly lower in Deschutes County compared to Oregon as a whole. The 5-year mortality rate for falls among those aged 65+ in Crook County is also now significantly lower than in Oregon as a whole.

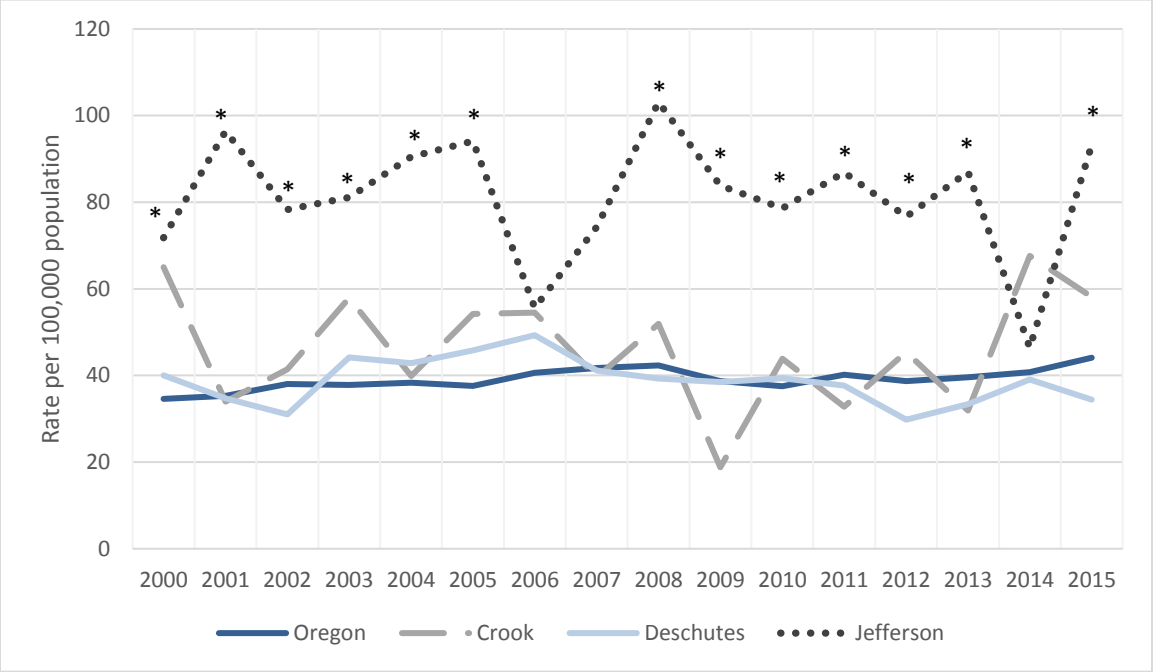
Table 22. Unintentional injury-related deaths and mortality rates per 100,000 population, OPHAT, 2015.

	Number of deaths	Age-adjusted mortality rate per 100,000
Oregon	1,987	44.1
Crook	15	58.1
Deschutes	69	34.4
Jefferson	21	93.2

Significantly higher than Oregon and Deschutes County rates.

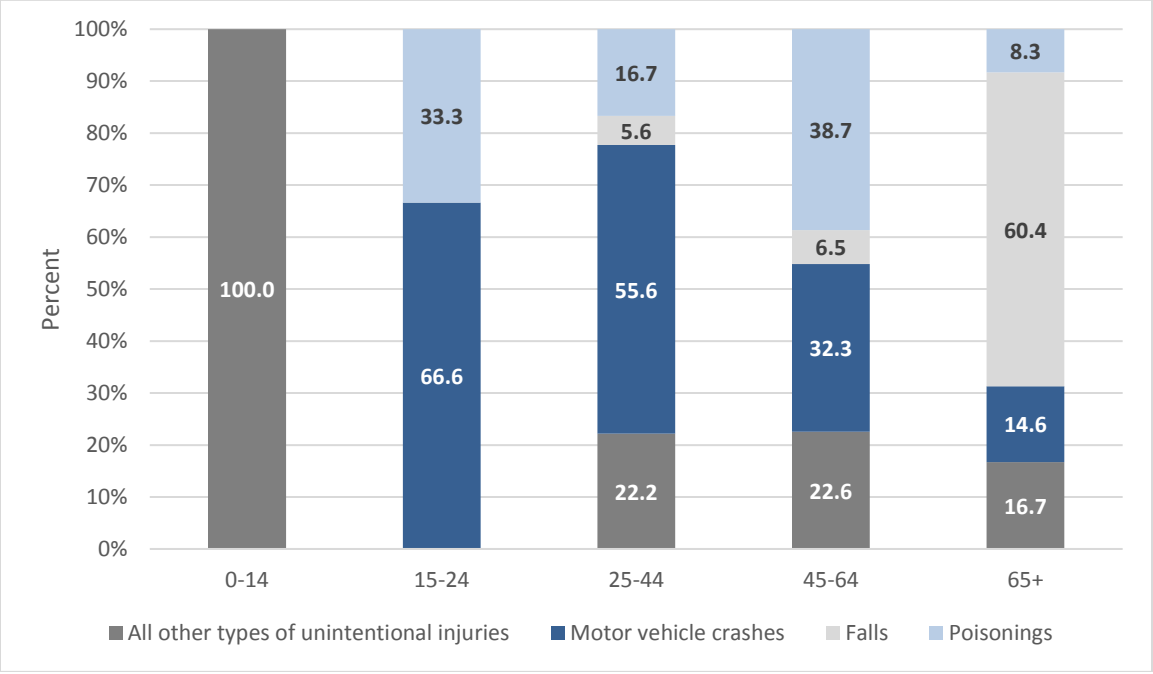
- The top unintentional injury-related death categories in Oregon in 2015 were falls, transport/motor vehicle injuries, poisoning, suffocation, and drowning. The leading causes in Central Oregon were the same.

Figure 78. Age-adjusted unintentional injury mortality rate per 100,000 population, OPHAT, 2000-2015.



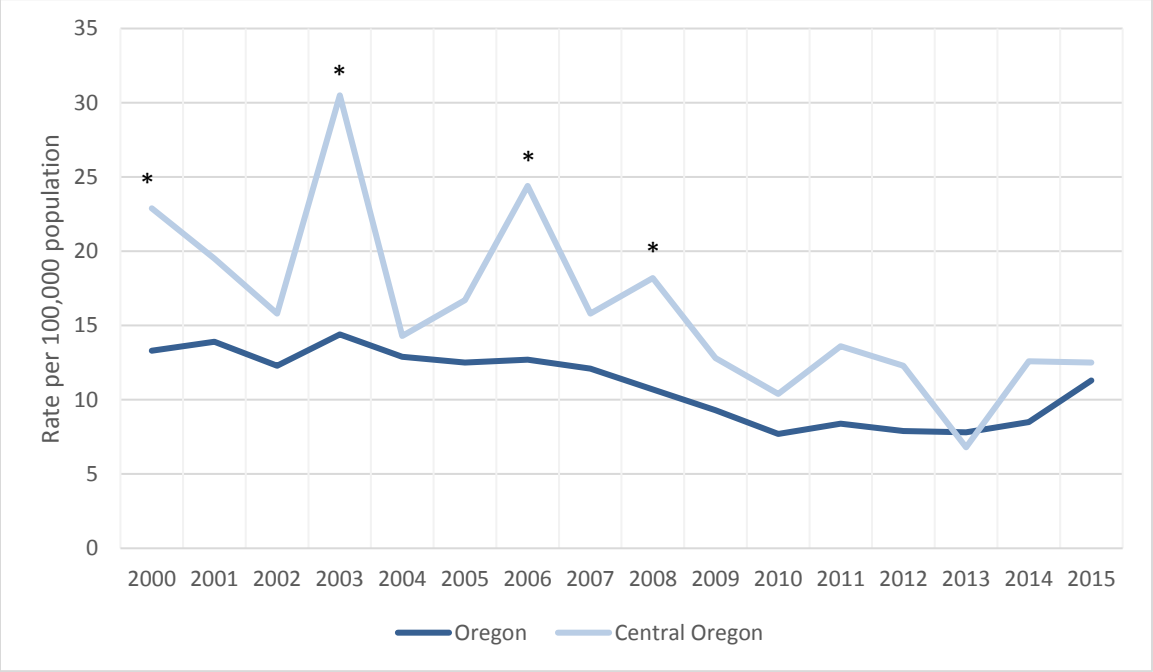
*Rate is significantly higher than Oregon rate for the specified year.

Figure 79. Percent of unintentional injury deaths by age group and mechanism, Central Oregon, OPHAT, 2015.



