



# Oral Health Toolkit:

Resources for supporting oral health  
integration in Oregon

*Prepared by Health Management Associates  
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## Introduction

Oregon's Coordinated Care Model (CCM) serves as a national model for changing the way care is delivered through Medicaid, and oral health is a key component of the model. The vision for Oregon's health system transformation includes the integration of oral health, physical, and behavioral health across the delivery system, with efforts underway currently primarily for the Medicaid populations.

The start of Oregon's efforts to transform the health care delivery system have thus far achieved meaningful results, but more work remains. It has been a period of transition over the last two years since the oral health funding stream have become the responsibility of the new Coordinated Care Organizations (CCOs), with full integration not yet achieved. Key to these efforts is the continued push to better integrate and improve coordination for all aspects of care. Although behavioral health integration has been a more prominent focus to date, there is growing recognition that oral health integration and improvements in oral health quality and outcomes are also critical to achieving the triple aim of better health, better care, and lower costs.

HMA, as part of its work on oral health with the Oregon Health Authority's (OHA) Transformation Center, recommended the following next steps to further oral health integration in the state:

- Increase state and local leaders' communication about oral health and oral health integration.
- Facilitate and coordinate across oral health activities and develop support tools to improve alignment and maximize the impact and use of limited resources.
- Increase CCOs, health plans, and provider attention on oral health integration.
- Reduce barriers to integration and enhance administrative simplification through streamlining and standardizing processes.
- Enhance data collection, analytics, and surveillance efforts to incorporate oral health.

This toolkit is a collection of resources to help the state, CCOs, and oral health and primary care providers and practice transformation leaders as they continue down the path of oral health integration. These resources should be used to guide any efforts the state may take to promote increased oral health integration. The topics and tools contained within this tool kit can serve as a framework for learning collaboratives or any other opportunities for learning and sharing best and emerging practices facilitated by the OHA Transformation Center. They may also serve as tools for practice change within CCOs and among providers.

## Why Oral Health Integration Matters

Oral health is a critical part of overall health and well-being. Oral health care in the U.S. has traditionally been siloed from medical care but the impacts of poor oral health effect the rest of the body. Dental disease has been associated with other costly medical conditions, including diabetes, respiratory disease, cardiovascular disease, stroke and adverse pregnancy outcomes. Lack of access to oral health care exacerbates the cost of care for these conditions and accounts for preventable emergency department utilization. Evidence continues to grow that improving oral health care and providing preventive treatment can significantly lower the cost of medical care.

In addition to driving up medical costs, poor oral health impacts well-being, financial stability, employment and education. The Centers for Disease Control and Prevention found that acute dental conditions cost nearly two days of work per year per 100 people in the U.S. Poor oral health can also be a serious barrier to employment, especially for low-income populations. According to the ADA, nearly one-third of low-income adults report that the appearance of their mouth and teeth negatively impacts their ability to interview for a job. Children with untreated dental disease are more likely to miss school and more likely to have a low grade-point average.

Although there is growing recognition that oral health must be a part of integrated, comprehensive health care, dental care remains a separate and disconnected delivery system. It is not surprising then that poor oral health is a significant and persistent problem. Dental disease is the most common chronic disease in the U.S. The Surgeon General issued a report in 2000 pointing to the “silent epidemic” of dental disease, which disproportionally impacts low-income people, communities of color and seniors.

The relationship between oral health and overall health and well-being requires that oral health be an integral part of the approach to transform health care delivery and achieve the goals of the triple aim. Although Oregon is a national leader when it comes to the Coordinated Care Model (CCM), much work remains to be done to truly address the oral health needs of the state’s Medicaid population and integrate care. The OHA and the state’s CCOs are already undertaking several activities related to the integration of oral health, and nationally, the state is identified as a leader. However, as evidenced in many oral health status measures, Oregon remains behind in achieving improved oral health in its citizens. OHA, the CCOs, and community stakeholders have many opportunities to work collaboratively to further oral health integration efforts, which can lead to improved oral health outcomes.

## Leadership and Culture Change for Oral Health Integration

Oral health integration requires commitment and vision from leaders and attention to the change management required to support new ways of operating. Although the sections that follow provide tools and resources more specific to the connection between physical health and oral health, this section addresses the most critical component when it comes to achieving oral health integration. Strong leadership, committed partners and clear goals with the ongoing support needed to achieve them are all necessary components to achieving change. Cultural shifts in other models of care, such as moving to team-based care in patient-centered medical homes, and integrating primary and behavioral health care provide illustrations of the challenges and strategies needed to overcome them. In fact, many of the issues that arise in integrating medical and behavioral health care are applicable to the integration of oral health with medical care.

Dentistry has traditionally been very siloed from the medical delivery system. Although Oregon has made strides in improving the oral health of its population over the years, much work remains. The state has had a long history of separating out oral health services in the Oregon Health Plan, with Dental Care Organizations (DCOs) delivering services to the Medicaid population for two decades. It has been a period of transition over the last two years since the oral health funding stream has become the responsibility of the new CCOs, with full integration not yet achieved. In order to achieve oral health integration and improve the overall health of patients, the leadership at the state agency, the CCOs, the DCOs, and their clinical network partners' clinics and organizations will need to include oral health in their priorities, performance monitoring, and strategic planning efforts.

## Resources for Leadership and Culture Change for Oral Health Integration

**Seven Leadership Leverage Points for Organization-Level Improvement in Health Care** (Second Edition). Available at:

<http://www.ihl.org/resources/Pages/IHIWhitePapers/SevenLeadershipLeveragePointsWhitePaper.aspx>

**Lessons in Leadership for Improvement: Kaiser Permanente's Improvement Journey Over 10 Years.** Cambridge, Massachusetts: Institute for Healthcare Improvement; April 2016.

Available at <http://www.ihl.org/resources/Pages/Publications/Lessons-Leadership-Improvement-Kaiser-Permanente.aspx>

**A Leadership Framework for Culture Change in Health Care:** Experience of Ascension Health System on implementing culture change. Available at:

[http://www.ascensionhealth.org/assets/docs/JCAHO\\_A\\_Leadership\\_Framework\\_for\\_Culture\\_Change\\_in\\_Health\\_Care.pdf](http://www.ascensionhealth.org/assets/docs/JCAHO_A_Leadership_Framework_for_Culture_Change_in_Health_Care.pdf)

**Leading Healthcare Integration: A Change Leadership Guide for Mental Health and Primary Care**

**Services Integration:** A guide that provides provide practical information for the healthcare leader preparing to, or involved in, primary and behavioral healthcare services integration at the administrative, supervisory or clinical staff levels. Many of the issues that arise in integrating medical and behavioral health care are applicable to the integration of oral health with medical care.

Available at: <https://www.thenationalcouncil.org/wp-content/uploads/2013/10/Leading-Healthcare-Integration.pdf>

**RWJF Culture of Health.** Robert Wood Johnson Foundation program to promote health leadership.

Available at: <http://cultureofhealth-leaders.org/>

## Integration of Oral Health into Primary Care

The integration of oral health into primary care is an effective strategy to decrease oral health disease by making preventive care more accessible. It is also in keeping with the push to make primary care more patient-centered and coordinated. Primary care teams have the ability to engage and educate patients, coordinate care and improve the management of oral health needs for patients with chronic diseases associated with poor oral health. Oral health care in primary care settings can help stop and even reverse dental disease, preventing the need for more expensive oral health treatment in the future. Primary care teams will need to increase their knowledge and understanding of oral health issues and care, and change practice flows to incorporate oral health as a regular part of routine medical care. Primary care providers and dental providers will also need to develop methods of communication and information sharing, as well as effective referral pathways.

In recognition of the role primary care can play in improving oral health, the Health Resources and Services Administration (HRSA) developed an Integration of Oral Health and Primary Care Practice Initiative which includes an Inter-Professional Oral Health Clinical Domains Framework. This is a nationally accepted framework for dental integration practices that was designed to organize activities. The domains are as follows:

- **Risk Assessment:** Identifies factors that impact oral health and overall health.
- **Oral Health Evaluation:** Integrates subjective and objective findings based on completion of a focused oral health history, risk assessment, and performance of clinical oral screening.
- **Preventive Intervention:** Recognizes options and strategies to address oral health needs identified by a comprehensive risk assessment and health evaluation.
- **Communication and Education:** Targets individuals and groups regarding the relationship between oral and systemic health, risk factors for oral health disorders, effect of nutrition on oral health, and preventive measures appropriate to mitigate risk on both individual and population levels.
- **Inter-professional Collaborative Practice:** Shares responsibility and collaboration among health care professionals in the care of patients and populations with, or at risk of, oral disorders to assure optimal health outcomes.<sup>1</sup>

The following resources include tools to support oral health integration across these domains, as well as the leadership and culture change that are necessary for advancing integration.

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<sup>1</sup> U.S. Department of Health and Human Services Health Resources and Services Administration. Integration of Oral Health and Primary Care Practice. February 2014.

## Resources for Integration of Oral Health into Primary Care

**Integration of Oral Health and Primary Care Practice:** HRSA's guiding principles and framework for the design of a competency-based, inter-professional practice model to integrate oral health and primary care.

U.S.D.H.H.S. Health Resources and Services Administration. Integration of Oral Health and Primary Care Practice. February 2014. Available at:

<http://www.hrsa.gov/publichealth/clinical/oralhealth/primarycare/>

**Oral Health: An Essential Component of Primary Care:** A white paper commissioned by the National Intraprofessional Initiative on Oral Health which contains an oral health delivery framework for primary care, which addresses implementation considerations such as sample workflows and overcoming real and perceived barriers.

