ISSUE BRIEF

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Integrating Oral and General Health: The Role of Accountable Care Organizations

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Executive Summary

Unlike dental care, which is the responsibility of dental providers, oral health care is broader and should be owned by all health providers regardless of discipline. The current environment, in which oral health is seen as a separate, stand-alone healthcare entity, does not foster comprehensive quality care. Evidence shows that oral health complications, such as infections that begin in the mouth, can travel throughout the body and lead to major health complications, even death. In parallel, a dental exam may reveal signs of general health problems, such as nutritional deficiencies and systemic diseases, including microbial infections, immune disorders, injuries, and some cancers. Furthermore, poor oral health is associated with a number of social ills, including limited active engagement in society, loss of productivity, school absenteeism, in addition to inappropriate emergency department use, under-employment and unemployment, and has an adverse effect on military readiness.

The Affordable Care Act (ACA) offers an opportunity for innovations in the health care delivery systems and calls for a holistic approach to population healthcare. By testing value-based payment models, the ACA is encouraging changes in medical care delivery systems and financing to ensure and maintain wellness across healthcare domains. These models work by pooling financial risk among a wide spectrum of health care providers. This is an opportunity to move towards an integrated oral and general health system.

With nearly 24% of Massachusetts' residents enrolled in Massachusetts' Medicaid program, MassHealth, Medicaid plays a major role in providing care for Massachusetts' most vulnerable populations. In April 2016, Massachusetts Secretary of Health and Human Services proposed standards for a MassHealth

accountable care organization program, which seeks to better integrate the health care delivery system to provide more efficient care. A pilot program is expected to begin in December 2016, and the full program is expected to begin October 2017. This report aims to explore how Massachusetts can take advantage of this reform to better coordinate oral into overall health, and thereby enhance patient care, improve health, and reduce costs.

An Accountable Care Organization (ACO) is an organization of providers responsible for the overall care of enrollees. It provides a platform to bring together health providers to collaborate and improve healthcare delivery, increase patient satisfaction, and reduce cost. Primary care is the core of ACOs, and integrated case management has the potential to provide more appropriate and timely care and reduce duplication of services and medical errors.

Successful strategies for integrating oral health into overall health require a new vision and approach to the health care delivery system. **Insurance coverage** is a major factor in integrating what are, currently, distinct systems. ACOs serving the Medicaid population are more likely to offer dental services. The inclusion of adult dental benefits as a core component of the Medicaid is invaluable for successful oral-general health integration. **Provider outreach and educational activities** are needed to fill the awareness and culture gap between dental and other health care providers. An increase in Medicaid **beneficiaries' awareness** of dental benefits, in addition to access to oral health care providers, is essential for overall health and well-being.

Several approaches have been used to reach this goal. For example, using a team of outreach and referral staff, Delta Dental of Iowa targets patients seeking care at emergency departments (ED) for dental pain, as does Trillium Coordinated Care Organization in Oregon. Innovative approaches are also being used to incentivize members' good oral health practices by establishing a dental home to promote care continuity. Hennepin Health in Minnesota uses a team consisting of a community health worker, an RN clinical coordinator, and a social worker to help enroll new members, identify their health needs, and coordinate health care visits. Adequate **coordination** between dental and other medical providers and a **unified information and health record** system that includes both medical and dental information is essential for effective coordination of care.

In general, improving reimbursement rates and reducing administrative burdens will encourage more dentists to participate in the Medicaid program. ACOs can enhance access to dentists by offering

incentives to dental providers for meeting certain requirements, such as completion of online risk assessments, proactive outreach for patients to encourage recall visits, and care maintenance.

Coordinating overall health requires improving **coverage** of dental services and **access** to dental services, especially for those with publicly funded health insurance. It requires closing gaps in oral health literacy and changing the perceived low value of oral health among beneficiaries and primary care providers. Access challenges include limited provider access among Medicaid beneficiaries, as well as transportation, daycare and work-related conflicts. Another challenge is sharing electronic medical records. Dental practices are not set up to share data and often use a mix of electronic health records and paper records. Finally, there is a **lack of unified, standardized quality measures** to evaluate the performance of dental providers, making it difficult to link payment to performance.

The experience from early Medicaid ACOs shows that while ACO's leadership is committed to a holistic health approach, oral health integration is often missing as other priorities take center stage. The slow integration of oral and general health is a lost opportunity to improve overall patient health. While some effort to promote coordinated care through patient-centered health homes and ACOs is taking place nationwide, these efforts are often pursued separately. No one model for oral health integration can meet all needs of a diverse population, nor will it work for every organization. Regardless of the integration model, a number of core principles remain necessary:

1. Involve the dental community in ACO's activities and invite a dental representative to participate on the ACO's board.
2. Improve access to dental care and the coverage of dental services, particularly in the Medicaid program.
3. Facilitate debate to reach consensus on oral health quality measures that meet the approval of payers, providers, and patients.
4. Invest in dental diagnostic codes and dental quality metrics to enable quality-based payment.
5. Move away from the existing fee-for-service to a more value-based, integrated patient-centric financial model.
6. Provide adequate incentives for providers to adopt integrated electronic health record (EHR) systems.
7. Incentivized primary care providers to take an active role in oral health, i.e., conduct oral health assessments and needs.

8. Reform/modify health professional’s education to assure that providers can deliver truly integrated and comprehensive health care.
9. Conduct more research and pilot studies to better explore best models for oral systemic health integration.

Introduction

Mrs. Dream received a phone call from her health coordinator, Mr. Iamhereforyou, who works at her primary health care provider's clinic, Clinic from Heaven, to inform her that her diabetes medicine refill will arrive at her apartment before her current supply ends. The coordinator scheduled an appointment with her primary health care provider, the lab, and a nutritionist for the next day to check her blood sugar and address any concerns she might have. Before concluding the call, Mr. Iamhereforyou informed Mrs. Dream that her dental records showed that she last visited her dentist for periodontal treatment three months ago and that she needed to follow up with her treatment. "What day works best for Mrs. Dream to schedule the dental appointment," Mr. Iamhereforyou asks.

Unlike Mrs. Dream, Mrs. Reality is having a difficult time controlling her blood sugar. She finds that she is unable to get an appointment for weeks to see her primary health care provider. She leaves a message on the voice machine of her provider's office asking to refill her medications. She frequently uses the local hospital's emergency department for a preventable condition associated with her diabetes and dental pain. She has severe periodontal disease, and as a result lost some of her teeth. This affects her quality of life and living standards. She feels unable to leave her low-paying job for a better one due to her oral health and the perceived unease others feel around her. She is trying to get dental care but Medicaid cut adult dental benefits and no dentist is willing to see her due to low reimbursement rates and spotty coverage. Her periodontal infection impedes her ability to control her blood sugar levels. As a result, she has more inpatient episodes, frequent emergency department visits for oral pain, and declining overall health.

While much is being done in Massachusetts to better coordinate care, oral health care is often left out of the discussion, leading to poorer health and higher health care costs. In addition to the pain and suffering, poor oral health has social and economic consequences. For example, low income adults avoid smiling (36%), and experience reduced participation in work and social activities due to the condition of their mouth and teeth [1]. The Massachusetts Health Policy Commission report found that 1 in 5 individuals have unmet dental care needs due to cost, adults account for 90% of preventable oral health emergency department visits, and MassHealth paid 48.8% of all oral health emergency department visits [2].