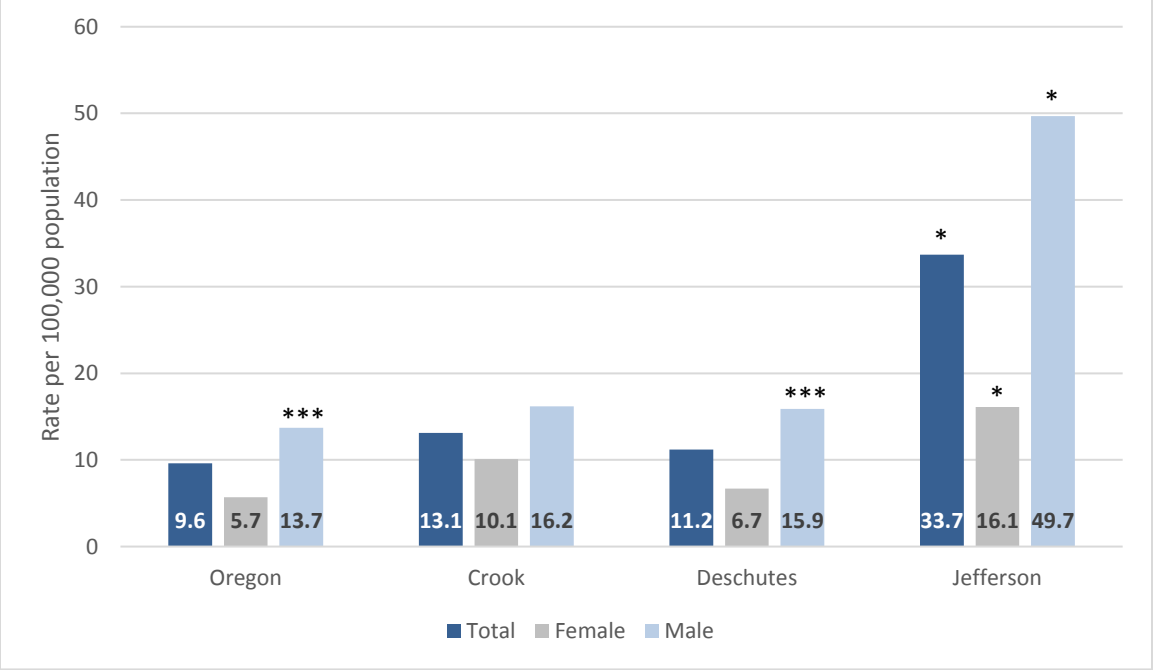
Motor Vehicle Crashes

Figure 80. Age-adjusted unintentional motor vehicle crash mortality rate per 100,000 population, OPHAT, 2000-2015.



*Rate is significantly higher than Oregon rate for the specified year.

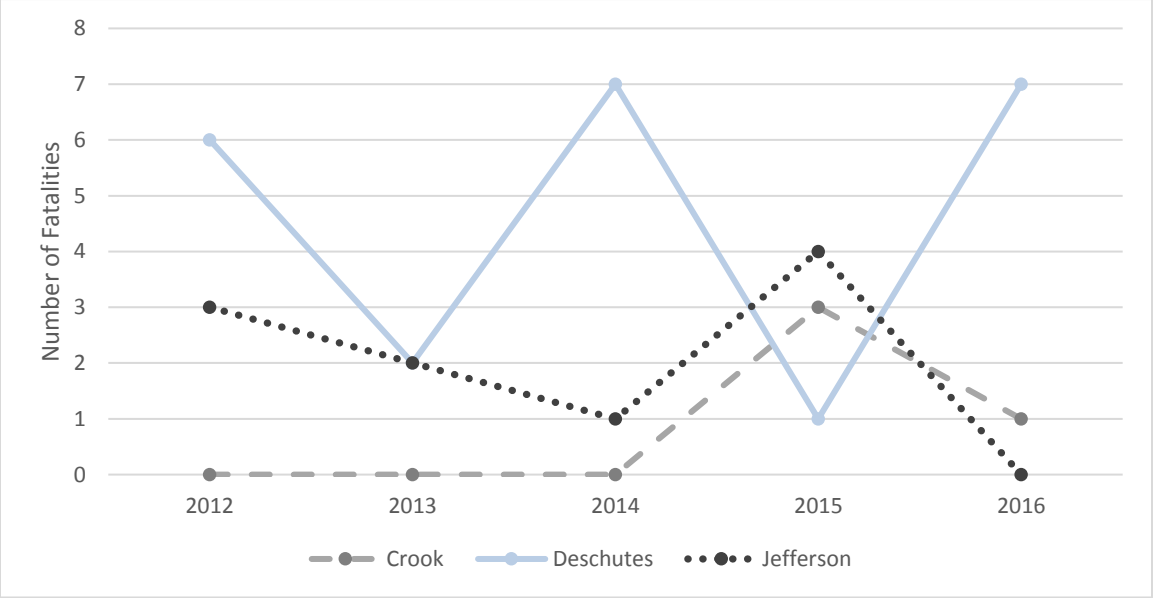
Figure 81. Age-adjusted unintentional motor vehicle crash mortality rate per 100,000 population, by sex and county, OPHAT, 2006-2015.



*Significantly higher than Oregon rate for the specified sex category
***Significantly higher than female rate for the specified geography

- In 2015 in Central Oregon, there were a total of 1,216 nonfatal motor vehicle injury crashes and 21 motor vehicle fatal crashes.
- In 2015, the top three causes for motor vehicle crashes resulting in injury by county were:
    - Deschutes County: following too closely (26%), failing to yield (19%), and speeding (13%);
    - Crook County: speeding (26%), following too closely (15%), and failing to yield (13%); and
    - Jefferson County: speeding (19%), failing to yield (17%), and following too closely (10%).

Figure 82. Number of motor vehicle fatalities that included driver alcohol involvement, National Highway Traffic Safety Administration Fatality Analysis Reporting System, 2012-2016.



Unintentional poisoning

Figure 83. Age-adjusted mortality rate per 100,000 population for unintentional poisoning, OPHAT, 2000-2015.

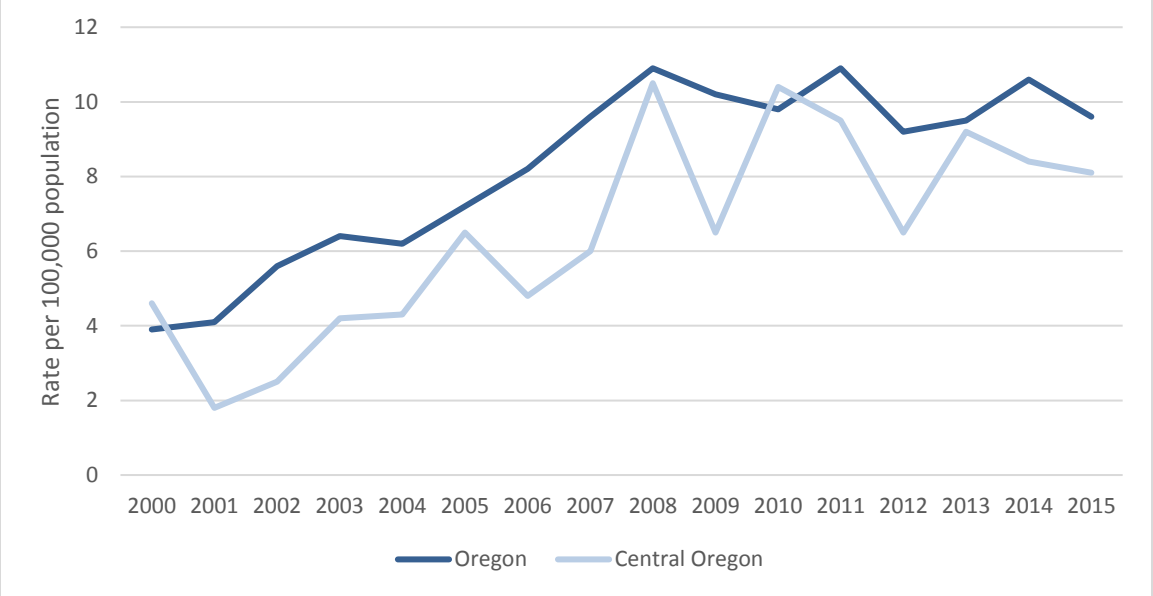
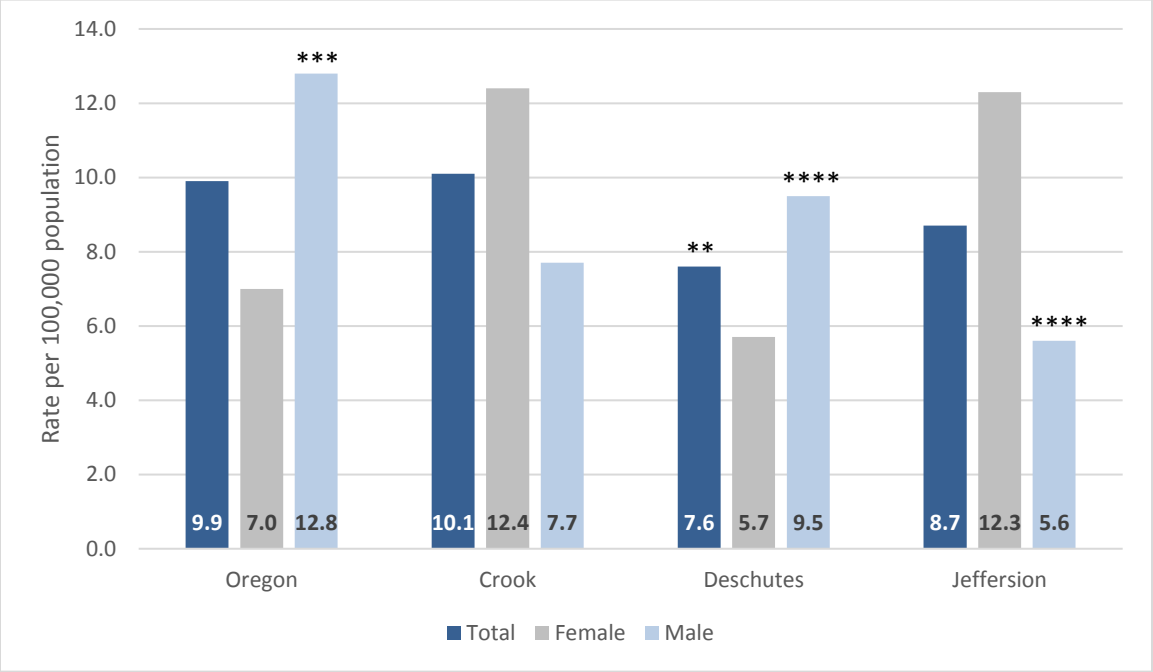


