Strategic Plan for Oral Health2015in Benton, Lincoln & Linn Counties2020











Benton, Lincoln, Linn Regional Oral Health Coalition of Oregon

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The following participants donated their expertise and many hours of their time to assess regional oral health needs and to develop this strategic plan for Benton, Lincoln and Linn counties. The plan's recommendations reflect their consensus on the most potent and cost-effective strategies for achieving and maintaining lifelong oral health for every resident of the tri-county region.

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This plan was reviewed and approved by the Coast to Cascades Community Wellness Network Steering Committee on March 30, 2015: Marty Cahill, Sherlyn Dahl, Deborah Loy, Julie Manning and Louise Muscato.

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Priority Area 1: Infrastructure

OBJECTIVE 1	OBJECTIVE 2	Selected Outcome Measures
The tri-county region's oral health infrastructure delivers better care, better health and lower costs.	astructure delivers better care, better facilitates equitable, appropriate and timely	
 Coast to Cascades Community Wellness Network (CCCWN) prioritizes oral health and provides leadership in regional policy, funding, and regulatory discussions and decisions. Seek opportunities to expand and improve the region's oral health surveillance system. Collaborate with allies to build community capacity and engagement. 	 IHN-CCO and its advisory councils comprehensively integrate oral health. Develop and promote alternatives to the costly use of hospital emergency departments and urgent care clinics for nontraumatic dental pain. Expand transportation options for low- income, uninsured and disadvantaged residents. 	 Target date: 2016 All IHN-CCO boards and advisory bodies include at least one dental professional. Target date: 2016 Oral health is comprehensively integrated into IHN-CCO activities. Target date: 2017 Oral health coordinators serve each county through public health departments, nonprofits and other entities. Target date: 2017 All school-based health centers (SBHCs) and federally qualified health centers (FQHCs) integrate oral health promotion and education. Target date: 2018

Priority Area 2: Prevention and Systems of Care

OBJECTIVE 1	OBJECTIVE 2	Selected Outcome Measures	
 OBJECTIVE 1 Evidence-based preventive strategies are implemented across the lifespan of every tri-county resident. Support optimally fluoridated community water systems. Include oral disease prevention in prenatal and pediatric programs. Expand access to dental screenings and care for high-risk children. Expand evidence-based, best-practice oral health programs for children and teens. Integrate oral health with chronic disease prevention and management. 	 OBJECTIVE 2 Tri-county residents achieve oral health literacy and understand that oral health is inseparable from overall health. Develop a culturally appropriate communications plan to educate all residents on oral health. Integrate oral health education into general health education. 	 Selected Outcome Measures Pregnant women on OHP/Medicaid who had their teeth cleaned in the previous year: 58 percent. Most recent state data: 53 percent, 2011. Children 0 to 5 on OHP/Medicaid with a dental visit in the previous year: 27 percent. Most recent state data: 24 percent, 2011. Children ages 6 to 9 on OHP/ Medicaid with sealants on one or more permanent molars: 42 percent, 2012. Eighth graders on OHP/Medicaid with decay experience: 63.1 percent. 2013. 	
 Expand community-based prevention, outreach and intervention to underserved and disadvantaged adults and seniors. 		 Adults 18 and older on OHP/Medicaid with a dental visit in the previous year: 70 percent. <i>Most recent state data:</i> 64 percent, 2011. 	

Priority Area 3: Workforce Capacity

OB	BJECTIVE	Suggested Outcome Measures		
	e tri-county region's oral health workforce meets the lifelong oral health needs of all idents, including underserved and vulnerable populations.	 Number of expanded practice dental hygienists (EPDHs) practicing in 		
1.	Mitigate the dental workforce shortage in rural areas, high-poverty hotspots, and dental HPSAs.	collaboration with CCO/DCOs in tri- county communities. <i>Data source: OBD</i> .		
2.	Foster a culturally competent oral health workforce to serve the region's diverse communities.	 Number of dental and dental hygiene students completing a 30-day rural rotation in the tri-county region. 		
3.	Collaborate with traditional health workers and allied professionals to provide basic preventive care and to connect community members with oral health providers.	Data source: OHSU.Number of regional oral health care		
4.	Support pilot workforce projects made possible by Senate Bill 738.	providers who completed cultural competency training.		
5.	Integrate oral health education into the training for all care providers.	Data source: OBD.		

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EXECUTIVE SUMMARY

Optimal oral health is fundamental to our well-being, happiness, productivity and quality of life. To reduce the social and economic cost of oral disease and related illnesses, all tri-county residents must receive timely, appropriate and equitable dental care at every stage of life, including the prenatal stage.

Although Benton, Lincoln and Linn counties have made important progress in fighting oral disease, our region still has significant disparities and inequities in access and outcomes, especially with regard to race/ethnicity, age, income, insurance, geographic isolation and English language skills. There is also an urgent and growing need to expand care to seniors, the homeless, undocumented residents, people with special needs, and people living in foster homes and in long-term care facilities.

Oral diseases affect what we can eat, how we look, the way we communicate, and how we feel about ourselves. In addition to serious medical issues such as pain, infection and tooth loss, poor oral health can cause severe emotional and financial stress. It can impair self-esteem, limit employment opportunities, and increase absenteeism at school and work.

The toll of oral diseases on tri-county residents is all the more tragic because these diseases are almost entirely preventable, and the cost of prevention is far lower than the cost of treatment. In particular, the cost of promoting optimal oral health care at every stage of life is much lower than the cost of treating oral diseases in dental offices and emergency rooms.

Achieving lasting improvements in community-wide oral health will require ongoing coordination, as well as access to valid and reliable data. More generally, it's essential to educate the public, policymakers and care providers on the connection between oral health and general health, so that everyone understands the need for coordinated, comprehensive health care.

A holistic approach to health care is central to our goal of overcoming inequities in the availability and quality of dental care. Through this approach, dental, behavioral and primary care providers will have new opportunities to optimize care for all Oregonians, while also helping underserved populations to access health benefits, resources and treatments.

Taking advantage of this unique historical moment will require an exceptional collaborative effort. With this effort in mind, *The Strategic Plan for Oral Health in Benton, Lincoln and Linn Counties* aims to:

• Communicate to policymakers, providers and the public that oral health is inseparable from overall health at every stage of life.

- Provide factual information about the region's oral health status, while also promoting evidence-based strategies for improvement.
- Help state, regional and local oral health coalitions and other public health organizations to expand and coordinate their efforts.
- Alert policymakers and funders to opportunities for collaboration with other stakeholders who are working to ensure that all tri-county residents achieve optimal oral health.

We hope this strategic plan will guide policymakers, funders, local coalitions, and other stakeholders as they work together to improve access to equitable, affordable and timely care for all tri-county residents.

This plan will periodically be revised and updated by the Benton, Lincoln, Linn Regional Oral Health Coalition of Oregon. We welcome your comments and suggestions for improvement.

About the Coalition

Benton, Lincoln, Linn Regional Oral Health Coalition of Oregon provides leadership through partnerships to build community resources that will sustain and integrate oral health as an essential component of overall health across the lifespan.

About Coast to Cascades Community Wellness Network (CCCWN)

Coast to Cascades Community Wellness Network is the formal coalition that resulted from the Coast to Cascades Childhood Obesity Project and the Rural Health Network Development planning grant.

CCCWN's mission is to improve community health in Benton, Lincoln and Linn counties by providing leadership and support for regional partnerships. Its membership consists of leaders and decision-makers from health care, schools, government, nonprofits and tribal councils.

