SAFETY NET MEDICAL HOME INITIATIVE

IMPLEMENTATION GUIDE SUPPLEMENT

ORGANIZED, EVIDENCE-BASED CARE: Oral Health Integration

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SECTION 1

Introduction

Oral health is an essential component of comprehensive primary care. The delivery of preventive oral healthcare is consistent with the principles of whole-person care and should be standard practice within a patient-centered medical home (PCMH) or advanced primary care practice. The integration of oral health into primary care is not intended to displace dental care, but rather to expand the workforce addressing preventive oral health and improve patient health outcomes.

In the last 20 years, three major publications have brought the importance of oral health to policymakers' attention: *Oral Health in America: A Report of the Surgeon General*, released in 2000; *Advancing Oral Health in America,* released in 2011 by the Institute of Medicine; and *Integration of Oral Health and Primary Care Practice,* released in 2014 by the Health Resources and Services Administration (HRSA). This implementation guide builds upon, and is aligned with, this prior work. It offers guidance, resources, and tools to help primary care practices integrate oral health into the primary care setting and achieve the vision of addressing oral health as part of whole-person care. The guide follows *Oral Health: An Essential Component of Primary Care* (2015), which presented the Oral Health Delivery Framework (further described in this guide) and called for actions to support implementation. For more information on the development of the Oral Health Delivery Framework, refer to page 16.

Recommendations made in this guide are based on the experiences of 19 primary care practices that tested the Oral Health Delivery Framework for 4–20 months and on input from a panel of experts in primary care and dentistry. More information on field-testing sites is included on page 16; specific examples of their successes and challenges are profiled in case vignettes throughout this guide, and shared through in-depth case examples available in Section 9: Field-Testing Results and Case Examples.

"Oral health is integral to overall health." ***—Oral Health in America: A Report of the Surgeon General***

ALSO AVAILABLE

Oral Health: An Essential Component of Primary Care white paper

Benefits of Integrated Oral Healthcare for Patients

All patients can benefit from integrated care. The story below illustrates how a primary care intervention for a common oral health condition might have prevented unnecessary complications, pain, and suffering.

Ms. D's story

Ms. D is a 48-year-old female, diagnosed with diabetes seven years ago, who weighs 254 pounds. She lives with her husband and two children and has medical and dental insurance. She works as a clerk at her local grocery store. Her problem list includes obesity, diabetes, and smoking.

Since her diabetes diagnosis, she has regularly seen her primary care clinician but has struggled to keep her HbA1c level below 8. She has a "sweet tooth," and with a full-time job and two teenagers, she doesn't have much time for cooking meals at home. Ms. D has occasionally mentioned pain in her gums while eating over the last several years, but her clinician has focused instead on her blood pressure and glycemic control, being somewhat unsure about how to address Ms. D's oral complaints in the short amount of time they have together.

During a conversation about diet, the clinic's nurse suggests to Ms. D that she see a dentist. However, Ms. D does not have a relationship with a dentist and is uncertain who to contact or how to request an appointment. Ms. D is already taking time off work to attend her medical appointments and is concerned she will lose her job if she requests more time off.

Then, one weekend, Ms. D presents at the emergency department (ED) with severe pain in her jaw. Upon examination, the ED clinician finds she has a tooth abscess from advanced decay. The ED clinician gives her pain medication, prescribes antibiotics to treat the infection, and gives her a list of dentists to call on Monday morning. The pain subsides and she is able to schedule an appointment with a dentist 10 days later, at which point the tooth is extracted.

Ms. D returns to her primary care clinician for a regular diabetes care check-up, and tells her about the experience in the ED and what she was told about her teeth. Ms. D's clinician feels badly that things progressed to that point, and urges her to continue to see the dentist regularly for ongoing care. She feels frustrated at the limited options she has to offer her patient.

In a primary care practice integrated with oral health preventive care, Ms. D's clinician would examine her mouth at regular intervals to assess her oral health. She would give her patient clear recommendations on brushing and flossing, and would have referral agreements in place with multiple dentists. Given Ms. D's high risk for periodontal disease because of her diabetes, the primary care clinician would ensure that the patient was receiving regular dental care. When early signs of decay were first observed in the primary care office, the clinician would alert the patient and refer her to her dentist for diagnosis and treatment. The practice's referral coordinator would help Ms. D make an appointment if necessary, and ensure that Ms. D saw her dentist for early treatment that could prevent loss of the tooth and the avoidable ED visit.

Source: Modified from Hummel J, Phillips KE, Holt B, Hayes C. *Oral Health: An Essential Component of Primary Care.* Seattle, WA: Qualis Health; June 2015. Reprinted with permission.

Highlighted Impact Data and Field-Testing Lessons

- Among the 19 field-testing sites, over the course of 20 months, 13,771 patients were screened for oral health issues.
- 4,518 patients had fluoride varnish applied to their teeth.
- 1,255 patients without a regular dentist were referred to dental care.
- Through field-testing, 80 clinician care teams were reached, and began addressing oral health in their primary care practice.
- Implementation of the Oral Health Delivery Framework was feasible for a diverse group of primary care practices, though the level of implementation varied.
- Sites did not report a negative impact on patient flow efficiency once the initial phase of implementation had passed.
- Spread has been effective at sites that have engaged in it—spreading from 27 clinicians to 80 clinicians over 20 months.

The Change Concepts for Practice Transformation: A Framework for the Patient-Centered Medical Home

"Change concepts" are general ideas used to stimulate specific, actionable steps that lead to improvement.

The Safety Net Medical Home Initiative (SNMHI) was a five-year demonstration project to help primary care safety net sites become high-performing patient-centered medical homes (PCMH) and achieve benchmark levels of quality, efficiency, and patient experience. The project also established a framework for PCMH transformation to help guide practices through the transformation process. The framework includes eight change concepts in four stages:

- Laying the Foundation: Engaged Leadership and Quality Improvement Strategy.
- Building Relationships: Empanelment and Continuous and Team-Based Healing Relationships.
- Changing Care Delivery: Organized, Evidence-Based Care and Patient-Centered Interactions.
- Reducing Barriers to Care: Enhanced Access and Care Coordination.

The Change Concepts for Practice Transformation were extensively tested by the 65 practices that participated in the Safety Net Medical Home Initiative and have since been used by other collaboratives and practices nationwide. They were derived from reviews of the literature and discussions with leaders in primary care and quality improvement. They are supported by a comprehensive library of training materials that provide detailed descriptions and real examples of transformation strategies. These resources are free and publicly available. To learn more, see Change Concepts for Practice Transformation.

Care integration programs, like oral health and behavioral health, involve all four of the higher-level change concepts. The decision to place care integration and population management for specific clinical topics under the Organized, Evidence-Based Care Change Concept was made with the understanding that key changes for Patient-Centered Interactions, Enhanced Access, and Care Coordination are also heavily involved.

Message to readers

Practices beginning the PCMH transformation journey often have questions about where and how to begin. We recommend that practices start with a self-assessment to understand their current level of alignment with the most current Patient-Centered Medical Home standards and identify opportunities for improvement. The SNMHI's self-assessment, the Patient-Centered Medical Home Assessment (PCMH-A), is an interactive, self-scoring PDF that can be downloaded, completed, saved, and shared.

Readers are encouraged to download additional Organized, Evidence-Based Care materials available from the Safety Net Medical Home Initiative:

- Organized, Evidence-Based Care Executive Summary provides a concise description of the change concept, its role in PCMH transformation, and key implementation activities and actions.
- Organized, Evidence-Based Care Implementation Guide introduces the Chronic Care Model and examines the connections between it and the PCMH, then focuses on critical aspects of organized, evidence-based care including planned care, decision support, and care management.
- The Organized, Evidence-Based Care supplement Improving Care for Complex Patients: The Role of the RN Care Manager provides practical recommendations about providing care management services to high-risk patients.
- The Organized, Evidence-Based Care supplement Behavioral Health Integration provides a practical guide and flexible model for primary care practices to follow to integrate behavioral health services into their practice.
- Webinars provide additional examples, tips, and success stories and highlight the best practices of SNMHI sites and other leading practices.

Organized, Evidence-Based Care

The eight Change Concepts represent the critical dimensions of PCMH transformation. Each Change Concept is supported by a series of key changes, which provide a practice with more specific ideas for improvement.

Organized, evidence-based care (OEBC) is care that is based on scientific evidence and planned and delivered so that the team optimizes the health of their entire panel of patients. OEBC in a PCMH consists of designing each visit to meet a patient's preventive and chronic illness needs, using planned interactions, and ensuring appropriate follow-up care. Evidence-based guidelines are embedded into daily clinical practice as well as shared with patients and their family/caregiver. High-risk patients are identified to ensure they are receiving appropriate care management services.

The key changes for OEBC are:

- Use planned care according to patient need.
- Identify high-risk patients, and ensure they are receiving appropriate care management services.
- Use point-of-care reminders based on clinical guidelines.
- Enable planned interactions with patients by making up-to-date information available to clinicians and the care team at the time of the visit.

Similar to the issues that surround behavioral health and the role of the PCMH, oral health problems are common, significantly impact patient health and quality of life, and are often co-morbid with other physical health problems.[1–5] If patients' behavioral health or oral problems go un- or under-treated, it may be more challenging to address their other physical health problems. For these reasons, behavioral healthcare and oral healthcare are critical components of OEBC.

Health Information Technology

Oral Health Integration in the Age of Health Information Technology

The integration of oral health into primary care practice is interwoven with health information technology (HIT), and yet it is important to remember that this is about oral health, not about HIT. Because HIT is related to each aspect of integrating oral health in primary care, each section of this implementation guide contains specific HIT guidance in a special call-out box at the end. The exception is Section 7: Using Data for Quality Improvement, where, because of the topic, HIT is woven throughout the section. The importance of HIT in care integration lies in the fact that HIT brings to bear powerful tools for clinical decision support and measuring the way care is delivered. In this way, HIT opens a door to viewing oral health integration through the lens of population health.

For those practices with limited HIT resources, the message is that oral health integration does not require HIT. Important activities for primary care teams include understanding behaviors that place patients at risk for oral disease, routinely looking in patients' mouths, recognizing signs of oral disease, and referring to a dentist when necessary. It is important to acknowledge that HIT is a useful tool for managing information, creating efficiencies in workflows, and facilitating care coordination activities, but lack of HIT resources should not be a barrier to addressing oral health in the primary care setting.

SECTION 2

The Case for Change: Delivering Preventive Oral Health Services in the Primary Care Setting

Introduction

There are many reasons to integrate oral health preventive services, such as applying fluoride varnish and offering patient and family education on oral health, into a primary care setting. Building on the work published in the white paper Oral Health: An Essential Component of Primary Care, the case for change and importance of oral health are reviewed. This section concludes with a fictional case example that presents a vision for the future of oral health integration, including:

- Describing the structure and function of a successful oral health integration program.
- Reviewing challenges and opportunities.
- Discussing the key ingredients for success.

"I've always felt that your teeth and your mouth can affect your whole body. Poor oral health has been linked to heart disease, poor diet, missing work, missing school. I've always felt it should be part of medical care."

— Practice Manager in an urban federally qualified health center

The Burden of Oral Disease

Oral health is essential for healthy development and healthy aging, yet nationwide there is an unacceptably high burden of oral disease. Tooth decay (dental caries) is the most common chronic disease of childhood.[2] Tooth decay has significant negative impacts on school attendance and academic achievement and places young children at risk for repeated exposure to general anesthesia with resulting lifelong implications for overall health.[6,7] Over one-quarter of adults have untreated dental caries[8] and more than 35 percent have moderate to severe periodontal disease, which can result in pain, tooth loss, and systemic infection.[9] The emerging pattern of evidence suggests that periodontal disease acts as an accelerator for diabetes and cardiovascular disease complications. In pregnant women, periodontal disease is associated with an increased risk for preterm labor, low birth weight, and spreading cariogenic bacteria to infants during the first months of life.[10–16] Disparities in oral health are significant, with the greatest impact on the most vulnerable populations.[17, 18] While oral complications are often discounted or minimized, research and experience demonstrate that a person's oral health impacts their overall health and quality of life.

"I could see how the lack of oral care resources was impacting our patients negatively. Even though a visit was supposed to be about hypertension, we had to keep talking about their oral pain issues. We thought if we could get their oral health under better control, we'd be better able to address their health issues."

—Wendy Hughes, ARNP,
Grand Coulee Medical Center

Oral disease is also a growing cost concern. The total cost of dental care in the U.S. exceeded $111 billion in 2013, with much of this expense for restorative interventions that could have been avoided with adequate prevention and/or early detection and intervention.[19] In 2013, $2.1 billion was spent on emergency department services for oral complaints— further highlighting the opportunities for prevention, early detection, and coordinated care.[20, 21] Although the generalizability has yet to be determined, analyses of large insurance data sets suggest potential for significant savings in total healthcare costs resulting from treatment of periodontal disease in patients with chronic conditions such as diabetes and heart disease.[1]

For more information on the burden of oral disease, refer to Oral Health: An Essential Component of Primary Care (2015).

"We're reaching out to the community dental offices to figure out a workflow so we can get a consult to them and they can send it back to us. We've connected with a couple of community dentists who feel excited about working with us. They like that now they have someone to reach out to if they need medical support (like if a patient needs a blood pressure before oral surgery)."

— Practice Manager in an urban federally qualified health center

Incorporating Oral Health in Routine Medical Care

Integrating oral health into primary care addresses a currently unmet need. It is becoming clear that in order for accountable care organizations to successfully manage clinical outcomes, population health, and total cost to achieve the Triple Aim, whole-person care, including oral health, must be part of the strategic plan. This guide provides information and tools to address oral health in an algorithm-driven manner, ensuring that the work is done in a way that minimizes the impact on the primary care team.

Incorporating preventive oral healthcare in routine primary care has many advantages. The first is access for patients. Primary care teams have frequent and predictable contact with the patients at highest risk for oral disease. High-priority populations include children, pregnant women, women of childbearing years, and adults with chronic diseases such as diabetes, end-stage renal disease, cancer, and/or HIV/AIDS. This implementation guide frequently references patients with diabetes, pregnant women, and children because these were the populations selected by the practices that chose to field-test implementation of the Oral Health Delivery Framework (Framework). However, among these populations, many of the risk factors for oral disease and the disease processes themselves are largely the same. Lessons learned from one high-risk population are likely to apply to others, including frail elderly, adults and children with special needs, migrant agricultural workers, and people experiencing homelessness.