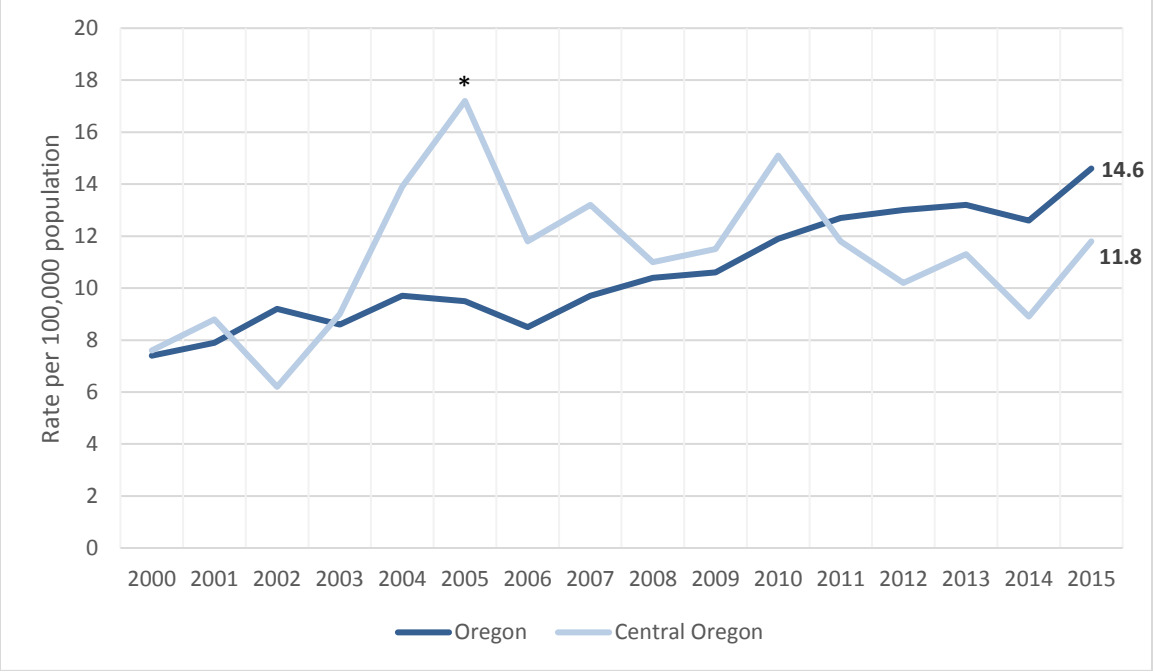
Figure 84. Age-adjusted mortality rate per 100,000 population for unintentional poisoning by sex, OPHAT, 2006-2015



**Significantly lower than Oregon total rate
***Significantly higher than Oregon female rate
****Significantly lower than Oregon male rate

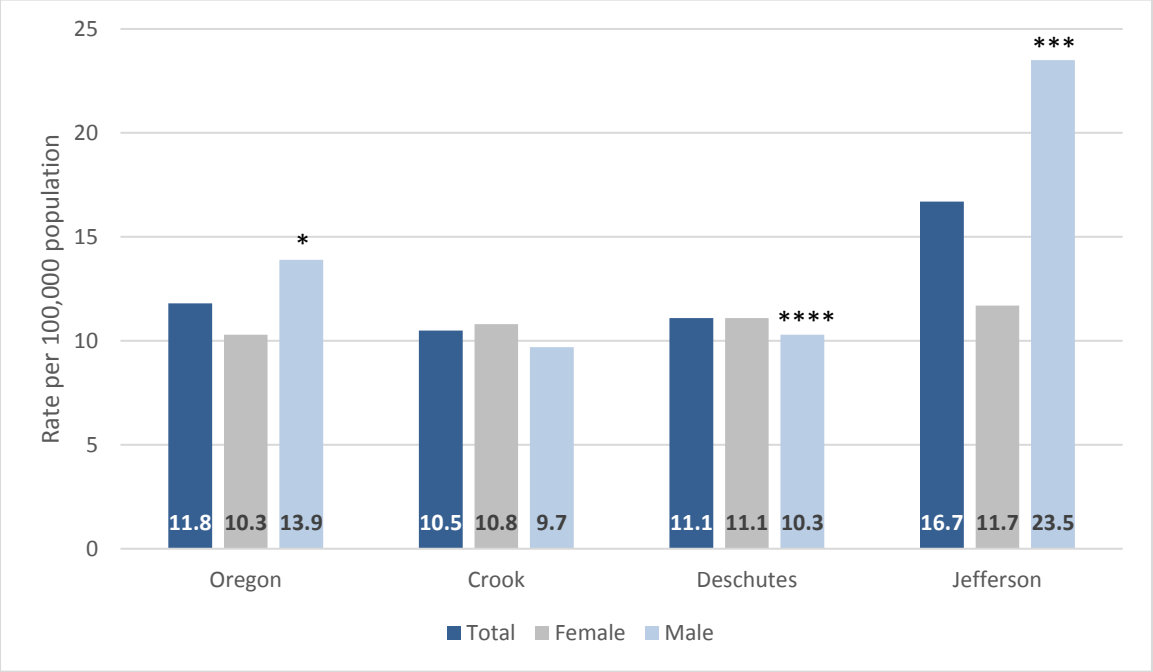
Falls

Figure 85. Age-adjusted unintentional fall mortality rate per 100,000 population, OPHAT, 2000-2015.



*Significantly higher than Oregon rate for the specified year

Figure 86. Age-adjusted mortality rate per 100,000 population for unintentional falls by sex, OPHAT, 2006-2015



*Significantly higher than Oregon female rate
***Significantly higher than Oregon male rate
****Significantly lower than Oregon male rate

- Between 2011-2015, the fall mortality rates among adults aged 65 and older were significantly lower in Deschutes County (62.7 per 100,000 population) and Crook County (49.3 per 100,000 population) compared to Oregon as a whole (94.1 per 100,000 population).

Oral Health

Oral Health Section Highlights

Since the 2015 RHA was published:

- The percent of those enrolled in OHP who accessed dental care increased in all three counties.
- The percent of 11th graders who visited a dentist or dental hygienist for a check-up, exam, teeth cleaning, or other dental work in the previous year decreased in all three counties.
- The percentage of 11th graders who were injured in the mouth area while playing an organized sport increased in Deschutes and Jefferson Counties.
- The percent of 8th grade students who missed school because of mouth pain increased in all three counties; the percent of 8th grade students who missed school due to going to the dentist for tooth/mouth pain, however, decreased in all three counties.

Access

Figure 87. Full Time Equivalency (FTE) dentists per 1,000 residents, "Oral Health in Oregon's CCOs 2017 report," 2015-2016.

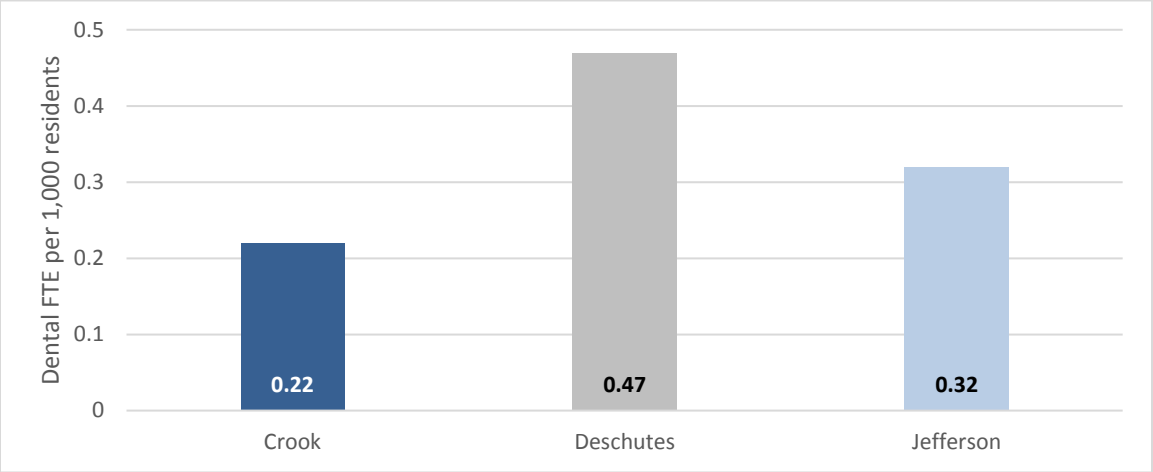


Figure 88. Percent of those enrolled in OHP who accessed dental care, "Oral Health in Oregon's CCOs 2017 report," Central Oregon, 2015.