CCCWN is responsible for supporting and monitoring the Health Resources and Services Administration's *Healthy Smiles for All* grant, in addition to addressing community health improvement recommendations from regional and local oral health coalitions.

THE BURDEN OF ORAL DISEASE

Oral disease is a serious health problem for tri-county residents of all ages and backgrounds. Although it affects a majority of our population, this silent epidemic is seldom recognized as a public health priority.

Risk factors for oral diseases typically overlap with those of many other lifestyle-related chronic illnesses, including a high-sugar diet, tobacco use, excessive alcohol consumption and poor nutrition.

The following oral diseases account for most of the social and economic cost of dental care in Oregon:

- Dental caries, or tooth decay, is a chronic infectious disease caused by multiple bacteria species residing in a sticky biofilm called plaque. These bacteria produce acid that damages tooth enamel, eventually causing cavities. Infections resulting from tooth decay may be severe enough to require emergency treatment.
- Periodontal diseases are bacterial infections that affect the gums, soft tissue, and bone. They typically begin with gum inflammation, or gingivitis, resulting from a buildup of plaque. Untreated gingivitis may progress to periodontitis, which can result in tooth loss. People who smoke tobacco and drink alcohol have a higher risk of developing periodontal diseases and may also be at higher risk for failure of dental implants. Some studies associate chronic periodontal disease with a higher risk of other serious illnesses, including heart disease and diabetes.
- Oral and throat cancers affect roughly 40,000 Americans every year, leading to 8,000 deaths. Human papilloma virus (HPV) is the foremost cause of oral and throat cancers among otherwise healthy nonsmokers ages 25 to 50. In addition, the 2014 U.S. Surgeon General's report emphasizes that "tobacco use is a risk factor for oral cavity and pharyngeal cancers." Thus, educational campaigns that target high-risk behaviors are fundamental to the prevention of oral and throat cancers.

The toll of oral diseases is all the more tragic because they are almost entirely preventable, and the cost of prevention is far lower than the cost of treatment.

In particular, the costs of promoting optimal oral health care at every stage of life are much lower than the cost of treating oral diseases in dental offices and emergency departments. Because oral diseases share risk factors with other chronic diseases, reducing the burden of oral diseases also has the potential to reduce a broader range of health care costs.



Infants and Children

Tooth decay is currently Oregon's most common chronic childhood disease, with rates up to four times higher than that of asthma. According to the 2012 *Oregon Smile Survey*, at least 51 percent of children ages 6 to 9 in Benton, Lincoln and Linn counties have had a cavity. Studies of Benton and Lincoln county teens show rates of decay well above the Healthy People 2020 target of 48.3 percent, ranging from a low of 63.6 percent among eighth-graders in Benton County to a high of 78.2 percent for 11th-graders in Lincoln County.

In addition to the needless suffering childhood dental problems cause, they can interfere with academic success. The Oregon Health Authority estimates that "on any given day, as many as 3,800 children" in first through third grades are suffering from dental pain or infection at school. Children with poor oral health are nearly three times more likely than other children to miss school. Nationally, children miss more than 51 million school hours each year due to dental pain.

Furthermore, a 2012 study undertaken by researchers from the University of Southern California's Ostrow School of Dentistry discovered that "students with toothaches were almost four times more likely to have a low grade-point average" than peers who did not report recent tooth pain.

Adults and Seniors

Although each county has oral health resources that target children 0 to 18, programs for adults are less available. The service gaps for adults are particularly problematic for seniors; this traditionally underserved

population has distinctive oral health risks, which include medication side effects as well as conditions related to osteoporosis, diabetes and other common chronic diseases.

In all three counties, the population of residents 65 and older is growing. Between 2000 and 2040, the highest rate of growth will be seen among adults 75 years and older. This will result in an even greater need for accessible dental resources, especially for low-income and mobility-challenged patients. The needs of seniors in assisted-living homes and related facilities are of special concern.

Health Disparities and Inequities

The major risk factors for oral diseases — and for chronic diseases associated with poor oral health, such as diabetes — are strongly associated with low income, lack of education, and ethnic/racial status. These factors also strongly affect access to timely prevention and treatment.

Currently, Black, Hispanic/Latino, multiracial and rural Oregonians receive dental care at rates well below the state average, as do Oregonians at lower income and education levels. As a result, rates of tooth decay and gum disease are significantly higher among these populations. For example, 68 percent of Hispanic/ Latino children ages 6 to 9 have had at least one cavity, compared to only 47 percent of white children.

People who have physical, mental or developmental disabilities (including autism spectrum disorders, or ASDs), or chronic health conditions such as diabetes, are also more likely to have poor oral health. This is

a serious concern given the increasing rate of both diagnoses: Oregon has the nation's second-highest rate of autism diagnosis, and its incidence of diabetes has doubled since 1990. Like oral disease, diabetes and its risk factors are associated with lower income, lower education levels and nonwhite race/ethnicity.

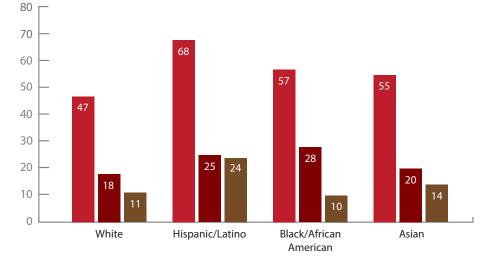
Despite ongoing efforts to meet the oral health needs of all tri-county residents, nonwhite race/ethnicity, lower education levels and lower socioeconomic status continue to be strong predictors not just of higher rates of oral disease, but also of a persistent lack of access to care.

Economic Costs

Oral diseases are putting a severe financial strain on our region's health care system. In 2014 alone, the cost of treating tooth pain, infections and related problems in tri-county emergency departments (EDs) and urgent care clinics (UCs) was about \$453,000. Statewide, the cost is estimated at \$8 million per year.

A 2014 study entitled *Emergency Department Visits* for Non-Traumatic Dental Problems in Oregon State found that "ED visits by uninsured Oregonians were eight times more likely to be for dental problems than were visits by commercially insured patients," and that "Oregon Health Plan enrollees' visits were four times more likely to be for dental problems."

In addition to being much more costly than timely and appropriate dental care, ED treatments for oral pain usually fail to address the underlying disease or condition, which often leads to a recurrence of symptoms and another ED visit.



Oral Health Status of Children 6 to 9 Years Old, by Race/Ethnicity

- Cavity experience. About 52 percent of Oregon children ages 6 to 9 have had a cavity.
- **Untreated decay.** One in five children ages 6 to 9 has untreated decay in primary or permanent teeth.
- Rampant decay. Roughly 17,000 children have treated or untreated decay in seven or more teeth.

Data source: Oregon Health Authority, Oregon Smile Survey, 2012.

MOMENTUM FOR CHANGE

Although we face serious challenges in meeting the oral health needs of all tri-county residents, there are also positive reasons for a sense of urgency. New resources, new paradigms, coordinated efforts and statewide momentum for change make this an ideal time to improve the tri-county region's oral health.

Coordinated Care

As a result of Oregon's Health Transformation bill, coordinated care organizations (CCOs) and dental care organizations (DCOs) are now providing crucial infrastructure for improving access to dental care. These local, patient-centered entities are tasked with coordinating physical, behavioral and dental care for Oregonians who receive coverage under the Oregon Health Plan (OHP/Medicaid).

InterCommunity Health Network CCO (IHN-CCO) serves the regional OHP/Medicaid population. Its goal is to coordinate health initiatives and improve efficiency, while engaging stakeholders to improve the availability and quality of care.