Prevention and early detection are foundational to effective primary care. Primary care teams provide risk assessment, screening, and case finding for every other body system (e.g., skin, heart/lungs). They also routinely arrange for specialty care, and help patients and families navigate the broader healthcare system. Primary care teams in "patient-centered" and other advanced practice settings are trained to engage patients in goal setting and self-care—the very skills most patients will need to reduce their risks for oral disease by changing their diet or hygiene habits.

Oral health integration can serve as an opportunity for primary care teams to develop, refine, or enhance workflows and processes that will benefit other aspects of patient-centered care. The techniques and overall integration approach recommended for oral health integration will be familiar to practices engaged in other practice transformation work. Care integration programs frequently share common patterns regardless of the clinical topic (behavioral health, pharmacy, eye care, foot care), and lessons learned in the process of integrating oral health into primary care are often generalizable. Several practices engaged in the oral health integration field-testing efforts discovered opportunities for other improvements, and developed processes that were applicable to other aspects of their practice transformation work, such as improving referral processes, improving care team skills in population management of chronic diseases, and population health reporting.

Some practices found that integrating oral health and primary care led to improvements in other systems of care.

"This program is helping us to improve our own internal data reporting and get more meaningful information to clinicians and staff. The health center had already realized that data reporting is important, but was still in the beginning stages of working on it. This was one of the first programs that really emphasized data reporting, and this work helped support the health center's data reporting efforts as a whole."

—Samantha Jordan, DMD,
MPH Lowell Community Health Center

Primary Care's Role in Protecting and Promoting Oral Health

It is important to define several concepts that are closely related but distinct:

- **Oral health** is an aspect of overall health and may be broadly defined as a state of being free from pain, diseases, and disorders affecting the oral cavity.
- **Oral healthcare** (or the "care" of oral health) is a part of overall patient care and includes activities such as risk assessment, health promotion and education, and referral for dental care.
- **Dental care** is a critical component of oral healthcare, and includes health services specifically focused on maintaining, attaining, or restoring oral health.[22]

The role of the primary care clinician and team is to provide oral healthcare by assessing and reducing risk, screening for signs of early oral disease, implementing preventive measures (e.g., applying fluoride varnish), identifying patients in need of dental care, and coordinating referrals to dentistry. These actions are delineated in the Framework and described in detail in Section 3: The Oral Health Delivery Framework. The oral disease process involves pathophysiology (e.g., infection, inflammation) similar to many other disease processes. Primary care clinicians and teams have the knowledge and skills required to understand and intervene in the oral disease process, although many will benefit from a clinical review, discussed further in Section 4: How to Prepare for Successful Implementation. Staffing definitions used in this guide are provided in Section 5: Staffing Options and Workflow. Primary care teams are not expected to definitively diagnose or treat oral disease. Incorporating oral health in routine primary care thus requires close partnerships with dentist-led teams. Strategies for building these partnerships are explored further in Section 6: Structuring Referrals to Dentistry.

"We are in a severe dental shortage area, so anything we could do to improve oral health will have a significant impact. We're very rural, not quite frontier. We've been looking at different ways we could help bridge that gap and meet the need, and this felt like it was something we could do to help address oral health. In our needs assessment for all patients we ask about dental needs, and it's a need for everyone."

—Heather Hicks, RN, Heart of Kansas Clinic

The Case for Change: Incorporating Oral Health in Routine Medical Care PowerPoint tool outlines the role primary care providers can play in addressing oral health issues.

What Integrated Care Could Look Like: A Fictional Case Example

It is helpful to have a clear vision of success when beginning the process of creating system change. This fictional case example illustrates what full and robust implementation of the information laid out in this guide might look like. A primary care network integrates oral health into primary care.

The Cul de Sac Family Practice Network (CdS) is a private, multi-site primary care group in a suburban environment that recently achieved Level 3 National Committee for Quality Assurance (NCQA) medical home recognition. Two years ago, CdS finished deploying a new program to all of their clinics with the aim of integrating preventive oral health services into their primary care practices using the Oral Health Delivery Framework. They began with a goal of providing fluoride varnish to all children under age six twice a year and emphasizing oral health for the whole family through oral hygiene/dietary coaching for parents and caregivers. They expanded the program to include a yearly oral health screening assessment first for pediatrics, adolescents, and adults with diabetes, then for pregnant women, and finally, for all patients.

Structure and function of a successful program

All CdS clinics are structured around large, multidisciplinary primary care teams staffed by one full-time equivalent (FTE) physician, one FTE physician assistant, one FTE registered nurse (RN) for care management and population health, and four FTE clinical assistants to handle patient flow. Each team manages a panel of approximately 3,500 patients. All of the care teams incorporate oral health into their normal office visit workflow. Clinical assistants review upcoming visits on the schedule each day during a huddle. Patients identified as overdue for their yearly oral health assessment are flagged and get the brief oral health assessment as part of the visit regardless of the chief complaint. In that assessment, the clinical assistants follow a protocol to determine whether the patient meets the risk criteria set by the practice for referral for tooth decay or gum disease, and they look in the patient's mouth for visual signs of oral disease. The resulting information is documented in the patient's chart and reviewed and confirmed by the primary care clinician. Those patients found to be at risk for tooth decay receive fluoride varnish from the clinical assistant, and a tutorial in optimal oral hygiene practice and dietary coaching from the RN. Those with signs of tooth decay or gum disease are referred to a dentist by the primary care clinician.

The CdS internal quality reports are reviewed each month as part of a regular quality monitoring process. The reports reflect an increase in preventive oral health services for all their patients. They demonstrate that those patients found to have tooth decay, or to be at high risk for tooth decay, are receiving basic preventive interventions. The clinic pharmacist has developed a tool to help the care teams identify patients on medications that impair salivary function, placing them at higher risk for tooth decay, and offer alternatives for many of the most problematic medications.

Challenges and opportunities

As successful as it appeared, CdS still struggled with the challenge of maintaining a reliable referral network for patients needing dental procedures and coordinating care with dozens of different dental offices. They identified a group of dentists who owned a clinic called Suburban Smile Dentistry and who were intrigued by the prospect of growing their dental practice by partnering with a primary care group. They were willing to accept both commercially insured and Medicaid-insured patients and treat people without insurance on a sliding scale based on income. The two groups began with a small-scale pilot test limited to the CdS clinic closest to the Suburban Smile office. They negotiated and signed a referral agreement, then established a protocol for sharing clinical information both as part of the referral order and in the consultation report sent back to the ordering clinician. The pilot demonstrated a strong-enough business case that the stream of patients referred from CdS to Suburban Smile Dentistry was both manageable and would be able to produce sufficient revenue when scaled up to allow Suburban Smile to hire another dentist and dental hygienist.

Key ingredients of success for CdS

1. The primary care clinicians expanded their preventive clinical care knowledge to include oral health.
2. Primary care and dental clinicians built a relationship between their practices to provide better care for their patients, and they discovered there was a business model to support it.
3. The original step of providing fluoride varnish to all children under age six opened a door that led them to try other oral health integration innovations they otherwise may not have considered.
4. Clinicians were well served by moving in stages, testing each component on a small scale within a single care team to ensure it worked as expected before adopting on a wider scale.

Similar themes will reappear throughout this guide, illustrated through vignettes and case examples that share actual experiences from sites that field-tested various aspects of the Framework.

Health Information Technology
Using Data to Make Oral Health Integration an Organizational Strategic Priority

The widespread adoption of health information technology (HIT) in the form of electronic health records (EHRs) has transformed healthcare. Although the transition has been challenging, information technology has ushered in a new era in which it is now possible to use data to measure the processes by which care is delivered and, increasingly, the effect care delivery has on clinical outcomes. When planning an oral health integration program, it is useful to think through the ways in which data can be used to build and maintain organizational support for the program:

- One of leadership's roles is to initiate and lead change in an organization.[23] An effective strategy in leading change is to use data to show why the current state is unacceptable, and define the goal of change in terms of a desired measurable level of improvement. For example, at the beginning of an oral health initiative, an organization may have no data on the prevalence of periodontitis among its own population of patients with diabetes. However, it is possible to use national[1] or state prevalence figures as a proxy for the number of patients with diabetes for whom the organization provides care who have significant periodontal disease. This helps clinicians and other stakeholders understand the likely scale of the problem affecting diabetes outcomes that they need to monitor.
- Once an oral health program is underway, practice-level data are a powerful form of positive feedback that can demonstrate to a care team that their workflow innovations are improving a key measure. Data showing improvement are also effective in efforts to spread successful innovation to an entire delivery system. If a practice is unable to write clinical reports using EHR data, an alternative approach is to pull 20 or 30 charts and conduct a chart review to get a snapshot of how well a new process is working. For example, a practice may start the year with no information about periodontal disease among its diabetic patients, and by the end of the year has evaluated 80 percent of them for gum inflammation, finding it in nearly half of patients, with a resulting referral for treatment. This tells a compelling story.
- Presenting data in graphic format, such as a run chart (sample shown here in Figure 7.3), makes it much easier for people to quickly understand their meaning.

"As with all of our Uniform Data System (UDS) measures, we share that information with clinicians, both our clinic-wide rates and our per/clinician rate. Clinic-wide measures are posted on the wall of every exam room so patients can also see that information. We run the data reports quarterly, because we want to know why the people who are doing well are doing so well—what is that clinician doing with her team that makes it happen? And if someone else is not doing as well with fluoride varnish, we want to ask why it isn't being done, to know why we're missing it."

—A. Stevens Wrightson, MD, Bluegrass Community Health Center

It is important to articulate a clear vision of the information technology resources the program will need in order to measure the work of the care teams and the impact it is having on patients—in other words, to tell the story of how integrating preventive oral health into primary care will improve the care patients receive.

As new information becomes available, it is leadership's job to use that information to help the organization understand how oral health integration is aligned with the organization's strategic goals in the context of the Triple Aim: patient experience, population health, and total cost. In each of the following sections, we will dive in detail into how health information technology can be optimally configured to support the operational requirements of oral health integration and can be leveraged to enhance its benefit to patients.

Click here to jump to Section 3: HIT: Document—the Role of Health Information Technology.

Supporting Materials, Section 2

The Case for Change: Incorporating Oral Health in Routine Medical Care: This modifiable slide deck can be used by a champion in your practice organization to educate and inspire others. It includes basic information on the burden of oral disease and why oral health is an important component of comprehensive care. There are also spaces and directions for customizing messages for your community and audience.

SECTION 3

The Oral Health Delivery Framework

Introduction

Three things are required for integrating oral health into primary care:

1. A clear definition of the actions primary care teams can take to protect and promote oral health in the primary care setting.
2. A streamlined process for fitting oral health into the primary care workflow. This process must be clear, with enough detail that teams have a dependable blueprint to follow, yet it must be flexible enough to be adapted to different team configurations, diverse populations, and varying organizational priorities.
3. A practical model for close collaboration between medicine and dentistry.

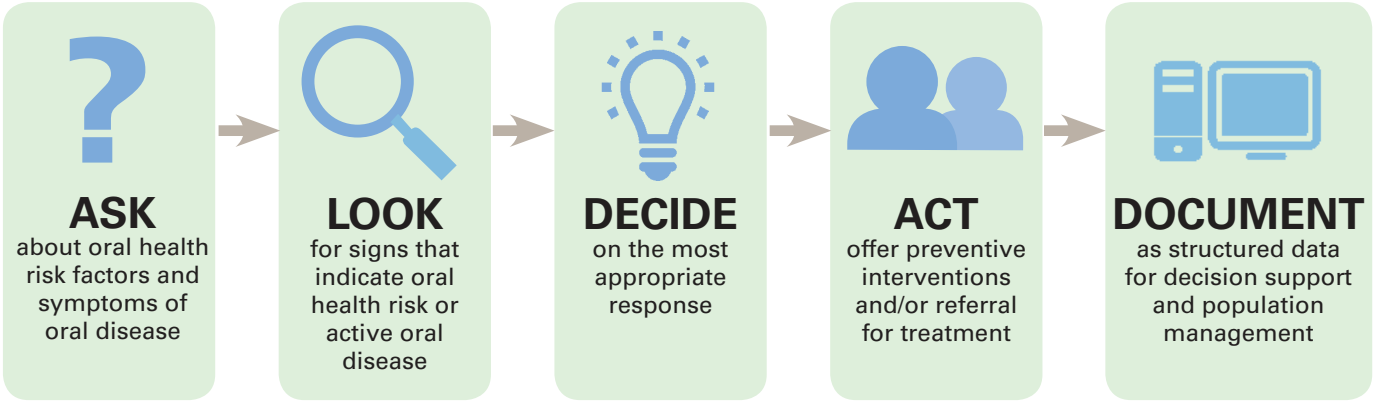
A fourth component is also important:

4. The ability to make a business case to support oral health integration, based on each unique practice environment and state.

"We live in a rural area and it is a drought, not only for primary care but especially for dental. Learning more about oral health integration and what we can do to make a difference in the oral health of our patients was a perfect fit. We don't have fluoridated water here, and haven't for the last 40 years. Our entire pediatric population has tooth decay in some form, and most of our adult patient population does too. Being able to offer oral health services is such a benefit to our patients."

—Keri Scott, Director of Quality, Rinehart Clinic

Figure 3.1: The Oral Health Delivery Framework



Source: Hummel J, Phillips KE, Holt B, Hayes C. *Oral Health: An Essential Component of Primary Care.* Seattle, WA: Qualis Health; June 2015. Reprinted with permission.

The Oral Health Delivery Framework (the Framework), shown in Figure 3.1, directly addresses the first of these requirements by providing a structure for defining the operational components of oral health integration. This section describes the Framework and its development in detail. Section 5: Staffing Options and Workflow provides detailed information on workflow optimization strategies that a practice can use to achieve the second requirement. The third requirement is addressed in Section 6: Structuring Referrals to Dentistry. Financing is addressed in Section 8: Leveraging Success: Spreading and Sustaining, although variability in reimbursement and financing across the country precludes recommending a single business model for oral health integration that applies to all primary care practices.

Oral Health Delivery Framework Development

The Framework was developed in partnership with a panel of experts, including primary care and dental care clinicians; leaders from medical, dental, and nursing associations; payers and policymakers; a patient and family partnership expert; and oral health and public health advocates. Additionally, it has been endorsed by a broad array of primary care and dental organizations. View a list of endorsers and supporters here. The Framework builds upon the 2014 Health Resources and Services Administration (HRSA) recommendations published in Integration of Oral Health and Primary Care Practice, confirming that primary care clinicians are well positioned to incorporate five interprofessional core clinical competencies for oral health preventive care, which align with the five components of the Framework.[24] The Framework also aligns with similar efforts focused on oral health integration, such as the Head, Eyes, Ears, Nose, Oral Cavity, Throat (HEENOT) model focused on educational and clinical innovation.[25]

Originally designed as a conceptual framework, the Framework was successfully tested by 19 diverse primary care practices between 2014 and 2016. These sites included urban, suburban, and rural practices in five states around the country. Collectively, they focused on four unique target populations for their initial pilots and utilized five different electronic health records (EHRs). The sites varied in size, and included both private practices (hospital-based, independent, and part of a large integrated delivery system) and community health centers (most of which are federally qualified health centers). For examples of practices' implementation approaches and successes, refer to case vignettes throughout this guide. Impact data, summary results, and in-depth case examples are available in Section 9: Field-Testing Results and Case Examples.