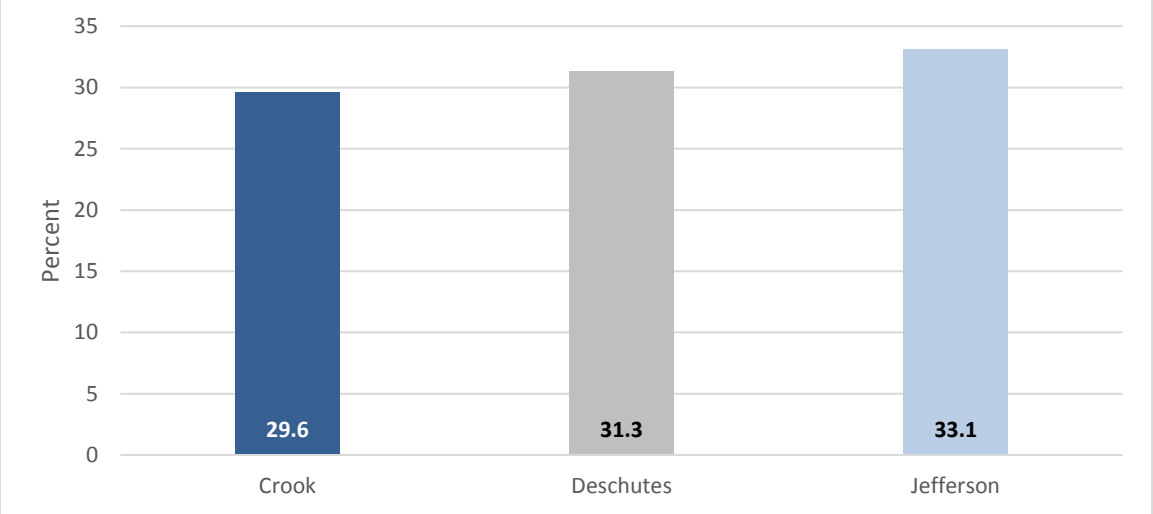
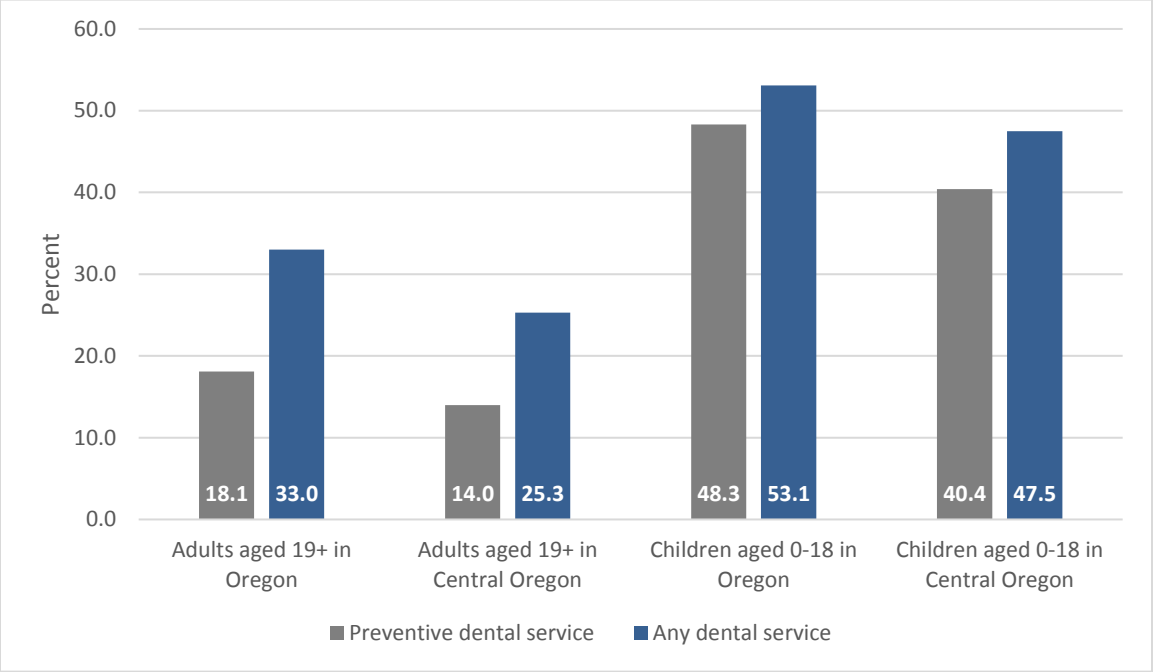
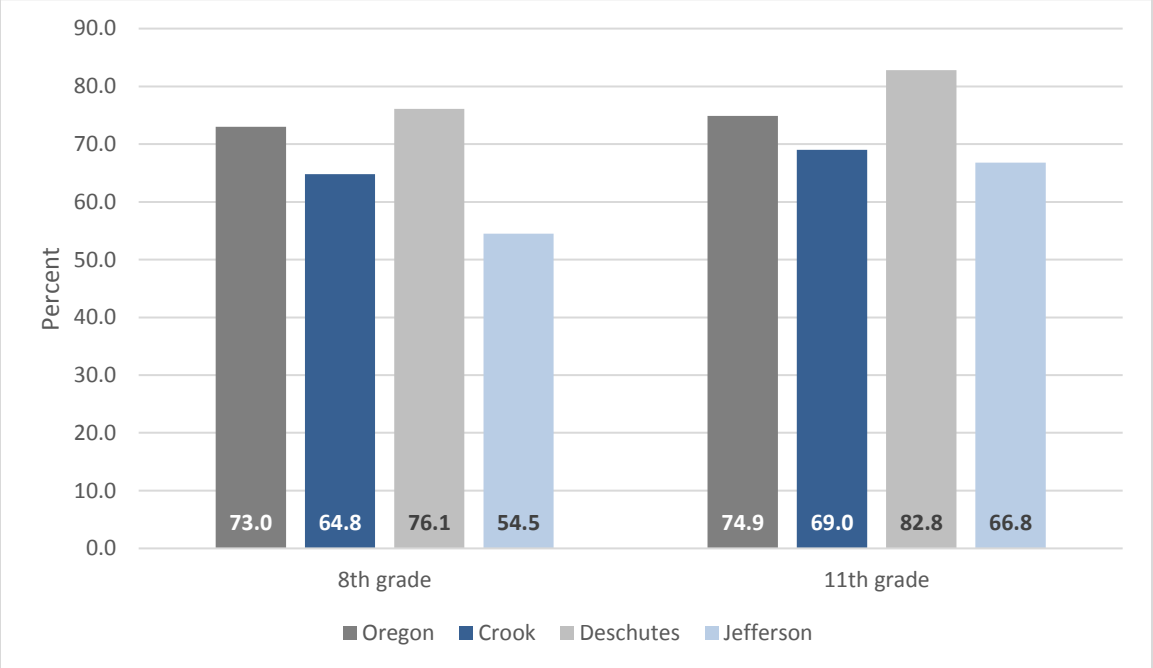


Figure 89. Percent of Oregon OHP-enrolled adults and children who received a preventive dental service and any dental service, "Oral Health in Oregon's CCOs 2017 report," 2015.



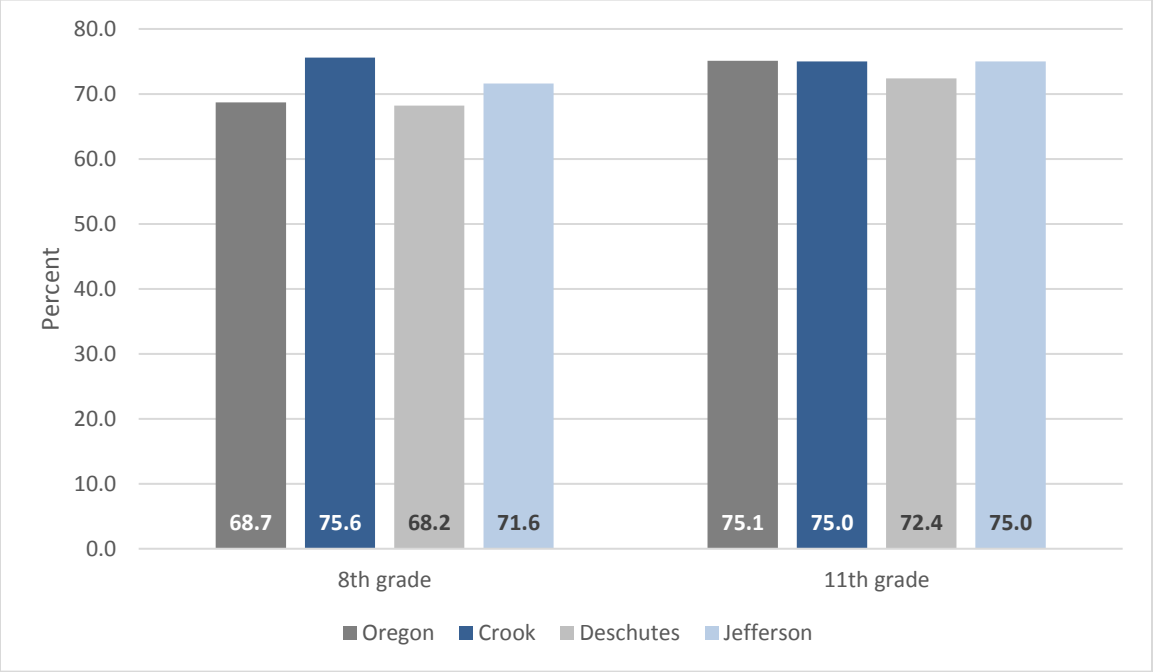
Youth Data

Figure 90. Percent of 8th and 11th graders who reported visiting a dentist or dental hygienist for a checkup, exam, teeth cleaning, or other dental work in the past year, Oregon Healthy Teens, 2015.