Also, IHN-CCO's Regional Planning Council is guiding the development of a regional delivery system that is firmly grounded in a philosophy of coordinated, patient-centered health care.

The Affordable Care Act (ACA)

With the passage of the ACA, demand for oral health services is rising. Oregon's uninsured rate dropped by 63 percent between June 2013 and June 2014, according to a study released by Oregon Health & Science University; this reduction was primarily due to an increase in OHP/Medicaid enrollment.

The Oregon Department of Human Services and the Oregon Health Authority estimate that the tri-county region will see a significant increase in OHP/Medicaid eligibility by 2016:

- Benton County: 5,020 newly eligible residents
- Lincoln County: 3,113 newly eligible residents
- Linn County: 7,076 newly eligible residents

Expanded primary care coverage will increase the diagnosis of oral diseases and of systemic diseases with oral symptoms or effects. However, even among tri-county residents with dental insurance, out-of-pocket costs may be steep enough to discourage patients from getting the care they need. This influx of new, lower-income patients — many of whom will need immediate care — necessitates expanding regional infrastructure and systems of care to reach underserved populations.

Healthy People 2020

In 2010, the U.S. Department of Health and Human Services launched a 10-year health initiative called Healthy People 2020, which sets forth achievable, evidence-based benchmarks for improving the health of all Americans. Meeting or exceeding HP2020 oral health targets in the tri-county region will require considerable collaboration, education and funding, which in turn will require a strategic plan.

State and Regional Health Plans

The alignment of various plans for improving oral and public health provides an unprecedented opportunity to address oral disease, along with problems that contribute to poor oral health, including tobacco use, poor nutrition, chronic diseases, and health inequities and disparities.

- Oregon's Healthy Future is the state's health improvement plan. It has set ambitious oral health goals in addition to targeting high-risk behaviors associated with poor oral health.
- The Strategic Plan for Oral Health in Oregon: 2014-2020 is the result of a collaborative effort between the Oregon Health Authority, the Oregon Oral Health Coalition, and the Oral Health Funders Collaborative. This plan reflects the consensus of nearly 200 oral health advocates and has been endorsed by more than 30 organizations and agencies working to improve statewide oral health. The tri-county plan aligns closely with this plan and builds on its recommendations.
- InterCommunity Health Network CCO Community Health Improvement Plan 2014 draws on recent health improvement plans in Benton, Lincoln and Linn counties. Goals relating to oral health include tobacco prevention, prenatal dental care, and building provider capacity.

Philanthropy and Volunteerism

Volunteers and charitable nonprofits are on the front lines of the battle against oral disease. They have a vital role to play not just in providing disadvantaged populations with care, dignity and respect, but also in providing policymakers, oral health coalitions and other stakeholders with information that will help to build a more equitable public health system.

Healthy People 2020: Selected Oral Health Objectives

JECTIVE		TARGET %		
ildren's	Oral Health			
OH-1	Reduce the proportion of children and teens with dental caries in primary or permanent teeth.			
1.1	Children ages 3 to 5 with dental caries in primary teeth	30.0		
1.2	Children ages 6 to 9 with dental caries in primary and permanent teeth	49.0		
1.3	Teens ages 13 to 15 with dental caries in permanent teeth	48.3		
OH-2	Reduce the proportion of children and teens with untreated dental decay.	-		
2.1	Children ages 3 to 5 with untreated dental decay in primary teeth	21.4		
2.2	Children ages 6 to 9 with untreated dental decay in primary and permanent teeth	25.9		
2.3	Teens ages 13 to 15 with untreated dental decay in permanent teeth	15.3		
ult Oral	Health			
OH-3	Reduce the proportion of adults with untreated dental decay.			
3.1	Adults ages 35 to 44 with untreated dental decay	25.0		
3.2	Adults ages 65 to 74 with untreated coronal caries	15.4		
3.3	Adults ages 75 years and older with untreated root surface caries			
OH-4	Reduce the proportion of adults who have lost teeth because of dental caries or periodontal disease.			
4.1	Adults ages 45 to 64 who have had a permanent tooth extracted	68.8		
4.2	Adults ages 65 to 74 who have lost all of their natural teeth	21.6		
cess to F	Preventive Services			
ОН-9	Increase the proportion of school-based health centers with an oral health component.			
9.1	Includes dental sealants	26.5		
9.2	Includes dental care	11.		
9.3	Includes topical fluoride	32.		
OH-10	Increase the proportion of local health departments and Federally Qualified Health Centers with an oral health component.			
10.1	Federally Qualified Health Centers with an oral health care program	83.0		
10.2	Local health departments with oral health prevention or care programs	28.4		
OH-11	Increase the proportion of patients who receive oral health services at FQHCs each year.	33.		
al Healtl	n Interventions			
OH-12	Increase the proportion of children and adolescents who have received dental sealants on their molars	s.		
12.1	Children ages 3 to 5 with dental sealants on one or more primary molars	1.5		
12.2	Children ages 6 to 9 with dental sealants on one or more permanent molars	28.		
12.3	Teens ages 13 to 15 with dental sealants on one or more permanent molars	21.9		
OH-13	Increase the proportion of the U.S. population with optimally fluoridated community water systems.	79.6		

Source: http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=32

PRIORITY AREA 1: INFRASTRUCTURE

Integrating, strengthening and coordinating all of the interconnected elements of our region's oral health delivery system is critical to achieving and maintaining optimal oral health for all tri-county residents.

Local Infrastructure and Coalitions

Strengthening regional infrastructure requires greater collaboration and coordination between public and private health care providers. This in turn requires informed cooperation from policymakers, funders, nonprofits, local and regional oral health coalitions, patients and their advocates, and the general public.

To facilitate this ongoing process, Coast to Cascades Community Wellness Network (CCCWN) can provide leadership in policy, funding and regulatory decisions.

Strengthening local infrastructure entails fostering and empowering local leaders while also cultivating oral health coalitions and engaging various other public health organizations and advocates as allies.

Policymakers and funders can build support for local infrastructure by:

- Facilitating communication and collaboration between public and private care providers
- Overcoming policy barriers to the integration of dental and medical services
- Utilizing oral health coordinators for county and local coalitions

Local leaders and programs should work closely with state agencies while garnering community support and encouraging the development of local, culturally competent oral health programs and resources.

Medical/Dental Integration

An understanding that oral health is inseparable from overall health must drive medical/dental integration at every level of our health care system. This process will require close collaboration between social services, care providers, and educators at the state, county and local levels.

As part of this broad effort, all IHN-CCO advisory councils should prioritize oral health for enrollees. Including a dental professional on IHN-CCO boards and advisory councils will facilitate this process.

Monitoring and Using Oral Health Data

The tri-county region needs to improve the collection of data on public and private oral health promotion, treatment and utilization. It also needs to develop a common methodology for collecting, validating, measuring, sharing and reporting these data.

Policymakers, oral health advocates, providers and other stakeholders will need ongoing access to this information in order to identify problems, design evidence-based interventions, and address disparities in access and outcomes.

Oral health data are collected by a wide variety of public and private organizations serving low-income residents, including WIC, Head Start, Medical Teams International, and local safety-net clinics. Compiling



SELECTED OUTCOME MEASURES, 2015-2018

- All school-based health centers (SBHCs) and federally qualified health centers (FQHCs) integrate oral health promotion and education. *Target date:* 2018
- Oral health is comprehensively integrated into IHN-CCO activities. *Target date:* 2017
- The Coalition's oral health coordinator and a consultant complete a directory of regional oral health data. *Target date:* 2016
- All IHN-CCO boards and advisory bodies include at least one dental professional. *Target date:* 2016

Please visit page 16 for a complete list of outcome measures.

a directory of these data sources and staff contacts would simplify the process of monitoring and using data, facilitate communication between allies, and potentially form the foundation of a more robust and accessible data network.