Massachusetts' cost containment reforms and the ACA encourages the transformation of health care delivery systems toward a holistic approach to population healthcare. By testing and experimenting with **value-based payment models**, these reforms encourage changes in the medical care delivery systems and financing by pooling the financial risk among multiple providers, representing a wider spectrum of health care providers to ensure holistic population health. This new vision of the health care delivery system is an opportunity to put the mouth back in the body and to acknowledge the importance of oral health to overall health and wellbeing [3]. Nearly 24% of Massachusetts' residents are enrolled in MassHealth [4], which plays a major role in providing care for Massachusetts' most vulnerable populations. In April 2016, the Massachusetts Secretary of Health and Human Services proposed a major reform to overhaul MassHealth [5]. This reform centers on a new integrated delivery system, known as the MassHealth Accountable Care Organization (ACO) Program. A pilot is expected to begin in December 2016, with the full program expected to begin October 2017. There are a number of ways **Massachusetts can take advantage of this reform to better integrate oral health into overall health, enhance patients' experience of care, improve the health of the population, and reduce the per capita cost of healthcare** [6].

This report is divided into four sections. The **first section** outlines evidence on the benefit of linking oral health to overall health, examines the challenges of the current oral health delivery system, and the consequences of separating oral health from general health care delivery systems. In the **second section,** we examine oral and general health care integration models and the evolution of the ACOs, including Medicaid ACOs. We examine the proposed MassHealth ACO program, and how the current proposal may enhance the delivery of oral health services. The **third section** analyses the current status of oral and general health integration in ACOs and highlights examples from five states with Medicaid ACOs that covers oral health for all or part of the Medicaid population. This section concludes by highlighting successful strategies and challenges to integrating oral health into ACOs. The **fourth section** recommends steps to providing greater access to more efficient integrated healthcare.

Section One: Disconnect of Oral and the General Health Care System

Unlike dental care, which is the responsibility of dental providers, oral health is broader and should be owned by all health providers regardless of their disciplines [7]. Our separate, stand-alone dental healthcare system does not foster comprehensive quality health care. The linkage between oral and

overall health and well-being is well established [7]. An oral examination can reveal signs of numerous general health problems, such as nutritional deficiencies and systemic diseases [7-9], including microbial infections [10], immune disorders [11, 12], injuries [13, 14], and some cancers [15, 16]. Evidence shows that oral health infections that begin in the mouth may travel throughout the body initiating and exacerbating general health conditions and could lead to death [17-19]. For example, periodontal bacteria have been found in samples removed from brain abscesses [20], pulmonary tissues [21], and cardiovascular tissues [22]. Periodontal disease may also be associated with adverse pregnancy outcomes [23-28], respiratory disease [29-32], cardiovascular disease [33-37], coronary heart disease [38], and diabetes [39-42]. It is also true that chronic diseases and medications can exacerbate oral health problems [43]. Further, poor oral health is associated with a number of social ills, including limited active engagement in society [44], loss of productivity [45], school absenteeism [46-49], inappropriate emergency department use [2, 50, 51], under-employment and unemployment [52-54], and reduced military readiness [55].

Despite evidence, oral health has been perceived as less important and disconnected from the rest of the body. In 2000, the US Surgeon General reported on the status of oral health, stressing that oral health is vital to general health and is especially responsive to preventive strategies [7, 56]. However, sixteen years after the Surgeon General's report, oral health continues to be a distant component of overall health, and millions of Americans go without dental care each year.

The disconnect between oral and overall health is multifactorial, as evidenced by the exclusion of oral health from health policy debates and the public perception that oral health is less important and separate from general health [56]. The disconnection is also apparent in the separation of health professional education and training systems, the oral health care delivery system, insurance system, financing structure, and coverage. The next section will detail the causes and current status of each factor.

Oral health delivery system

The separation between oral and medical care systems begins with separate education systems and professional cultures. Currently, oral health care is delivered through two fragmented models: private practice and the oral safety net, primarily Federally Qualified Health Centers (FQHC). The two models use different financing systems, serve different clientele, and provide care in different settings [57]. The dental delivery system is different from the medical system, with 69% of US private practice dentists

operating in a solo practice versus only 18% of physicians [58]. They have autonomy in their practice decisions and are better represented in urban and high-income areas [59, 60]. In Massachusetts, this structure resulted in 61 Dental Health Professional Shortage Areas (DHPSAs)[1], mainly in rural Massachusetts [2, 61, 62]. On average, 64% of patients in the Commonwealth have private dental coverage, 29% do not have any dental coverage, and 7% have publicly supported dental coverage [63].

In Massachusetts, community health centers offer dental services in 56 locations.[2] These centers employed more than 86 full-time dentists (1.01% of dentists with active licenses)[3], 160 dental assistants, 42 dental hygienists, and over 20 dental residents, serving more than 130,000 patients [64]. When MassHealth cut dental benefits for adults in 2010, these centers reported increases in new adult dental patients; 50% of these new patients were formerly served by private dental providers [65]. The oral safety net model provides care for population groups who face difficulty in accessing the private model due to geographic, financial, and other access barriers [57, 59, 66].

Oral health insurance system

Dental insurance is usually separate from medical insurance. Unlike medical insurance plans, private dental insurance plans are typically designed as a **prepayment plan, with a number of cost-sharing mechanisms such as deductibles, co-payments, and established annual maximum benefits** [67]. In most dental plans, **low occurrence, high-cost categories of dental diseases (which comes close to meeting the definition of an insurable risk) are not covered benefits or are reimbursed at the lowest percentage rate** [67]. This is the inverse of the medical insurance structure, and leaves those needing extensive dental work and suffering from dental pain with high and sometimes unaffordable dental expenses.

MassHealth offers comprehensive dental coverage for children and is slowly restoring dental benefits for adults (fillings and dentures) [2, 68]. However, in 2014, only 53% of children age 1 to 21 enrolled in MassHealth visited a dentist, and only 35% of dentists in Massachusetts treated a MassHealth patient [2]. Nationally, public dental plan coverage provided for children by Medicaid and Children's Health Insurance Program (CHIP), are considered more comprehensive compared to some private plans [69]. However, there are often greater barriers to accessing needed care [67]. Though 60-70% of individuals

[1] These areas encompass nearly a tenth of the total state population

[2] Available at http://www.massleague.org/findahealthcenter/

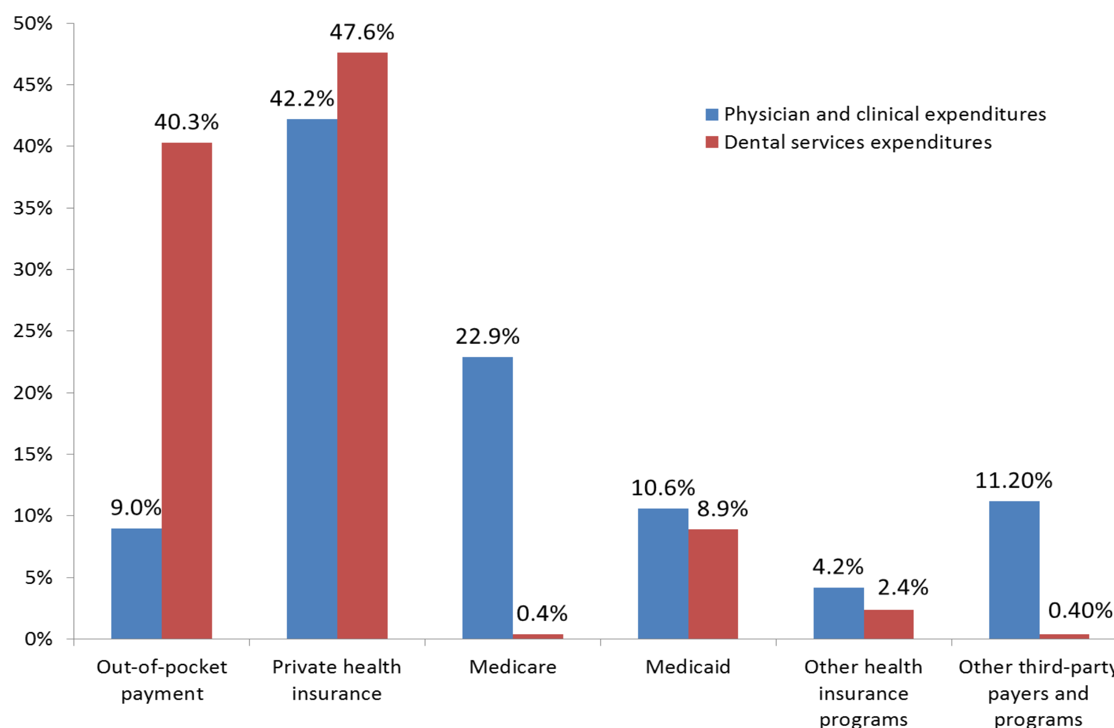
[3] Computed by authors from https://checkalicense.hhs.state.ma.us/MyLicenseVerification/