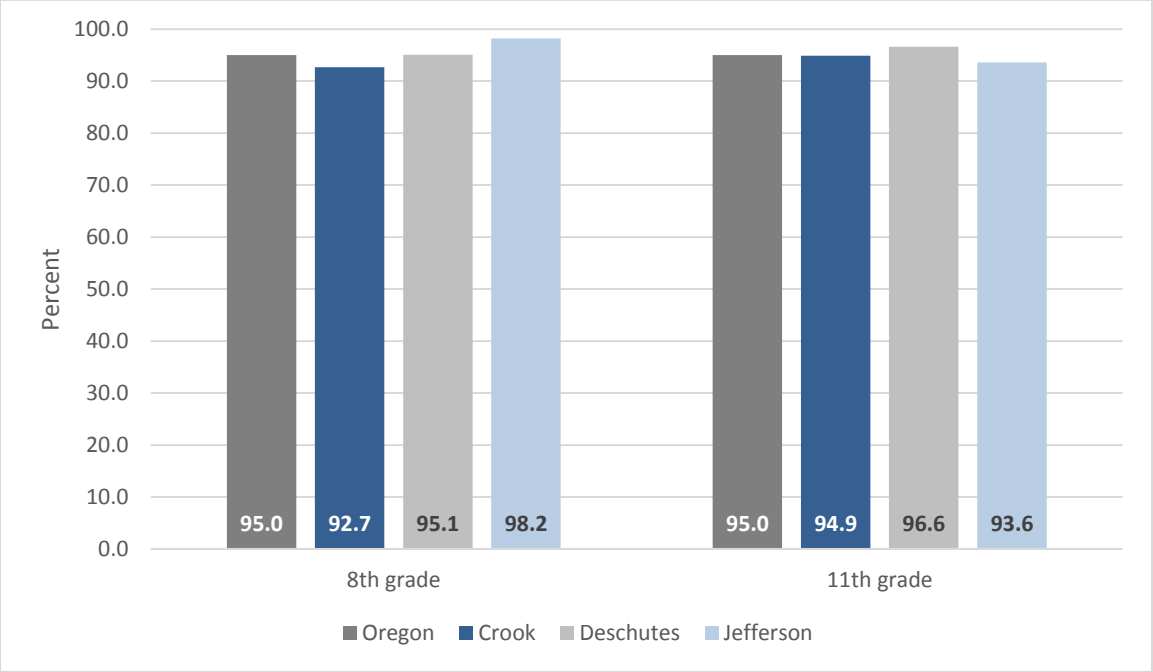
Note: Deschutes County estimates may not be representative of the county as a whole.

Figure 91. Percent of 8th and 11th graders who reported ever having a cavity, Oregon Healthy Teens, 2015.



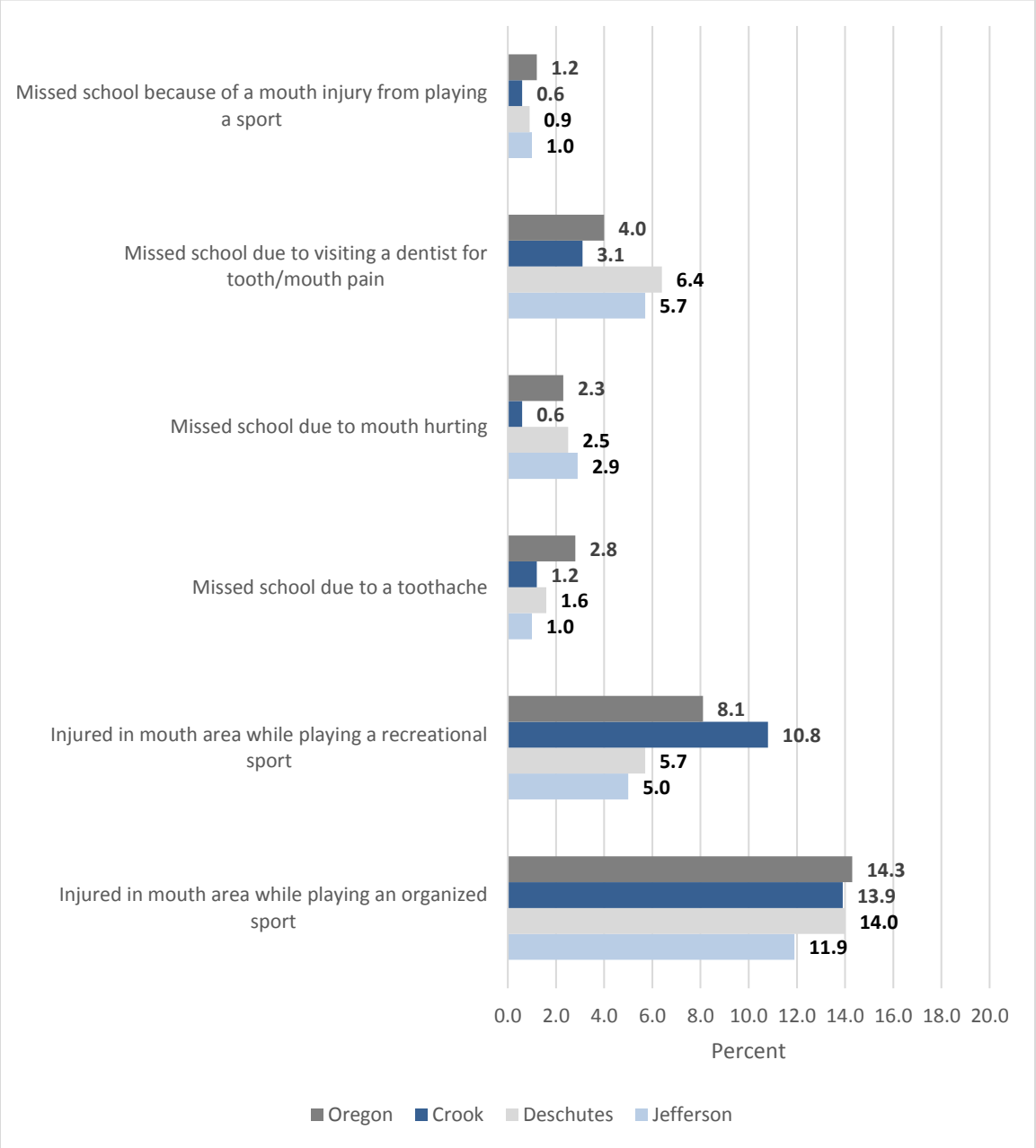
Note: Deschutes County estimates may not be representative of the county as a whole.

Figure 92. Percent of 8th and 11th graders who reported brushing their teeth in the past 24 hours, Oregon Healthy Teens, 2015.



Note: Deschutes County estimates may not be representative of the county as a whole.

Figure 93. Percent of 8th graders who reported specific oral health indicators, Oregon Healthy Teens, 2015.



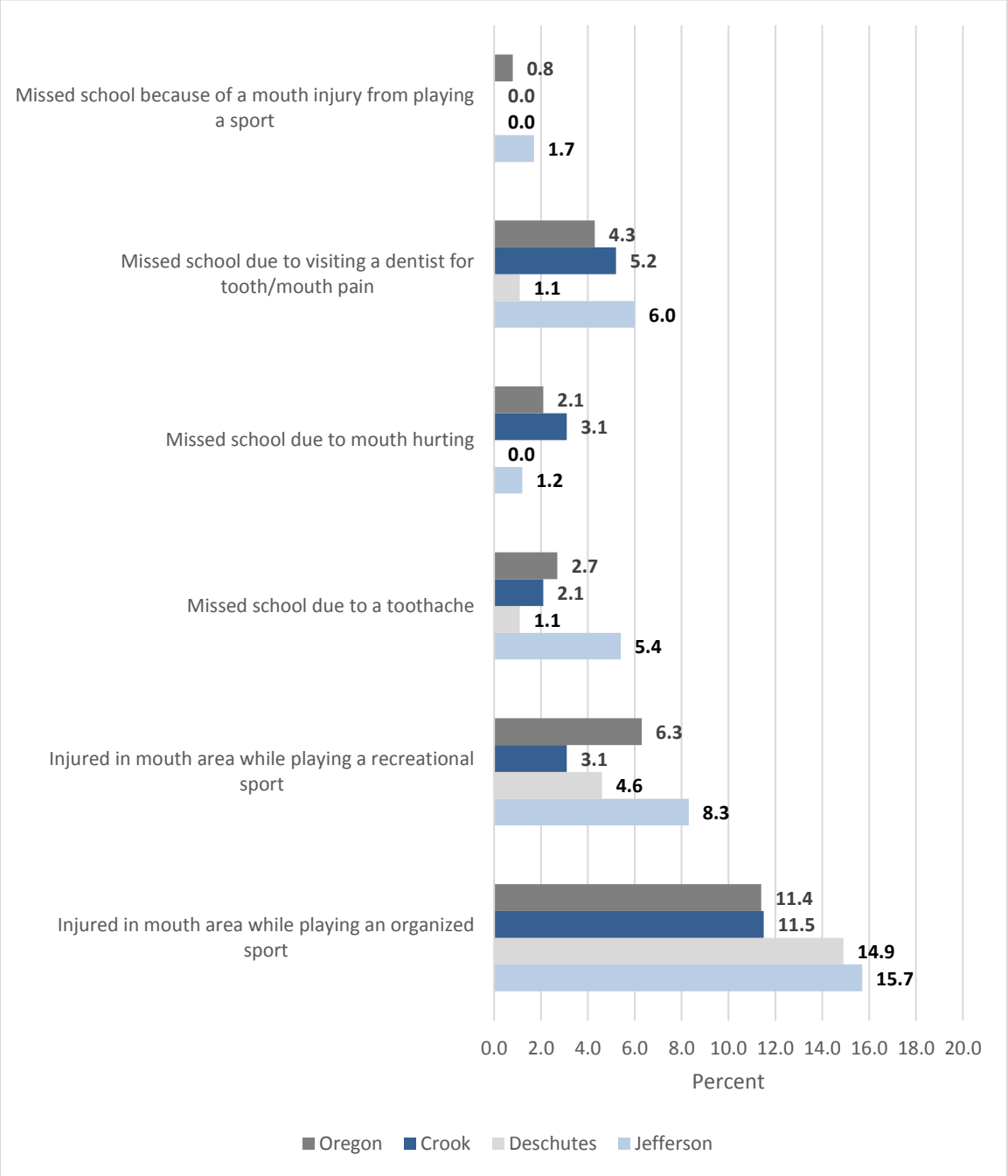
Note: Deschutes County estimates may not be representative of the county as a whole.