This effort will require ongoing cooperation between public and private stakeholders. Building regional and local infrastructure is fundamental to facilitating this cooperation, just as data collection is fundamental to optimizing our region's public health infrastructure.

Increasing Transportation Options

Lack of transportation can be a significant burden for tri-county residents seeking dental care. Because most of the region's oral health providers operate in urban areas, rural residents may need to travel 40 miles or more to see a dentist or to access Medicaid services. Some people in need may not be able to take time away from work or family responsibilities to visit the dentist, while others may have health or disability issues that make driving impossible.

These difficulties are often compounded by poor weather, road closures and other factors beyond the patient's control. Transportation problems result in a higher than average rate of no-shows, reinforcing the image that some providers have of disadvantaged patients as unreliable.

In short, lack of transportation limits access to oral health care while increasing its cost. To address this problem, public health experts should get involved in local and regional transportation planning processes, so that they can act as advocates for vulnerable and medically underserved populations.

On a more basic level, it's important to expand the availability and use of transportation vouchers and volunteer transportation services for low-income, uninsured patients, including children.

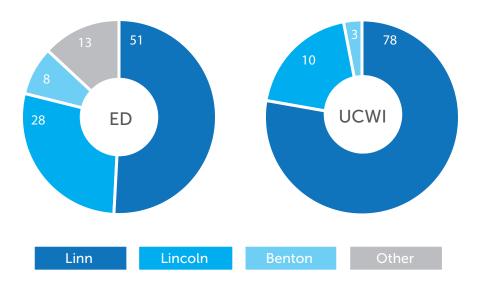
Alternatives to Emergency Care

Reducing the use of EDs and UCs for nontraumatic dental problems has three major benefits. First, it will reduce costs. Second, it will improve outcomes by treating underlying dental conditions instead of offering temporary or palliative care. Third, it will help to connect high-risk patients with a dental home. This can result in earlier detection of problems and a reduction in costs and suffering.

With these goals in mind, we recommend improving infrastructure to reach out to populations at a high risk for emergency department usage and redirect them to less costly and more effective care providers.

As reported in *Emergency Department Visits for Non-Traumatic Dental Problems in Oregon State*, "geographic analyses show that most users of EDs for dental conditions live near hospitals." Therefore, increasing the availability of alternative oral health services "could reduce the unmet dental care needs in these high-use communities."

Interventions of this type are particularly necessary in Linn County, which currently has the region's highest rate of ED/UC visits for oral problems.



Emergency Department and Urgent Care Walk-In Utilization: Percentage by County, 2014

Residents who can't afford regular dental care often visit emergency departments or urgent care walk-in clinics for acute oral pain.

In Oregon, oral pain is the second most common cause of emergency department visits, costing the state an estimated \$8 million per year.

ED/UCWI treatment is much more expensive than standard care in a dental office. Furthermore, it tends to be palliative instead of curative because ED staff are not trained or equipped to treat dental problems.

Data source: InterCommunity Health Network CCO, 2014

Priority Area 1: Infrastructure Objectives and Strategies

Integrating, strengthening and coordinating all of the interconnected elements of our region's oral health delivery system is critical to achieving and maintaining optimal oral health for all tri-county residents.

OBJECTIVE 1

The tri-county region's oral health infrastructure delivers better care, better health and lower costs.

- Strategy 1 Coast to Cascades Community Wellness Network (CCCWN) prioritizes oral health and provides leadership in regional policy, funding and regulatory discussions and decisions.
 - a. Engage and sustain the CCCWN steering committee.
 - b. Work with the Health Evidence Review Commission (HERC) to establish evidence-based practices for dental care.

Strategy 2 Seek opportunities to expand and improve the region's oral health surveillance system.

- a. Improve awareness and utilization of regional oral health resources by creating a regional oral health data directory.
- b. Track fluoride varnish (age 6 months to 18 years), sealants and other school-based preventive services.
- c. Monitor and evaluate oral health access and utilization data from the Division of Medical Assistance Programs (DMAP), the Oregon Insurance Division, WIC, Head Start, dental vans, and other public and private sources.
- d. Identify and promote best practices for the timely sharing of oral health data between county and state surveillance systems.
- e. Monitor county-level surveillance data to identify demographic and geographic variation, and target interventions appropriately.

Strategy 3 Collaborate with allies to build community capacity and engagement.

- a. Support the efforts of county and regional oral health coalitions to garner community support and to develop and implement local oral health plans.
- b. Use oral health coordinators to support local coalitions and programs.
- c. Mobilize low-income, disabled, ethnic and racially diverse, rural and other disadvantaged residents along with their advocates and care providers to assure meaningful input into CCOs, DCOs, public health policy, and regional health transformation efforts.
- d. Expand access to oral health services through federally qualified health centers (FQHCs), school-based health centers (SBHCs), provider clinics and public/private partnerships.

Priority Area 1: Infrastructure Objectives and Strategies — *continued*

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OBJEC	TIVE 2 The region's oral health infrastructure facilitates equitable, appropriate and timely access to oral health prevention, education and care for all.
Strategy 1	IHN-CCO and its advisory councils comprehensively integrate oral health.
	a. Encourage the inclusion of a dental professional on all IHN-CCO boards and advisory councils.
	b. IHN-CCO fully integrates evidence-based best practices for dental care, such as school-based prevention programs, oral health for pregnant women, and early childhood cavity prevention.
	c. Engage advisory councils in prioritizing oral health for CCO enrollees.
Strategy 2	Develop and promote alternatives to the costly use of hospital emergency departments and urgent care clinics for nontraumatic dental pain.
	a. Promote the siting of after-hours safety-net clinics and related resources in communities with high dental ED use.
	b. Implement a voucher program to redirect ED users to dental clinics.
	c. Explore the possibility of creating a hub of local dental offices that will accept emergency-only patients.
	d. Recruit and train an on-call dental staff to provide case management for emergency department staff.
Strategy 3	Expand transportation options for low-income, uninsured and disadvantaged residents.
	a. Promote the participation of public health experts in transportation planning as advocates for vulnerable and medically underserved populations.
	 Expand the use of vouchers and volunteer transportation services for children and adults in need.

PRIORITY AREA 2: PREVENTION & SYSTEMS OF CARE

Evidence-based behavioral and policy interventions will reduce the toll of oral diseases and achieve a high lifelong standard of oral health for all tri-county residents, regardless of income, background or location.

Population-Based Prevention

In this plan, *prevention* describes community-based, community-wide strategies, as opposed to clinical prevention activities. Although one-on-one clinical interventions are essential to good oral health, lasting change requires a community-based approach that dismantles barriers to access and delivers equitable and appropriate education, prevention and treatment across the lifespan of every resident.

Population-based preventive measures like public water fluoridation and dental sealants, and individual measures such as the daily use of fluoride toothpaste, are equally valuable in fighting tooth decay. Preventive care should ideally begin before birth; a mother who gets regular dental care and maintains good oral hygiene during pregnancy will reduce the amount of harmful bacteria in her mouth, which in turn limits transmission of the bacteria to her child.