Alignment of the Framework with clinical thinking

The Framework is modeled on the way clinicians organize their clinical documentation using a "SOAP" (Subjective, Objective, Assessment, and Plan) note. ASK corresponds to the "Subjective" portion of the chart note, and LOOK to the "Objective" portion. DECIDE overlaps with "Assessment," and ACT may be considered the equivalent of "Plan."

Responsibilities of Primary Care and Dental Care Teams

Defining what primary care can do

It is important to clearly define the responsibilities of the primary care team and the responsibilities of the dental team. The approach to oral health, as presented in the Framework, entails a scope of work that is very similar to the preventive care that primary care teams already provide and is, in fact, closely aligned with the core competencies of primary care. Oral healthcare is not an extra service that needs to be tacked on to existing services. Rather, it is a currently unmet need that offers opportunities to create efficiencies for comprehensive care and to manage chronic health conditions more effectively.

Primary care team responsibility

- **Understanding the pathophysiology**: Care teams can become familiar with the anatomy of teeth and periodontal tissue. Clinicians extend their understanding of how the immune system, neuroglandular function, and bacterial infection, etc., interact to affect the health of these structures. The primary care team does not need an in-depth understanding of the oral anatomy and pathophysiology. Rather, the goal is to understand at a high level the processes that maintain the balance of oral health, how that balance is disrupted, and to learn to distinguish normal from abnormal when looking at the teeth, gums, and oral soft tissue.
- **Case finding:** Care teams do not have to diagnose oral disease in order to recognize it; rather, their goal will be to distinguish abnormal from normal, and refer patients with suspicious patterns to a dentist for diagnosis and treatment.
- **Risk reduction:** Primary care teams will want to focus their limited resources on identifying modifiable risk factors such as inadequate oral hygiene, poor dietary habits, cariogenic bacterial exposure, acid reflux, and oral dryness* that can be addressed in primary care with practical interventions like fluoride varnish, antacids, education, and behavior change. This approach is similar to the way risk factors for other conditions, such as heart disease, are addressed in the primary care setting by treating high blood pressure and encouraging weight loss through diet and exercise.
- **Individualized medical therapy:** Primary care clinicians can learn to recognize dry mouth as a symptom that indicates a likely medication side effect with a potentially serious negative impact on the teeth.
- **Care coordination:** Care teams will be well served by establishing and maintaining relationships with dental colleagues just as they do with medical/surgical specialists. These relationships appear to function best when based on referral agreements and formal referrals to dentistry that include referral tracking and follow-up to ensure referrals are completed and the loop is closed.
- **Clinical quality improvement:** Primary care teams need to be able to measure the impact of their efforts so they can modify their interventions as needed to reach their goal (applying a quality improvement methodology, described in more detail in the Quality Improvement Implementation Guides Part 1 and Part 2).

* Oral dryness is a clinical term that describes objective and visible dryness of the oral mucosa. "Dry mouth," a term used later in this document, is a subjective term describing a patient experience. This feeling can occur without the presence of clinical oral dryness. The Framework recommends that primary care teams ASK about dry mouth and LOOK for oral dryness to determine the appropriate preventive action to take.

"Frankly, integrating oral health is one of the easiest things a primary care clinician can do. It takes about one extra minute to do an oral assessment using the HEENOT approach and the Oral Health Delivery Framework. When you're taking a history you should be thinking about oral health, and when you're asking other questions you're already asking—about medical conditions, health behaviors, family history—think about oral health. It needs to become a standard part of a primary care visit."

—Madeleine Lloyd, PhD, FNP-BC, MHNP-BC, Clinical Director, Nursing Faculty Practice, New York University

Dental care team responsibility

- **Accepting referred patients:** It is the dental team's responsibility to see patients referred by primary care teams according to established referral agreements. For most practices, this will mean accepting a mix of patients, including those with Medicaid and those with and without private dental insurance.
- **Diagnosis and treatment:** Dentists will diagnose and treat patients referred to them.
- **Patient identification and reporting:** Dental practices that collaborate with primary care, by accepting referrals, will need to develop a process for identifying patients who have been referred to them by a primary care referral partner so they can send a consultation note back to the referring clinician. The consult note should describe what was found, what was done, and the care plan. More information on this step is provided in Section 6: Structuring Referrals to Dentistry.

To download and use a referral template for communicating primary care referrals to dentistry, click **here.**

"At Light Dental Studios, we accept patients with or without insurance. For some insurances, we might get a lower reimbursement, but the benefit is that we get a more committed patient population, patients who are committed to the practice. All new patients have value to any dental practice. If they have a good experience with our company, then they speak highly of us to friends and family, and that is how our company has continued to grow." **—Angie Dunn, DDS, Light Dental Studios**

Oral Health Interventions in Primary Care

The Framework defines what can be done in primary care to protect and promote oral health. It is designed to fit into an office visit workflow, and offers care teams considerable flexibility in when and how to execute the individual components (see Section 5: Staffing Options and Workflow). It may not be feasible for a primary care team to implement all of the components of the Framework at the same time, or as robustly as they are described below. This should not prevent a care team from choosing a part of the Framework to begin implementing, as doing something to address oral health is better than doing nothing. Suggestions for ways to "start small" are offered at the end of the Framework component descriptions.

Once the care team has determined that a patient is due for an oral health assessment, the ASK, LOOK, DECIDE, ACT, and DOCUMENT sequence can be performed without distracting from other critical preventive and chronic care tasks. The ASK and LOOK components of the Framework are tools for performing a quick scan for information that defines a limited number of clinical conditions, each of which has a corresponding set of interventions that can be performed appropriately in primary care. A protocol defining these conditions and their interventions is shown in Figure 3.2. The questions and actions described in Table 3.1 are not an exhaustive list of everything a primary care team could ask about oral health risk factors, or all preventive actions they could administer. Opportunities to do more are discussed in Expanding Actions on page 25.

ASK

The small set of recommended questions in Table 3.1 focus on gathering information to identify risk factors for clinical conditions (tooth decay or gum inflammation). Primary care teams may choose to ask additional questions, such as "Have you seen a dentist in the past year?", or "Does your child fall asleep or take naps with a bottle containing juice or milk?" in order to assess the specific risk factors for their patient population. The questions in the Framework should not be confused with risk assessment tools that are appropriate for dentistry, like the Caries Management by Risk Assessment (CAMBRA) tool or American Dental Association (ADA) Caries Risk Assessment forms. Those are tools designed for use in a dental office as detailed questionnaires to identify patients at high risk for caries. Primary care teams have a short amount of time available, multiple competing clinical issues for which they are also screening, and only a limited set of oral health interventions appropriate for the primary care setting.

Table 3.1: Data entry fields with wording to prompt care team on which questions to ask

Risk Factor	Data Entry Template
Oral hygiene (adolescents and adults)	On average, how many days per week do you brush your teeth for at least two minutes, twice daily, using fluoride toothpaste and floss at least once daily? [0, 1, 2, 3, 4, 5, 6, 7]
Oral hygiene (children under age 12)	On average, how many days per week do you clean/brush your child's teeth, or supervise/monitor your child in brushing their teeth? [0, 1, 2, 3, 4, 5, 6, 7]
Diet (adolescents and adults)	On average, how many times daily do you consume starch or sugar (sugary snacks or sugary drinks) between meals? [≤ 1, 2–3, 4–5, ≥ 6]
Diet (children under age 12)	On average, how many times daily does your child consume starch or sugar (sugary snacks or sugary drinks) between meals? [≤ 1, 2–3, 4–5, ≥ 6]
Exposure to cariogenic bacteria (all)	Has anyone in the immediate family (including caregiver) had tooth decay or lost a tooth from decay, in the past year? [Y/N]
Dry mouth (adolescents and adults)	Do you commonly experience dry mouth (i.e., requiring swallowing water to eat crackers)? [Y/N]
Acid reflux (adolescents and adults)	Do you experience stomach acid in your throat after eating or when lying down on a daily or almost daily basis? [Y/N]
Screening assessment for symptoms of oral disease (adolescents and adults)	Do you experience tooth pain or bleeding gums when you eat or brush your teeth? [Y/N]
Screening assessment for symptoms of oral disease (children under age 12)	Does your child complain of tooth pain or have signs of bleeding gums when they eat or brush their teeth? [Y/N]

"A lot of our patients come into our office due to tooth pain. We counsel our patients with diabetes about nutrition, but some don't have many teeth left so they have a hard time eating healthy food—they eat food that is easy to chew, such as bread. The importance of the mouth comes up as a vehicle for getting proper nutrition to help control diabetes." **—Allie Nicholson, Operations Manager, Heartland Community Health Center**

These questions do not include questions that primary care teams should already be asking and documenting in other places (e.g., drug use, tobacco use). Responses to those questions may also point to oral health risk factors or identify issues requiring clinical judgment.

The first three modifiable risk factors for adolescents and adults pertain to the drivers of chronic infection in the mouth. The last two are individual factors that undermine the natural defenses against chronic infection in the mouth:

- Poor oral hygiene.
- Excessive exposure to starch and sugar.
- Cariogenic bacterial exposure.
- Acid reflux.
- Oral dryness.

Recommended wording of the questions is shown in Table 3.1, and can be downloaded as a handout: Recommended Oral Health Screening Questions.

LOOK

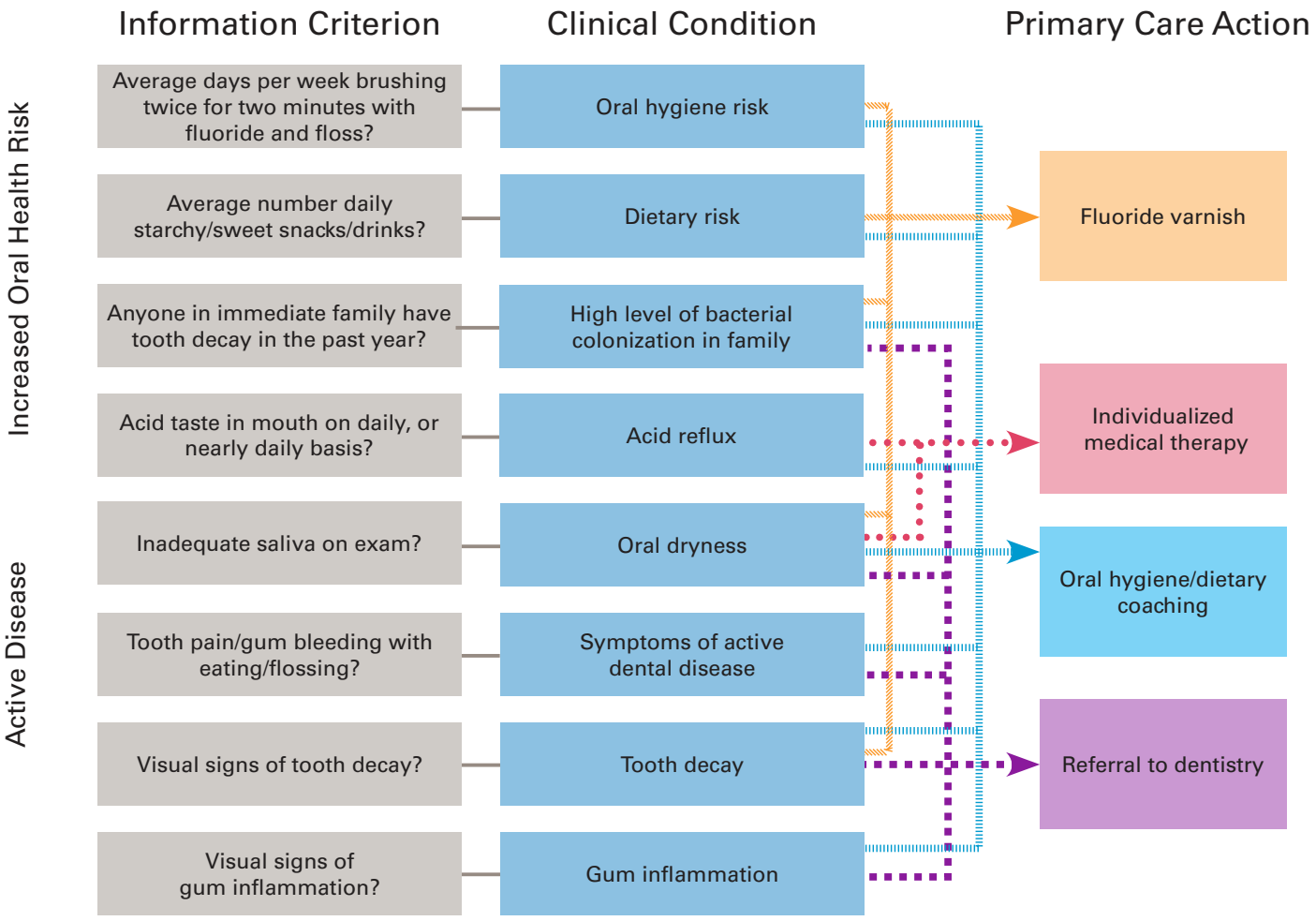
The second part of the information-gathering portion of the Framework requires looking in the patient's mouth. The primary care team is not expected to make a diagnosis of caries or periodontal disease; however, team members can recognize signs of oral dryness, tooth decay, and gum inflammation. For each finding, there is a corresponding set of interventions. An example of a data entry field for visual findings is shown in Figure 3.4. Some of the findings, such as oral dryness, are unlikely to be found in very young children and can be removed if desired.

Smiles for Life: A National Oral Health Curriculum (a self-paced, online education program that is certified as continuing education for both clinicians and non-clinician care team members), is an excellent resource to see visual examples of what primary care physicians should look for in the mouth.

DECIDE

Clinical decisions involve pattern recognition on the part of clinicians and their care teams, and they take place in the context of sharing information with patients. Decisions are easier when key information is organized in a way that drives a correct decision. The algorithm in Figure 3.2 helps guide the care team in deciding whether the patient's teeth and gums are normal or abnormal, and should drive a shared decision-making process about the appropriate actions to take.