2016-2019 RHIP Indicator: Oral Health #4.

By 2019, decrease the percent of 8th graders who missed one or more hours of school due to going to the dentist because of tooth or mouth pain by 0.5%.

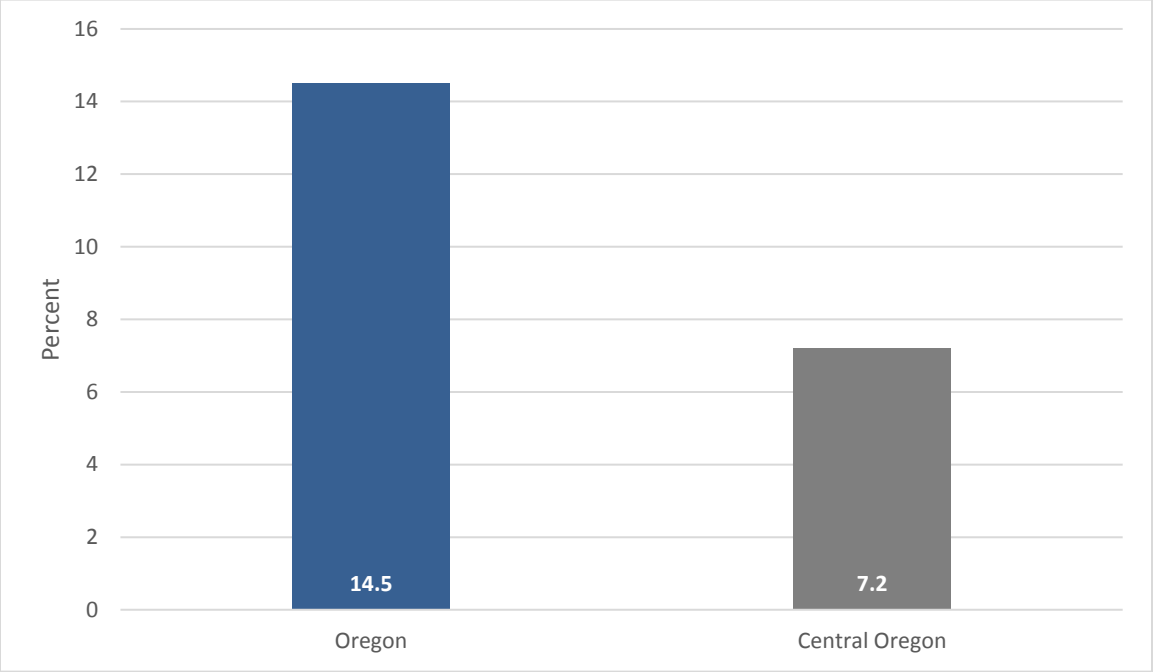
As shown above, according to the 2015 Oregon Healthy Teens Survey, the percentage of 8th graders in Crook, Deschutes, and Jefferson Counties who missed school due to visiting a dentist for tooth or mouth pain was 3.1%, 6.4%, and 5.7%, respectively.

Figure 94. Percent of 11th graders who reported specific oral health indicators, Oregon Healthy Teens, 2015.



Note: Deschutes County estimates may not be representative of the county as a whole.

Figure 95. Percent of Central Oregon OHP-enrolled children (aged 1-21) who received at least two topical fluoride applications during 2015, "Oral Health in Oregon's CCOs 2017 report."



Environmental Health

Environmental Health Section Highlights

Since the 2015 RHA was published:

- Between 60-70% of residents in Crook, Deschutes, and Jefferson Counties had a commute time to work of <20 minutes.
- Between 75-80% of residents in Crook, Deschutes, and Jefferson Counties traveled to work alone in a car, truck, or van. Only 4%, 4.9%, and 4.9% of residents in Crook, Deschutes, and Jefferson counties, respectively, used active transportation (i.e., walking or biking) to commute to work.
- Over the past five years in Deschutes County, September had the highest number of unhealthy air quality days. In Jefferson County, the unhealthiest air quality month was August. In Crook County, November, December, and January were the unhealthiest months for air quality.
- A report on climate change in Oregon was released. Climate change is expected to lead to several changes that may affect human health. These include extreme temperatures, more frequent wildfires, extreme precipitation and weather events, and negative impacts on agriculture and livestock.

Transportation

Figure 96. Travel time to work, American Community Survey, 2015.

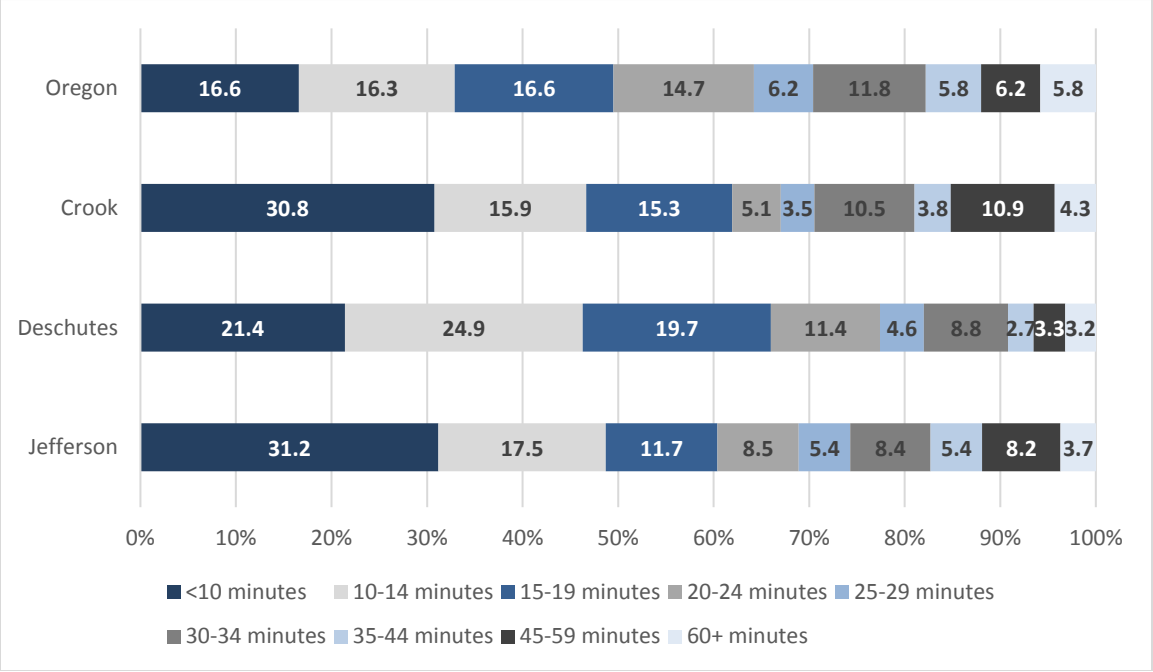
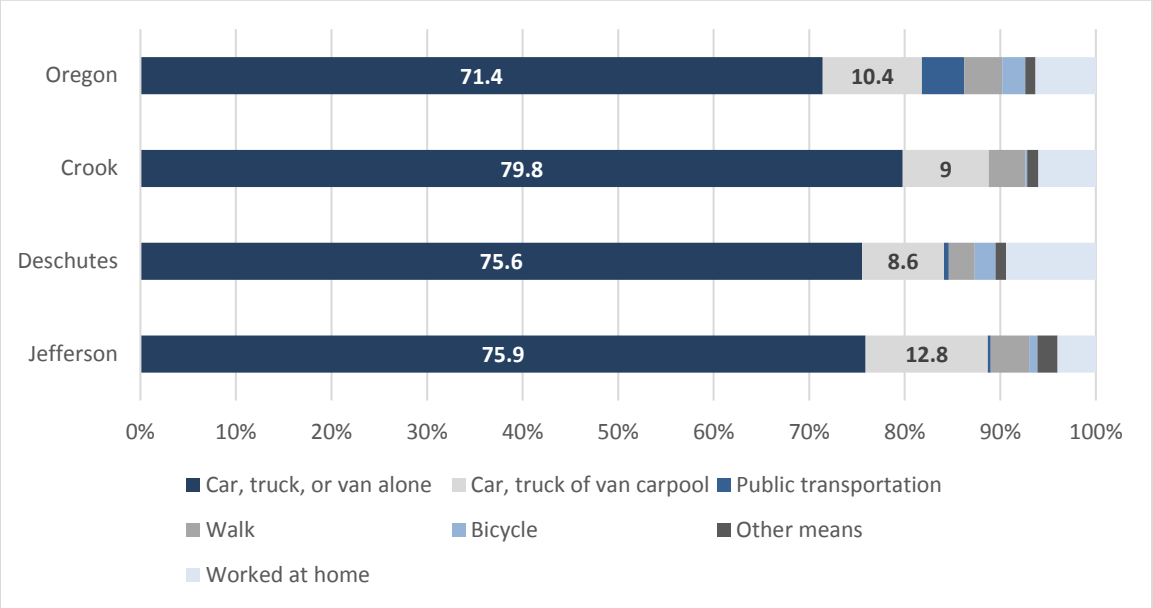


Table 23. Mean travel time to work, ACS, 2015.	
	Mean Travel time (in minutes)
Oregon	22.9
Crook County	18.5
Deschutes County	21.3

Note: Jefferson County estimate unavailable.