Water Fluoridation

Water fluoridation is a powerful tool for overcoming oral health inequities, because everyone benefits from it regardless of income level, race or ethnicity. Its greatest benefit is seen among disadvantaged populations at a higher risk for dental disease, many of whom may be difficult to help by other means.

The proven efficacy and safety of this intervention makes it crucial both to continue promoting water fluoridation in currently unfluoridated communities, and to maintain the region's existing programs.

Preventive Care in Non-Dental Settings

Primary care settings are a logical access point for preventive oral health services, especially for infants and children ages 0 to 5, who tend to visit primary care providers earlier and more frequently than they visit dental care providers.

In addition, basic oral health literacy and preventive services (e.g., fluoride varnish) should be promoted at every regional facility serving children and their parents, including schools, child care centers and social service agencies. These services should also be extended to long-term care and nursing home facilities, senior centers, and other focal points for senior care.

School-based prevention programs that offer fluoride varnish and dental sealants are effective in reducing tooth decay, and should be enhanced and expanded.

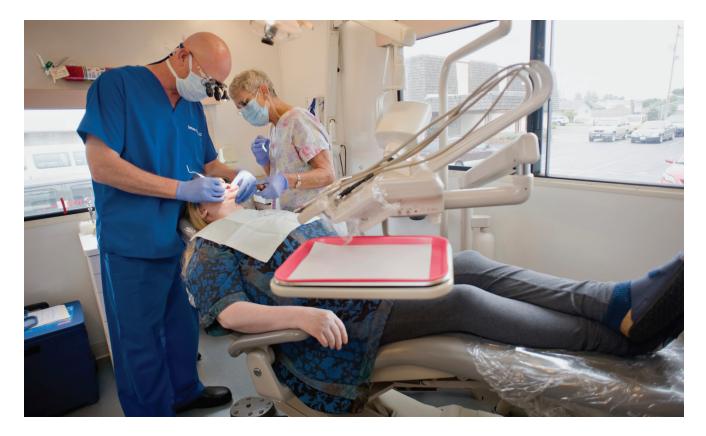
Because sugary drinks and snacks are a leading cause of childhood tooth decay, schools and other childoriented facilities should restrict the marketing of these products on their grounds, educate students and parents on the risks of consuming such products, and improve access to healthy options. Discouraging the consumption of junk foods, while also making a greater effort to target teens (whose utilization of dental services falls off after age 12), has the potential to prevent a variety of serious dental problems that most commonly affect 20- to 39-year-olds, including those that lead to the majority of costly emergency department and urgent care clinic visits.



SELECTED OUTCOME MEASURES FOR 2020

- Pregnant women on OHP/Medicaid who had their teeth cleaned in the past year: 58 percent. Most recent state data: 53 percent, 2011.
- Children 0 to 5 on OHP/Medicaid with a dental visit in the past year: 27 percent. Most recent state data: 24 percent, 2011.
- Third graders on OHP/Medicaid with decay experience: 52 percent. *Most recent state data*: 58 percent, 2012.
- Adults 18 and older on OHP/Medicaid with a dental visit in the past year: 70 percent. Most recent state data: 64 percent, 2011.

Please see page 16 for a complete list of outcome measures.



Awareness of Options

Underserved and disadvantaged residents are often unaware of local oral health resources, making it difficult or impossible for them to understand and weigh their options for care.

Even in cases where care options are known, the complexity of determining eligibility for treatment, completing necessary paperwork, finding a provider, and arranging transportation may be discouraging or unmanageable for the patients who need care most.

Varied eligibility rules, restrictions on treatment, and shifting hours and schedules require patients with limited time — and in some cases, lower educational status or limited English language skills — to research, understand and assess a confusing array of options. Given the tendency among high-risk populations to ignore or put off dental treatment, this can act as a further disincentive to seeking care.

To address both issues, age-appropriate information should be disseminated to specific populations, and it should be targeted culturally and linguistically so that recipients will see it, understand it and act on it. The goal should be to facilitate access to oral health services and dental home referrals through every point of contact with high-risk populations, including low-income residents, seniors, communities of color, migrant workers, people with physical and mental disabilities, and the homeless.

Oral Health Literacy and Risk Awareness

Because most oral diseases are preventable through education and behavior modification, oral health care should be an integral part of health education from prenatal and early childhood programs to chronic disease education for adults and seniors.

The major risk factors for oral disease include poor diet, consumption of sugary drinks, tobacco use and excessive alcohol use. In particular, tobacco use is one of the biggest risk factors for oral cancers and periodontal disease. As the American Academy of Periodontology notes, "tobacco use may be one of the most significant risk factors in the development and progression of periodontal disease."

Focusing on these risks has the potential to improve a wide range of costly chronic health problems in addition to oral disease. Therefore, it's important to include clear, actionable oral health information and resources in relevant health promotion efforts, such as healthy eating, tobacco cessation, and HPV awareness programs.

Since oral diseases share risk factors with common chronic conditions such as obesity, heart disease and diabetes, targeted oral health information should also be included in prevention and management materials for chronic disease. In addition, all care providers for seniors should be educated on oral disease risk factors, symptoms and prevention.

Priority Area 2: Prevention and Systems of Care Objectives and Strategies

Evidence-based behavioral and policy interventions will reduce the toll of oral diseases and achieve a high lifelong standard of oral health for all tri-county residents, regardless of income, background or location.

OBJECTIVE 1

Evidence-based preventive strategies are implemented across the lifespan of every tri-county resident.



- a. Monitor and maintain optimal water fluoridation in fluoridated communities.
- b. Promote optimal water fluoridation in unfluoridated communities.
- c. Educate the public and policymakers on the benefits of water fluoridation.

Strategy 2 Include oral disease prevention in prenatal and pediatric programs.

- a. Promote oral exams and treatment for pregnant women.
- b. Expand First Tooth training to all family and pediatric health care providers.
- c. All children ages 0 to 5 receive fluoride varnish in primary care settings.

Strategy 3 Expand access to dental screenings and care for high-risk children.

- a. Expand prevention programs in community sites serving a high proportion of low-income children and their parents, such as Head Start, WIC, Boys & Girls Clubs, day care centers, and social service agencies.
- b. Expand First Tooth training beyond clinical providers to include laypersons such as licensed child care workers.

Strategy 4 Expand evidence-based, best-practice oral health programs for children and teens.

- a. Include a dental screening along with mandatory vision and hearing tests.
- b. Foster collaboration and coordination between community partners to expand dental sealant programs.
- c. Strengthen the dental referral component of school-based programs.
- d. Support limits on the marketing of sugary drinks and junk food on school grounds.
- e. Encourage development of school-based oral health access points for high school students.

Strategy 5 Integrate oral health with chronic disease prevention and management.

- a. Include dental screening and risk assessments in chronic disease programs.
- b. Include oral health information in diabetes, heart disease, HPV and stroke prevention materials.



Priority Area 2: Prevention and Systems of Care Objectives and Strategies — *continued*

OBJECTIVE 1

Continued

Strategy 6 Expand community-based prevention, outreach and intervention to underserved and disadvantaged adults and seniors.

- a. Educate and encourage primary care providers, emergency department staff, and urgent care clinic staff to guide underserved patients toward access points for oral health services.
- b. Integrate oral screenings, fluoride treatments and oral hygiene supplies into existing social programs for underserved adults.
- c. Expand oral health education, in-service training and mobile outreach at long-term care and nursing home facilities, senior centers, and other focal points for senior care.
- d. Expand mobile outreach to homebound seniors, migrant workers and the homeless.
- e. Coordinate local and regional services through a central hub that will connect diverse populations with medically appropriate and culturally competent care and (where possible) referral to a dental home.
- f. Engage culturally competent volunteer or professional staff to act as navigators for oral health services; to strengthen referral pathways between relevant programs; and to help underserved patients understand and use complex health and social service systems.
- g. Provide dental care and education at community events and outreach fairs.