Oral Health: An Essential Component of Primary Care. 2015. Available at:

<http://www.safetynetmedicalhome.org/sites/default/files/White-Paper-Oral-Health-Primary-Care.pdf>

**Smiles for Life:** A widely used oral health curriculum for primary care clinicians.

Available at: [www.smilesforlifeoralhealth.org](http://www.smilesforlifeoralhealth.org)

**Oral Health and the Patient-Centered Home Action Guide:** Information on nine patient-centered medical homes that were early adopters of dental integration, including organizational characteristics, barriers and promising practices.

National Network for Oral Health Access. Oral Health and the Patient-Centered Home Action Guide.

2012. Available at: <http://www.qualishealth.org/sites/default/files/white-paper-oral-health-integration-pcmh.pdf>

**Innovations in Oral Health Toolkit:** An online toolkit developed by Northeastern University designed to engage students across the health professions to learn about, from and with each other to improve oral health. The toolkit seeks to promote the integration of oral health in primary care settings such as community health centers, school-based programs, and clinics.

Available at: <http://www.northeastern.edu/oralhealth/toolkit/>

**Clinical Excellence in Integrated Care:** The National Network for Oral Health Access (NNOHA) has developed program resources in Clinical Excellence in Integrated Care. They have also highlighted practices that can be implemented in dental practice that go beyond what is typical of oral health integration efforts

Available at: <http://www.nnoha.org/resources/clinical-excellence/integrate-care/>

**Oral Health Toolkit: A Guide to Promoting Oral Health In Community Health Centers and Achieving Medical-Dental Integration:** A toolkit developed by the Arizona Alliance for Community Health Centers to promote oral health integration. Includes overview of special populations, strategies for integration and sample referral forms.

Available at: [http://www.aachc.org/wp-content/uploads/2014/04/AACHC-Oral-Health-Toolkit\\_3rd-Edition.pdf](http://www.aachc.org/wp-content/uploads/2014/04/AACHC-Oral-Health-Toolkit_3rd-Edition.pdf)

**Delaware Oral Health Toolkit:** Online toolkit compiled by the state of Delaware to support oral health integration in the state.

Available at: <http://www.dhss.delaware.gov/dhss/dph/hsm/tkhome.html>

**Virginia Integration Toolkit:** A toolkit developed by the Virginia Oral Health Coalition which contains examples of oral health integration in a variety of disciplines, from primary care to social service settings. Includes and integration model checklist, readiness assessment and clinical practice tools.

Available at:

<http://www.vaoralhealth.org/WHATWEDO/EducateProviders/OralHealthIntegration/IntegrationToolkit.aspx>

**Rural Oral Health Toolkit:** An online resource for strategies to integrate oral health and primary care in rural communities, including modules on strategies, sustainability, evaluation and metrics, as well as examples of programs that have been implemented in rural communities.

Available at: <https://www.ruralhealthinfo.org/community-health/oral-health>

Targeted Interventions:

**Dental Emergencies Needing Treatment (DENT)** Successful pilot in Washington State to reduce unnecessary ED visits for non-traumatic oral health services. Information about the initiative available at: <http://www.betterhealthtogether.org/bold-solutions-content/2015/8/21/dental-emergencies-needing-treatment-dent>

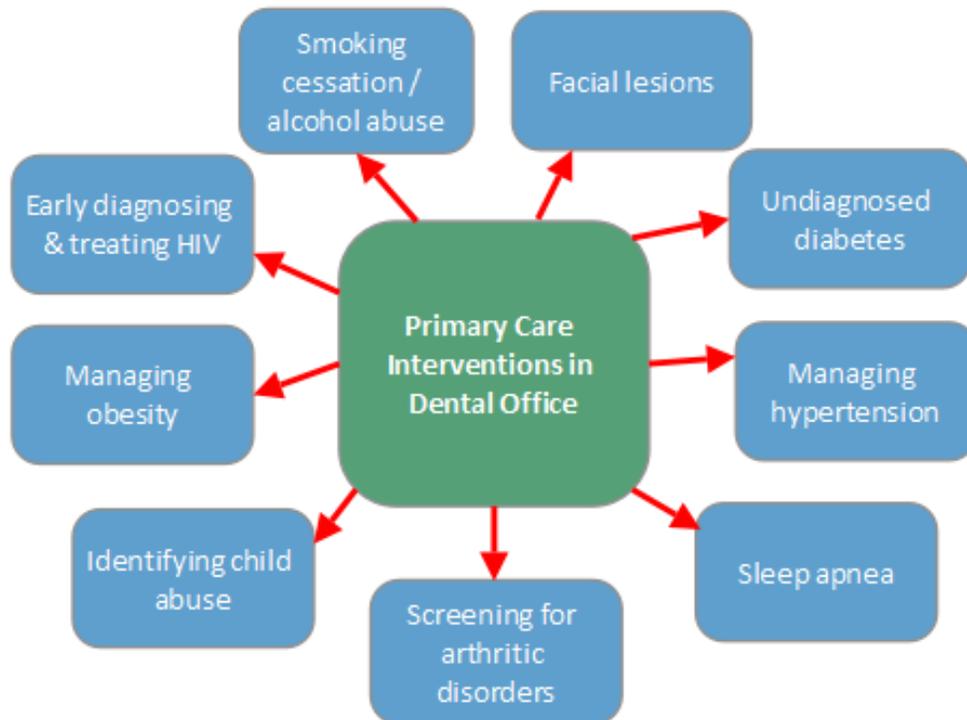
**Transplants and Oral Health:** Patient and provider resources for patients on dialysis and undergoing organ transplants:

Available at: [http://www.itns.org/uploads/ITNS\\_Dental\\_Care\\_English.pdf](http://www.itns.org/uploads/ITNS_Dental_Care_English.pdf)  
<http://www.scsp.net/articles/the-importance-of-dental-care-for-transplant-recipients/>

## Integration in Oral Health Settings

True health integration should be bidirectional. Although oral health integration in primary care settings holds much promise, there are significant contributions that can be made to improved overall health outcomes by dental providers. Medical care integration in the dental office can begin by focusing on areas that are directly connected to oral health, though other important opportunities exist, such as the identification of child abuse. Dental providers can play a critical role in oral health integration by providing timely treatment for patients referred for oral health care services by a primary care provider. It is also important for dental providers to work with primary care providers to coordinate care for patients with chronic health conditions, such as diabetes, cardiovascular disease or HIV/AIDS, including sharing of treatment plans. Oral health care providers should also incorporate key medical questions into the dental health history screening, including asking about chronic or special conditions linked to dental disease. They can identify at-risk patients who do not have a medical home and connect them to care. Dental providers can also play an important role in promoting tobacco cessation. In addition, patients with special needs can create care challenges in the dental office such as those with developmental and intellectual disabilities. Education for oral health providers and their staffs is important to ensure clinical excellence and address the health disparities for these patients.

**Fig. 1: Primary Care Procedures that can be Conducted in a Dental Office**



From Gambhir, R. S. (2015). Primary Care in Dentistry - An Untapped Potential. *Journal of Family Medicine and Primary Care*, 4(1), 13–18. <http://doi.org/10.4103/2249-4863.152239>

## Resources for Integration in Oral Health Settings

**Primary Care in Dentistry – An Untapped Potential:** Review of peer-reviewed literature exploring the opportunities for dentists to make further contributions to general medical primary care. Identifies primary care procedures that can be performed in a dental office (see figure above).

Gambhir, R. S. (2015). Primary Care in Dentistry - An Untapped Potential. *Journal of Family Medicine and Primary Care*, 4(1), 13–18. Available at: <http://doi.org/10.4103/2249-4863.152239>

**Dentists as Oral Physicians: the Overlooked Primary Health Care Resource:** Article on the opportunity for dentists to provide limited preventive primary care, including screening for chronic diseases, as a means to improve the health of the US population as well as increase access to dental care at lower cost, while partially alleviating the primary care shortage by filling a need for the screening aspects of primary care.

Giddon DB, Swann B, Donoff RB, Hertzman-Miller R: Dentists as oral physicians: the overlooked primary health care resource. *Journal of Primary Prevention*. 34:279–291, 2013

Available at: <http://link.springer.com/article/10.1007%2Fs10935-013-0310-7>

**Tobacco Cessation Webinar:** The National Network for Oral Health Access (NNOHA) and the Association of Clinicians for the Underserved (ACU) collaborated to produce a webinar for oral health providers to help them assist their patients to stop smoking. Strategies and tools are featured that address smoking cessation and incorporate culturally and linguistically appropriate patient education. Slides available at: <http://www.nnoha.org/nnoha-content/uploads/2013/11/Tobacco-Cessation-in-the-Dental-Home.pdf>

**NY Guidelines on HIV Testing in the Dental Chair:** New York State’s efforts and guidelines for HIV testing in the dental chair. Available at: <http://www.nynjaetc.org/Testing.html>

**National Network for Oral Health Access (NNOHA)** provides resources and learning opportunities focused on running effective oral health program inside community health centers. Examples of approaches to medical problems for oral health providers are included in their resources on clinical excellence at <http://www.nnoha.org/resources/clinical-excellence/integrate-care/>

**NNOHA Guidelines on Elevated Blood Pressure:** NNOHA has suggested guidelines for oral health providers finding elevated blood pressures in patients in the dental chair: <http://www.nnoha.org/nnoha-content/uploads/2013/08/Establishing-Dental-Treatment-Guidelines-for-Patients-with-Uncontrolled-Hypertension-Attending-Acute-Care.pdf>

## National Institute of Dental and Craniofacial Research

- 1) Information to support oral health providers to provide care to special needs patients facing oral health care:  
<http://www.nidcr.nih.gov/OralHealth/OralHealthInformation/SpecialNeeds/SpecialCare.htm>
- 2) Information and a series of publications, *Practical Oral Care for People with Developmental Disabilities*, equips dental professionals in the community with the basic information they need to deliver quality oral health care to people with special needs. The publications present an overview of physical, mental, and behavioral challenges common in patients with autism, Down syndrome, cerebral palsy, and intellectual disability and offer strategies for providing oral care. Also available are a guide for caregivers that explains home-based oral hygiene for the family member or client with special needs and a publication on safe wheelchair transfer.  
<http://www.nidcr.nih.gov/OralHealth/Topics/DevelopmentalDisabilities/>

**American Dental Association (ADA) Continuing Education:** Continuing education credits are available through the ADA for oral health providers for completing home study on line regarding care of patients with developmental disabilities.