Figure 3.2: Information is gathered to identify specific clinical conditions, each with a limited set of corresponding primary care interventions



There are additional reasons, not included in the algorithm, that a practice may choose to order one of the oral health actions available to them on the basis of clinical judgment:

- A patient asks for a referral to dentistry.
- A patient is under age six and is due for fluoride varnish per the United States Preventive Services Task Force (USPSTF) guidelines released in 2014. The guidelines provide a grade B recommendation to the administration of fluoride varnish and fluoride supplementation by medical clinicians, meaning it is a recommended service, and the Affordable Care Act (ACA) requires insurers to provide the benefit.[26]
- A patient hasn't seen a dentist in over a year.

The protocol laid out in Table 3.1 and Figure 3.2 is a basic one, focused specifically on a limited set of clinical conditions that primary care can address.

ACT

There are four basic actions the primary care team can take, and they are used in various combinations for each of the oral health abnormalities that can be found using the Framework. The principle of starting small and expanding can be applied to each of these interventions.

1. **Individualized medical therapy:** Clinicians frequently add, change, and discontinue medications in the course of medical management. This type of intervention is indicated for:
    - Medication side effects impairing salivary function.
    - Acid reflux.
    - Medication to assist smoking cessation.

The details of the most appropriate medical therapy action for these conditions will depend on the context of the complaint, clinical judgment, and patient preference.

2. **Coaching:** There are many tools available to practices for patient education, including written information, one-on-one coaching, frequent positive messaging, motivational interviewing, teach-back, and others. The content of the oral health coaching that patients need includes:
    - Age-appropriate oral hygiene goals.
    - Consequences of exposing the teeth and gums to starch/sugar and strategies for reducing exposure.
    - Additional coaching tailored to the individual, such as behavioral approaches to acid reflux.
    - Referral for smoking cessation or substance use counseling and treatment.

Coaching in some form is appropriate for every positive oral health finding in the Framework.

Download clinician tools

Summary of Primary Care Clinical Interventions outlines oral health education messages and coaching methods. Refer to the Summary of Patient Education Resources for many other oral health education brochures, posters, flyers, videos, and messages for clinicians to share with patients.

Starting small: A practice might start by putting up oral health education posters in the waiting room and giving each patient a handout on how to brush and floss properly, and then build up to providing active oral hygiene training over time. A recurrent concept in oral health integration is to start small and expand the scale of things that work well. Start with ideas for patient education about which the team is passionate and expand as they gain confidence.

"We had pregnant patients showing up in the ER due to oral pain before starting this integration work. We had patients saying they'd been trying to get in to see a dentist and weren't able to. When we called the dental clinicians, we would hear from the staff that they couldn't see the patients until after the baby was delivered. We realized we needed to educate both the patients and the dental clinicians."

—Leondra Weiss, RN, Harborview Medical Center–Women's Clinic

3. **Apply fluoride varnish:** All children under the age of six should receive fluoride varnish in the primary care setting.[26] Fluoride can be delivered several ways (prescription-strength toothpaste, a mouth rinse). Fluoride varnish is safe, easy to administer, and is appropriate for patients of all ages with signs of active tooth decay, root exposure due to gum recession, or modifiable risk factors for caries including:
    - Inadequate oral hygiene.
    - Excess exposure to sugar/starch.
    - Familial exposure to cariogenic bacteria.
    - Oral dryness.

Starting small: A practice may choose to start by ensuring all children under age six receive fluoride varnish twice yearly, then extend to include patients with major risk factors for tooth decay including poor oral hygiene, oral dryness, or active caries. The American Academy of Pediatrics (AAP) maintains a list of fluoride varnish suppliers here**.** The Minnesota Oral Health Coalition has created a brief fluoride varnish application training video, available here**.**

"We chose to start small [with two clinicians] in case the need and volume was significant, but now that we've seen that it's very manageable, we're ready to spread to other clinicians."

—Deborah Nalty, MD,
Providence Medical Group–Monroe Clinic

4. **Referral to dentistry:** For suspected oral disease discovered by the Framework, diagnosis and treatment of caries and periodontal disease fall within the clinical domain of dentistry. Referral to dentistry is indicated for:
    - Pain and bleeding associated with brushing, flossing, or eating.
    - Signs of tooth decay.
    - Signs of gum inflammation.
    - Presence of tooth decay in the immediate family.
    - Signs of oral dryness.

Patients may be referred to dentistry for any number of reasons that are not listed on the protocol, such as wanting to establish care with a dentist. Likewise, an oral health integration program targeting pregnant women may entail ensuring that all women receive a dental exam during their first trimester.

Starting small: A practice may choose to begin by establishing a referral relationship for patients who have no dentist with one or two nearby dental offices to work out the details of referral expectations and information exchange. Over time they may expand by creating formal referral orders for all patients who are referred to a dentist. Referrals are covered in more detail in Section 6: Structuring Referrals to Dentistry.

Refer to a clinician tool: Rapid Oral Health Screening and Risk Assessment provides an at-a-glance summary of the Framework, including notes indicating where information should be entered into the EHR. This is a PDF one-page clinician reference tool.

Expanding actions

Just as there are more reasons to refer to dentistry than those covered in the Framework, there is also more to oral health than caries and periodontal disease. These conditions were chosen as the centerpiece of the Framework because they are common and they develop and worsen slowly over time, during which time preventive interventions can be effective. Primary care clinicians should maintain their vigilance in screening for suspicious lesions in the oral mucosa. Likewise, patients without teeth who wear dentures could be evaluated yearly to look for suspicious mucosal lesions, and to identify candida infections, commonly found under dentures, which are easily recognized and treated.

Similarly, there are more actions than the four described above that a primary care practice might choose to offer patients (such as prescribing a higher-concentration fluoride toothpaste, or providing a chlorhexidine rinse). The four actions described above were chosen for inclusion in this guide because they were the actions selected by the majority of the sites field-testing the Framework. Interested practices can investigate other actions to offer, depending on the needs of their patient population and capacity of their care teams. For example, practices in communities lacking public water fluoridation could ensure that pregnant women and young children with developing teeth are offered fluoride oral supplementation at the correct dose.

Health Information Technology Document—the Role of Health Information Technology

The list of things that can be done in primary care to protect and promote oral health is focused on a small number of modifiable risk factors for oral disease, offering preventive interventions such as oral health education, and identifying patients with signs of active disease so that they can be properly treated by a dentist. The challenge for primary care teams is balancing this work with the vast array of other things that require attention and the high-volume flow of patients through a clinic. The role of health information technology (HIT) is to serve as an interactive checklist to remind care teams:

- Which patients need to have their oral health assessed using the Framework.
- The questions to ask (ASK).
- What to look for (LOOK).
- Whether or not there is an abnormality that requires action (DECIDE).
- The orders to consider (ACT).

The optimal way to do this will depend on details of the workflow and the features available within a particular EHR.

Decision to conduct an oral health assessment

The primary care team needs to be able to quickly decide whether a patient on the schedule is due for oral health screening. This means that the date of the last oral health assessment needs to be visible when reviewing the chart. Options include:

- A flow sheet.
- A health maintenance dashboard.

ASK

Charting templates serve not only as a place to document information as structured data, they also serve as reminders to ask a question and should suggest wording that is easily understandable to the patient. This provides structure and consistency for the care team as they inquire about specific risk factors, as shown in Table 3.1.

There are other questions that a clinic or delivery system may wish to include, for example, to elicit information that payers like state Medicaid programs require for reimbursement purposes. Those questions may not require that the answers be entered as structured data for reporting purposes, but it is still important to include them in the charting template as a reminder for the care team to ask, and as a place for billers to find documentation required for reimbursement.

LOOK

The Framework is designed to ensure that when looking in the mouth, the care team specifically looks for three things: signs of inadequate salivary flow, active tooth decay, and active gum inflammation. As shown in Table 3.3, there are other findings, particularly in adolescents and adults, that the care team may find and need to respond to, such as oral piercings or mucosal lesions. The most common of these are listed below, not because they need to be entered as structured data for reporting, but because it is easier for the care team to document their presence by clicking on the item in the list than by typing it under "other." It is important to have a place for the care team member looking in the patient's mouth to be able to document that a finding is under active care of a dentist. The appropriate response to finding active disease is to ensure the patient receives dental care. This means a referral to the patient's established dentist if they have one, or to a dentist in the referral network. The exception to this rule is that if the patient is already receiving appropriate care, a new referral is unnecessary. The role this information plays in quality reporting is discussed in Section 7: Using Data for Quality Improvement.

Figure 3.3: Example of a data entry field preference list for primary care team members to capture findings on teeth, gums, and saliva

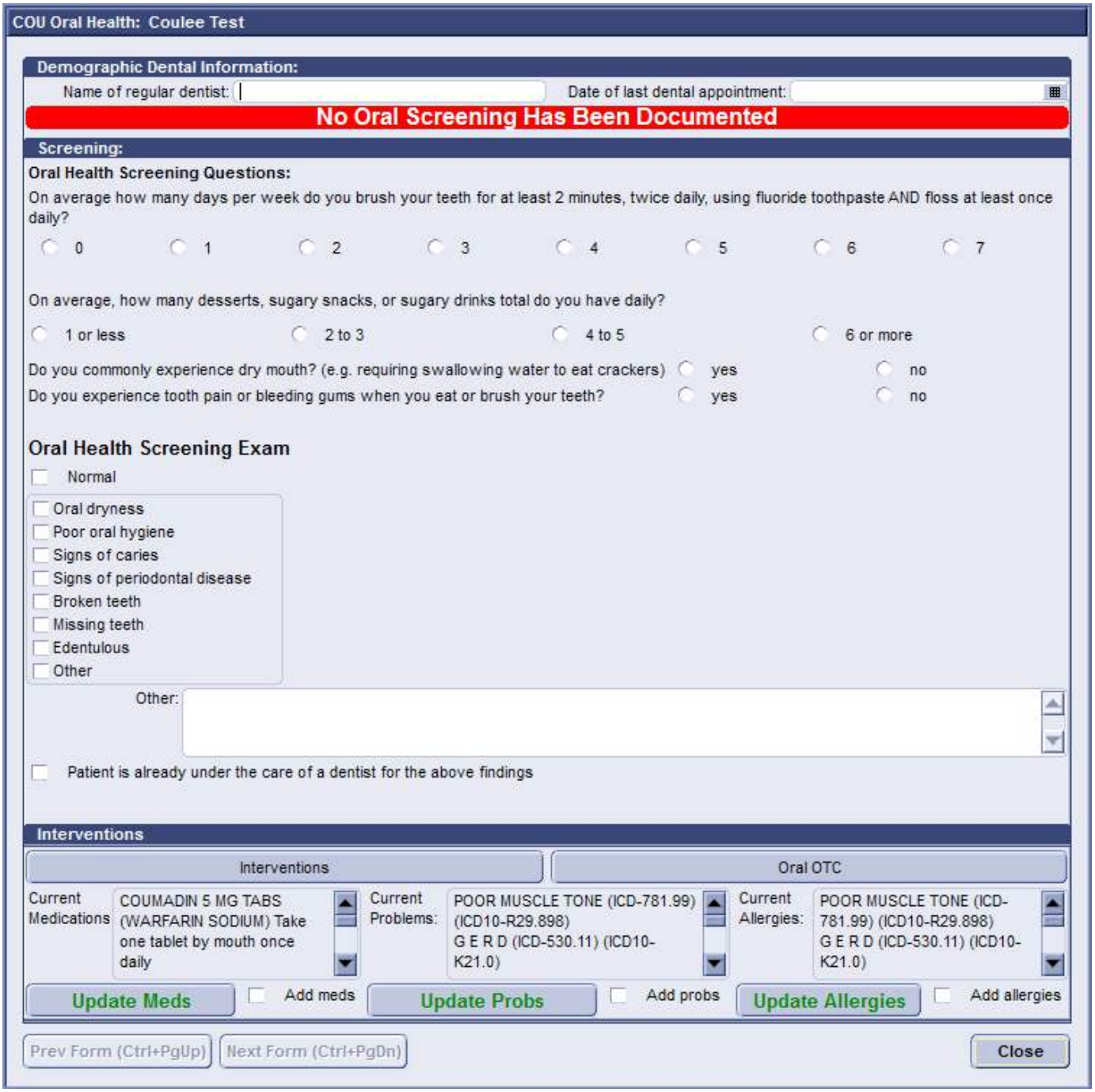
Preference List

- Normal
- Oral dryness
- Plaque
- Signs of tooth decay, including white spots
- Inflamed gums
- Broken teeth
- Missing teeth
- Edentulous (lacking all teeth, toothless)
- Other: _____

Patient is under active treatment by a dentist for the above finding(s) Y/N

Some electronic health record (EHR) systems may have an oral cavity template that can be modified to include the above information. Others may require creating a new or separate template. An example of a specific oral health template that was created with one of the field-testing sites is shown in Figure 3.4.

Figure 3.4: Grand Coulee Medical Center Oral Health Template



DECIDE

The act of deciding whether a patient has a modifiable risk factor or active dental disease takes place in the mind of the clinician and has no HIT component. Each abnormality the care team is looking for is reflected in the answer to a question on the ASK template or an item on the LOOK preference list. Those one-to-one relationships are shown in Figure 3.2.

The questions about diet and oral hygiene have answers corresponding to a numeric scale, indicating increasing risk. A practice may decide to focus on all patients at risk or on those patients at greatest risk, for example, those who brush and floss on fewer than half the days, or who consume sweet snacks and drinks many times daily.

ACT

As shown in Figure 3.2, there are four specific things we recommend primary care teams consider to protect and promote oral health:

- Make individualized medical therapy decisions. Often this includes changing, adding, or discontinuing medications or altering a medication dose. It may also include diet change, weight loss, or smoking cessation, or a work-up for another medical condition such as acid reflux. For a list of types of medications most likely to cause dry mouth, click here.
- Coach the patient about oral hygiene and diet.
- Apply fluoride varnish.
- Refer to dentistry if indicated.

While there are too many potential medical therapy options depending on clinical context and patient preference to predict the most appropriate action, the other actions (fluoride varnish, coaching, and referral) should be grouped together in an order set so that the person placing orders for oral health is prompted to consider all of the possible choices.

DOCUMENT

The documentation of information as structured data makes it possible to create reports that measure the impact of the care team's work on their target population. As shown in Section 7: Using Data for Quality Improvement, these reports allow the care team to see the percentage of their target population they have screened and what they found on screening. They also make it possible to record the actions that were taken to protect patients found to have modifiable risk factors and to ensure those patients with active disease received appropriate diagnosis and treatment from a dental professional.