OBJECTIVE 2

Tri-county residents achieve oral health literacy and understand that oral health is inseparable from overall health.

Strategy 1 Develop a culturally appropriate communications plan to educate all residents on oral health.

- a. Tailor appropriate and actionable prevention messages to pregnant women; new parents; adolescents; adults; and seniors and their caregivers.
- b. Promote culturally appropriate nutrition and wellness education.
- c. Focus messages on the impact of nutrition on oral health, the effects of oral disease on the body, and general oral health literacy.
- d. Produce culturally appropriate prevention and care messages in various languages and at various levels of health literacy.

Strategy 2 Integrate oral health education into general health education.

a. Advocate age-appropriate oral health education in general health education curricula from early childhood programs through high school.

PRIORITY AREA 3: WORKFORCE CAPACITY

To meet the evolving needs of an increasingly diverse population, we must take steps to bolster workforce capacity, encourage cultural competence, and equitably distribute care providers throughout the region.

Workforce Shortages

Benton, Lincoln and Linn counties have been federally designated as dental health professional shortage areas (HPSAs) for low-income residents, migrant farm workers and the homeless.

Each county also has a large medically underserved population, most of whom are either geographically isolated or concentrated in a handful of urban highpoverty hotspots.

Lincoln and Linn counties have a significantly higher rural population than Oregon as a whole (36 percent for Lincoln and 31 percent for Linn, compared to 21 percent for the state). However, only about 27 percent of Oregon's dentists practice in rural areas. Therefore, the availability of free time, transportation and affordable child care can play a major role in determining accessibility for patients in rural areas.

Unless this problem is addressed, it's likely to worsen. Dentists in rural areas tend to be closer to retirement age; roughly 48 percent are 55 or older, compared with 39 percent statewide.

Pilot Projects for Workforce Development

Oregon Senate Bill 738 (2009) authorized the Oregon Health Authority to administer new pilot projects for alternative oral health workforce models. This bill also allows dental hygienists to expand their scope of practice to include routine restorative work, which could be a cost-effective way of expanding dental services to disadvantaged patients, including those who typically seek care in emergency departments.

Cultural Competence

The racial and ethnic diversity of Oregon's dental workforce has changed little since 2007. It continues to consist primarily of white (78 percent), male (79 percent) general dentists (88 percent) who are older than 55 (40 percent) and work in private practice (89 percent).

As the tri-county region continues to diversify, it must support and strengthen the cultural competence of its dental workforce to address language differences and other cultural barriers to care. Simply increasing options for care is not enough; unless providers and policymakers address the underlying economic and cultural factors that affect dental care utilization and outcomes within specific underserved communities, disparities and inequities will persist. Above all, there is a clear need for skilled medical translators in dental practices and related care settings. Statewide, 1,700 practicing dentists out of 2,335 speak English only.

Integrated Education

Dental and medical care providers have traditionally tended to work in relative isolation from one another. Changing this paradigm requires including oral health in the training for all certified primary care workers.

Oral health training is also necessary for community health workers, traditional health workers, health navigators, pharmacists and allied professionals who work directly with underserved and disadvantaged clients. This training should provide competence in basic oral hygiene and disease prevention, and in connecting clients with a dental home.



SUGGESTED OUTCOME MEASURES

- Number of expanded practice dental hygienists (EPDHs) practicing in collaboration with CCO/DCOs in tri-county communities. *Data source: Oregon Board of Dentistry (OBD)*.
- Number of dental and dental hygiene students completing a 30day rural rotation in the tri-county region. *Data source: OHSU*.
- Number of oral health care providers who completed cultural competency training. Data source: Oregon Board of Dentistry (OBD).

Please see page 16 for a complete list of outcome measures.

Priority Area 3: Workforce Capacity Objectives and Strategies



To meet the evolving needs of an increasingly diverse population, we must take steps to bolster workforce capacity, encourage cultural competence, and equitably distribute care providers throughout the region.

OBJECTIVE

The tri-county region's oral health workforce meets the lifelong oral health needs of all residents, including underserved and vulnerable populations.

Strategy 1 Mitigate the dental workforce shortage in rural areas, high-poverty hotspots and dental HPSAs.

- a. Support deployment of teledentistry and mobile dentist units in underserved areas.
- b. Encourage oral health professionals to work at the top of their license and to expand their scope of practice.
- c. Encourage retired professionals to return to practice as insured volunteers.
- d. Promote the allocation of education, resources and new technology to providers serving underserved populations, including seniors, teens, the homeless, migrant workers and the disabled.
- e. Expand dental van services to reach isolated and underserved patients, including those in assisted-living facilities, long-term care facilities and shelters.

Strategy 2 Foster a culturally competent oral health workforce to serve the region's diverse communities.

- a. Educate all providers on cultural and socioeconomic risk factors for oral disease.
- b. Identify and engage culturally diverse oral and public health professionals who have expertise in caring for underserved populations.
- c. Support the recruitment and training of multilingual and multicultural providers, educators and health system navigators.

Strategy 3 Collaborate with traditional health workers and allied professionals to provide basic preventive care and to connect community members with oral health providers.

- a. Create culturally appropriate First Tooth trainings for these groups.
- b. Encourage the inclusion of oral health in the training for traditional health workers.

Strategy 4 Support pilot workforce projects made possible by Senate Bill 738.

- a. Investigate innovative workforce models for oral health care.
- b. Raise project funding from foundations, universities and other stakeholders.

Strategy 5 Integrate oral health education into the training for all care providers.

- a. Promote activities that foster interdisciplinary collaboration between the primary care team and oral health care providers.
- b. Encourage collaboration and communication between oral health education institutions and community partners.
- c. Engage pharmacists and other health professionals in guiding community members toward access points for acute oral care and in providing information on the oral health component of chronic disease prevention and management.

STRATEGIC PLAN OUTCOME MEASURES, 2015–2020

The scope of this plan is limited by a lack of key data, especially at the county level. As we continue to work together to improve oral health in our region, we will need to gather new data, identify new problems, and assess the effectiveness of our interventions. We believe that the strategies recommended in this plan will make these tasks easier to accomplish.

Priority Area 1: Infrastructure	
The Benton, Lincoln, Linn Regional Oral Health Coalition's oral health coordinator and a consultant complete a directory of regional oral health data	2016
All IHN-CCO boards and advisory bodies include at least one dental professional	2016
Oral health is comprehensively integrated into IHN-CCO activities, as described in <i>Infrastructure Objective 2, Strategy 1</i>	2017
Oral health coordinators serve each county through public health departments, nonprofits and other entities	2017
All school-based health centers (SBHCs) integrate oral health promotion and education	2018
All federally qualified health centers (FQHCs) integrate oral health promotion and education	2018

Priority Area 2: Prevention And Systems Of Care	Most Recent	2020 Target	Change %	Data Source
Pregnant women on OHP/Medicaid who had their teeth cleaned within the previous year	53.2% ¹	58.5%	10% ↑	IHN-CCO
Children 0 to 5 on OHP/Medicaid with a dental visit in the previous year	24.4% ²	26.8%	10% ↑	IHN-CCO
Third graders on OHP/Medicaid with decay experience	58% ³	52.2%	10%↓	IHN-CCO
Children ages 6 to 9 on OHP/Medicaid with dental sealants on one or more permanent molars	38.1% ³	41.9%	10% ↑	IHN-CCO
Eighth graders on OHP/Medicaid with decay experience	70.1% 4	63.1%	10%↓	IHN-CCO
11th graders on OHP/Medicaid with a dental visit in the previous year	74.5% ⁴	81.2%	10% ↑	IHN-CCO
Adults 18 and older on OHP/Medicaid with a dental visit in the previous year	63.8% ⁵	70.2%	10% ↑	IHN-CCO

Note: The outcome measures for this priority area align with those specified in *The Strategic Plan for Oral Health in Oregon: 2014-2020*. The sources for recent statewide data are listed below; data for OHP/Medicaid enrollees will come from IHN-CCO.