with public insurance receive their dental services care in the private delivery model [66], 39% of dentists in Massachusetts served Medicaid children compared to 42% nationally [70]. **If Massachusetts follows the national trend, then we would expect 1 in 6 dentists enrolled in MassHealth (or 7% of all dentists working in private practices) to be available to treat Medicaid patients [71].**

Financing structure

Similar to the national trend, Massachusetts oral health care accounts for just a fraction of overall medical costs, but it has far higher out-of-pocket costs. In 2014, dental services accounted for 3.8%of the $3.0 trillion in total national health expenditures; a scant amount when compared to 32.1% for hospital care, 19.9% for physician and clinical services, and 9.8% for prescription drugs [72]. However, **40.3% of dental services are paid out-of-pocket, compared to 9% out-of-pocket paid to physician and clinical services** [73], and is the second highest out-of-pocket expense for Americans after prescription drugs. Figure 1 illustrates the difference in the source of funding for physician and clinical services and dental services.

Figure 1. Expenditure on physician and clinical services compared to dental services by source of funding



Source: Personal health care expenditures by source of funds and type of expenditure. Centers for Disease Prevention

Coverage

The latest data on dental coverage in Massachusetts is for the year 2007[4]. In that year, 58% of Massachusetts residents were covered by an employer or an individual plan, nearly 25% had no dental insurance coverage, and 17% were covered through MassHealth [62]. The low priority given to oral health and dental insurance is emphasized by the absence of regular, systematic data collection on the status of dental insurance in important national surveys, including the CDC's National Health and Nutrition Examination Survey, which captures oral health status and medical insurance but not dental insurance. At the national level, in 2009, the rate of residents who lacked dental insurance was 2.7 to 3 times greater than those lacking medical insurance, compared to 2.5 times in 2003 [74, 75]. This coverage gap leaves nearly 36% of the population with no dental insurance. Additionally, dental coverage does not cover the full cost of treatment. In 2015, 1 in 5 individuals in Massachusetts did not receive needed dental care because they could not afford the cost of treatment [2]. The coverage gap caused by the significant reduction and elimination of adult dental benefits in many state Medicaid programs, and the decline in private dental insurance coverage rates among adults are two important drivers for the both a decline in adult dental care utilization and an increase in unmet oral health needs [76].

Benefits associated with integrating oral into overall health

Increasing evidence documents the advantage of oral health care integration. A research study conducted by the American Dental Association, Health Policy Institution documented a reduction of $1,799 in total health care cost for individuals newly diagnosed with type 2 diabetes when they received a periodontal intervention [77]. United Concordia reported annual medical cost savings of $1,090 for members with coronary heart disease, and $5,681 for members with stroke when these patients received periodontal treatment and maintenance [78]. Additionally, hospitalization was 21% lower among patients with chronic disease who received dental treatment compared to those with the same condition but did not receive dental treatment. The treatment and maintenance of periodontal diseases have been found to reduce medical costs and inpatient hospital admissions for pregnant women and patients with certain chronic conditions. For cerebral vascular disease, the average savings from the provision of dental care is $5,681 per patient per year; with a 21.2% decrease in hospital admissions; for

[4] http://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2015/09/expanding-dental-access-in-massachusetts

diabetic patients the average savings was $2,840 per year, including outpatient drug cost savings of $1,477, and a 39.4% decrease in hospital admissions [78, 79].

Section Two: Oral and General Health Integration Models

Approaches for oral and general health integration

A number of organizations initiated early efforts to integrate dentistry into a holistic health model of care. These integration efforts have taken many forms, from facilitated referrals between medical and dental providers, to full integration, in which providers are co-located and share infrastructure and electronic health records (EHRs) [77].

Facilitated referral and follow-up

Facilitated referral and follow-up models aim to formalize the process of referrals, referral tracking, and follow-ups between medical and dental providers. This helps facilitate effective collaboration between providers and ensures that dental services are accessible to patients who need it. Examples of this model include health centers that have formal contracts with dental providers for the provision of dental services [80].

Virtual integration

This model emphasizes the coordination that can occur with shared information provided through a common EHR that is visible and accessible by both medical and dental providers. The integrated medical-dental records used by the Veteran's Administration is an example of this type of coordinated care [80]. This concept can extend to new models of care, such as in emerging teledentistry models. Pacific Center for Special Care at the University of the Pacific, Arthur A. Dugoni School of Dentistry in California has a teledentistry model called the Virtual Dental Home to support an oral health delivery system where children and adults can receive preventive and basic therapeutic services in community settings. The Virtual Dental Home utilizes expanded-function dental hygienists, dental therapists, or assistants to clean and/or temporarily fill teeth as well as gather relevant clinical information, including X-rays, photographs, and dental and medical histories in community-based settings. Information is then uploaded to a secure database where a collaborating dentist can review them and put together an initial treatment plan if needed. If the treatment plan requires the skills of a dentist, the hygienist can easily make the referral. When the patient arrives at the dentist's office for the visit, the patient's dental records and images would have already been reviewed and the diagnosis and treatment plan would have been pre-determined [80, 81].

Shared financing

In a shared financing approach, medical and dental providers work together to improve access to dental care services for children and families and receive financial incentives rewarding their collaboration. These strategies include performance payments for primary care providers who successfully refer patients to dental providers and joint global financing arrangements. In Oregon, each CCO contracts with local dental care organizations to provide oral health services to beneficiaries [82]. Dental services are capitated under the current Medicaid managed care program and are part of the CCO's global budget. The local dental care organizations receive a per-member-per-month payment upfront to provide services and accept full financial risk for their assigned population[83]. Medicaid withholds 3% of CCOs' total funding and places the funds in an incentive pool. Their performance on 17 metrics, including children's utilization of dental sealants, determines what they can earn back [82].

Co-location

In this approach, dental and primary care providers deliver care in the same location. This approach is built on the idea that working together in the same location will facilitate inter-professional communication, referrals, and enhance the continuum of care. Examples of this approach are Federally Qualified Health Centers (FQHCs) that provide dental services at the same location as medical services [80]. Another example is Colorado's Co-Located Dental Hygienist Project. The Colorado Delta Dental Foundation has sponsored the co-location of dental hygienists in primary care settings with the goals of creating a true health home for children and changing practice culture. Most of the hygienists also practice part-time in a dental office, which helps create a natural referral system to help ensure continued access to care [84]. In 2015, a partnership between Northeastern University School of Nursing and Harvard School of Dental Medicine created an interprofessional collaboration nurse practitioner-dentist model of primary care. The nurse practitioner takes blood pressure readings, tests blood sugar levels, asks patients about their chronic conditions and works with dentists to educate patients on how to improve their oral and overall health [85].