Click here to jump to Section 4: HIT: Assess and Build Health Information Technology Capacity.

Supporting Materials, Section 3

Summary of Patient Education Resources: This PDF tool contains links to a variety of patient education materials including handouts, posters, flyers, videos, and websites. The resources are organized by topic, and when available in other languages, the languages are listed.

Rapid Oral Health Screening and Risk Assessment: This PDF tool is a handout intended for members of the clinical care team. It succinctly summarizes the Framework components, and notes where information can and should be entered into the EHR.

Summary of Primary Care Clinical Interventions: This PDF tool is designed for members of the clinical care team. It details the oral health interventions that can be offered in the primary care setting, and provides supporting evidence and references. Links are provided for additional resources that describe coaching techniques that can be applied to oral health topics such as dietary and oral hygiene risk reduction.

Recommended Oral Health Screening Questions: This PDF handout summarizes the recommended questions a practice can select from to use as the oral health screening and risk assessment questions. Four questions are provided for pediatrics, and six questions are provided for adults and adolescents. A practice may want to use all of the questions, or they may select a smaller set, depending on their target population and workflow.

SECTION 4

How to Prepare for Successful Implementation

Introduction

Successfully implementing the Oral Health Delivery Framework (the Framework) in a primary care setting involves thoughtful preparation. This section describes the planning, development, and composition of an oral health integration program. The roles that are necessary for the planning and piloting of the program are reviewed, strategies to engage patients and families are discussed, and common challenges and concerns are described, as well as ways to address them. The key events and tools available to support implementation are outlined in detail, including the:

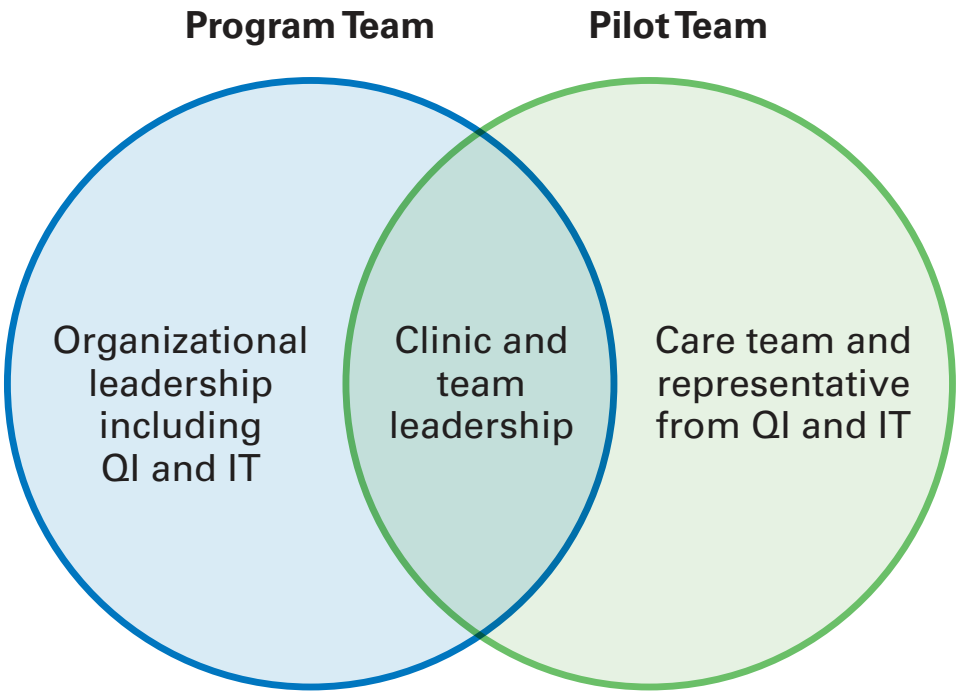
- Kickoff event.
- Clinical content training.
- Interactive workflow optimization mapping.
- Test of change.

"I would definitely bring in clinicians and staff from the beginning—they're the ones doing the work, and you often forget to bring the front line into the planning process. What has made our process successful is we haven't overcomplicated things. We thought really hard about how to keep it simple and avoid overwhelming or overburdening staff. We know we can't hammer everything out overnight, and that's okay. We'd rather start out slow and steady than put this enormous puzzle into motion too quickly." **—Aron Goffin, MPH, Multnomah County Health Department–East County Health Center**

Planning a Successful Oral Health Integration Program

A successful oral health integration program begins with the formation of a program leadership team, made up of clinic or system leaders and decision-makers who will be responsible for designing the program. An important component of this program design is a small-scale pilot test of change in a single care team with a specific target population. This provides an opportunity to test and modify the workflow and supporting information system until it works well enough to expand to the remainder of the clinic or delivery system, and to other populations. The pilot team is the testing group for the program design. Both the program and the pilot should be planned together, using the pilot as a model for the program. This means the program leadership team needs to include the clinical champion in whose team the pilot will take place. The program leadership team must also monitor the pilot closely so that the lessons learned in the pilot are reflected in the program. The relationship of the program team to the pilot team is shown in Figure 4.1. The overall sequence of the major milestones in program development is shown in Figure 4.2.

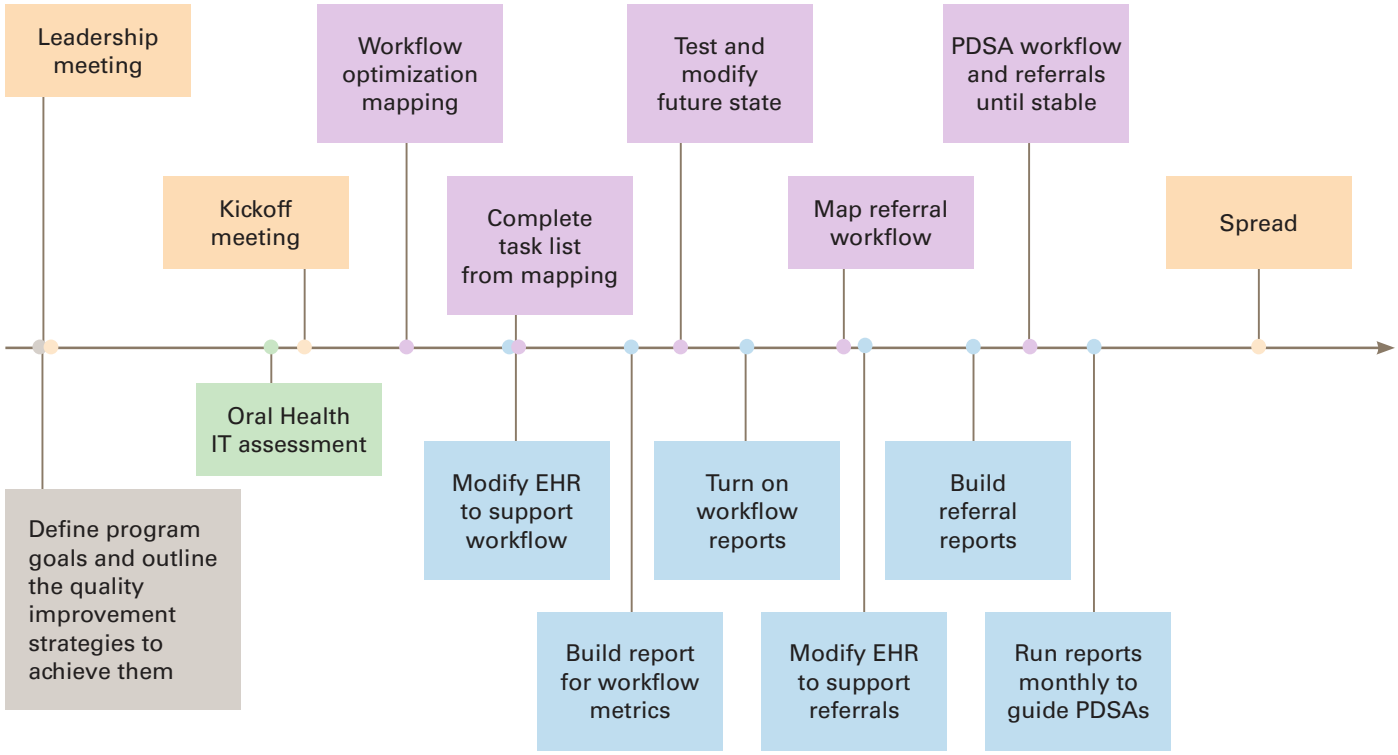
Figure 4.1: Overlapping composition of the program team roles and the pilot team



"Having a champion who doesn't think oral health integration is a big deal and is willing to just do it makes a big difference. It helps to have champions who aren't afraid of change."

—Elizabeth Aughney, DDS, One Community Health

Figure 4.2: Overall timeline showing the sequence of major events in program development



Establish the program leadership team

The program leadership team includes the clinical champion in whose care team the pilot will take place. It also includes leadership representation from:

- Organization and clinic medical staff.
- Organization and clinic operations.
- Organization finance.
- Quality improvement (QI).
- Health information technology (HIT).
- Dental director (if partnering with a co-located dental clinic).

The person who is responsible for the financial health of the clinic should be involved in planning the program to ensure it is aligned with the economic interests of the organization. In a smaller practice, there may be just two to three people who represent the roles listed above (e.g., the clinic manager, the clinician champion, and the QI super-user). There is value in having patient involvement when designing new services, and an effort should be made to include someone, perhaps a board member, who can provide that perspective whenever possible.

The program leadership team must be able to articulate to the practice or system as a whole that oral health is an essential component of primary care that has historically been left out, and demonstrate how oral health integration fits into the organization's strategic plan. A goal might be added to the strategic plan that states, "Develop an oral health program that identifies patients at risk of, or who currently have, oral disease, and provide appropriate care and care coordination services." If the practice doesn't have a strategic plan, oral health might be reflected in the mission statement. For example, "Provide comprehensive whole-person care to all patients."

Steps for the program leadership team

1. Include appropriate leadership representation.
2. Hold a planning meeting to articulate and document program goals, target population, timeline for pilot, and strategy for spread.
3. Choose a pilot care team representing all appropriate roles.

The program leadership team then must develop and maintain a plan to support the goals, strategy, and timeline of the program. This might be as part of a clinical pathway for prenatal care, a mechanism to improve diabetes outcomes, or a component of a larger effort to manage population health. The key role of leaders throughout oral health integration program development is to commit resources and remove barriers.

The program leadership team needs to hold a planning meeting with the following agenda:

- Establish the goals of the program:
  - Target population.
  - Standard of care.
  - Members of the program and pilot teams.
- Establish a timeline for the pilot:
  - Workflow optimization.
  - Adaptation of the electronic health record (EHR).
  - Quality reports.
- Develop a plan to spread the pilot to the rest of the organization once the pilot is stable.
- Commit resources (e.g., staff time, budget if needed for EHR modifications or fluoride varnish purchases).

Goals of the program

The program's goals need to be articulated in an Aim Statement; for example, "The goal of the program is to ensure that all adults with diabetes have their oral health evaluated annually."

Case Vignette: Selecting a Pilot Team at One Community Health

One Community Health is a federally qualified health center located in Hood River, OR, a rural community of 7,200 people. On selecting a pilot team for their oral health integration program, Elizabeth Aughney, DDS, at One Community Health shares, "We picked a pilot team that was most likely to get that this is important. We did present the program in advance at a clinician meeting. The director of the residency program and I spent one hour-long lunch session presenting to all clinicians." During the discussion that followed the initial presentation, "We heard every possible reason why oral health integration wouldn't work," shares Aughney. "It was hard to hear that early on, but it was also good because we could identify the biggest barriers and tackle them before beginning implementation. One of the biggest concerns was that the capacity in medical and dental is very different in terms of the number of clinicians, and we know that the biggest unmet need in the community is dental care. Clinicians were concerned that patients would need a referral to a dentist, but then they wouldn't be able to be seen." To help mitigate that concern, the program leadership team worked out a clear referral process for closing the loop and selected a narrowly focused target population (patients with diabetes with an HbA1c greater than 9.0). This has kept the initial numbers very low, and is letting the pilot team demonstrate that the referral process will work and patients can be seen for dental care.

Define the target population and explicit standard of care

Defining the target population relies on demographic and clinical parameters:

- Age: children, adolescents, adults, older adults, etc.
- Special populations: pregnant women, women of childbearing years, etc.
- Clinical focus: well children, adults with diabetes, etc.

"We want to keep it small, consistent, and feasible for a while to work out the kinks, so we can get comfortable with everything. We'll probably expand to more staff at the same site before we expand to other sites. We need a few months to look at more data and make sure the processes we have in place are manageable. Our clinicians say it is taking about two to three minutes to do everything—screening questions, exam, and fluoride varnish." **—Aron Goffin, MPH, Multnomah County Health Department–East County Health Center**

The standard of care should include how often an oral health assessment is to be performed, the type of visit in which it will take place, and what will be considered an abnormal finding. Abnormal findings may include:

- Modifiable risk factors for caries and/or periodontal disease.
- Presence of active tooth decay and/or gum inflammation.

"Our biggest challenge was choosing too small of a target population. Because the number of patients is so low, we haven't had the opportunity to work out all the bugs in our workflow and for everyone to practice." **—Jane Dageenakis, Clinic Staff Supervisor, Rinehart Clinic**

The standard of care also includes protocols the care team will use to respond to abnormal findings in the oral health screening assessment. These actions should be discussed in sufficient detail that leadership can be confident that the interventions are feasible with current staffing and resources.

The actions recommended for primary care fall into four categories:

1. Individualized medical therapy:
    - Discontinue/reduce dose of medications causing oral dryness
    - Add medications to treat oral conditions (fluoride, salivary aids, chlorhexidine rinse).
2. Patient and family education, counseling, or coaching.
3. Application of fluoride varnish in the clinic.
4. Referral to dentistry.

The program leadership team may choose to assess the readiness of the practice to begin oral health integration before beginning to engage the pilot team and plan the subsequent events. Refer to the Oral Health Practice Readiness Assessment for questions to consider and suggestions of conditions under which additional technical assistance might be necessary to support integration.

Workflow optimization is also an opportunity to assess whether the care team has sufficient capacity to perform the oral health tasks specified in the Framework. If staffing resources cannot support some of these actions, it may be reasonable to limit the scope of the program to those actions that are required or feasible within the specified timeframe. Taking steps to begin addressing oral health in primary care is important, even if a care team cannot do every action described in the Framework; the idea is to start somewhere and move forward.

"Keep it broken down into simple and small steps, and don't get bogged down trying to make too many changes at once. We focused on what was feasible and meaningful to the clinic as a whole, to clinicians and staff, and also to patients."