- 1. Centers for Disease Control and Prevention, *Pregnancy Risk* Assessment Monitoring System (PRAMS), 2011.
- Most recent data is from Centers for Disease Control and Prevention, Pregnancy Risk Assessment Monitoring System 2 (PRAMS-2), 2011, and is specific to children ages 0 to 3. Future measurements will use Division of Medical Assistance Programs (DMAP) data for children ages 0 to 5.
- 3. Oregon Health Authority, Oregon Smile Survey, 2012.
- 4. Oregon Health Authority, Oregon Healthy Teens Survey, 2013.
- 5. Centers for Disease Control and Prevention, *Behavioral Risk Factor Surveillance System (BRFSS)*, 2010.

Priority Area 3: Workforce Capacity

Number of expanded practice dental hygienists (EPDHs) practicing in collaboration with CCO/DCOs in tri-county communities	OBD ¹
Number of dental and dental hygiene students completing a 30-day rural rotation in the tri-county region	
Number of oral health care providers who completed cultural competency training	

As of this writing, most of the available workforce data tell us how many providers there are, by type, in Oregon. This does not tell us where, how and who those providers serve. For this reason, the suggested outcome measures for workforce capacity do not have baselines. Instead, they align with the strategies and activities recommended in this plan, so that baselines can be established through implementation of the plan.

- 1. Oregon Board of Dentistry
- 2. Oregon Health & Science University

APPENDIX A. Organizations Supporting Oral Health in the Tri-County Region

Advantage Dental Clinics

409 W 1st Ave., Albany, OR 97321
142 SW 2nd St., Corvallis, OR
816 S 2nd St., Lebanon, OR 97355
324 SW 7th St., Suite C, Newport, OR 97365
888.468.0022 | advantagedentalclinics.com

Albany InReach Services 1215 SE Hill St., Albany, OR 97322 541.812.4997 | www.samhealth.org

Benton County Public Health Department 530 NW 27th St., Corvallis, OR 97330 541.766.6835 | www.co.benton.or.us/health

Benton, Linn, Lincoln Regional Oral Health Coalition 815 NW 9th St., Suite 201, Corvallis, OR 97330 541.768.7330

Boys & Girls Club of Albany 1215 SE Hill St., Albany, OR 97322 541.926.6666 | bgc-albany.org

Boys & Girls Club of Corvallis

1112 NW Circle Blvd., Corvallis, OR 97330 541.757.1909 | www.bgccorvallis.org

Capitol Dental Care

810 Walnut St. SW, Albany, OR 97321 541.918.4824 | capitoldentalcare.com
2815 Willetta St. SW, Suite A1, Albany, OR 97321 541.924.1086 | capitoldentalcare.com
1769 NW Kings Blvd. #8, Corvallis, OR 97330 541.757.0755 | capitoldentalcare.com
180 S Park St., Lebanon, OR 97355 541.451.5477 | capitoldentalcare.com
165 Main St., Lebanon, OR 97355 541.451.3394 | capitoldentalcare.com
2825 W Devils Lake Road, Lincoln City, OR 97367 541.994.3033 | capitoldentalcare.com

Coast to Cascades Community Wellness Network

815 NW 9th St., Ste. 201, Corvallis 97330 541.768.7330

Community Health Centers of Benton & Linn Counties

Benton: 530 NW 27th Street, Corvallis, OR 97330 541.766.6835 | bentonlinnhealthcenters.org East Linn: 100 Mullins Dr., Suite A-1, Lebanon, OR 97355 541.451.6920 | bentonlinnhealthcenters.org Lincoln: 121 SE Viewmont Ave., Corvallis, OR 97333 541.766.3546 | bentonlinnhealthcenters.org Monroe: 610 Dragon Dr., Monroe, OR 97456 541.847.5143 | bentonlinnhealthcenters.org

Community Outreach, Inc.

865 NW Reiman Ave., Corvallis, OR 97330 541.758.3000 | www.communityoutreachinc.org

COMP-NW, Western University of Health Sciences

200 Mullins Dr., Lebanon, OR 97355 541.259.0200 | www.westernu.edu/northwest

Dental Foundation of Oregon 8699 SW Sun Place, Wilsonville, OR 97070 503.594.0837 | www.smileonoregon.org

Dental Lifeline Network—Oregon PO Box 690, Wilsonville, OR 97070 503.594.0837 | dentallifeline.org/oregon Exceptional Needs Dental Services (ENDS) 12029 NE Sumner St., Portland, OR 97220 503.295.1201 | www.endsor.com

Good Samaritan Regional Medical Center 3600 NW Samaritan Drive, Corvallis, OR 97330 541.768.5111 | www.samhealth.org

InterCommunity Health Network 815 NW 9th St., Suite 101, Corvallis, OR 97339 541.768.4550 | www.samhealth.org/ihn-cco

Lincoln Community Health Centers 4422 NE Devils Lake Blvd., Suite 2, Lincoln City, OR 97367 1010 SW Coast Hwy., Suite 203, Newport, OR 97365 541.265.4947 | www.co.lincoln.or.us/hhs

Lincoln County Health & Human Services Department 36 SW Nye St., Newport, OR 97365 541.265.4112 | www.co.lincoln.or.us/hhs

Linn County Department of Health Services 2730 SE Pacific Blvd., Albany, OR 97321 541.967.3888 | co.linn.or.us/health/public_health

Love INC of Benton County 2330 NW Professional Dr., Corvallis, OR 97330 541.757.8111 | www.yourloveinc.org

Medical Teams International 14150 SW Milton Ct., Tigard, OR 97224 503.624.1000 | www.medicalteams.org

Moda Health

601 SW 2nd Ave., Portland, OR 97204 503.265.2965 | www.modahealth.com

Oregon Dental Association PO Box 3710, Wilsonville, OR 97070

503.218.2010 | www.oregondental.org

Oregon Oral Health Coalition

9140 SW Pioneer Ct., Suite E, Wilsonville, OR 97070 971.224.3018 | www.orohc.org

River Center

3000 S Santiam Hwy., Lebanon, OR 97355 541.451.1271 | www.therivercenter.net

Samaritan Albany General Hospital

1046 6th Ave. SW, Albany, OR 97321 541.812.4000 | www.samhealth.org

Samaritan Lebanon Community Hospital 525 N Santiam Hwy., Lebanon, OR 97355 541.258.2101 | www.samhealth.org

Samaritan North Lincoln Hospital

3043 NE 28th St., Lincoln City, OR 97367 541.994.3661 | www.samhealth.org

Samaritan Pacific Communities Hospital 930 SW Abbey St., Newport, OR 97365 541.265.2244 | www.samhealth.org