Figure 97. Means of transportation to work, ACS, 2015.

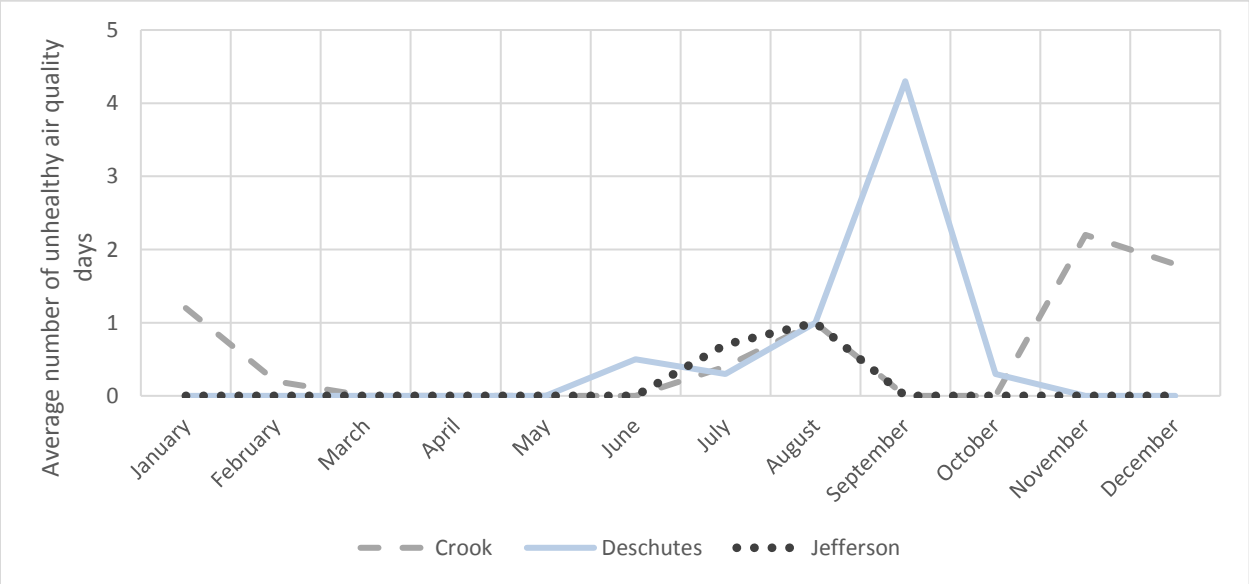


Oregon Public Health Modernization Metric: Active Transportation

The majority of individuals in Oregon and in the tri-county area commuted to work alone in a car. Active transportation (i.e., walking or biking to work) was only used by 4%, 4.9%, and 4.9% of residents in Crook, Deschutes, and Jefferson counties, respectively. In Oregon as a whole, 6.4% of residents used active transportation to work.

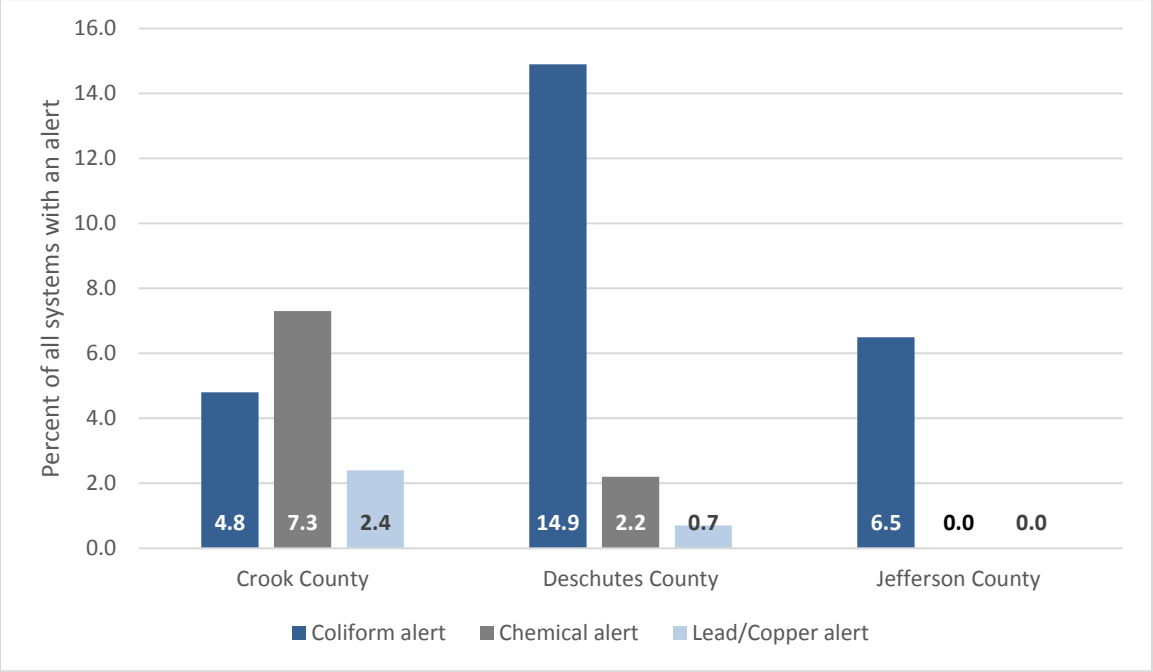
Air Quality

Figure 98. Monthly average of unhealthy air quality days for individuals with Asthma or other Lung Diseases, 2012-2016.



Water Quality

Figure 99. Percent of all active drinking water systems that had an alert by county, Oregon Drinking Water Quality Database, 2016.



Oregon Public Health Modernization Metric: Drinking water

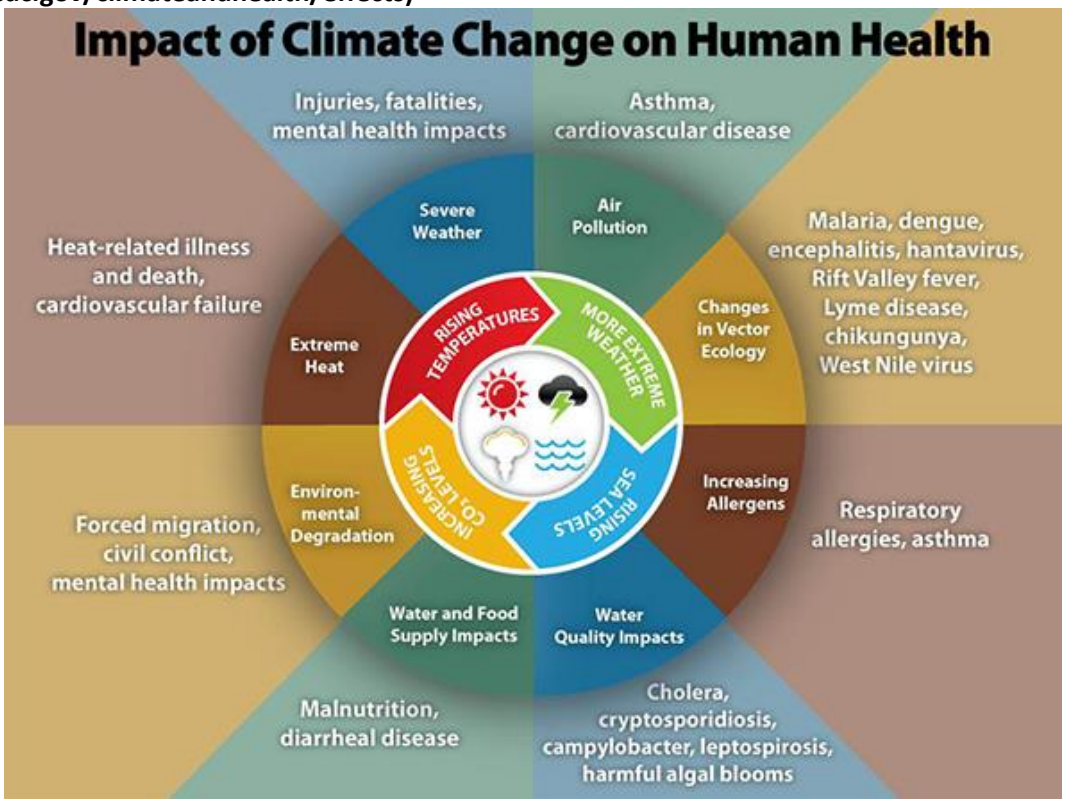
In Crook, Deschutes, and Jefferson Counties there were 6, 24, and 2 drinking water systems, respectively, with alerts in 2016.

Climate and Health

Changes in climate are directly and indirectly impacting the health of Central Oregonians. In January 2017, the Third Oregon Climate Assessment Report was released by the Oregon Climate Change Research Institute. The report outlines major climate change-related risks to human health:

> "More frequent heat waves are expected to increase heat-related illness and death. More frequent wildfires and poor air quality are expected to increase respiratory illnesses. Warmer temperatures and extreme precipitation are expected to increase the risk of exposure to some vector- and waterborne diseases. Access to sufficient, safe, and nutritious food may be jeopardized by climate change. Extreme climate or weather events, or even the threat of one, can lead to adverse, and sometimes lasting, mental health outcomes."