—Samantha Jordan, DMD, MPH, Lowell Community Health Center

Build the Will to Change

Once a practice has determined it is ready to begin planning an oral health integration program, the next step is to "build will" among staff, patients, and other stakeholders for the changes required to achieve integrated care. As with any care delivery redesign, staff need to:

- Understand why change must occur, in this case, why oral health should be an essential component of primary care.
- Understand the intended outcomes of change.
- Have effective implementation strategies.
- Understand their role in the change process.
- Understand the benefits for patients, other staff, and themselves.

Identifying a clinical champion for oral health integration can help the practice gain momentum. For an example of how a clinical champion inspired staff to increase their fluoride varnish application rate, refer to Expanding Oral Health Access for Children: Early Experience from the Bluegrass Community Health Center.

"You really need to find an internal champion, someone who is interested in integration and can follow up and make sure it's happening."

—Leondra Weiss, RN, Harborview Medical Center–Women's Clinic

"Get buy-in from staff and start with the teams that are most excited to learn the skills of doing oral exams and painting on varnish—from there you'll be able to get others to buy in." **—Cheri Gregson, PA-C, Grand Coulee Medical Center**

Oral health integration will be a new concept for many staff. Practice leadership should be prepared to explain the value of integration and how it might look in the practice. This will help practice staff members who are not on the initial pilot team understand the importance of the work and feel that they are part of the larger program, which can help facilitate spread in the future. The Case for Change: Incorporating Oral Health in Routine Medical Care PowerPoint tool can be used to make a compelling argument for why the practice should offer preventive oral healthcare.

Strategies for Engaging Patients and Families in Oral Health Integration

An important early step in planning an oral health integration program is to understand the specific oral health needs of the patient population, overall health conditions (including chronic conditions), and the patients' and families' highest priorities for oral healthcare.

- **Patient age:** Does the practice serve mainly pediatric patients or young families? If so, preventive interventions such as fluoride varnish and culturally appropriate dietary counseling may be a high priority. If the practice serves mainly older adults, be aware that many may have already lost teeth due to dental disease and may need focused support for periodontal disease or denture sores. If the practice is planning an initial partial implementation of the Framework, consider what interventions are likely to be of highest value to patients.
- **Literacy level:** How do patients generally prefer to access health education services at the practice (in person, via video, or via print materials)? What literacy level do educational materials need to be at in order to effectively reach the patient population?
- **Language preference:** What languages are spoken in the practice's patient population?
- **Past experience with dental care:** Some patients may not have had regular access to dental care or oral health education in the past. These patients may need additional support or may have concerns (such as cost, access, or fear) about seeking dental care.

For a comprehensive list of additional considerations, refer to the National Standards for Culturally and Linguistically Appropriate Services in Health and Health Care (National CLAS Standards).

Case Vignette: HealthCore Clinic Lesson Learned: The Importance of Communication

At Healthcore Clinic, an urban federally qualified health center located in Wichita, KS (population 390,000), the clinical assistants are offering fluoride varnish as part of the planned future state workflow for oral health integration. Initially, many patients were refusing the service. One day, when a member of the program leadership team happened to be in the patient room and fielded a question about the cost of fluoride varnish, she realized this was likely a perceived barrier for the clinic's patients. Diane Peltier, PhD, chief operating officer, explains, "We hadn't educated the clinical assistants to inform the patient that fluoride varnish is a free service. We just assumed that they would know to tell the patient that there was no additional charge for the fluoride. It's really important to convey the same message to the whole team so you're not taking anything for granted." Following this discovery, the leadership team made a change. Peltier says, "We made sure to communicate to all of the clinical assistants that they need to tell the patients there is no cost when they are offering the varnish. Because of this new information, we expect to see our rates increase. It can't be overstated how important communication is with the whole team to make sure everyone is on the same page."

Preference of patients and caregivers

The best way to understand the priorities and preferences of the patient population is to ask directly. There are several ways to do this:

- **Conduct a patient survey:** Most organizations do patient satisfaction surveys. A set of questions, such as the following, can reveal unmet needs and give an indication of how to design a program that would meet the needs of patients. These questions could be asked at some point during the primary care visit (such as when the patient checks in for the visit), or included in an annual patient assessment or independent patient survey focused on oral health.
    - Do you have a regular dentist?
    - Have you seen a dentist in the past year?
    - Have you had a toothache in the past year?
- **Host focus groups:** An organization can use formal focus groups to gauge the level of patient interest in oral health and which aspects of oral health patients see as most important to them.
- **Ask for guidance from patients who serve on an advisory council or improvement team for the practice:** Including a patient representative on the program team for oral health integration will provide a perspective that is often missing and can help prevent mistakes.

The American Academy of Family Medicine has created a sample patient satisfaction survey that could be modified to include questions to determine how patients feel about having their oral health addressed in the primary care setting.

In addition, consider the following strategies to inform the planning:

- Refer to an existing community health needs assessment. Many counties do periodic assessments of unmet health needs. Hospitals are also required to regularly assess community health needs and may be a resource for local information. The American Dental Association has developed Oral Health and Well-Being in the United States, which summarizes self-reported oral health status data on a state level.
- Determine which local municipalities in the community have fluoridated water and which do not. My Water's Fluoride is a national tool maintained by the Centers for Disease Control and Prevention and allows individuals to search by state and by county to view their community's water system fluoridation. Forty states report information to this tool. Even in communities with fluoridated water, patients may be drinking water from non-public sources that are not fluoridated. Those without fluoridated water will be at higher risk for caries.
- Review the insurance status of the practice's patient population and look at census tract data to determine income levels. Populations without insurance and those without commercial health insurance are unlikely to have private dental insurance. These populations may be at higher risk for oral disease and are less likely to have a private dentist. Low-income populations are at higher risk for oral disease regardless of their insurance status.
    - Engage with local resources such as schools, churches, and other community organizations that may support oral health.

Case Vignette: Rinehart Clinic Community Partnerships

Rinehart Clinic is a small, rural federally qualified health center located in Wheeler (population <425) on the north Oregon coast. In implementing their oral health integration program, their program leadership team initially chose to focus on their pediatric population, and their staff received training on fluoride varnish application from the Oregon Oral Health Coalition, which also provided them with health education materials to share with patients. Rinehart Clinic already had a history of building community partnerships, and Keri Scott, director of quality, describes how they used this skill to introduce their program to the community: "Our greatest success has been the school kickoff events—we have done two so far. In the first workflow session, we identified that our outreach coordinator would come up with a kickoff event, and she had already been working with the schools, so she reached out and asked them what they might need. They suggested an assembly." The clinic's nurse did some research online and discovered a video on YouTube of a skit that a dental clinic had performed. The Rinehart staff re-worked the skit to develop one that aligned with what they planned to implement. Members of the pilot team and clinic staff played roles in the skit, such as Tooth Fairy and Plaque Monster. Scott explains, "We had been working on nontraditional community partnerships for a while and already had a connection with The Little Apple grocery store. They had told us previously that anything we're involved with in the community they'd like to be involved in too, so they offered to send a representative from the store dressed as an apple and participate in our skit. We also sent home information packets with all students. We shared the video in our social media, on the school website, and the grocery store website." The reaction from the students and school community has been very positive, and has created excitement about the oral health services offered at Rinehart. Scott shares her advice: "Focus on something that makes everyone excited—we got so excited to be in the schools; it just built everything up. When I go into the grocery store, people recognize me and call me the tooth fairy—it keeps the energy up around the program when you have something fun. Finding something that your team is excited about is key." View the Rinehart Clinic's oral health integration school video here.

Alert patients and families

Remember that integrated oral healthcare will be new for many patients. Consider using a variety of ways to alert patients and families to the program goals and how attention to oral health will positively impact their overall health, and ensure they know what to expect in their clinical encounters. For example, practices could use a poster, wall-board, waiting room video, or flyer to inform patients and families that the care team is implementing a new way to provide comprehensive care. These materials will let patients know how improved oral health will benefit their overall health, and what to expect during clinic visits (e.g., their clinician may ask to look in their mouth to see if their teeth and gums are healthy). A list of general oral health education materials and specific patient education resources on a variety of topics is available in the Summary of Patient Education Resources tool.

"We put together a local presentation at a conference to show what we are doing with oral health integration, and now we're putting it up on the wall at the clinic because we're all proud of what we're doing." **—Leondra Weiss, RN, Harborview Medical Center–Women's Clinic**

Get regular feedback and improvement ideas

Patient and family input is important at the beginning of any change initiative and throughout. Eliciting patient and family input can be accomplished through patient and family advisory boards, participation as members of the oral health integration team, patient experience surveys, or focus groups. Experienced patient and family advisors can also partner with practice staff to support community education on the importance of oral health. For more ideas on soliciting patient input and feedback over time, refer to the Patient-Centered Interactions: Engaging Patients in Health and Healthcare Implementation Guide.

The Oral Health Pilot

The program leadership team includes the clinical champion. That clinician and their care team will lead the pilot team and develop an operational plan to test the oral health integration program on a small scale in their practice. This allows the pilot team to try new workflows and processes, identify obstacles or barriers, work out solutions, and achieve a stable and efficient new workflow that can be easily shared with other care teams during spread. To do so they will need the support and content expertise of others, who may or may not be part of the program leadership team. Those content roles include:

- Quality improvement/population management.
- HIT.
- Referral coordinator.
- Operations supervisor.
- Patient perspective.

Care teams often lack experience, including patient perspectives, as they are developing new initiatives. When a patient or patient representative participates, they will often share valuable observations about patient experience that the care team may not have considered.

The pilot team will modify and develop the action steps that are essential for meeting the aim of the oral health integration program. This work is likely to entail structural modification of the electronic health record (EHR) user interface, adaptation of the workflow, and development of clinical protocols.

Larger primary care systems might choose to have two pilot teams, each focusing on a different target population (for example, pregnant women and pediatrics), so that an optimal workflow can be determined for different types of visits.

Pilot initiation

The pilot begins with three initiation activities, all three of which require time for the primary care pilot team to be out of the clinic and focused on these events. It is important for leadership to support this so that all of the pilot team members can be present at the initiation activities:

- Kickoff event.
- Clinical content training.
- Workflow optimization mapping.

Depending on scheduling priorities, the initiation activities can be combined into one or more events. Many of the sites field-testing the Framework were creative with the timing for these events, starting early before clinic hours began, or late after clinic hours ended. Some brought multiple sites together for a shared event that combined the kickoff and clinical content trainings. Each practice or system will need to determine the most efficient way to organize these three events to ensure adequate time is reserved while minimizing the impact on clinic time.

The kickoff

The kickoff serves several important purposes:

- It is an event marking the creation of the pilot team, which is larger than the clinical care team in which the pilot will be tested, and includes individuals such as a patient care representative with whom the care team may not have previously worked.
- It is a formal handoff from the program leadership team to the pilot team. This handoff includes a clear statement that the organizational leadership endorses the work the pilot team will do as "strategically important" and plans to implement it system-wide.
- It is an opportunity to present the case for change so everyone on the pilot team understands why oral health is a strategic priority.
- It ensures that pilot team members who were not part of the program leadership team understand the purpose of the work and how it will unfold.

The kickoff can be done in a one-hour, in-person meeting. A sample kickoff agenda detailing objectives and session content is available here. The Case for Change: Incorporating Oral Health in Routine Medical Care PowerPoint tool can be used to support this event.

Steps for the pilot test of change

1. Include care team members and other content roles representing expertise needed as the pilot and program are developed.
2. Conduct a kickoff meeting and clinical content training for the care team.
3. Conduct workflow mapping to evaluate current workflow and plan a future state for oral health integration.
4. Complete pre-pilot tasks identified during the mapping.
5. Test and evaluate the future state.
6. Once the workflow and processes are stable, spread the program to other teams, patient populations, or practice sites.

Clinical content training

The purpose of clinical content training is to:

- Ensure that each care team member has a basic understanding of caries and periodontal disease as chronic infectious diseases, and is able to distinguish a normal mouth from an abnormal mouth.
- Create a shared understanding of the clinical context for the work the pilot team is doing.

This can be done in a one-hour didactic introduction. Clinical content training presentations and associated case studies focused on the three high-risk target populations selected by the field-testing sites (diabetes, pregnancy, pediatrics) are offered in the Oral Health Integration Toolset here. These trainings describe the essential clinical information a care team needs to know to implement the Framework, and describe how the Framework can be implemented in primary care. We recommend that care team members also complete the relevant modules of Smiles for Life. Both sets of tools can be reviewed online, and can be downloaded with speaker notes for a clinical champion to present to their practice team in person. Although it is possible to carry out clinical content training remotely, the experience of the 19 clinics in which the Framework was tested was that in-person training was more effective.

"We made the Smiles for Life curriculum required for staff as part of their onboarding, and then annually for all staff."

—Donna Agee, Clinic Nurse Manager, Bluegrass Community Health Center

Developing clinical confidence

Clinical competence means having a command of the most effective interventions that slow or arrest disease progression, and recognizing when it is appropriate to refer for restorative procedures. Although clinicians will have a deeper understanding of pathophysiology than non-clinicians, presenting the clinical material to all team members together can help foster a shared sense of clinical responsibility within the team and develop the team's confidence in preventive oral healthcare.

Needs of non-clinicians

Non-clinicians need to hear that this is information they already know, although it is likely to be from the perspective of having had personal experience with caries or periodontal disease, or with children and other family members who have had a history of oral disease. For non-clinical staff, the goal is to give them a view into the disease processes so that they can appreciate the importance of their roles, as they assess patients and provide them with information on oral hygiene and diet, with a solid understanding of the context for the message. Didactic instruction is most effective when it is presented as in-service training by an internal clinical champion or a local dentist. Onsite didactic instruction provides an introduction to the clinical content, which can be augmented at greater depth with the Smiles for Life curriculum.

Needs of clinicians

Clinical content can be best presented by a respected member of the care team. The message for clinicians is that oral health is not new, and the mouth is part of the body. It involves the same biologic systems in which they are already experts:

- Anatomical structure and characteristics of different body tissue.
- Immune system and inflammatory response to infection.
- Glandular function and its autonomic nervous system control.

It helps to cover these topics at a high level to assure clinicians they are based on familiar concepts, and to highlight the interaction between oral and systemic disease as much as possible.

"We did the First Tooth Training through the Oregon Oral Health Coalition on fluoride varnish application. This was a free training, and they supplied informational tools, guides, and education materials for patients—they have been a great resource for us."

— Keri Scott, Director of Quality, Rinehart Clinic

The clinical content

The clinical content for clinicians and their care teams can be divided into three general areas:

1. Anatomy, physiology, and pathophysiology of the following structures:
    - Saliva's role in protecting oral health and the risks that some medications pose to normal salivary function.
    - Teeth.
    - Gums and soft tissue of the mouth.