Willamette Dental Group

2225 Pacific Blvd. SE, Suite 201, Albany, OR 97321 2420 NW Professional Dr., Suite 150, Corvallis, OR 97330 1105 SE Jetty, Suite B, Lincoln City, OR 97367 855.433.6825 | www.willamettedental.com

APPENDIX B. Selected References

- American Academy of Periodontology. "Gum Disease Risk Factors." Accessed March 19, 2015. http://www.perio.org/ consumer/risk-factors.
- Benton County Health Department. "The Health of Benton County: Community Health Assessment 2012." Accessed March 12, 2015. http://www.co.benton.or.us/health/public_ health/documents/community_health_assessment.pdf.
- Benton, Lincoln, Linn Regional Oral Health Coalition of Oregon. "Oral Health Needs in Benton, Lincoln and Linn Counties: An Assessment," February 2015.
- Clark, Melinda B., Rebecca L. Slayton, et al. "Fluoride Use in Caries Prevention in the Primary Care Setting." *Pediatrics* August 25 (2014): 626-633. doi: 10.1542/peds.2014-1699.
- Easter Seals. "State Autism Profiles: Oregon," October 2014. Accessed March 2, 2015. http://www.easterseals.com/exploreresources/living-with-autism/profiles-oregon.html.
- Hill, Jill A. and Cindy Hallet. "Assessment of Dental Care Need in Benton County Adults." Accessed March 28, 2015. http://www. lwv.corvallis.or.us/Dental%20Needs%20Assessment%209-29-2011.pdf.
- Linn County Department of Health Services. "Community Health Assessment 2012." Accessed April 4, 2015. https:// public.health.oregon.gov/ProviderPartnerResources/ LocalHealthDepartmentResources/Documents/Annual%20 Plans/Linn_County.pdf
- Lincoln County Health and Human Services. "Lincoln County 2013 Community Health Assessment." Accessed March 8, 2015. http://www.lincolncountyhealth.com/Media%20Release%20 2013/2013%20Community%20Health%20Assessment.pdf.
- Marinho, V.C., H.V. Worthington, et al. "Fluoride Varnishes for Preventing Dental Caries in Children and Adolescents." *Cochrane Database of Systematic Reviews* 7 (2013). doi: 10.1002/14651858.CD002279.pub2.
- Office for Oregon Health Policy and Research. "Oregon Health Professions: Occupational and County Profiles February 2013." Accessed March 12, 2015. http://oregonhwi.org/resources/doc uments/2012ProfilesReportFINAL1.pdf.
- Oral Cancer Foundation. "HPV/Oral Cancer Facts." Accessed March 5, 2015. http://www.oralcancerfoundation.org/hpv/hpv-oral-cancer-facts.php.
- Oregon Department of Human Services, Office of Forecasting, Research and Analysis. "Spring 2013 DHS/OHA Regional Forecasts By District." Accessed February 18, 2015. http://www. oregon.gov/dhs/ofra/ofradocuments/Spring%202013%20 -%20Regional.pdf.
- Oregon Health & Science University et al. "Impacts of the Affordable Care Act on Health Insurance Coverage In Oregon," September 2014. Accessed April 4, 2015. http://www.ohsu. edu/xd/research/centers-institutes/center-for-healthsystems-effectiveness/current-projects/upload/Impacts-ofthe-Affordable-Care-Act-on-Health-Insurance-Coverage-in-Oregon.pdf.
- Oregon Health Authority. "Oregon Diabetes Report," January 2015. Accessed February 5, 2015. https://public.health.oregon.gov/ DiseasesConditions/ChronicDisease/Diabetes/Documents/ OregonDiabetesReport.pdf.
- —. "Oregon Healthy Teens Survey 2013." Accessed April 2, 2015. http://public.health.oregon.gov/BirthDeathCertificates/ Surveys/OregonHealthyTeens/Pages/index.aspx.

- --. "Oregon Smile Survey 2012." Accessed April 2, 2015. https:// apps.state.or.us/Forms/Served/le8667.pdf.
- Oregon Healthcare Workforce Institute. "Profile: Oregon's Dentist Workforce – 2012." Accessed April 2, 2015. http://www.oregonhwi.org/resources/documents/ Dentists2012ProfileBrief.pdf.
- ... "Profile: Oregon's Rural Dentist Workforce, 2010." Accessed April 2, 2015. http://oregonhwi.org/resources/documents/201 oOregonRuralDentistProfile91611.pdf.
- Portland State University, Population Research Center. "Components of Population Change for Oregon's Counties: April 1, 2010 to July 1, 2013." Accessed March 28, 2015. http://www.pdx.edu/prc/sites/www.pdx.edu.prc/files/ Population%20Report%202013_Web3.xls.
- Seirawan, Hazem et al. "The Impact of Oral Health on the Academic Performance of Disadvantaged Children." American Journal of Public Health 102(9) (2012):1729.
- Sun, Benjamin and Donald L. Chi. "Emergency Department Visits for Non-Traumatic Dental Problems in Oregon State," 2014. Accessed March 30, 2015. http://www.oregoncf.org/ Templates/media/files/oral_health_funders_collaborative/ dental-report-final.pdf.
- Terlson, Holly and Julia Young-Lorion. "Assessment of Dental Care Needs in Lincoln County," 2012.
- Thompson, Frances E. et al. "Interrelationships of Added Sugars Intake, Socioeconomic Status, and Race/Ethnicity in Adults in the United States: National Health Interview Survey, 2005." *Journal of the American Dietetic Association* 109, no. 8 (2009): 1376-83. http://www.ncbi.nlm.nih.gov/pubmed/19631043
- U.S. Centers for Disease Control and Prevention. "Dental Caries (Tooth Decay)." Accessed March 12, 2015. http://www.cdc.gov/ healthywater/hygiene/disease/dental_caries.html.
- —. "Morbidity and Mortality Weekly Report: CDC Health Disparities and Inequalities Report: MMWR Supplements: Current Volume," 62, no. 3 (2013): 1-187. Accessed March 30, 2015. http://www.cdc.gov/mmwr/preview/ind2013_ su.html#HealthDisparities2013.
- ... "Oral Health Status and Access to Oral Health Care for U.S. Adults Aged 18–64: National Health Interview Survey, 2008." Accessed February 4, 2015. http://www.cdc.gov/nchs/data/ series/sr_10/sr10_253.pdf.
- —. "Preventing Dental Caries with Community Programs." Accessed February 12, 2015. http://www.cdc.gov/oralhealth/ publications/factsheets/dental_caries.htm.
- U.S. Department of Health and Human Services, Office of the Surgeon General. "The Health Consequences of Smoking—50 Years of Progress." Accessed April 6, 2015. http://www. surgeongeneral.gov/library/reports/50-years-of-progress/.
- —. "Oral Health in America." Accessed March 30, 2015. http:// www.nidcr.nih.gov/DataStatistics/SurgeonGeneral/Report/ ExecutiveSummary.htm#challenge.
- U.S. Preventive Services Task Force. "Prevention of Dental Caries in Children From Birth Through Age 5 Years." Accessed April 2, 2015. http://www.uspreventiveservicestaskforce.org/uspstf/ uspsdnch.htm.
- World Health Organization. "Oral Health Fact Sheet," no. 318 (2012). Accessed March 15, 2015. http://www.who.int/mediacentre/ factsheets/fs318/en/.



Optimal oral health is fundamental to our well-being, happiness, productivity and quality of life.

BENTON, LINCOLN, LINN REGIONAL ORAL HEALTH COALITION OF OREGON

815 NW Ninth Street, Suite 201 Corvallis, OR 97330