Full integration

With full integration, dental care providers offer comprehensive preventive and restorative care as members of a health delivery system, which provides a single location for patients to receive comprehensive primary and specialty care. In this model, dental professionals are members of patient care teams. They provide primary dental services to children; deliver specialty-level dental care to children with special or advanced needs; and involve primary care physicians in oral health promotion, screening, and prevention [80]. The Health Resources and Services Administration (HRSA) published

preliminary guidelines for full integration of oral health care in the primary care setting [86]. The guidelines are designed for care delivery only. The main recommendations are presented in Table 1. Shared financing, health information technology and health records, and inter-professional training and education are essential for developing and sustaining fully integrated models.

Table 1. HRSA Dental and Medical Primary Care Integration Guidelines

Element of care model	Aspects of care delivery or organizational characteristics
Clinical Information Systems	Integrated health record and scheduling system (ideally electronic) Close the information loop on referrals; ensure report-back to medical providers with the date the patient was seen, treatment received, and plan
Decision Support	Greater understanding among medical staff of dental practices Understanding of the importance of oral health for children 0-5 years of age and pregnant women Referral mechanisms between medical and dental care with access ensured
Delivery System Design	Integrated care team pods Shared support staff Open access for children 0-5 years of age and pregnant women when seen in the medical clinic Dental liaison in medical department (dental packets created and ready to distribute to patients and staff) Dental screenings during well-child visits Medical providers discuss the importance of oral health visits with pregnant women and young mothers Oral health considerations are integrated into every appropriate medical visit Dental presence in medical clinic (i.e. a dental hygienist is present to provide screening during a health maintenance or sports physical exam) “Patient navigator” to perform medical, dental and mental health risk assessment
Self-Management	Patient education materials co-located Integrated self-management goal sheet Shared self-management “message” and interview techniques across departments
Organization of Healthcare	Co-location Increased respect and understanding of roles and contributions of medical and dental staff Measurements within medical primary care that address oral health System of care coordinated to address medical, dental, and mental health needs at each patient visit Integrated case management Shared language and understanding between medical and dental (cultural competency) Structural parity for dental (dental is viewed as having the same level of importance as medical)
Community Resources	Creating patient and community awareness that oral health is an integral part of overall health Insurance and reimbursement structures adjusted to encompass oral health as part of comprehensive health care Dental screenings incorporated into WIC, Head Start, and Early Head Start visits

Source: Health Resources and Services Administration, Oral Health Disparities Collaborative Implementation Manual. (February 2008.) WIC denotes Women, Infants and Children Program. Notes: HSRA denotes Health Resources and Services Administration; WIC denotes women infants and children.

Oral and general health integration models

A number of organizations have already integrated dentistry into a holistic model of care. These models or initiatives have taken various forms. The most important of these models is the **Patient-Centered Medical Home (PCMH).** PCMH is patient-centered, comprehensive, team-based, coordinated, accessible, and focused on quality and safety [87]. The PCMH model aims to achieve better access, coordination of care, prevention, quality, and safety within the primary care practice by improving access to care and coordinated care, ensuring continuity of care and community linkages, utilizing information system support and active care management. To create a strong partnership between the patient and primary care clinician, PCMH uses information and communication technology to support both the coordination of patient care activities and strong longitudinal relationships between patients and their providers [88]. As of 2011, the National Committee for Quality Assurance certified over 1500 PCMHs that met accreditation standards in the following categories: enhancing access and continuity of care, using data to identify and manage patient population, planning and managing care using evidence based guidelines, tracking and coordinating care, and measuring and improving performance [89].

One financing method for this delivery model is based on a per-member-per-month “bonus” for improving primary care services for each patient in the medical home. An evaluation of 17 state-based PCMH initiatives demonstrated net savings in total medical costs for enrolled patients, reduced the per capita costs for Medicaid patients, decreased the use of emergency and hospital visits for non-emergency treatment needs, increased provider participation in Medicaid programs, and improved patient and provider satisfaction [90-92].

Despite the potential of this model, few practices using PCMH have integrated oral health services into their coordinated services. Examples of those community centers that have integrated oral health services into coordinated services include the Community Health and Dental Care PCMH in Pennsylvania and International Health Services PCMH in Seattle [58, 89, 93, 94]. The Community Health and Dental Care PCMH in Pennsylvania includes both medical and dental providers in a co-located setting, and offers a full range of dental services regardless of ability to pay [89]. International Health Services PCMH in Seattle was founded to better serve needy Asian, Native Hawaiian, Pacific Islander, and other underserved communities in a culturally and linguistically appropriate manner. The center’s two sites each house co-located medical and dental providers [89].

Other models of oral health care integration include: community health care team model [95], community care organizations model [96], and public health care case management model [97]. These models emphasizes the important role played by primary health care providers on coordinating care among health professionals, ensuring continuity of care, and building appropriate communication channels among health providers, including dentists. Building on the experience gained from these initiatives, the ACA encouraged the development of innovative health care delivery systems that focus on primary health care, including the Accountable Care Organizations (ACOs) [58].

Massachusetts is among the leading states in the number of active ACOs. By January 2016, Massachusetts had between 28 to 69 commercial and public ACOs from the 838 ACOs at the national level [98]. An **Accountable Care Organization** is an organization of clinically integrated health care providers that work together to provide, manage, and coordinate health care (including primary care) for a defined population. ACOs are characterized by payment and care delivery models that seek to **tie provider reimbursements** to whether the **ACO providers as a group** succeed at improving patients' care and health outcomes based on **specified quality metrics** [99], and at reducing the total cost of care for an assigned population [58]. **ACOs are accountable for the cost and quality of care both within and outside of the primary care settings** [100]. ACOs must include specialty care, hospital care and post-acute care such as rehabilitation services, in addition to other health providers such as dentists, in order to be able to control costs and improve health outcomes across the entire care continuum [100]. The economies of scale, both in a number of beneficiaries and financial resources, gives ACOs the power to discontinue the services of providers who fail to meet quality standards [100]. Building on the experience of PCMHs, ACOs aim to improve access to services, enhance care coordination and integration, ensure that patients receive the appropriate care at the right time, **avoid unnecessary duplication of services**, and prevent medical errors [101].

In April 2016, Massachusetts Secretary of Health and Human Services proposed to overhaul MassHealth through the creation of Medicaid ACOs [5]. Massachusetts' Medicaid program submitted a request to amend and extend the MassHealth Section 1115 Demonstration waiver to the Center for Medicare and Medicaid Services. A pilot is expected to begin in December 2016, and the full implementation is expected to start in October 2017 [5]. This amendment aims to enact payment and delivery system reforms that promote a holistic approach to population health by integrating and coordinating care among different health providers (physical and behavioral health, **dentists,** long-term service and supports, and health-related social services), and hold providers accountable for quality and total cost of

care. Additionally, the amendment aims to maintain the near-universal coverage, sustain support to safety net providers and address the opioid addiction crisis [5]. The state aims to contract with entities such as ACOs, Managed Care Organizations, and integrated care models like One Care plans[5] to ensure a continuum of care a defined population. To address the variation in providers' level of preparedness to establish and participate in accountable care delivery systems, three options have been proposed, as highlighted in Figure 2.

In **Model A ACO/MCO,** provider-led ACO would form a partnership with a managed care organization (MCO). Under this partnership, the ACO/MCO will have the dual role of covering members and providing care. Model A ACOs are responsible for both administrative health plan functions (such as claims payment and network development) and for coordinated care delivery for the full range of MassHealth MCO covered services. Model A ACOs will be paid prospective capitation rates and will bear insurance risk for enrolled members' costs of care [5].

Model B ACO is an advanced provider-led entity that contracts directly with MassHealth. In this model, the ACO has the option to offer members preferred provider networks, which delivers well-coordinated care and population health management. Under this model, MassHealth's directly contracted provider network (and contracted managed behavioral health "carve-out" vendor) will be available to Model B ACO members. This model offers shared savings and losses with the ACO based on the total cost of care for ACO's assigned population [5].