<http://www.nidcr.nih.gov/OralHealth/Topics/DevelopmentalDisabilities/ContinuingEducation.htm>

**Center for Disease Control (CDC) National Diabetes Education Program: “Working Together to Manage Diabetes: A Toolkit for Pharmacy, Podiatry, Optometry and Dentistry (PPOD)”** which includes an introduction to team care, tips on communicating with patients, sections on for each of the specialties, and resources and links to other PPOD-related resources and organizations. Available at: <https://www.cdc.gov/diabetes/ndep/toolkits/ppod.html>

**A Model for Dental Practice in the 21st Century:** Article discusses the ways in which modern dental practice can address medical health issues, including diabetes and hypertension. Provides evidence-based recommendations that can be followed by oral health care and primary care providers to address such issues.

Lamster, Ira B., and Kayleigh Eaves. "A Model for Dental Practice in the 21st Century." *American Journal of Public Health* 101.10 (2011): 1825-830.

Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3222372/>

## Oral Health Integration for Pregnant Women and Newborns

During pregnancy, a woman’s oral health doesn’t only impact her own health – it can impact the health of her baby. Pregnant women with periodontal disease are 7 times more likely to have a premature delivery and/or give birth to low birth weight babies. In addition, approximately 40% of pregnant women have some form of periodontal disease. In 2007-2009, 56% of US women reported that they did not visit the dentist during pregnancy.<sup>2</sup>

Mothers can also spread oral bacteria to their infants, increasing the prevalence of children developing tooth decay. Roughly 30% of all pregnant women have periodontal disease. Pregnant women should have dental treatment needs addressed prior to delivery. Healthcare providers can encourage all pregnant women to schedule a dental exam and cleaning and reassure them that routine dental care is safe during pregnancy. Pre- and post-natal care visits are an opportunity to discuss infant oral health. Pregnancy is widely considered a “teachable moment” – a time when women are especially receptive to health education and willing to change behavior for the health of themselves and their babies.

Pregnancy is a critical time for primary care providers and oral health providers to work together. Prenatal care providers should include oral health in medical screenings and educate pregnant mothers about the safety of and need for oral health care and make referrals to care. Pregnant women should be prioritized in the dental office. Primary care and oral health care providers should both work to educate pregnant women about oral health and hygiene for themselves and their infants.

### Resources for Oral Health Integration for Pregnant Women and Newborns

**OrOHC Oral Health & Pregnancy Resources:** Resource page from the Oregon Oral Health Coalition that includes oral health practice guidelines and resources for medical providers, as well as educational materials for pregnant women. Includes information and materials for the “Maternity: Teeth for Two” program, which educates about the safety and importance of oral health care for pregnant women. Materials include brochures, waiting room posters, and sample oral health care referral form.

Available at: [www.orohc.org/pregnancy](http://www.orohc.org/pregnancy)

**Improving Wellness in Pregnancy & Childhood:** Clinical and programmatic components of integrated oral health program (for both co-located and separate services) for pregnant women and young

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<sup>2</sup> Oral Health for Pregnant Women and Children. (n.d.). Retrieved November 15, 2016, from [http://www.floridahealth.gov/programs-and-services/womens-health/pregnancy/10\\_2015-title-v-brief-oral-health-final-11-06-2014.pdf](http://www.floridahealth.gov/programs-and-services/womens-health/pregnancy/10_2015-title-v-brief-oral-health-final-11-06-2014.pdf)

children. Part of the Virginia Oral Health Coalition's *Oral Health Integration Toolkit*.

Available at:

<http://www.vaoralhealth.org/Portals/0/Integration%20Toolkit/Pregnancy%20and%20Childhood%20Model.pdf>

**Oral Health During Pregnancy Consensus Statement:** National consensus statement developed to help health professionals, program staff, policymakers, and other stakeholders support the improvement of oral health services to women during pregnancy. Includes guidance on changes in the health-care-delivery system to improve the overall standard for care.

Available at: <http://www.mchoralhealth.org/PDFs/OralHealthPregnancyConsensus.pdf>

**Access to Oral Health Care During the Perinatal Period:** A policy brief on the importance of oral health during the perinatal period, which includes recommendations and strategies for improving access to care.

National Maternal and Child Oral Health Resource Center, Georgetown University. Access to Oral Health Care During the Perinatal Period: A Policy Brief 2008.

Available at: <http://www.mchoralhealth.org/PDFs/PerinatalBrief.pdf>

**Oral Health Care During Pregnancy and Through the Lifespan:** This report discusses the details of periodontal diseases and adverse pregnancy outcomes followed by a discussion on oral health assessment and counselling on during pregnancy. It further discusses the burden related to access to dental care during pregnancy.

American College of Obstetricians and Gynecologists. Oral health care during pregnancy and through the lifespan. Committee Opinion No. 569. *Obstetrics & Gynecology*. 2013;122:417–22.

Available at: <http://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/Oral-Health-Care-During-Pregnancy-and-Through-theLifespan>

**Oral health during pregnancy and early childhood: Evidence-based guidelines for health professionals:** An evidence based guideline for health professionals about oral health in pregnancy and early childhood from the California Dental Association Foundation.

Oral health during pregnancy and early childhood: Evidence-based guidelines for health professionals. (2010). Available at: [http://www.cdafoundation.org/Portals/0/pdfs/poh\\_guidelines.pdf](http://www.cdafoundation.org/Portals/0/pdfs/poh_guidelines.pdf)

**From the First Tooth:** Pediatric oral health initiative promoting oral health for infants and young children. Provides training and resources for primary care providers to support the oral health of pediatric patients. It also includes information for obstetrics providers.

Available at: [www.fromthefirsttooth.org](http://www.fromthefirsttooth.org)

**AAPD Guideline on Oral Health Care:** American Academy of Pediatric Dentistry's guidelines and recommendations for the prevention of oral health issues in newborns and to reduce the rate of early childhood caries.

AAPD. Guideline on Infant Oral Health Care. Available at:

[http://www.aapd.org/media/Policies\\_Guidelines/G\\_InfantOralHealthCare.pdf](http://www.aapd.org/media/Policies_Guidelines/G_InfantOralHealthCare.pdf)

**Smiles for Life:** Educational resources to ensure the integration of oral health and primary care, which includes resources and an online curriculum for pregnancy and women's oral health.

Available at: <http://www.smilesforlifeoralhealth.org/>

## Oral Health Integration for Children and Adolescents

Oral health care is the most common unmet health care need for children and adolescents in the United States. Although children without health coverage are far more likely to go without dental care than children who do have health insurance, even children with coverage often don't get the oral health care they need. Nationally, less than 40% of children enrolled in Medicaid received dental care. Unmet oral health care needs impact a child's ability to learn. Children with untreated caries or other oral health problems are more likely to miss school and have lower grade point averages. In fact, nationally children miss more than 51 million hours a year due to oral health to dental problems.

Medical providers can improve the oral health of children and adolescents, particularly for children who do not have access to dental care. Medical professionals can provide oral health screening and risk assessment, preventive measures, and education. School-based oral health care and education can also improve the oral health of children and adolescents. Dental providers can support important screenings for adolescents, such as alcohol and substance abuse and tobacco use. And as with primary care and oral health integration for adults, improved communication, coordination, information sharing and referrals will also help support the oral health of children and adolescents.

### Resources for Oral Health Integration for Children and Adolescents:

**Considerations for Oral Health Integration in Primary Care Practice for Children:** Overview and resource guide on the integration of oral health preventive interventions into systems of care, including a child's need for a dental home.

U.S. Department of Health and Human Services, Health Resources and Services Administration. Oral Health in Primary Care. Rockville, Maryland: U.S. Department of Health and Human Services, 2012. Available at:

<http://www.hrsa.gov/publichealth/clinical/oralhealth/primarycare/oralhealthprimarycare.pdf>

**A Health Professional's Guide to Pediatric Oral Health Management:** Training modules developed by the National Maternal and Child Oral Health Resource Center for medical health providers to assist in managing the oral health of infants and young children.

Available at: <http://www.mchoralhealth.org/PediatricOH/>

**Child and Adolescent Oral Health Issues:** Review of issues and strategies to address child and adolescent oral health. Includes information on nutrition, injury and violence and tobacco use.

Available at: <http://www.mchoralhealth.org/PDFs/issues.pdf>

**Smiles for Life:** Educational resources to ensure the integration of oral health and primary care, which includes resources and an online curriculum for children’s oral health.

Available at: <http://www.smilesforlifeoralhealth.org/>

**Open Wide: Oral Health Training for Health Professionals:** Online training designed to help health and early childhood professionals working in community settings (for example, Head Start and WIC staff) promote oral health in the course of promoting general health for infants, children, and their families.

Available at: <http://www.mchoralhealth.org/OpenWide/index.htm>

**Promoting Oral Health in Schools:** A resource guide compiled by the National Maternal & Child Oral Health Resource Center on how to provide oral health services and oral health education in school-based settings, including case studies.