Figure 100. Impact of climate change on human health, Centers for Disease Control and Prevention (www.cdc.gov/climateandhealth/effects)



Rising temperatures and heat waves. Data presented in the report predicts that Oregon's average temperature will warm by 3-7 degrees Fahrenheit by the 2050s. Extreme temperatures and increased frequency of heat waves will lead to increased heat-related illness and death, as well as the potential for increased risk of exposure to certain vector- and water-borne diseases.

Wildfires. Increased frequency of wildfires and longer wildfire seasons will result in a greater risk of wildfire smoke exposure, reduced air quality, and increased respiratory illness.

Changes in precipitation. Annual precipitation is projected to increase slightly, but summers are expected to warm more than the annual rate and are likely to become drier. Precipitation in the mountains is expected to fall less as show and more as rain, affecting the timing and amount of water resources. This could result in a greater risk of water scarcity. People living in the John Day River Basin are particularly vulnerable to declining snowpack. Extreme precipitation events could also increase risk of exposure to waterborne pathogens due to runoff and combined sewer outflows.

The health impacts of climate change in Oregon are expected to disproportionately affect vulnerable populations. Those identified in the report at highest risk in Oregon include "the elderly, the young, pregnant women, the poor, persons with chronic medical conditions, persons with disabilities, outdoor workers, immigrants and limited English proficiency groups, and Indigenous peoples."

Access to Care

Access to Care Section Highlights

Since the 2015 RHA was published:

- The percent of the population under the age of 65 who were uninsured increased in all three Central Oregon counties.
- Client satisfaction scores for Central Oregon OHP members are similar to satisfaction scores for all Oregon OHP members.
- Warm Springs is the region of Central Oregon with the highest level of unmet healthcare need; the Warm Springs area ranked in the top 10 for areas of Oregon with the highest unmet healthcare need. Warm Springs ranks first in the state of Oregon for preventable hospitalizations.

Figure 101. Percent of the population under the age of 65 who are uninsured, ACS, 2015.

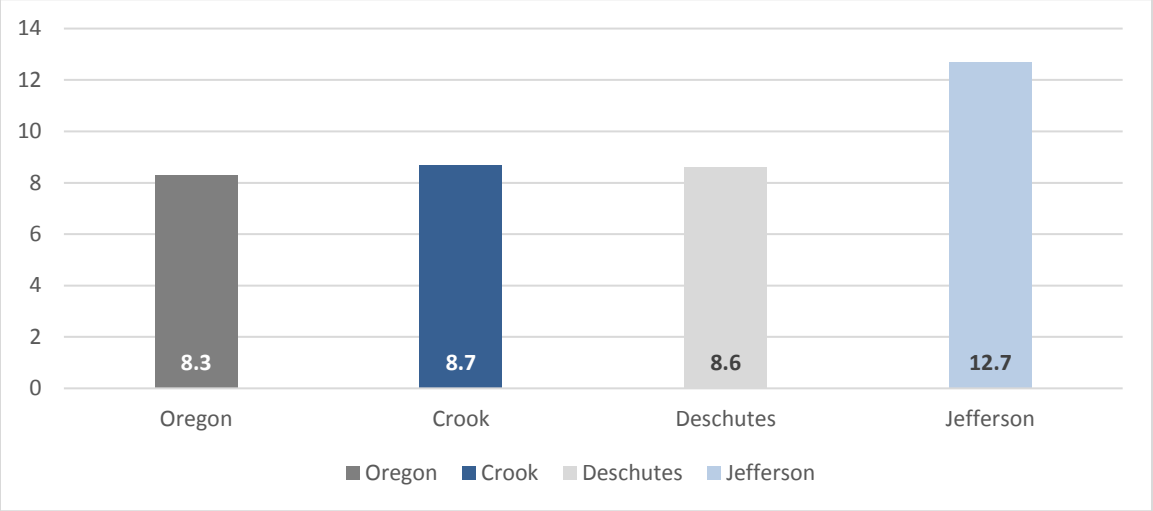


Figure 102. Quality Measures for Central Oregon OHP members, CAHPS Survey, 2016.

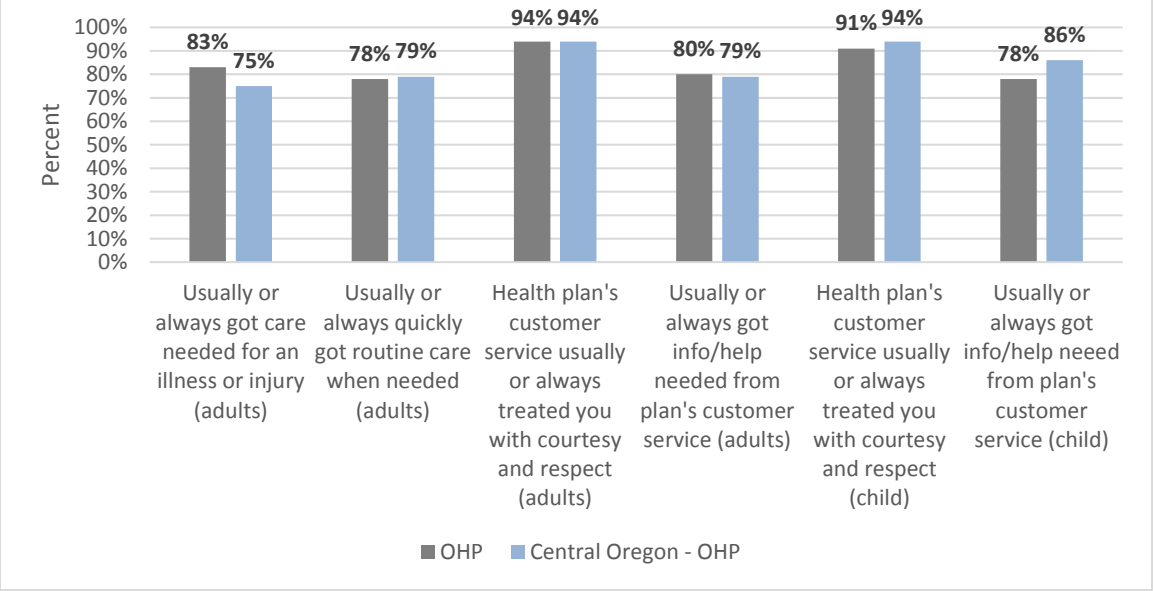
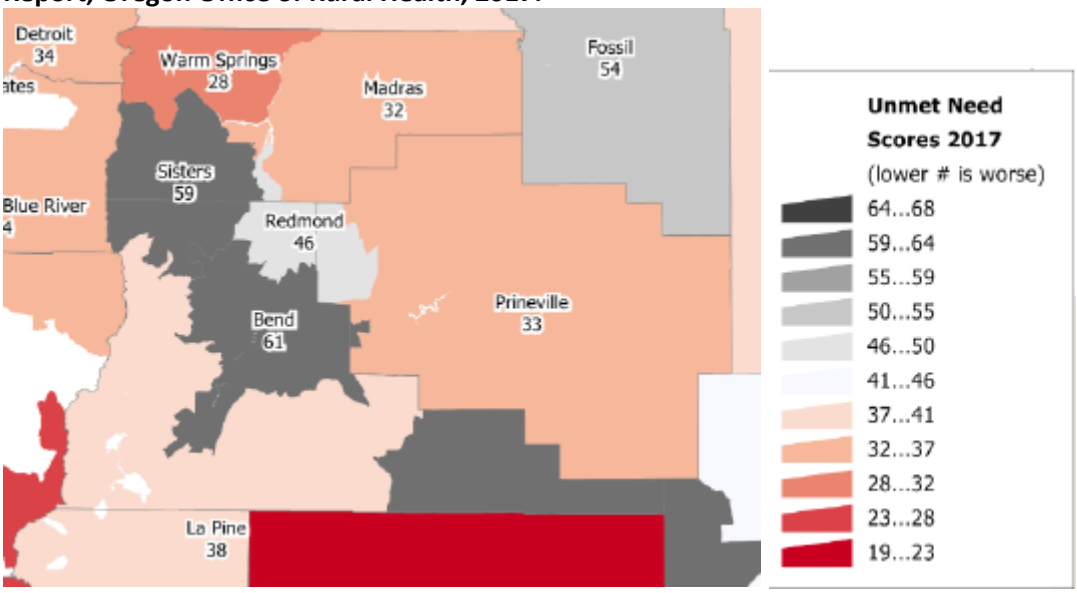


Figure 103. Central Oregon "overall unmet need" scores, Areas of Unmet Health Care Need in Oregon Report, Oregon Office of Rural Health, 2017.



Note: 9 variables are used to calculate "overall unmet need" scores for each of Oregon's 130 primary care service areas. Possible scores range from 0-90, with lower scores indicating a higher unmet need.

Other highlights from the Areas of Unmet Health Care Need in Oregon Report (Oregon Office of Rural Health, 2017) include the following:

- The Warm Springs area is among the top ten highest unmet needs locations in the state of Oregon.
- Sisters, Madras, La Pine, Redmond, and Prineville are all considered areas that are below Oregon's average primary care capacity level. Of these five areas, Prineville and La Pine have the lowest capacity to meet primary care needs.
- Sisters, Madras, Warm Springs, La Pine and Prineville are all considered areas that are below Oregon's average mental health provider capacity level. Warm Springs, La Pine, and Redmond have the lowest capacity to meet mental health needs.
- Madras, Prineville, and La Pine are the three areas of Central Oregon that have the lowest capacity to meet dental care needs.
- The Warm Springs area has the highest rate of preventable hospitalizations and the highest rate of emergency department visits for non-traumatic dental care of all regions in the state of Oregon. Warm Springs is also ranked among the top five areas of the state with the highest inadequate prenatal care and the highest rate of emergency department visits for mental health and substance abuse.