Model C ACO is a provider-led ACO that contracts directly with MassHealth MCOs. Members will enroll in MCOs, which would serve as their health plan and is responsible for contracting provider networks and paying providers for MCO covered services for these members. MCO members will be assigned to Model C ACOs, primarily based on primary care relationships. This model offers shared savings and losses with the ACO based on the total cost of care for ACO's assigned population [5].

To monitor the performance of ACOs, MassHealth will **initially focus on previous national experience in the primary care setting and align its quality measures with existing national and state measure sets.** Priority domains for MassHealth's quality measurement strategy are prevention and wellness, reduction of avoidable utilization, chronic disease management, behavioral health/substance abuse, long-term service, and support and member experience [5]. As for dental services, MassHealth members will

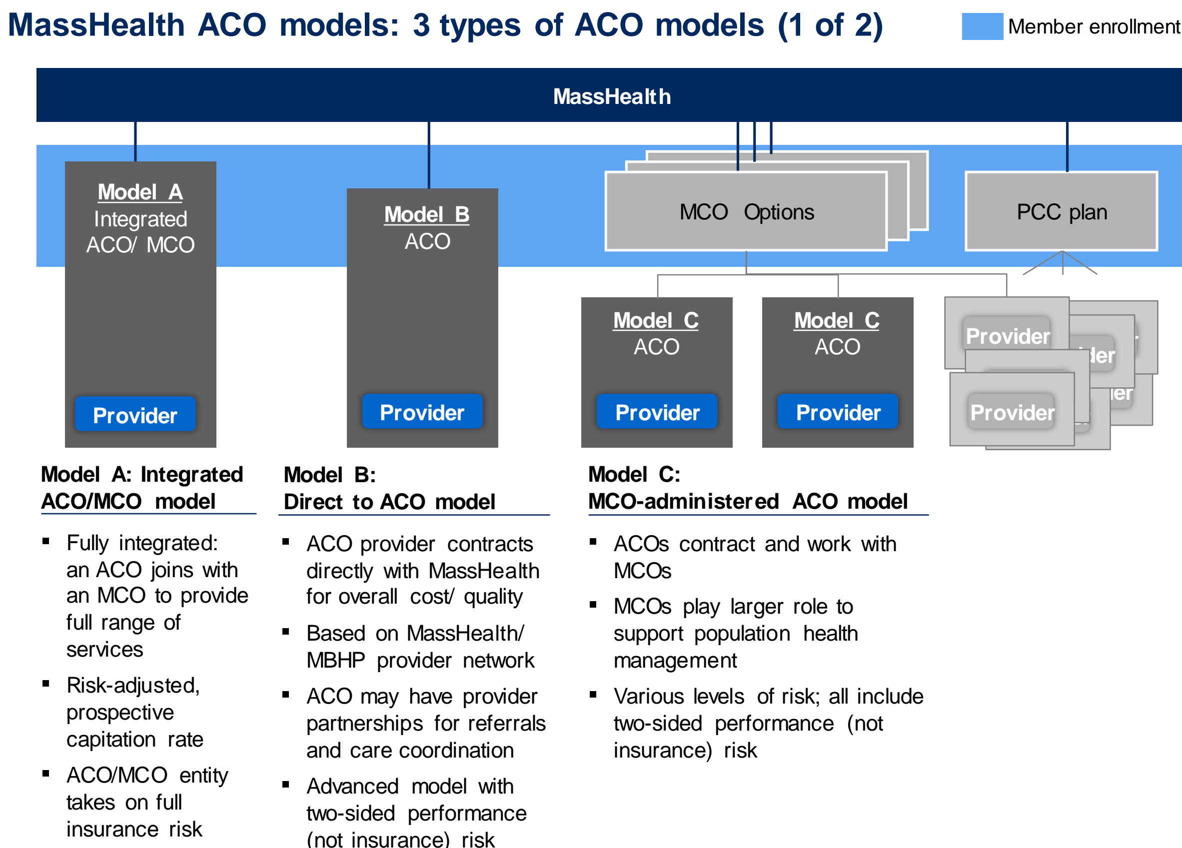
[5] One Care is an integrated program for individuals between the age of 21 and 64 years old who are eligible for MassHealth and Medicare. The program focuses on a care coordinator who manages the health needs of enrollees.

continue to receive dental care benefits according to MassHealth Dental Program regulations[6]. **MassHealth will promote the integration of oral health and quality of oral health care through a range of methods (e.g., the inclusion of oral health metrics in the ACO quality measure slate, contractual expectations for ACOs).** Dental services will continue to be paid on a fee-for-service basis, and associated dental costs will not be counted against the ACO total cost of care budget [5].

MassHealth will fund eligible entities to support their infrastructure and capacity development, such as expansion of workforce capacity, health information technology investments, performance management, and data analytics capabilities. MCOs will have a significant role in supporting the ACO program. They are expected to support providers in making the shift to accountable care through the **provision of data analytics and reports for population management**, and MCOs may also help ACOs determine how best to integrate behavioral health and long-term services and support community partners into care teams [5].

[6] Regulations number 130 CMR 420.000 and 450.105

Figure 2. MassHealth ACO Models



Source: MassHealth, *Section 1115 Demonstration Project Amendment and Extension Request*. June 2016, Commonwealth of Massachusetts, Executive Office of Health And Human Services, Office of Medicaid. ACO denotes Accountable Care Organization; MCO denotes managed care organization; MPHP denotes Massachusetts Behavioral Health Partnership

Section Three: The Potential Role of ACOs

Accountable Care Organizations and oral and general health integration

The majority of ACOs are not responsible for the cost and quality of dental services [102]. While Medicaid ACOs are nearly three times more likely to include dental care than commercial ACOs, fewer than 1 in 4 Medicaid ACOs include responsibility for cost and quality of dental services [103]. The researchers did not find any differences in the characteristics of ACOs responsible for dental services and those that are not regarding patient panel sizes; care management payments or advanced shared savings payments; leadership models; mean number of primary care or specialty providers; and provision of behavioral health, pediatric and home care services. However, ACOs responsible for dental services are more likely to include an FQHC or a community health center, receipt of upfront capital

investments from the federal government, and possession of Medicaid or mixed-payers contracts, as compared to ACOs not responsible for dental services [102, 103, 104].

States' Medicaid programs are required by the ACA to provide comprehensive dental coverage for children under the 21 years of age, but this mandate does not include adults and as a result only 15 states offer extensive dental benefits to adults. For low-income adults with Medicaid insurance, this reduces their chances to receive necessary dental care [82]. Section 1115 waiver presents an opportunity for states' Medicaid programs to close that gap by integrating oral health care into broader innovative payment and care delivery system reform efforts. The Center for Medicare and Medicaid Services' State Innovation Models Initiative encouraged states to explore models of integrating oral health into primary care delivery and payment reform models. Of the 36 states receiving State Innovation Models Initiative funds, only Connecticut, Oregon, and Virginia are integrating oral health in emerging payment and delivery models. Other states, e.g., Iowa, Virginia, Washington, Maine, and New Jersey are exploring models for Medicaid benefit design and expansion, and Wisconsin, Washington, Virginia, Minnesota, and South Carolina are exploring practice level oral health reform, i.e., including oral health care guidance and services in primary, and specialty, medical care [82].