Available at: <http://www.mchoralhealth.org/PDFs/resguideyoungchildren.pdf>

**Be an Oral Health Champion:** Brochure developed by the National Maternal & Child Oral Health Resource Center highlighting the ways providers, teachers and others

Available at: <http://www.mchoralhealth.org/PDFs/Champion.pdf>

**Pediatric Oral Health and Health IT Toolbox:** Training module with information, tools, and resources that illustrate the importance of pediatric oral health, how the stakeholders can impact oral health, and how health IT can facilitate the delivery of high quality oral health care.

Available at:

<http://www.hrsa.gov/healthit/toolbox/Childrenstoolbox/PediatricOralHealthIT/index.html>

**Special Care: An Oral Health Professional’s Guide to Serving Young Children with Special Health Care Needs:** An online training designed to provide oral health professionals with information to help ensure that young children with special health care needs have access to health promotion and disease prevention services that address their unique oral health needs in a comprehensive, family-centered, and community-based manner.

Available at: <http://www.mchoralhealth.org/SpecialCare/index.htm>

**Health & Safety in the Child Care Setting: Promoting Children’s Oral Health:** a curriculum developed by the California Childcare Health Program at the UC San Francisco School of nursing to assist child care and early childhood professionals in promoting oral health. Available at:

[http://www.ucsfchildcarehealth.org/pdfs/Curricula/oral%20health\\_11\\_v7.pdf](http://www.ucsfchildcarehealth.org/pdfs/Curricula/oral%20health_11_v7.pdf)

**Early Childhood Caries Project:** Project of the Association of Clinicians for the Underserved which is a transdisciplinary health care approach to prevention of dental disease in children ages 0 – 3 years. Includes resources and training materials.

Available at: <http://clinicians.org/our-issues/oral-health/>

**National Children’s Oral Health Foundation:** Foundation with a mission to eliminate children’s pain and suffering from preventable pediatric dental disease and improve quality of life for at-risk children. Programs and resources to promote oral health in vulnerable children.

Available at: <http://www.ncohf.org/>

## Oral Health Integration for Seniors

Oral health is especially important for older adults. Unfortunately, they frequently lack access to oral health care. Dental care is not a covered benefit under Medicare and many seniors have restricted or low incomes and cannot afford private dental coverage. According to the CDC, more than one-third of adults 65 years and older have untreated tooth decay about 25% have lost all their natural teeth. Poor oral health can have a greater impact on older people than younger people.

Oral health is an important component of care management for elderly patients. Over 80% of older adults have one or more chronic diseases, which can be exacerbated by oral health problems. The relationship is bi-directional. Chronic disease can also lead to worsening oral health. Dental problems can interfere with the ability to eat, leading to poor nutrition and weight loss. Poor oral health also leads to increased infections, which may also be associated with chronic disease. Lastly, the elderly population in long term care facilities (LTC) are at a higher risk for oral health problems.

### Resources for Oral Health Integration for Seniors

**Integrating Oral and General Health Screening at Senior Centers for Minority Elders:** Overview and evaluation of the ElderSmile program, replicable, comprehensive community-based program offering oral health prevention, education, screening, and treatment services to minority elders in New York. The program successfully incorporated education, screening, and referral for diabetes and hypertension into its service delivery offerings.

Marshall SE, Cheng B, Northridge ME, Kunzel C, Huang C, Lamster IB. Integrating Oral and General Health Screening at Senior Centers for Minority Elders. *American journal of public health*. 2013;103(6):1022-1025. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3670655/>

**Seniors Oral Health Toolkit:** A web-based toolkit which showcases how oral health can be incorporated into the work of different types of organizations in order to improve oral health outcomes for seniors. Includes best practices and success stories.

Available at: <http://seniorsoralhealth.org/for-health-professionals/oral-health-toolkit/>

**Improving the Oral Health of Seniors and People with Disabilities:** Presentation on the importance of oral health integration for seniors and people with disabilities, including a review of common issues and care needs.

Available at:

[https://www.eiseverywhere.com/file\\_uploads/2029580ee658b358eb54f22d54e6bc73\\_FinnertyandTerzaghiOralHealth.pdf](https://www.eiseverywhere.com/file_uploads/2029580ee658b358eb54f22d54e6bc73_FinnertyandTerzaghiOralHealth.pdf)

**Connecting Oral Health and General Health to Real Life: Integrated Health Models for Seniors:** A fact sheet from Grantmakers in Aging on models for integrated health care for seniors, which highlights the promising model at the Gary and Mary West Senior Dental Center in San Diego, California. Available at:

[http://www.giaging.org/documents/Fact Sheet Connecting Oral Health and General Health\) Aug 2016.pdf](http://www.giaging.org/documents/Fact_Sheet_Connecting_Oral_Health_and_General_Health)_Aug_2016.pdf)

Further information about the center is available at: <http://www.westhealth.org/projects/oral-healthcare-and-care-coordination/>

**Oral Health of Older Americans:** Report from the Centers for Disease Control on the oral health needs of older Americans

Vargas CM, Kramarow EA, Yellowitz JA. The Oral Health of Older Americans. Aging Trends, No. 3. Hyattsville, MD: National Center for Health Statistics, 2001. Available at:

<https://www.cdc.gov/nchs/data/ahcd/agingtrends/03oral.pdf>

**Older Adults and Oral Health: Inspiring Community-Based Partnerships for Healthy Mouths**

**Webinar:** This May 2013 webinar from the U.S.D.H.H.S. Administration on Aging (AOA) explores the oral health status of older adults in the U.S., provides useful resources and highlights two innovative community approaches to improving oral health access for older adults. The AOA is also developing an **Oral Health Community Guide**, which will be a web-based tool that will provide a collection of resources designed for communities interested in building an oral health program(s) for older adults. Presentation slides, transcript and audio recording of webinar available now and Community Guide in 2017 at: [http://www.aoa.gov/AoA\\_Programs/HPW/Oral\\_Health/index.aspx](http://www.aoa.gov/AoA_Programs/HPW/Oral_Health/index.aspx)

**Aging and Dental Health:** American Dental Association review of topics in aging and dental health, including common oral health problems and comorbidities and medical and dental health care considerations.

Available at: <http://www.ada.org/en/member-center/oral-health-topics/aging-and-dental-health>

**Wisdom Tooth Project:** Project of Oral Health America which seeks to improve the oral health of seniors. Includes a resource page to connect older adults, caregivers, and health professionals to oral health resources. The project is also funding a demonstration project for pharmacists to better prepare them to answer questions older adults have regarding oral health.

Available at: <http://www.toothwisdom.org/>

**Senior Smiles Program:** Alliance of the ADA's health literacy program to educate seniors about the importance of good oral health.

Available at: [http://allianceada.org/senior\\_smiles.php](http://allianceada.org/senior_smiles.php)

**Interprofessional Oral Health Faculty Toolkit:** Training toolkit developed by the Oral Health Nursing Education & Practice (OHNEP) for the Adult-Gerontology Primary Care NP curriculum.

Available at: <http://ohnep.org/>

**Smiles for Life:** Educational resources to ensure the integration of oral health and primary care, which includes resources and an online curriculum for geriatric oral health.

Available at: <http://www.smilesforlifeoralhealth.org/>

**Partnership to Prevent Oral Disease & Associated Complications Among AAA Clients:** Slides from a joint presentation by the Washington State Department of Social and Health Services and the Washington Dental Service Foundation on ways to address oral health needs of seniors receiving home and community-based services. Available at:

[https://www.eiseverywhere.com/file\\_uploads/1c9e431b4ce85fc814367e767a239ef5\\_HCBSOralHealthPresentationV3.pdf](https://www.eiseverywhere.com/file_uploads/1c9e431b4ce85fc814367e767a239ef5_HCBSOralHealthPresentationV3.pdf)

## Oral Health Integration for People with Serious Mental Illness

The oral health needs of people with serious mental illness (SMI) are frequently ignored, even though dental health is significantly worse in people with SMI than in the general population. People with serious mental illness often do not seek oral health care treatment. For those who do, finding a provider can be tremendously difficult due to the severe shortage of oral health providers who will treat SMI patients. People with mental illness are three times more likely to have their teeth removed than the general population. One survey of adults with mental illness found that 92% were found to have tooth decay.<sup>3</sup> People with SMI have high rates of diabetes, which is linked with poor oral health. Furthermore, many medications used to treat severe mental illness lead to a reduction in saliva production, which significantly increases the risk of cavities, infection and tooth loss.

Primary care and behavioral health providers who treat people with SMI should not ignore the oral health needs of these patients. Oral health screening and assessment is a critical component of care for this population. Unmet oral health needs should be addressed through warm handoffs to dental providers who have been trained in how to work with patients with SMI. Case managers and social service providers serving the population with SMI should also engage in the promotion of good oral hygiene, the need for oral health care and support to reduce dental anxiety and phobia.

### Resources for Oral Health Integration for People with Serious Mental Illness

**Clinical Concerns in Dental Care for Person with Mental Illness:** Self-study training module by the Southern Association of Institutional Dentists on the dental problems associated with severe mental illnesses, as well as side effects of common psychotropic medications.

Available at: [http://www.integration.samhsa.gov/health-wellness/Clinical Concerns in Dental Care for Persons With Mental Illness.pdf](http://www.integration.samhsa.gov/health-wellness/Clinical_Concerns_in_Dental_Care_for_Persons_With_Mental_Illness.pdf)

**The Dental-Mental Connection: What Dental Professionals Need to Know About Psychiatric Disorders:** Comprehensive presentation and resource materials from a presentation at the April 2013 Special Care Dentistry Association.