2. Oral health in target populations: Additional focused content relevant to the target population chosen for the pilot:
    - **Children:** Emphasis on development of deciduous and permanent teeth; focus on caries; emphasis on diet, fluoride varnish, and oral hygiene of entire family to reduce exposure to cariogenic bacteria; and referral to dentistry for sealants on molars in older children.
    - **Adults with diabetes:** Emphasis on positive feedback loop between diabetes and periodontal disease; focus on oral hygiene, glycemic control, and measures to reduce bacterial growth; and referral to dentistry to treat active periodontal disease.
    - **Pregnant women:** Emphasis on periodontal disease and acid reflux, as well as referral to dentistry for preventive dental care during pregnancy.

3. The Oral Health Delivery Framework: The oral health clinical content introduces primary care clinicians and non-clinical care team members to the anatomy and physiology of the mouth in a way that makes caries and periodontal disease understandable on a big-picture level. The clinical content overview provides a context for the Framework, which defines what can be done in primary care to protect and promote oral health.

Potential for maximizing clinical assistants

Oral health integration offers many opportunities to maximize the role of the clinical assistant and share the work among members of the care team to ensure efficient clinic operations are maintained. Among the sites that field-tested the Framework, clinical assistants often took lead roles in the implementation of the Framework and ownership of the oral health integration work and were crucial to the success of the program.

"Our workflow process is heavily dependent on the clinical assistants, and they have reacted very positively to the additional work. Our clinical assistants have always been pretty involved clinically, particularly with the referral process. This wasn't something new, but it is something they enjoy doing so it is a really good fit."

—Michael Purdy, MD, Hilltown Community Health Center

1. The clinical assistant(s) supporting the pilot clinician are key members of the pilot team and need to be included in the workflow optimization mapping.
2. Clinical assistants are frequently responsible for more tasks than the rest of the care team realizes; sharing this information during the workflow optimization mapping is important to ensure that the Framework components can be integrated successfully.
3. Clinical assistants can perform many aspects of the Framework, including gathering information by asking questions, applying fluoride varnish, and providing oral health education and counseling. Clinics can create streamlined protocols to minimize clinician workload (such as automatic fluoride varnish application for eligible pediatric patients) depending on their need.
4. Clinical assistants may be responsible for setting up referral orders for the clinician to sign. They may also be responsible for ensuring the necessary information to support the referral is entered into the EHR, such as entering the patient's regular dentist.
5. Clinical assistants may be responsible for making sure the patient leaves with the necessary information about their referral, including the date and time of their appointment if it is made in the office, information about how to schedule their referral appointment, and reinforcing the importance of making and keeping the referral appointment.
6. Depending on the role of the clinical assistant in the implementation of the Framework, it may be helpful to have the clinical assistant involved in workflow training of the other care teams to ensure successful spread.

"The clinician impact has been minimal because I do almost everything. I try to make it as easy as possible on the clinician."

—Sheila Lien, MA, Community Health Centers of Benton and Linn Counties

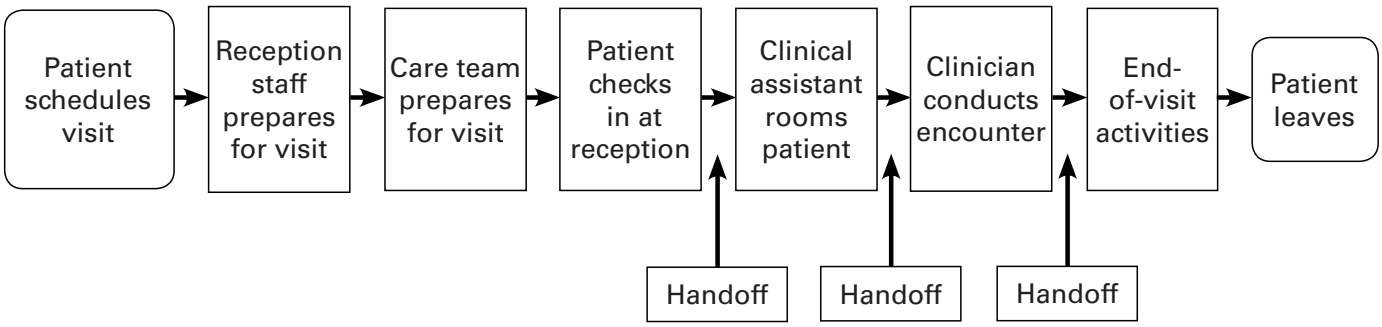
Workflow optimization mapping

Workflow optimization mapping is the initial focal point of the pilot team's effort. In this event, the pilot team agrees on the structural components, the processes, and the operational norms that will define the future state in which oral health will be integrated into primary care. The full mapping session needs to accomplish the following:

- Map the current state.
- Design a future state.
- Identify the tasks necessary to operationalize the future state, and develop a concrete plan to complete them.
- Set a date to test the future state.

Qualis Health has developed a set of tools for interactive workflow optimization that can be applied to oral health integration efforts. This technique is based on the observation that at a macro level, a standard primary care office visit workflow consists of eight separate, basic steps with handoffs between several key steps. Those steps are shown in Figure 4.3.

Figure 4.3: The steps of a primary care office visit



Each step and handoff can be accomplished in a number of ways, and can incorporate any number of other activities. Practices with experience in workflow redesign processes will likely recognize the principles described below and will be able to use an internal team member to facilitate the session. Practices that have not engaged in workflow redesign previously may need to seek assistance from an outside facilitator. The interactive workflow optimization technique was used in the sites field-testing the Framework with outside facilitators, and the sessions consistently took four hours with a small break in the middle. During this time, the care team first maps its current state, and then develops a future state that includes the minimal number of additional tasks required to accomplish a stated goal.

"Everyone understood the importance of good oral care in diabetes, so that is the population we started with. The dental director came and gave a clinical training for the primary care clinicians following the kickoff event, and that really helped to generate buy-in. Everyone was concerned about adding more work to a patient visit, so we worked carefully to make sure we could accomplish the oral healthcare efficiently within a 15-minute visit." **—Dawn West, DDS, Community Health Center of Cape Cod**

Mapping the current state

A primer on workflow optimization is included in the toolset that accompanies this implementation guide. The tool titled Oral Health Integration Workflow Optimization: A Streamlined Guide for Primary Care Practices is a step-by-step set of instructions for the interactive workflow optimization PowerPoint tool for mapping both current and future state workflows titled Workflow Optimization for Oral Health Integration. The tool addresses topics like defining goals, determining the right people to participate in the mapping, the time commitment, and how to use this tool successfully. Having the right mix of attendees is essential for success and should include all care team members who will be testing the new workflow during the pilot, as well as representatives from other roles involved in the new future state, such as HIT or a referral coordinator.

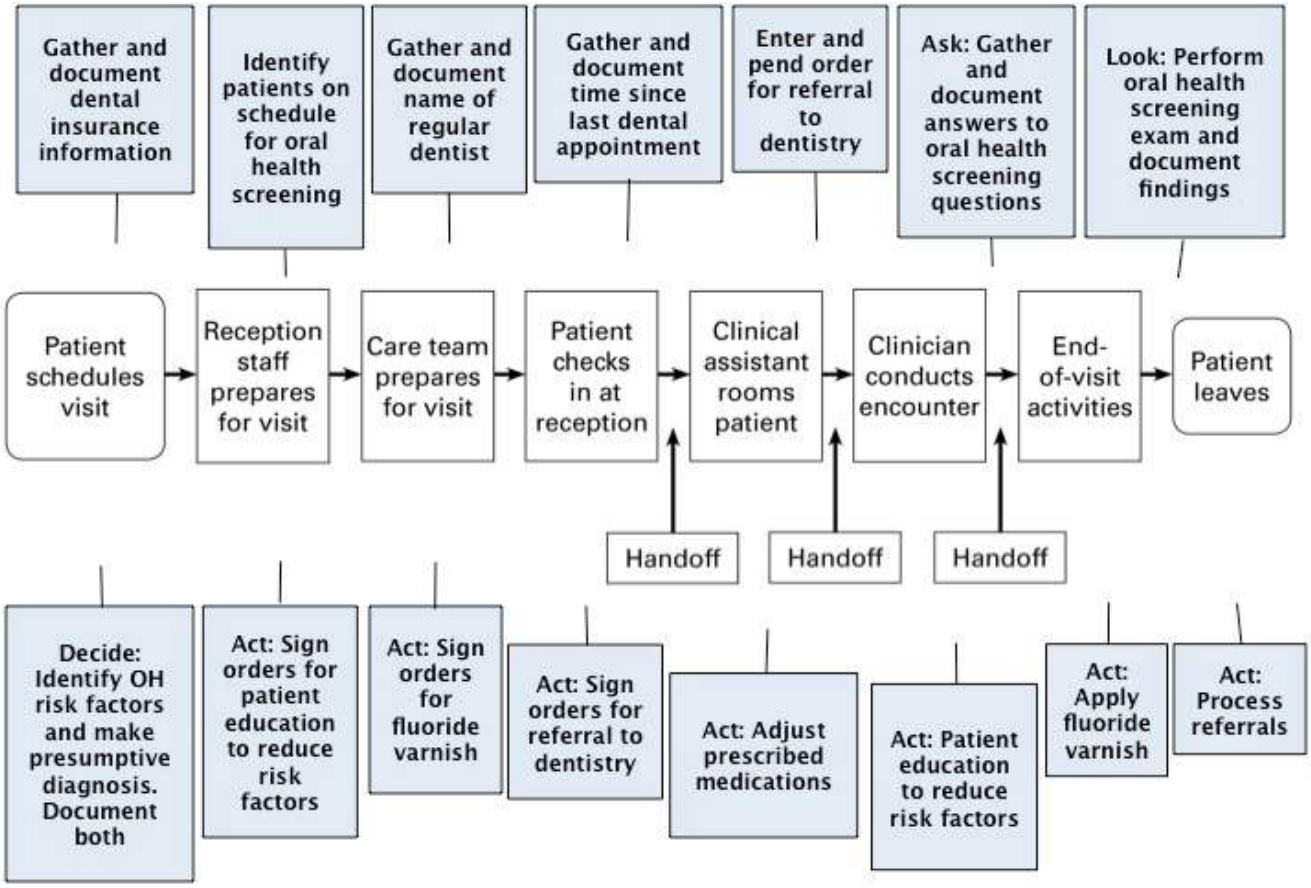
Designing a future state

The technique for creating a future state is similar to the process used to map the current state. For this portion of the mapping, the entire eight-step sequence comprising the office visit workflow, as shown in Figure 4.2, is displayed, surrounded by call-outs that together constitute all the activities other clinics have added to their workflow in their efforts to integrate oral health into an office visit. These call-outs reflect the possible oral health integration activities that a clinic may choose to add to their workflow. The goal is to select, from the total list of potential activities, those the pilot team decides they are able to include in their future state workflow. By connecting each activity to the appropriate workflow step, the resulting graphic visually displays the team member responsible for carrying out each activity.

The job of the workflow optimization mapping participants is to:

- Consider each potential additional activity, and decide if it is an important component of the future state.
- For each activity selected, decide in which workflow step it best fits.
- Specify, if necessary, the role or person who will perform the new activity.
- Think about what that person will need (training, tools, and information) to perform the added activity.
- Determine a timeline for completing training, tools, and information needed to implement new oral health activities.

Figure 4.4: Interactive workflow optimization tool for creating oral health integration future state



To download and use the interactive workflow tools for current and future state, click here.

"We mapped out exactly, to the smallest detail, what the patient was doing from start to finish. That helped us take a look at the reality of an appointment, and then we worked out exactly where we could implement the Framework, and who would do what. Being that detailed in the planning up front helped us be successful in implementation. We all thought we'd have to give something up to fit in oral health, but once we got the workflow worked out we were all surprised to see it really didn't take that much time, and we didn't have to lose anything to get it done." **—Tina Moore, APRN, FNP-C, Rodgers Health**

Make a list of tasks necessary to operationalize the future state, and develop a concrete plan to complete them.

The future state workflow will invariably require structural changes for it to function as intended. Examples include:

- EHR changes in how information is entered, organized, and presented to the end user.
- A physical place to apply fluoride varnish and a supply chain to ensure it is available.
- Patient education materials and ways to get them to patients.
- Formation of a collaborative dental referral network.

The future state may also require creating new operational norms, such as:

- Agreements on what is considered normal or abnormal in an oral health screening.
- Protocols for interventions based on abnormal oral health findings.
- New ways of interacting with dental colleagues. (Refer to page 74, Strategies for Building a Referral Network, for more information.)

Once the future state is mapped, it is important to make a list of identified tasks. For each task, designate a person responsible and a realistic date for its completion.

Post-workflow mapping phases

Once the workflow optimization mapping is completed, the real work begins. That work consists of:

- Completing tasks from the mapping.
- Testing and evaluating the future state and modifying as needed.
- Spreading the program to the rest of the delivery system.

> "Find a clinician who is really interested, and then take a soft approach. Take your time, brainstorm, fit it in, and set yourself an internal team deadline to continue checking in on the process. Start small with something that you can grow. We had one piece of education, one handout, and an assessment."
>
> **—Heather Hicks, RN, Heart of Kansas Clinic**

Task completion: Many of the tasks identified during development of the future state will be related to HIT modifications. These will be discussed in detail in the HIT section. During the task completion phase, the program leadership team will need to work closely with the pilot team to ensure that tasks are completed on schedule to the greatest extent possible. This may require interventions to remove barriers and shift resources to complete specific tasks.

Test and evaluate the future state: As soon as the tasks have been completed, the pilot team should begin to use the future state workflow. Like all quality improvement efforts, the key to success is a series of Plan-Do-Study-Act (PDSA) cycles. The strategy is to test the new workflow, measure to make sure it is working as intended, and then modify it as needed before testing it again. Measures used for PDSA cycles like this should be simple and easy to collect, for example, an end-of-the-day review of the charts of patients in the target population who were seen that day to count how many of them were screened and whether positive findings were treated according to the protocol. During this testing phase, the process measure reports will be turned on to begin collecting data for run charts as described in detail in Section 7: Using Data for Quality Improvement.

Spreading a successful pilot: The purpose of the pilot is to ensure that it works as intended and accomplishes its stated goal before rolling the program out to the entire delivery system. Data demonstrating a successful pilot are the foundation for successful spread. Spread does not happen overnight, nor does it need to happen all at once. The program leadership team will help determine the best way to spread—to one clinic care team at a time, to the full clinic team, to teams in other clinics in the same system, to other target populations, or to other interventions. This process is described in detail in Section 8: Leveraging Success: Spreading and Sustaining.