An Oregon 1115 waiver created Coordination Care Organizations (CCO) with the goals of improving population health outcome and reducing projected state and federal Medicaid spending by $11 billion in 10 years [105, 106]. Oregon has 16 payer-led geographic Medicaid CCOs; all but two are not-for-profit organizations [105, 106]. All Medicaid CCOs in Oregon began to integrate dental care services in 2014 [107]. The CCOs have a **global Medicaid budget with capitated and non-capitated components**. The CCOs have the flexibility to allocate their budget as they deem appropriate. Each CCO contracts with local dental care organizations to provide beneficiaries' oral health services [82]. **Dental services are capitated under the current Medicaid managed care program and are part of the CCO's global budget**. The local dental care organizations receive a per-member-per-month payment upfront for provider services and accept full financial risk for their assigned population[83]. **Medicaid withheld 3% of CCOs total funding and placed this fund in an incentive pool.** Their performance on 17 metrics, including **children's utilization of dental sealants**, determines what they can earn back [82]. The expansion of Medicaid increased access to care, including dental services, for nearly 200,000 individuals. With increased dental coverage, the demand for dental services exceeded expectations during the first year of the program and lead to delays in receiving care [105].

Hennepin Health, a county-based provider-led Medicaid ACO, has an integrated dental program. Minnesota's Medicaid program covers dental services for Medicaid expansion adults. Hennepin Health employs dentists, has a comprehensive network of affiliated dental practices, and contracts with a number of independent providers to increase access to dental care and reduce emergency department visits for dental pain. While employed dentists are part of the risk-sharing arrangement and are eligible for bonuses, affiliated dentists are not. One of the major challenges facing Hennepin's oral and general health integration is information sharing between the care team [108]. The results from Hennepin Health are promising. Between 2012 and 2013 there was a 9.1% decrease in emergency department visits, a 3.3% increase in outpatient visits, and improved access to dental care [108].

Other examples are emerging in Medicaid and Medicaid/commercial ACOs. Washington's ACO Better Health Together operates the Dental Emergencies Needing Treatment project. The project contracts with dental providers to serve low-income adults with oral health conditions to reduce unnecessary emergency department use for dental pain [82]. Using a Health Care Innovation grant, the University Hospitals Coordinated Care ACO in Ohio created the pediatric ACO University Hospitals Rainbow Care Connection. This ACO created a physician network that manages 200,000 children in northeast Ohio, one-third of whom are Medicaid enrollees. Using a co-location integration model, the Children's Hospital established a pediatric dental center to care for patients with acute or chronic problems, including children with special health care needs [89, 104].

Strategies and challenges to oral and general health integration through ACOs

Integrating oral into overall health requires a new vision and approach to health care delivery. The experience from early Medicaid ACOs shows that while leadership is committed to a holistic health approach, other priorities are currently postponing the integration of oral health. There is still time to increase the involvement of dental providers in the ACO and perhaps, even on a smaller scale, test the integration of oral health in one or several regions of the state. Lessons can be learned from programs around the country moving in this direction.

Dental coverage innovation

Nationally, ACOs serving the Medicaid population are more likely to offer dental services [102]. The inclusion of adult dental benefits as a core component of the holistic health care model is crucial for successful oral and general health integration [108]. Additionally, dental insurance could be integrated with medical insurance, or at least a partnership could be established among dental and medical

insurance companies, to ensure that both will gain from the benefits associated with oral and general health integration [108]. Medicaid programs can encourage ACOs or Medicaid MCOs to build partnerships with dental providers to improve the overall health of the population, and reduce cost. While this investment will require additional expenses in the short run, the return on investment might be worth the upfront cost.

Kaiser Permanente, a partnership between Permanente Dental Associate and Kaiser Foundation Health Plan in the Washington and Oregon, is one example. A memorandum of understanding determines the global payments that Permanente Dental Associate receives from Kaiser Foundation Health Plan based on a per-member-per-month fee for each Kaiser Permanente member with dental coverage. This arrangement kept patients healthier and increased patients' engagement in their health care [108].

Partners for Kids, an ACO in Ohio accepts full financial risk for dental services delivery and payment for serving Medicaid children. By contracting with Ohio Medicaid Managed Care plans, Partners for Kids receives a capitation fee to care for more than 300,000 pediatric beneficiaries. Using a patient-centered medical home model and evidence-based disease management approach, Partners for Kids decreased operation room utilization for dental conditions by 55%, reduced the rate of new cavitation by 69%, and reduced dental pain by 50% [108].

Aetna, a managed health care company, launched its dental/medical integration program in 2007 [109]. Acknowledging the importance of care coordination, in addition to outreach activities to the dental and medical communities, Aetna sponsored joint education courses with physicians and dentists, emphasizing the oral and general link. Integrating dental and medical health records were key to identifying high-risk members and providing case management and coordinated care between dental and medical providers. By identifying 2 million at-risk members and providing $50 million in outreach services and enhanced dental benefits to help prevent more serious and costly conditions, Aetna improved the health of 20% of its members who have chronic conditions. Dental/Medical Integration program members had a 3.5% reduction in hospital admissions compared to a 5.4% increase for non-members. Members also used 42% less major and basic services. Targeted dental care outreach resulted in a 10% increase in preventive dental care, and on average a program member had 17% lower medical claim costs compared to non-members [109].

Focus on primary care and adequate coordination channels between dental and medical providers

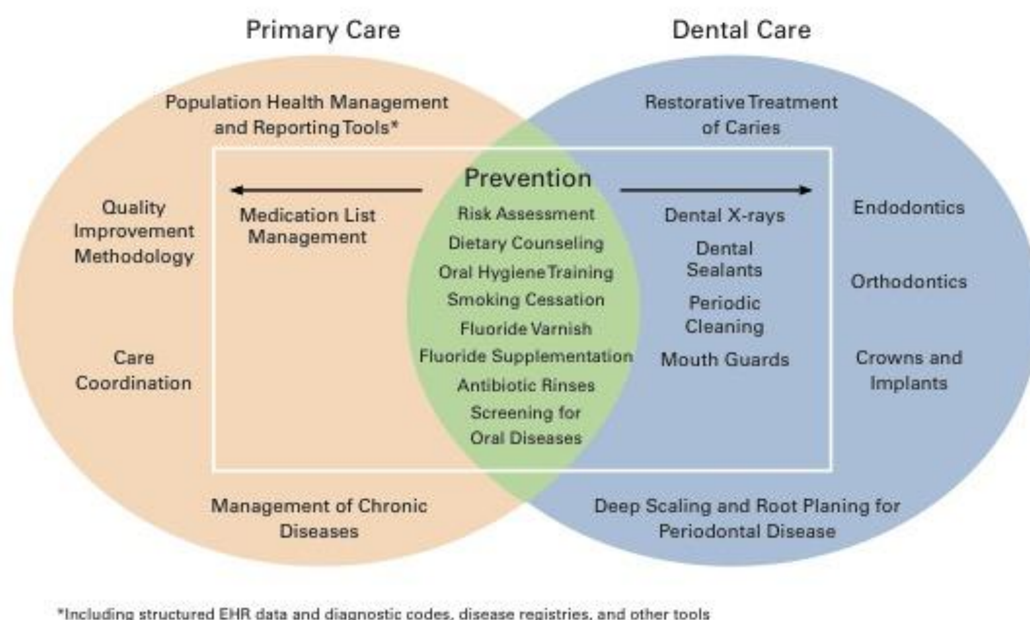
To reach the triple aim of improving clinical outcomes, increasing patient satisfaction, and reducing cost, new approaches and partnerships are needed. When it comes to oral health, primary care providers and dentists have complementary roles. Primary health care providers and their care team have the skills and resources needed to educate their patients on oral health risks and how to prevent oral disease, address challenges with self-care, coordinate access to dental care, implement preventive measures (e.g., apply fluoride varnish), and identify patients in need of dental care [110].