Available at: [http://c.ymcdn.com/sites/www.scdonline.org/resource/resmgr/2013\\_meeting\\_presentations/final\\_patty\\_doyle.pdf](http://c.ymcdn.com/sites/www.scdonline.org/resource/resmgr/2013_meeting_presentations/final_patty_doyle.pdf)

**How Oral health & Mental Health Are Connected:** Policy brief from the National Association of Counties (NACo) on the relationship between oral health and mental health highlighting the

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<sup>3</sup> Kadia, S., Bawa, R., Shah, H. Poor oral hygiene in the mentally ill: Be aware of the problem, and intervene. *Current Psychiatry*. 2014 July;13(7):47-48

importance of co-locating oral health and behavioral health care for patients with SMI.

Available at: [http://www.naco.org/sites/default/files/documents/oral-mental-health\\_06.29-v3.pdf](http://www.naco.org/sites/default/files/documents/oral-mental-health_06.29-v3.pdf)

**Three Shires Dental Checklist:** Checklist used by behavioral health providers to assess client's oral health in the Three Shires Early Intervention Dental Trial, which proved successful at enhancing short-term oral health behavior change for people with severe mental illness.

Available at: <http://www.biomedcentral.com/content/supplementary/1745-6215-14-158-S1.pdf>

**Before You Say Ahhh.... Integrating Oral Health in Behavioral Health in Primary Care Settings:**

SAMHSA-HRSA Center for Integrated Health Solutions presentation on how behavioral health providers can address the oral health needs of their patients.

Available at: [http://www.integration.samhsa.gov/about-us/Before\\_You\\_Say\\_Ahhhh%E2%80%A6Integrating\\_Oral\\_Health\\_and\\_behavioral\\_Health\\_in\\_Primary\\_Care\\_Settings\\_9-7-16\\_FINAL.pdf](http://www.integration.samhsa.gov/about-us/Before_You_Say_Ahhhh%E2%80%A6Integrating_Oral_Health_and_behavioral_Health_in_Primary_Care_Settings_9-7-16_FINAL.pdf)

**Poor oral hygiene in the mentally ill: Be aware of the problem, and intervene:** Overview of oral hygiene issues common in people with mental illness and recommended interventions.

Kadia, S., Bawa, R., Shah, H. Poor oral hygiene in the mentally ill: Be aware of the problem, and intervene. *Current Psychiatry*. 2014 July;13(7):47-48

Available at: <http://www.mdedge.com/currentpsychiatry/article/83308/somatic-disorders/poor-oral-hygiene-mentally-ill-be-aware-problem>

## Oral Health Integration for People with HIV/AIDS

An estimated one third of the approximate one million people infected with HIV in the United States do not know they are HIV positive. Dentists can play an important role in diagnosing and limiting the spread of the virus. With an estimated 58% to 75% of the US population seeing a dentist annually, practicing dentists may be the only provider to see an asymptomatic HIV-infected person in any given year.<sup>4</sup> By targeting dental patients, a provider can offer HIV testing to individuals who may not initiate testing on their own, whether out of fear or embarrassment. The advantage to offering this service at a routine dental visit is that the patient is already in the test setting. The results are available within 20 minutes, so the patient can be immediately educated on how to follow-up if the test comes back positive.

Experience with this approach shows that patients desire to know about their HIV status but are often too scared or embarrassed to initiate the process. Initiating a dental visit can open a door for discussion and pave the way to having the patient agree to testing. To be effective, the dentist must remain open, informative, and nonjudgmental.

Medical providers should include screening and assessment for oral health needs for their patients with HIV/AIDS. Dentists can also support the overall health of these patients. People with HIV/AIDS are at special risk for oral health problems. Poor oral health care can also undermine HIV treatment regimens and diminish quality of life. More than a third of people with HIV have oral health conditions related to their weakened immune systems. Dry mouth, a common side effect of HIV/AIDS, can also increase the risk of tooth decay. Unfortunately, large numbers of people living with HIV go without the dental care they need.

## Resources for Oral Health Integration for People with HIV/AIDS

**Oral Health and HIV:** A fact sheet from the HRSA Ryan White HIV/AIDS Program on the oral health issues experienced by people with HIV/AIDS.

Available at: <http://www.hrsa.gov/publichealth/clinical/oralhealth/hivfactsheet.pdf>

**Dental examinations as an untapped opportunity to provide HIV testing for high-risk individuals:**

Article on the opportunity to conduct HIV testing in dental offices.

Pollack HA, Metsch LR, Abel S. Dental examinations as an untapped opportunity to provide HIV testing for high-risk individuals. *Am J Public Health.* 2010;100(1):88-89

Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2791241/>

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<sup>4</sup> Pollack HA, Metsch LR, Abel S. Dental examinations as an untapped opportunity to provide HIV testing for high-risk individuals. *Am J Public Health.* 2010;100(1):88-89

**HIV testing in Oral Health Care Settings:** Recommendations from New York for implementing an HIV testing program in the oral health care setting based on extensive efforts there. Includes links to detailed implementation guide by the New York State Department of Health AIDS Institute in collaboration with the New York/New Jersey AIDS Education and Training Center (AETC) Oral Health Regional Resource Center. Also includes an algorithm that can be used as a planning tool.

Available at: <http://www.hivguidelines.org/clinical-guidelines/hiv-and-oral-health/hiv-testing-in-the-oral-health-care-setting/>

**HIVDENT:** Website with up-to-date oral health treatment information and shares expertise in development, training, integration, and evaluation of oral health services for PLWHA.

Available at: [www.hivdent.org](http://www.hivdent.org).

**Evaluation Center for HIV and Oral Health (ECHO):** ECHO was a 5-year multi-site evaluation and technical assistance center funded through the HRSA Division of HIV/AIDS Bureau, Projects of National Significance (SPNS). ECHO coordinated a national multi-site evaluation of innovative service models to increase access to oral health care for people who are HIV+, and provided technical assistance to the 15 funded sites on programmatic, clinical and evaluation topics. The resource library and reports on project impact are available on the website. Available at:

<http://cahpp.org/project/echo/>

**Financing oral health care for low-income adults living with HIV/AIDS:** This article provides an overview of Medicaid and the Ryan White program, the two vehicles for public financing of oral health care for people living with HIV/AIDS.

Bednarsh H, Reznik DA, & Tobias CR. Financing oral health care for low-income adults living with HIV/AIDS. Public Health Reports, May 2012; 127 (Supplement 2): 82-86. Available at:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3314395/>

**A New Approach to Ensuring Oral Health Care for People Living With HIV/AIDS:** The Dental Case Manager: Article on how dental care managers facilitated access to oral health care for people living with HIV/AIDS.

Lemay CA, Cashman SB, McDonald A, Graves JR. A New Approach to Ensuring Oral Health Care for People Living With HIV/AIDS: The Dental Case Manager. Preventing Chronic Disease. 2012;9:110297.

Available at: <http://dx.doi.org/10.5888/pcd9.110297>

## Oral Health Integration in Diabetes Care

Diabetes is a significant cause of health care spending in the United States. The rate of diabetes has increased for every age group in the United States over the past three decades, a trend that has been mirrored in Oregon. The prevalence of diabetes among adults in Oregon has more than doubled — an increase of 124% — over the past 20 years. As of 2015, there are approximately 287,000 adults with diagnosed diabetes in Oregon and an estimated 110,000 adults with diabetes who do not know it. More than 20% of health care spending is for people who have been diagnosed with diabetes<sup>5</sup>. The CDC finds that direct medical costs in 2012 in the US were 2.3 times higher for people with diabetes than those without the disease. The estimated total cost of diabetes in Oregon is nearly \$3 billion per year. Medical expenditures associated with diabetes in Oregon total nearly \$2.2 billion each year. Costs associated with reduced productivity from diabetes are estimated at \$840 million per year. An estimated 38,000 (19%) OHP members have been diagnosed with diabetes prior to the ACA expansion. More than \$106 million in direct claims cost were paid by OHP in 2012 for diabetes and diabetes-related complications.<sup>6</sup>

There is a strong link between diabetes and oral health. Diabetes has been identified as the only systemic disorder that is a definitive risk factor associated with periodontal disease. Periodontal disease has also been identified as a risk factor for poor metabolic functions in diabetic patients.<sup>7</sup> For example, patients with inadequate blood sugar control appear to develop periodontal disease more often and more severely, and they lose more teeth than do people who have good control of their diabetes. Looking from the primary care perspective, poor oral health can contribute to inadequate blood sugar control and addressing a patient's dental needs can lead to enhanced diabetic control.

Among adults, about 1.7 million new cases of diabetes are diagnosed each year. If this trend continues, as many as 1 out of every 3 adults in the United States could have diabetes by 2050.<sup>8</sup> All providers, whether they provide medical, behavioral health or oral health services will be seeing diabetic patients, many who may not yet know they have the chronic disease. Because of this strong relationship between diabetes and oral health, it is imperative that primary care, behavioral health and oral health providers work together to reduce oral health risk factors in the diabetic population.

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<sup>5</sup> American Diabetes Association. Economic Costs of Diabetes in the U.S. in 2007. *Diabetes Care*. 2008;31(3):596–615.

<sup>6</sup> From OHA Oregon Diabetes Report 2015 available at <https://public.health.oregon.gov/DiseasesConditions/ChronicDisease/Diabetes/Documents/OregonDiabetesReport.pdf>

<sup>7</sup> Lamster, Ira B., and Kayleigh Eaves. "A Model for Dental Practice in the 21st Century." *American Journal of Public Health* 101.10 (2011): 1825-830. Web.

<sup>8</sup> CDC data, accessed November 2016 at <http://www.cdc.gov/diabetes/pdfs/library/diabetesreportcard2014.pdf>

## Resources for Oral Health Integration in Diabetes Care

**Diabetes and Oral Health:** American Dental Association fact sheet for patients on the relationship between diabetes and oral health.