Proactive coordination of care is central to this delivery model. Referral models between primary healthcare providers and dentists are available, and the know-how to structure agreement between primary care providers and other providers, including expectation and information exchange, are established. By including assessment of oral health as a routine activity within the primary care practice, and actively referring patients to dentists, primary health care providers can elevate the assessment of oral health to a status equal to that of every other organ system in the body. By actively coordinating referrals, primary health care providers can establish the kind of partnership with dentists which is standard among health professionals across disciplines [110]. An oral examination can reveal signs of numerous general health problems, so dentists can identify and diagnose some diseases, e.g., diabetes, at an early stage, and refer patients to their primary care provider for early treatment and disease control. Additionally, dental providers can provide additional services such as smoking cessation counseling.

Using a simple framework developed by Qualis Health, primary health care providers can ask about oral health risk factors and symptoms of oral disease, check for signs that indicate oral health risk or active oral disease, discuss findings with patients and decide on the best response, deliver preventive interventions and/or refer the patient to a dentist for treatment, and document and follow-up with patients and their families, as illustrated in Figure 2. In Massachusetts, Holyoke Health Center, a PCMH-certified Federally-Qualified Health Center, offers fluoride varnish application during primary care visits. The primary care team members are involved in oral health risk assessments, oral screenings, and preventive interventions. Additionally, the care team emphasizes the need for dental follow-up in their communications and discussions with their patients [111].

Hennepin Health addressed the needs of its Medicaid expansion population by shifting care from hospitals to ambulatory settings using a team of care coordinators. The care coordination team consisted of a community health worker, an RN clinical coordinator, and a social worker. For members with high utilization, Hennepin Health offers additional medical and social services, such as housing navigation and intensive case management [108].

Figure2. Partnership between primary care providers and dentist to improve patients' health



Source: Hummel, J., et al., *Oral Health: An Essential Component of Primary Care*. June 2015, Qualis Health: Seattle, WA.

Many primary care providers find that adding oral health care to their practice competes with other priorities. They do not have the time, capacity, or financial incentives to address oral health during the patient's short visit [82]. Currently, primary health care providers are not compensated for their time when it comes to oral health assessment, coordinating care, or referring a patient to a dental provider [112]. New, innovative payment mechanisms should allow for the reimbursement of oral health care services delivered in non-traditional settings, e.g., schools, and by non-traditional providers.

While primary care providers and alternative oral health professionals are providing some preventive oral health services as part of the overall preventive services, shortages of dentists, especially in rural areas, might force the ACOs to rely on dental providers operating outside their circle of associates for complicated cases. This might reduce their ability to control cost and therefore give dental care a lower priority compared to other health needs.

Providers’ outreach and education activities

There is a need to challenge the attitude, culture, and beliefs of medical and dental providers to move toward a collaborate model that gives equal value to all body parts, including the mouth. Primary care providers are already stretched, and transitioning the culture to include dental care coordination will be a challenge. [80]. However, there is an opportunity in the overlap between medical and dental school curriculums to help change the culture and begin integrating the mouth back into the body. In the short term, providers’ outreach and education activities may enhance collaboration and partnership between health and dental providers by addressing the awareness and cultural gap between dentists and medical providers. These activities may take many forms.

At the Holyoke Health Center, provider and care team education was a core and vital part of the center’s overall integration strategy. Nurses and medical assistants received training on dental diagnoses from the Department of Public Health, and primary care staff received training on pediatric oral health from quarterly presentations delivered by the pediatric dental residents [111]. To reduce emergency department use for oral health, MassHealth piloted an oral health emergency department diversion program in 2014, where emergency room providers were educated on how to refer patients to MassHealth’ dental services vendor. Within 24 hours the vendor’s team would contact the patient to educate them of their benefits and help them find a dental home [2]. Similarly, at the national level, Delta Dental of Iowa educated emergency department staff on appropriate referrals and strategies to help emergency department patients seeking care for dental pain to establish a dental home. Trillium Coordinated Care Organization in Oregon sought expert advice to explain to medical staff why dentists engage in certain activities, as well as to dentists why medical staff do things in a certain order [108].

Beneficiaries’ outreach and awareness

Educating Medicaid beneficiaries about the importance of oral health and making sure they are aware of their dental coverage or low-cost option in the dental safety net is crucial [80] since most of the Medicaid expansion population is not aware of this benefit [82, 108]. Several approaches have been used to reach this goal. Using a team of outreach and referral staff, Delta Dental of Iowa **targeted patients seeking care at emergency departments for dental pain** to educate them of their eligibility for dental coverage and how to get an appropriate referral for dental providers. The same approach was used by Trillium Coordinated Care Organization in Oregon and Hennepin Health, Minnesota [108]. Innovative approaches have been used to incentivize members’ good oral health practices by

establishing a dental home where the continuity of care is promoted. However, the change in patients' eligibility for Medicaid coverage might be a challenge to optimal implementation. Hennepin Health, Minnesota, uses a coordination team to help enroll new members and identify their health needs to coordinate care visits [108].

Integrated health records

As Massachusetts moves toward integrating health services through ACOs model, it will need to invest in technology. The concept of ACO is based on identifying high-cost, high-risk patients, then engaging these patients in health improvement activities instead of waiting for patients to seek more expensive care. Separate electronic health records (EHRs) might have discrepancies in patients' health information that might be considered life threatening. One study reported 99 discrepancies between the medical and dental records for 178 joint patients. Six of these discrepancies were classified as "life threatening" [113]. A unified electronic health record system that allows bidirectional data sharing between medical and dental providers is necessary to effectively coordinate care. For this model to function**,** better data and improved data system capabilities are needed to properly implement a value-based system, e.g., **reliance on reviewing utilization data and unified health (medical and dental) records** [58].

Permanente Dental Associates, P.C., medical and dental providers share the same patient support tool. Dentists who have access to this tool can review the patient medical record and highlight gaps in medical care. Similarly, physicians are encouraging their patients to fill the dental care gap by advising them to see their dentist for routine care or advance treatment [108]. Three large government health care systems contain integrated medical-dental records: the U.S. Armed Forces, the Indian Health Service, and the Veterans Health Administration. However, integration of dental medical records is rare in the private sector. Medicaid and the private sector might learn from the experiences of these three institutions regarding the best approach to integrate dental and medical records.

The Accountable Care Act facilitated the establishment of the health information networks. However, as of 2014, the infrastructure did not exist within this exchange to directly access patient electronic dental records across organizations. Any dental record information could only be shared through direct provider-to-provider communication [58]. Sharing patient data is not common among dental practices, and dental providers tend to use a mix of electronic health records and paper records. This presents a challenge in integrating oral and systemic health records [108]. In some ACOs, dental providers are able to view their patients' medical records but medical providers are unable to view dental records.

Moreover, integrated (dental-medical) EHRs are complex and expensive to implement, especially in places where an EHR system is already in use. Introducing a new system will require retrofitting the system or retraining personnel. Additionally, the regulatory environment and hesitancy of some health plans to share patient health information between medical and dental providers without challenging security assurance procedures is an obstacle to a care model that relies heavily on coordination and communication [108]. However, there are new public-private initiatives, such as the Sequoia Project, that aim to create a national framework for exchanging health information among networks, such as Carequality launched in August 2016 [114]. With appropriate investment and incentives, a similar platform can be developed to integrate dental and medical records.

Payment arrangement and risk sharing and providers incentives for providers

Building partnerships between dental and other health providers to improve patients' care experience and overall health is beneficial to health providers, patients and the health care system. The environment is well set for such a partnership with current changes in the dental care delivery system. More dentists are participating in large dental practices. This model of care delivery reduces overhead costs and might encourage large practices to treat Medicaid beneficiaries, and allow them to invest in technologies needed for the oral and general health integration [115]. In general, improving reimbursement rates encourages dentists to participate in the Medicaid program. ACOs can enhance access to dentists by offering dental providers bonuses for meeting certain requirements, such as completion of risk assessments, regular patient visits, and provision of evidence-based care [108].

The experience of Hennepin Health of Minnesota emphasizes how risk sharing arrangements can improve coordination and enable a comprehensive care model among partners who share a global payment [108]. Partners for Kids in Ohio, who played the dual role of payer and provider, viewed capitation and risk sharing as a strategic approach to maintain their solvency, since they are paid up-front for care [108]. In Oregon, the health authority associated the dental care challenge with access to dental services, not quality of dental services [108]. While the local dental care organizations receive a per-member-per-month payment and accept full financial risk for their assigned population, dental provider reimbursement methods vary from the traditional fee-for-service to capitation, i.e., per-member-per-month payment [108, 111].

In the short run, the demand for dental services might exceed the current supply. This excess in demand might cause some dissatisfaction for both patients and dental providers. ACOs might contract with

private dental providers to provide certain services, usually on a fee-for-service basis. The ACO may not be able to influence the behavior of or fees of these dentists. Thus, the ACO might decide to postpone the inclusion of dental services, especially when such inclusion is optional.

Quality measures

For proper integration of oral and general health within an ACO model, there is a need for the dental community to work together and agree on stronger quality indicators to link dentists' payment to patient's outcome measures. While several entities[7] have independently sought to develop quality and performance measures for dentistry, significant challenges face the development and use of valid, reliable, feasible, and useable quality measures. Key among these challenges are (1) limited access to data, specifically claims data, to validate the measure, (2) lack of standardization in measurement, with many duplicates (3) limited evidence to support many of the measures currently available[8], and (4) lack of an organized system relating disease risk to diagnostic measures [116]. Dental Quality Alliance is leading the national effort to develop quality indicators for dentistry [117]. The majority of the available quality or performance measures focus on access and process rather than outcomes. More work is needed in this area to enable ACOs to design a payment mechanism for dental providers and to agree on standardized performance measures.

The early experience from five ACOs serving the Medicaid Expansion population reflects these challenges. As part of the arrangement with the Minnesota Department of Human Services, Hennepin Health is required to meet a set of agreed upon quality measures, one being the annual dental visit rate [108]. Permanente Dental Associate (PDA) has a long history of integrating oral and systemic health. PDA designed a set of around 40 evidence-based quality measures to track quality and outcomes in four categories: (1) patient care experience, e.g., patient satisfaction with care, (2) patient safety, e.g., if dentist performed a "procedural pause" prior to a surgical procedure, (3) resource stewardship, and (4) clinical effectiveness, e.g., sealant rates for patients within certain age ranges [108]. Medicaid withheld 3% of CCOs total funding and placed this fund in an incentive pool. Their performance on 17 metrics, including children's utilization of dental sealants, determines what they can earn back [105].

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[7] Including federal government agencies such as the Centers for Medicare and Medicaid Services, Health Resources and Services Administration, the Agency of Healthcare Research and Quality, commercial private purchasers/payer, data analytic companies, and leading health plan accreditation entities.
[8] The need to adopt evidence-based principles in the delivery of care in dentistry is needed, but it is limited due to insufficient or inconclusive evidence—there are limited quality clinical trials on oral health therapies, and dentistry does not have a tradition of formally reporting specific diagnoses or associating such diagnoses with specific services (Bader, J.D. and D.A. Shugars, Variation, treatment outcomes, and practice guidelines in dental practice. J Dent Educ, 1995. 59(1): p. 61-95.)

Section Four: Recommendations

Environmental change in medical and dental care is opening opportunities to better integrate oral into the overall health care system. First, the Affordable Care Act expanded oral health coverage for children, as well as some Medicaid adult beneficiaries, by requiring that all qualified health plans offer pediatric dental services as an essential health benefit, which increases the incentives and overall capital to expand dental plans. Second, there is a growing body of evidence that suggests a correlation between oral health and some chronic conditions; integration of oral and general health has a favorable impact on chronic disease management and cost containment. Third, and most importantly, integration of dental care will improve overall health and wellbeing.

There is neither a standardized oral-general health integration model for Massachusetts to copy, to meet the needs of the diverse residents of the Commonwealth, nor will a standardized model work for every setting or organization. However, the state could use the pilot phase of Medicaid ACOs to experiment with different oral and general health integration initiatives based on these core principles:

1. Involve the dental community in ACO's activities and invite a dental representative to participate on the ACO's board. This involvement will optimize oral health integration when it comes to the planning process to ensure that dental is a core part of the value proposition, especially for individuals with special needs. This integration will allow ACOs to set priorities and face challenges associated with the variation of adult dental coverage by starting with dental services that have the most benefit, covered, and has important health outcome.
2. Improve access to dental care and the coverage of dental services. The continuous change in the status of Medicaid adult dental benefits is an ongoing challenge, since it does not allow providers (or payers) to properly plan for patients' care or harvest the benefits of an integrated system. A clear vision for the state regarding adults' dental insurance is necessary to encourage ACOs to include dental services in their integration strategic plans.
3. Facilitate debate to reach consensus on oral health quality measures that meet the approval of payers, providers, and patients.
4. Move away from fee-for-service to a more value-based, integrated, patient-centric payment model. A value-based payment could be an opportunity to fix the relationship between dentists and Medicaid dental program by establishing a fair rate acceptable for both providers and payers, reduce the program administrative burden (claim processing and checking patients'

eligibility), and remove the need for services and claims auditing. However, moving in this direction requires the development of quality measures to ensure the appropriate implementation of this approach, avoid underutilization of services and move away from the traditional fee-for-service payment to quality-based payment. To reach this goal several steps need to be taken.

   a. Build partnerships among dentists to establish a network that can cover the needs of Medicaid population.
   b. Assess the Medicaid population to establish a fair reimbursement rate or per-member-per-month fee based on patients' needs, coverage, and expected utilization. Linking National Health and Nutrition Examination Survey data to states' Medicaid data is a feasible approach to estimate the need and to monitor progress. National surveys linked to Medicaid and Medicare claims data can play a major role in assessing dental needs and monitoring access to dental services and dental health outcomes.
   c. Invest in dental diagnostic codes and dental quality metrics to monitor dental utilization and quality.

5. Incentivize providers to adopt integrated EHR systems while simultaneously incentivizing EHR vendors to move toward developing more portable and integrated record products. This should improve communication among providers via integrated EHRs.
6. Encourage primary care providers to take an active role in oral health, i.e., conduct oral health assessments and needs to prevent dental diseases. Currently, primary health care providers are not compensated for their time when it comes to oral health assessment or referring patients to dentists. It is necessary to provide the right incentives by reimbursing primary health care providers for dental evaluation, and to increase payments to Medicaid dental providers to encourage them to accept and treat more Medicaid beneficiaries. Additionally, new innovative payment mechanisms should allow for the reimbursement of oral health care services delivered in non-traditional settings, e.g., schools, and by non-traditional providers. While these changes will increase access to preventive services, more is needed to encourage a referral system between primary health care providers and dentists, similar to referrals to other health professionals. Two crucial steps are coverage of dental services for adults, and encouraging dentists to participate in Medicaid and treat complex cases that alternative oral health providers are not able to perform, for example, endodontic treatment.

7. Promote interprofessional education: reform/modify health professional education to assure that providers, including nursing, hygiene, other members of the care team, can deliver truly integrated and comprehensive health care. Current changes in class curriculums are encouraging step for new professionals. Sponsoring joint courses for dental and medical providers has proven to be invaluable by creating a venue for discussion, exchange ideas, and enhance communication.
8. Invest in research and pilot studies to better understand how these models work.

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