Available at:

[http://www.ada.org/~media/ADA/Science%20and%20Research/Files/patient\\_18.pdf?la=en](http://www.ada.org/~media/ADA/Science%20and%20Research/Files/patient_18.pdf?la=en)

**Diabetes, Gum Disease, and Other Dental Problems:** Online information tool from the National Institute of Diabetes and Digestive and Kidney Diseases that describes the link between diabetes and oral health issues and oral health recommendations.

Available at: <https://www.niddk.nih.gov/health-information/diabetes/preventing-diabetes-problems/keep-mouth-healthy>

**The Daily Planet (FQHC) Case Study:** Case study of pilot project for low-income, uninsured, diabetic population in the Greater Richmond Region. Includes summary of clinical services, documentation and information-sharing, referral processes, case management and patient support services. Also provides information on challenges, successes and costs.

Available at: <http://www.vaoralhealth.org/Portals/0/Integration%20Toolkit/TheDailyPlanet.pdf>

**Diabetes Mellitus and Oral Health: Ignoring the Evidence May be a Costly Mistake:** A policy brief from the Center for Oral Health which provides an overview of the relationship between diabetes mellitus and periodontal disease, as well as interventions that can lead to a reduction in healthcare costs, hospital admissions, as well as health improvements for patients. Available at:

[http://www.centerfororalhealth.org/images/lib\\_PDF/diabetes\\_mellitus\\_issue\\_brief\\_center\\_for\\_oral\\_health.pdf](http://www.centerfororalhealth.org/images/lib_PDF/diabetes_mellitus_issue_brief_center_for_oral_health.pdf)

**Dental and Medical Co-management of Patients With Diabetes:** Chapter on the need for co-management between oral health and medical providers for patients with diabetes and recommended strategies.

Lalla E, Hsu WC, Lamster IB. Dental and Medical Co-management of Patients With Diabetes. Periodontal Disease and Overall Health: A Clinician's Guide. Yardley, PA: Professional Audience Communications; 2010:216–236. Available at:

<http://www.dtstudyclub.ru/resources/content/event/upfile/fc4f2e5a6b31b5e58311d1884e4116d1.pdf#page=62>

**What Dental Professionals Would Like Team Members to Know:** This document highlights the relation between nutrition and diabetes and oral health issues. It further explores the common modifiable risk factors between diabetes and oral health issues.

Available at: <http://www.cdc.gov/diabetes/ndep/pdfs/ppod-guide-dental-professionals.pdf>

**A Framework for Physician-Dentist Collaboration in Diabetes and Periodontitis:** Framework for dental and medical providers to work together to increasing screening of diabetes and address the needs of patients with diabetes.

A Framework for Physician-Dentist Collaboration in Diabetes and Periodontitis.

Satheesh Elangovan, Ruth Hertzman-Miller, Nadeem Karimbux, Donald Giddon

Clinical Diabetes Oct 2014, 32 (4) 188-192.

Available at: <http://clinical.diabetesjournals.org/content/32/4/188.full-text.pdf>

**Diabetes and oral health - information for health professionals:** Report published by the International Diabetes Federation with recommendations and information for health professionals regarding disseminating information and providing care about diabetes and oral health to patients.

Available at: <http://www.idf.org/guidelines/diabetes-and-oral-health/information-health-professionals>

**Assessment and management of patients with diabetes mellitus in the dental office:** Article on the role dentists can take in the early identification, assessment, and management of their patients who present with or are at risk of developing diabetes.

Lalla E & Lamster IB. Assessment and management of patients with diabetes mellitus in the dental office. Dental Clinics of North America 56:819–829, 2012.

Available at: <https://www.ncbi.nlm.nih.gov/pubmed/23017553>

**Marshfield clinic case study:** Case study of a primary medical care clinic’s efforts to address the oral health needs of patients with diabetes.

Presentation slides available at: <https://www.aacdp.com/docs/2014Symposium/Acharya.pdf>

Summary also contained within white paper, “Oral Health: An Essential Component of Primary Care (pp. 52-54), available at: [http://www.safetynetmedicalhome.org/sites/default/files/White-Paper-](http://www.safetynetmedicalhome.org/sites/default/files/White-Paper-Oral-Health-Primary-Care.pdf)

[Oral-Health-Primary-Care.pdf](http://www.safetynetmedicalhome.org/sites/default/files/White-Paper-Oral-Health-Primary-Care.pdf)

## Oral Health Integration in Cardiovascular Health

The role of oral health in the development of cardiovascular disease has received considerable attention. Periodontal disease is a complex chronic inflammatory disease, resulting in a loss of connective tissue and bone support of the teeth.<sup>9</sup> It is a major cause of tooth loss in adults aged over 40, and, according to the World Health Organization, affects people worldwide at prevalence rates of up to 10-20% for the most severe forms.<sup>10</sup> Periodontal disease is highly prevalent, especially in late middle age when coronary artery disease is also most common.<sup>11</sup>

Recent research has suggested a link between poor oral health and cardiovascular disease, or heart disease. Evidence continues to support an association among periodontal infections, atherosclerosis and vascular disease. A recent study from the Scottish Health Survey found participants who reported poor oral hygiene (never/rarely brushed their teeth) had an increased risk of a cardiovascular disease event.<sup>12</sup> Tooth loss is associated with higher risk of a heart attack independent of smoking, socioeconomic status, diet and other risk factors of a heart attack.<sup>13</sup> A study using insurance claims found lower costs and less hospitalizations for coronary artery disease in patients who maintain their periodontal health.<sup>14</sup> Most studies reviewed in an article in 2006 reported positive associations between periodontal disease and cardiovascular disease (CVD) after accounting for the effects of multiple risk factors.<sup>15</sup> Based on an extensive review of the literature, the United States Preventative Services Task Force (USPSTF) (2014) identified periodontal disease as an independent risk factor for coronary heart disease (CHD).

Additional aspects of this problem include:

- People with poor oral health tend to have poor nutrition since they may not have enough teeth to eat a healthy diet, which is essential for preventing heart disease.
- Individuals with chronic gum disease may be at greater risk of developing heart disease or having a stroke.
- The more teeth a person has lost, the more likely they are to have gum disease and also carotid artery plaques (indicators of heart disease).

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<sup>9</sup> Pihlstrom BL, Michalowicz BS, Johnson NW. Periodontal diseases. *Lancet*. 2005; 366:1809-20

<sup>10</sup> De Nardin E. The role of inflammatory and immunological mediators in periodontitis and cardiovascular disease. *Ann Periodontol* 2001; 6:30-40

<sup>11</sup> DeStefano F, Anda RF, Kahn HS, Williamson DF, Russell CM. Dental disease and risk of coronary heart disease and mortality. *BMJ*1993; 306:688-91

<sup>12</sup> Toothbrushing, inflammation, and risk of cardiovascular disease: results from Scottish Health Survey. *BMJ* 2010; 340 doi: <http://dx.doi.org/10.1136/bmj.c2451> (Published 27 May 2010)

<sup>13</sup> Oluwagbemigun, Kolade et al. "Association between Number of Teeth and Chronic Systemic Diseases: A Cohort Study Followed for 13 Years." 10.5 (2015): e0123879. PMC. Web. 20 Nov. 2016.

<sup>14</sup> Jeffcoat et al. Impact of periodontal therapy on general health: evidence from insurance data for five systemic conditions. *Am J Prev Med*. 2014;47(2):166-74.

<sup>15</sup> Demmer R, Desvarieux M, Periodontal infections and cardiovascular disease: The heart of the matter. *JADA*, Vol 137 October 2006. Accessed November 2016 at:

[https://www.ada.org/~media/ADA/Member%20Center/Files/Perio\\_heart.ashx](https://www.ada.org/~media/ADA/Member%20Center/Files/Perio_heart.ashx)

## Resources for Oral Health Integration in Cardiovascular Health

**The American Heart Association:** Information and several articles regarding the importance of oral health care and those with cardiovascular disease. They identify that many of the habits that one should avoid for prevention or improvement of heart disease are similar to those that can impact oral health disease such as periodontal disease. More information is available for patients at: [http://www.heart.org/HEARTORG/HealthyLiving/Dental-Health-and-Heart-Health\\_UCM\\_459358\\_Article.jsp#.WDD9hYWcHMc](http://www.heart.org/HEARTORG/HealthyLiving/Dental-Health-and-Heart-Health_UCM_459358_Article.jsp#.WDD9hYWcHMc)

**American Dental Association (ADA):** ADA article on the link between periodontal disease and cardiovascular disease.

Available at: [http://www.ada.org/~media/ADA/Member%20Center/Files/Perio\\_heart.pdf?la=en](http://www.ada.org/~media/ADA/Member%20Center/Files/Perio_heart.pdf?la=en)

**American Academy of Periodontology:** Collection of patient resources:

- Mouth-Body Connection: <http://www.perio.org/consumer/mbc.top2.htm>
- Gum Disease Symptoms: <http://www.perio.org/consumer/gum-disease-symptoms.htm>

**Cleveland Clinic** patient resources: Oral health and Risk for CV disease. The site also has information for patients regarding needing oral procedures and having a recent heart attack, stroke, and other conditions <http://my.clevelandclinic.org/services/heart/prevention/risk-factors/hic-oral-health-cardiovascular-diseases>

**Will Taking Care of My Teeth Help Prevent Heart Disease?:** Patient resource information from the Mayo Clinic.

Available at: <http://www.mayoclinic.org/healthy-lifestyle/adult-health/expert-answers/heart-disease-prevention/faq-20057986>

**Tools from Insurers:**

- MetLife: <https://oralfitnesslibrary.com/Interactive-Tools/Risk-Assessments-Interactive-Tools/interactive-tool-For-Adults-Am-I-at-Risk-for-Periodontal-Disease>
- Delta Dental: [https://www.deltadentalins.com/oral\\_health/heart-8x11.pdf](https://www.deltadentalins.com/oral_health/heart-8x11.pdf)

## Oral Health and Substance Abuse

Both primary care providers and oral health providers have a role in reducing substance abuse. It has been documented that just by simply advising and supporting patients to stop smoking, physicians and dentists can affect a 3-7% reduction in smoking. A far greater reduction may be effected if a well-organized, simple tobacco control program were to be integrated into dental practice as well as primary care practices. We believe that dentists can play an important role in addressing substance abuse issues since they have an ongoing relationship with individuals and some people may see a dentist more often than they see a primary healthcare professional.

According to the Centers for Disease Control and Prevention, at least 38 million Americans drink too much and most do not have an alcohol use disorder. Yet, only one in six people has ever talked with a healthcare professional about alcohol. Drinking too much includes binge drinking (more than three drinks in a sitting for women; more than four for men), weekly consumption above a moderate level, and any alcohol use under age 21 or by pregnant women. In addition, unhealthy alcohol intake may co-occur with other substance use that is known to affect oral health such as tobacco, marijuana and illicit drugs.

The American Cancer Society reports that heavy alcohol consumption combined with tobacco use has been identified as a primary risk factor for 75 % of oral cancers in the United States. Some patients who struggle to quit smoking tobacco are more likely to be successful if they change their pattern of alcohol and tobacco use at the same time. Additionally, heavy alcohol consumption has also been linked to periodontal disease and chronic tooth decay. Oral health complications are just some of the negative consequences related to heavy alcohol consumption. Dentists, like primary care providers, can use the same screening tool, the Screening, Brief Intervention and Referral to Treatment (SBIRT) tool and play a vital role in the prevention and intervention of substance abuse while reducing risk factors for oral health diseases.

Additionally, dentists prescribe pain medications for many of the oral health procedures yet can unknowingly contribute to the state's and national epidemic of opioid misuse. Work has been underway in the state to help providers across the spectrum to follow guidelines. Opioid abuse can also have an impact on oral health disease, particularly for those using illicit drugs coupled with poor nutrition and oral care practices. The "meth mouth" is becoming increasingly common as the drug has been more widely used. A recent study found that the more meth a person used, the worse their tooth decay was. Meth users who were 30 years of age or older, women or cigarette smokers were more likely to have tooth decay and gum disease.<sup>16</sup> Primary care and oral health providers must work collaboratively to reduce the disease burden chronic substance abuse patients have, and support the patient in addressing their health and behaviors issues.

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<sup>16</sup> Shetty V. et al. *Dental disease patterns in methamphetamine users*. Journal of the American Dental Association Dec 2015 volume 146, Issue 12, Pages 875-885 available at <http://jada.ada.org/article/S0002-8177%2815%2900977-0/abstract>

## Resources for Oral Health and Substance Abuse

**American Dental Association:** information and tools for dentists on tobacco cessation

Available at: <http://www.ada.org/en/member-center/oral-health-topics/smoking-and-tobacco-cessation>

**National Cancer Institute:** The National Cancer Institute (NCI) has developed a program for oral health professionals to educate their patients and assist them in stopping their tobacco use.

Monograph 5: Tobacco and the Clinician: Interventions for Medical and Dental Practice available at:

<https://cancercontrol.cancer.gov/brp/tcrb/monographs/5/>

### State Tobacco Cessation Tools for Dentists:

- State of Utah resources/toolkit for dentists on tobacco cessation available at: <http://www.tobaccofreeutah.org/healthcare-tobcessdentistry.html>
- State of Indiana resources/toolkit for dentists on tobacco cessation available at: <http://www.indental.org/getmedia/b25434eb-4013-4d7e-84f2-7f42c1d401d1/Tobacco-Cessation-Toolkit.pdf.aspx>

**Tobacco Cessation Webinar:** The National Network for Oral Health Access (NNOHA) and the Association of Clinicians for the Underserved (ACU) collaborated to produce a webinar for oral health providers to help them assist their patients to stop smoking. Strategies and tools are featured that address smoking cessation and incorporate culturally and linguistically appropriate patient education.

Slides available at: <http://www.nnoha.org/nnoha-content/uploads/2013/11/Tobacco-Cessation-in-the-Dental-Home.pdf>

**State of Utah Substance Abuse toolkit:** Toolkit that includes information for dentists on the role they can play and signs to recognize addiction . Available at:

<https://www.health.utah.gov/vipp/pdf/RxDrugs/rx-toolkit-ogden-web.pdf>

**Arizona Alliance for Community Health Centers' Medical-Dental Integration toolkit** has a section on impact of substance abuse and oral health. Available at: <http://www.aachc.org/wp-content/uploads/2014/01/AACHC-Oral-Health-Toolkit-2nd-Edition.pdf>

### Tools from the British National Health Service (NHS)

- Partnership with the British Dental Association efforts to enlist dentists in smoking cessation efforts. Available at:

<https://www.bda.org/dentists/education/sgh/Documents/Smoking%20cessation%20in%20NHS%20dentistry%20V2.pdf#search=tobacco%2520cessation%2520and%2520dentists>

- NHS- toolkit that includes discussion of tobacco and alcohol. Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/367563/DB\\_OHv32014OCTMainDocument\\_3.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/367563/DB_OHv32014OCTMainDocument_3.pdf)

Screening, Brief Intervention, and Referral to Treatment (SBIRT) Tools:

**SAMHSA-HRSA Center for Integrated Health Solutions:** SBIRT: Training/other resources page.

Available at: <http://www.integration.samhsa.gov/clinical-practice/sbirt/training-other-resources>

**Health Knowledge On-Line Course for Dentists (resource suggested by SAMHSA):** Self-paced course covering various topics related to the SBIRT Model and its use in the field of Dentistry. Available at:

<http://healthknowledge.org/course/index.php?categoryid=50>

**Arizona State University Center for Applied Behavioral Health Policy:** SBIRT Dental online development course. Available at: <https://cabhp.asu.edu/sbirt>

**Meth Mouth: An interdisciplinary Approach to Bringing in the Dentist as Part of the Team:** Poster from eastern Carolina University on bringing oral health providers into an interdisciplinary team to address addictions issues. Accessible at:

[http://www.adea.org/uploadedFiles/ADEA/Content\\_Conversion\\_Final/publications/library/ADEA-Presentations/Poster\\_8\\_Geralyn\\_Crain\\_ADEA\\_CCI\\_Poster\\_Meth\\_Mouth\\_2013.pdf](http://www.adea.org/uploadedFiles/ADEA/Content_Conversion_Final/publications/library/ADEA-Presentations/Poster_8_Geralyn_Crain_ADEA_CCI_Poster_Meth_Mouth_2013.pdf)

**Reducing Opioid Overuse and Misuse:** The Oregon Public Health Division has a general resource page available at:

<https://public.health.oregon.gov/PreventionWellness/SubstanceUse/Opioids/Pages/index.aspx>

**Oregon Opioid Prescribing Guidelines Taskforce:** The Oregon Health Authority convened a task force to develop statewide opioid prescribing guidelines, in alignment with those recently released by the Centers for Disease Control (CDC). These guidelines will support Oregon's initiative to address the epidemic of opioid use, misuse, and overdose by optimizing care, improving patient safety, and providing a consistent framework for endorsement and implementation at the local level.

- Oregon Opioid Taskforce guidelines for safe use of opioids document. Available at: <https://public.health.oregon.gov/PreventionWellness/SubstanceUse/Opioids/Documents/taskforce/oregon-opioid-prescribing-guidelines.pdf>

- The Taskforce just completed opioid guidelines for dentists. Available at:  
<https://public.health.oregon.gov/PreventionWellness/SubstanceUse/Opioids/Documents/taskforce/oregon-opioid-prescribing-guidelines-dentists.pdf>

### **Southern Oregon efforts: Oregon Pain Guidance**

The Oregon Pain Guidance group (OPG) is a diverse group of healthcare professionals from Jackson and Josephine Counties. The group was formed to engage healthcare professionals and community partners on the current opioid problem, to learn best practices for managing complex, chronic non-cancer pain (CCNP) and to bring them into standardized, general use in Southern Oregon.

- <http://professional.oregonpainguidance.org/introduction/>
- Toolkit: <http://professional.oregonpainguidance.org/tools-to-download/>
- Resources also by OPG re Portland metro area efforts  
<http://portlandprofessional.oregonpainguidance.org/>

## Oral Health Equity

The serious disparities in health by race/ ethnicity, language and socio-economic status in the United States also exist in oral health. Poor oral health disproportionately impacts low-income communities, with the greatest burden falling on communities of color. African-Americans and Hispanic populations experience significantly higher rates of untreated tooth decay and tooth loss. Native Americans suffer from the poorest oral health of any community in the country. Communities of color experience barriers in accessing care and in receiving culturally and linguistically competent care. Efforts to improve overall health through better integration of care must also address health equity.

### Resources for Oral Health Equity

**Campaign for Oral Health Equity:** Campaign of Oral Health America to connect communities with resources to drive access to care, increase health literacy and advocate for policies that improve overall health through better oral health for all Americans, especially those most vulnerable.

Available at: <https://oralhealthamerica.org/our-work/campaign-for-oral-health-equity/>

**2015 Kelly Report on Health Disparities in America:** Report compiled by Illinois Congresswoman Robin L. Kelly, chair of the Congressional Black Caucus Health Braintrust, to examine nationwide health disparities and lead policymakers and medical thought leaders in a meaningful direction in improving health outcomes in the United States.

Available at:

<http://robinkelly.house.gov/sites/robinkelly.house.gov/files/2015%20Kelly%20Report.pdf>

**A Framework for Advancing Oral Health Equity:** Webinar on oral health disparities and a framework to advance oral health equity, highlighting efforts in Connecticut and North Carolina. Collaborative.

Webinar Presentation slides and audio recording available at: <http://www.chcs.org/resource/a-framework-for-advancing-oral-health-equity/>

**Oral Health Literacy as a Pathway to Health Equity:** Summary report from the U.S. Alliance for Oral Health leadership colloquium on oral healthy literacy as a tool for improving oral health equity.

Available at:

[http://www.usalliancefororalhealth.org/sites/default/files/static/ThirdColloquiumSummaryUSNationalOralHealthAllianceJune2012\\_0.pdf](http://www.usalliancefororalhealth.org/sites/default/files/static/ThirdColloquiumSummaryUSNationalOralHealthAllianceJune2012_0.pdf)

**Minority Oral Health in America: Despite Progress, Disparities Exist:** Brief by the ADA on the status of oral health for communities of color in the U.S. and strategies to improve oral health equity.

[http://www.ada.org/~media/ADA/Advocacy/Files/060523\\_Kelly%20Report%20Dental%20Chapter.pdf?la=en](http://www.ada.org/~media/ADA/Advocacy/Files/060523_Kelly%20Report%20Dental%20Chapter.pdf?la=en)

**The Oral Health Crisis Among Native Americans:** Fact sheet from the Pew Charitable Trust on the significant oral health disparities experienced by Native Americans.

Available at: <http://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2015/06/the-oral-health-crisis-among-native-americans>

**Oral Health Equity Logic Model User's Guide:** Technical assistance tool from the Center for Health Care Strategies for improving programmatic or regional impact on oral health equity. Available at: <http://www.chcs.org/media/The-Oral-Health-Equity-Logic-Model-Template-081816-final.pdf>

**Taking a Bite Out of Oral Health Inequities:** Report on the status and cause of oral health inequities from the California Pan-Ethnic Health Network.

Available at: [https://cpehn.org/sites/default/files/resource\\_files/cpehn\\_oral\\_health\\_brief\\_01\\_16.pdf](https://cpehn.org/sites/default/files/resource_files/cpehn_oral_health_brief_01_16.pdf)

**Multicultural Issues in Oral Health:** Discusses the needs for culturally and linguistically competent care from dental providers, as well as the need to diversify the oral health care work force.

Garcia RI, Cadoret C, Henshaw M. Multicultural Issues in Oral Health. *Dental clinics of North America*. 2008;52(2):319-vi. doi:10.1016/j.cden.2007.12.006.

Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2365923/>

**Center for Research to Reduce Disparities in Oral Health:** Research Center at the National Institute of Health (NIH) focused on research to increase the understanding and eliminating the disproportionate burden of oral diseases suffered by segments of the U.S. population, including the poor, racial and ethnic minorities, and people with acquired or developmental special needs.

Available at:

[http://www.nidcr.nih.gov/research/NIDCR\\_Centers\\_and\\_Research\\_Networks/CentersforResearchtoReduceDisparities/](http://www.nidcr.nih.gov/research/NIDCR_Centers_and_Research_Networks/CentersforResearchtoReduceDisparities/)

**The Center to Address Disparities in Oral Health (CAN DO):** Part of the University of California at San Francisco, CAN DO provides Support for patient- and population-oriented research related to reducing oral health disparities in children.

Available at: <http://www.cando.ucsf.edu/>

## Oral Health Access

Any effort to improve the oral health of low-income Oregonians must address access to oral health care in addition to integration of care. In 2013, Oregon's dentists-to-population ratio was 1: 1,363. Only eight states have a better ratio. While this is fairly positive news, the story for Medicaid consumers seeking dental treatment is not nearly so good. The number of dentists, by region, that accept new Medicaid patients ranges from 19.7% to 34.5%, while the percent of dentists that accept no Medicaid patients ranges from 55.17% to 70.1% from region to region. Even for those dentists that do see Medicaid patients, many have limited Medicaid caseloads that represent 1% to 24% of their practice.<sup>17</sup>

Dental hygienists are also an important resource for dental care. The Oregon Board of Dentistry reported that between 2012 and 2014, the number of dental hygienists working in Oregon declined 10% to 2,153. The vast majority of hygienists, 89%, work in a private dental office, with only 2% practicing in a community or school-based health center setting.

### Resources to Support Oral Health Access

**Oral Health Access Framework Model:** Report and recommendations from the Oral health Workgroup of the Oregon Medicaid Advisory Committee.

Available at <http://www.oregon.gov/oha/OHPR/MAC/Documents/MAC-oralhealthframework-Oct2016.pdf>

**Improving Oral Health:** Presentation by Marko Vujicic, PhD Chief Economist & Vice President Health Policy Institute that includes examples of mapping of dental health access as a tool for addressing access problems.

Available at: [https://comm.ncsl.org/productfiles/83403465/Vujicic\\_Presentation.pdf](https://comm.ncsl.org/productfiles/83403465/Vujicic_Presentation.pdf)

**Improving Access to Oral Health Care for Vulnerable and Underserved Populations:** Report from the Institute of Medicine on oral health access issues. Available at:

<http://www.hrsa.gov/publichealth/clinical/oralhealth/improvingaccess.pdf>

**Improving Access to Oral Health in Rural Communities:** Webinar from the Rural Health Information Hub on strategies to improve access in rural communities. Available at:

<https://www.ruralhealthinfo.org/webinars/improving-access-to-oral-health-care>

**Dental Therapist Toolkit:** Toolkit from the state of Minnesota with an extensive set of resources and tools to promote the use of dental therapists to primarily serve low-income, uninsured and underserved patients, or practice in a dental health professional shortage area. Dental Therapists

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<sup>17</sup> Oregon Healthcare Workforce Licensing Database

and Advanced Dental Therapists play a key role in the state in increasing access to dental care and preventing emergency room visits for dental-related problems.

Available at: <http://www.health.state.mn.us/divs/orhpc/workforce/emerging/dt/index2.html#toolkit>

**Increasing Access to Dental Care through Public Private Partnerships:** Handbook on contracting between private dentists and Federally Qualified Health Centers to increase access to oral health care.

Available at: [http://www.integration.samhsa.gov/health-wellness/FQHC\\_Handbook\\_Dental2010.pdf](http://www.integration.samhsa.gov/health-wellness/FQHC_Handbook_Dental2010.pdf)

## How to Use this Toolkit

This toolkit is a collection of resources for integrating oral health into health system transformation efforts. Based on HMA's examination of oral health integration literature and efforts to date both locally and nationally, it highlights key focus areas for the greatest impact. The sections that follow are organized by the settings, populations and specific conditions where interventions have been demonstrated to have effectiveness, each with a list of resources and tools for assisting implementation. Addressing health equities and access to care barriers are critical, particularly with low-income vulnerable populations and resources that apply to oral health integration are included. Lastly, there are resources and examples of how to build leadership in organizations and across clinical practices for oral health integration.

Suggested approaches for the OHA, particularly the Transformation Center and the PCPCH program, in using this Toolkit include:

- As the Transformation Center considers activities such as an oral health integration learning collaborative, the toolkit can serve as a resource guide. Each section identifies key areas that could be used for break out discussions and sharing of best practices with the CCOs and their provider networks
- Partnering with key state partners could expand the reach of the Center's efforts in working with providers and their staffs, Coordinated Care Organizations, health plans, Community Advisory Councils, policymakers and others as to the importance and approaches of oral health integration. Bringing together the state partners expertise and resources could provide synergy and enhance sharing of best practices.
- The Toolkit, along with the recently completed white paper, *Oral Health Integration in Oregon: Environmental Scan and Recommendations*, can inform communication and strategic plans across the OHA and with its state partners.
- Resources in the Toolkit include many patient resources for providers to engage patients and their families, shared across both CCOs and medical, behavioral health and oral health provider associations, as they communicate the importance of oral health integration.
- The Transformation Center can use the Toolkit to:
  - Provide guidance and expertise with the OHA Oral Health cross-agency Team and the State Dental Director
  - Works with CCOs on oral health integration and provides targeted technical assistance
  - Add to website as a resource as an ongoing tool for oral health integration
- The Patient-Centered Primary Care Home (PCPCH) program can share resources with:
  - the clinics and providers they work with

- the Patient Centered Primary Care Institute, who have a web based set of tools for adopting the medical home model
  - Inform PCPCH Standards Advisory Committee, who provides the OHA with policy and technical expertise for the PCPCH model of care.
- Working with the CCOs, the Transformation Center can use the Toolkit and white paper to build communication tools that would develop effective messages to:
  - Engage their leadership
  - Engage their staff across their organization
  - Engage their Community Advisory Councils
  - Engage their Clinical Advisory Panels
- The tools are also resources for the CCOs' Community Health Improvement Plans and Transformation Plans and could be included along with other resources developed for the CCOs.

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## About Health Management Associates

HMA is a consulting firm with deep expertise across all domains of publicly funded health care. Nationally, the HMA team includes over 165 professional health care leaders, managers and analysts with up to 30 years of experience in the health and human services fields, including former state Medicaid and other health care program directors, federal officials, and managed care organization administrators, along with practicing clinicians, behavioral health experts, senior staff with extensive experience in clinical and administrative leadership of hospitals and health systems, and information technology experts.

HMA brings a strong interdisciplinary expertise to both its public and private sector clients across the country, including local, state, and federal governments, private sector providers, health plans, foundations, and major safety net health systems. The firm has extensive experience and expertise in the design, implementation and evaluation of health programs, particularly with respect to delivery system change, managed care, long-term services and supports, and behavioral health care. HMA has decades of unique experience integrating approaches between government bodies that oversee health care for vulnerable populations, health plans that pay for it and providers who deliver it.

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