The Institute for Healthcare Improvement's Improvement Project Roadmap worksheet is a helpful tool for practices to track the full program development and pilot process from the beginning through spread.

Overcoming Workflow Optimization Challenges

Change management issues

Primary care is no stranger to change, and it should come as no surprise that a change on the magnitude of oral health integration may encounter challenges that could threaten the success of the effort.

"There has been some pushback around the question of, 'Whose job is it?' but I think that if the administrative leadership guidance continues to be that we are here to serve the patients, it's in your scope of practice, and this needs to happen, it will improve."

—Wendy Hughes, ARNP,
Grand Coulee Medical Center

Lack of shared understanding of the importance of oral health integration in meeting an organizational strategic priority

If the pilot team does not share the sense that the organization is committed to the program, team members are less likely to participate fully and follow through on tasks necessary to test the future state workflow.

Lack of continuity in pilot team members

It is important to begin a pilot by testing the process for oral health integration on a small scale with a clinical champion and highly functioning care team. The learning curve for success even on this small scale is significant. In conducting the workflow optimization mapping, not only must all the right people be present, but it is also a good idea to avoid having people present who are not part of the pilot team. In particular, clinicians who have not participated from the beginning of the pilot can be disruptive and use up valuable time with requests to back up and explain the Framework and the clinical content. It is the job of leadership to ensure not only that everyone on the care team participates fully in each stage of the pilot, but also that people are not brought into the pilot partway through without adequate preparation.

Competing priorities

Competing priorities are a daily fact of life in primary care. There are several ways to minimize the risk that oral health integration will be undermined by this reality.

- Ensure the pilot team understands their key role in the workflow optimization mapping.
- Acknowledge competing priorities in the daily work life of the care team, and help them develop tactics to deal with this competition, including accepting the fact that sometimes not all care gaps, including oral health, can be addressed by the care team in a single visit. Often other issues take priority. The goal is to have a plan to bring patients back to deal with unmet needs.
- During a workflow optimization mapping, listen to care team members and understand that what may sound like resistance may be a realistic appraisal of inadequate resources and competing priorities.
    - Be prepared to scale back the scope and additional work of the future state.
    - Ask "What would it take?" to understand underlying concerns.

"We're focusing on the integration of oral health and behavioral health in primary care, and it is challenging for clinicians from all three disciplines to come together with an EHR administrator and agree on the necessary modifications to make sure they all have what they need to serve the patient in a meaningful way."

—Turner House Children's Clinic

Adequate referral capacity

Clinicians may be reluctant to begin offering screening assessments or preventive interventions if they do not have confidence that there are resources available to provide treatment if they identify an oral health problem. Referral capacity will vary by community and clinical setting. Frequently the number of referrals is small initially, and the capacity of community dentists often grows as the relationship with a medical practice is strengthened over time through consistent ongoing communication between the designated contacts on the primary care and dental teams. Section 6: Structuring Referrals to Dentistry explores the goals of structured referrals and offers practical advice on how to build and sustain a dental referral network.

Addressing common concerns

Primary care teams frequently operate in a stressful environment in which they have inadequate time to address all of the health issues during office visits for which they are accountable. Additionally, workflow optimization often forces changing operational norms that can be challenging for care teams and patients alike.

Clinicians:

- Many clinicians feel they are too busy to address oral health. It helps to let the pilot team pick the oral health tasks they think they can incorporate into their workflow. Many of the tasks can be delegated to clinical assistants on the care team.

"There was more initial pushback from the clinicians, though it seems like we have turned a corner now. The pushback was due to changing a workflow that they felt was working. It seemed initially like we were asking them to do more work to achieve the same result. Now they're seeing that data supports funding, so they're seeing a benefit to doing this in a more structured way. The initial chart audit we did showed almost no referrals following a positive screening, since the clinicians were not making structured referrals at that point. That was a big motivator for them to start making the structured referrals, since they wanted to get credit for what they were doing."

—Michael Purdy, MD, Hilltown Community Health Center

- Oral health preventive messages can be woven into other health education conducted during adult primary care visits with very little impact on clinician time.
- Clinicians usually understand the value of oral health to their patients. They come to work expecting to be able to solve problems for their patients, and they dislike having to tell a patient, "You have a dental problem. I have nothing to offer. You need to see a dentist." One of the most compelling ways to engage clinicians is to present integrated oral health as a solution to that situation, so the clinician can instead say, "I know someone who can help. Let me set it up for you."
- Clinicians often have an understandable desire to stay within the boundaries of their clinical competence. The best way to help clinicians overcome their concern that they are not trained to recognize and treat the teeth and gums is to present it as material they already know. It is the same mucosa, the same neuroglandular function, the same immune system, and the same bacteria about which they have expert knowledge. Their primary responsibility is to recognize abnormalities, provide preventive interventions as possible, and refer if needed.

"When you're in our clinic and you see all those children with caries or crowns, that's pretty motivating! Initially, we didn't know what to do about it, but now we have something we can actually do to address it."

—Nandini Sengupta, MD, Dimock Community Health Center

Clinical assistants:

- Clinical assistants frequently are trying to do more tasks across a number of clinical topics while rooming patients than time allows. One way to manage this heavy workload is to have clinical assistants review charts prior to the huddle, so the care team can use the huddle to prioritize the additional clinical tasks that could be done while rooming each patient. The clinical assistant can then work down the prioritization list as far as time permits. Oral health integration must respect the care team's need to stay on schedule. In time, they will discover how little additional time addressing oral health actually takes.
- The concern about competing demands is often best addressed by adhering to a workflow optimization process in which the care team participates in decisions about which components of the Framework will be included in the workflow, and ways to minimize the additional work that this entails.
- Clinical assistants frequently relate to oral health issues from a personal health perspective, being either a parent of, or someone with, oral health concerns. It helps to emphasize the impact of improved oral health on patients and their families, as well as the positive impact of getting personal guidance for preventive interventions and assistance with referrals.

Administrative leaders:

- Administrative leaders are often concerned about the financial implications of integrated care. As a practice considers an integrated oral health program, be prepared to speak to this concern. Payment varies by state and by payer, but is generally available for children. Refer to the American Academy of Pediatrics (AAP) Oral Health Reimbursement Chart for state-specific information about Medicaid reimbursement. Moving forward, more payers will be using value-based reimbursement models, making the use of a population health management approach even more important for primary care. More detail is provided in Section 8: Leveraging Success: Spreading and Sustaining. There is often a tension between a deeply felt desire to be doing everything possible for patients and the reality of the fee-for-service reimbursement system in which clinics struggle to survive with little financial reserve.
- It's possible that the anticipated financial impact is greater than the reality.

For more ideas on building will, and on the role of leaders in guiding change, refer to Engaged Leadership Implementation Guide.

Patient and family members:

Although most patients appreciate the attention paid to oral health, others may find the new emphasis surprising or even concerning.

- For patients or caregivers who express a reservation, the clinician or clinical assistant should explain what they are looking for and why. Additional explanation is usually sufficient to address patient concerns.
- In some communities, there is resistance to the use of fluoride in drinking water. Clinicians should remember that most patients respond well when scientific information is presented in frequent positive messages. Even patients who have concerns about fluoridated community water may be open to fluoride varnish and fluoridated toothpaste once safety information is provided. Including a patient representative in the planning process can help prepare care teams to address common concerns.

Case Vignette: Patient Reactions to Field-Testing

Steve Wrightson, MD, describes how the Bluegrass Community Health Center handles patient concerns. "One of the biggest challenges the clinicians face is if someone doesn't want fluoride varnish. Refusal usually comes from a lack of understanding about what fluoride varnish is, and what benefit it provides. This is a familiar situation for clinicians, with patients often initially refusing other procedures like HIV testing. Patients initially refuse, the clinical assistant provides additional education, and if they still refuse the clinician can go in and give them information about the importance. That usually works." To learn more about the work of the Bluegrass Community Health Center, refer to their case example.

"Patients have really loved, across the board, having the dental assistant do the fluoride for them. He's making a really good connection with families, and is able to answer all of their questions in Spanish in depth. Patients ask questions about oral health in general, why restorations would be needed in baby teeth, the value of baby teeth, and so on. No one has declined fluoride varnish over concerns about it, only if they had just recently received it at the dentist. —Turner House Children's Clinic

"Patients are sometimes surprised and they ask, 'Why do you want to look at my teeth?' They don't see the value of oral health. When you talk to them about the importance of seeing the dentist, you have to really sell the importance of dental care. Insurance is the biggest barrier, especially for patients with Medicare. Our dental clinic has a sliding scale, but when you're struggling to make rent every month, even low-cost dental care seems like a luxury.

"I had one patient where I hadn't looked at his teeth in a while and when I did I was horrified; he had horrible dentition. I said he had to go to the dentist, but he was afraid they would do extractions and didn't want to go. I was able to get him to understand the importance of getting dental treatment, and they did have to do extractions. His mouth was terrible but now is healing up." —Benjamin Lightfoot, MD, Brockton Neighborhood Health Center

"The very first thing I say before I ask the screening question is 'We focus on the whole person and oral health is included in that, so if you don't mind I have a few questions I'd like to ask you about your dental hygiene.' No one has said no. I explain that it is still important to see the dentist. Dental care is so connected to teeth, and people don't understand it's more about oral health overall." —Sheila Lien, MA, Community Health Centers of Benton and Linn Counties

"The patients are very appreciative and grateful. We had a patient who was very high functioning, it was her second baby, and she had been trying for months to get seen by a dentist. We called for her and were initially told that a new patient couldn't be seen for six months. We kept working with them, and I was able to help her get an appointment before her due date. We've been given permission to address this need—before, we felt like there wasn't really anything we could do. We've been doing a lot of active care coordination that has been benefiting our patients." —Leondra Weiss, RN, Harborview Medical Center- Women's Clinic

Where to start with the Oral Health Delivery Framework

If a practice lacks the resources to implement the Framework in full, consider taking an incremental approach to implementation and plan a staged implementation effort. How might this look?

Begin with screening and referral: If a practice has a well-tuned medical/surgical referral process but has not yet invested in the clinical skills of medical assistants or trained staff in effective health education strategies, consider beginning the oral health integration effort with screening and referral. Develop a plan to add preventive interventions (such as dietary counseling and oral hygiene training) over time as the practice works to enhance its ability to deliver effective team care.

Begin with risk assessment and risk reduction: If a practice has well-functioning care teams and staff trained in goal setting and self-management support but has not yet committed to tracking medical/surgical referrals, consider focusing first on risk assessment and risk reduction and plan to add structured referrals as referral capacity for all specialists is enhanced.

Health Information Technology Assess and Build Capacity

Work-arounds

Many healthcare organizations are unable to modify their user interface or create a reporting system to support this type of work. In those cases, there are several work-around strategies that may be of value:

- Free-standing registries for high-risk populations, such as patients with diabetes or those who are pregnant and women of childbearing years, can often be used to track oral health information.
- Some EHRs allow users to build patient lists that include the most recent date of a test or procedure, such as fluoride varnish. These tools can often be used to assess specific workflows, such as a workflow designed to ensure every child under six receives fluoride varnish at least twice yearly.
- It is always possible to sample patients in a target population and perform limited chart reviews.

Assessing the HIT Environment

When assessing the HIT environment before starting an oral health integration program, one of the most important tasks is to determine whether the organization has the ability to modify its EHR by creating data entry templates to support this work. It is equally important to understand how the information captured in the ASK and LOOK data entry fields is stored, and to assess what it will take to use that information to build quality reports for process measures. The use of HIT for population reporting as it pertains to oral health will be discussed in greater detail in Section 7: Using Data for Quality Improvement. The key points for assessment of the capacity of an organization's HIT to support oral health integration, both in terms of data entry and quality process measure reporting, are shown in Table 4.1. Download the modifiable Oral Health Information Technology Assessment tool to assess practice HIT capacity.

Table 4.1: HIT assessment for oral health integration

Required Features	Technical capability to modify the EHR	Organizational willingness to modify the EHR
User interface changes: • Data entry • Alert to care team that oral health assessment is due	• Access to programming • Someone capable of programming changes	• Organizational priority • Adequate resources • Collaboration between care team and HIT
Population reporting: • Definition of target population • Point prevalence reports (See Section 7: Using Data for Quality Improvement} • Numerators and denominators by clinician • Run charts	• Reporting data base • Query writing software • Database analyst to write queries • Clinician/QI team for report validation	• Organizational priority • Resources allocated • Collaboration between quality improvement staff and HIT staff to ensure report methodology supports population reporting

Assessment of the HIT system for oral health means verifying that the user interface can be modified to build data entry fields into charting templates as defined in Section 3: The Oral Health Delivery Framework. The information entered into the data entry fields is most helpful to practices when it is stored as structured data. In order to create these data fields, the organization will also need:

- A database analyst with the programming skills to build the data entry fields, order sets, and a place to view the date of the last oral health assessment.
- Authorization to modify the user interface and allocation of resources to support the effort.
- A clinician familiar with the oral health clinical content who understands the workflow in which the data entry fields will be used and who can work with the database analyst to ensure the end result works for the care team.

The HIT assessment also needs to determine the practice's ability to create custom quality reports. Reporting requires:

- A reporting database that is updated regularly from the production EHR server, including data from the oral health assessment data entry fields and the orders from the oral health order set.
- Report-writing software that can be used to build oral health reports.
- A database analyst who can write queries using the software.
- Authorization to write the reports and allocation of resources to support the effort.
- A clinician familiar with the oral health clinical content who understands the workflow and who can validate the reports.
- A quality improvement staff member who understands population management and the Framework who can oversee the reporting methodology and turn reports into run charts.

Starting small: Select one measure, and run one report to test the process. From there, more measures can be added and the process can be automated and included in regular reports reviewed by the clinic team.

It may be tempting to try and create clinical reports and user interface changes before the care team maps out exactly how it wants to implement the Framework. However, until the care team has agreed on a future state workflow, there is usually no shared vision for how the program will work and how the information system should be modified to support it. Tip: Make HIT modifications after the future state workflow has been determined.

To learn more about field-testing sites' experiences with data collection and HIT work-arounds, see Section 9: Field-Testing Results and Case Examples.

Click here to jump to Section 5: HIT: Use of HIT Within the Optimized Workflow.

Supporting Materials for Section 4

Oral Health Practice Readiness Assessment: This PDF tool walks through the key practice components that are necessary to support oral health integration, and describes conditions that may support full implementation, as well as conditions that may indicate that additional technical assistance may be required to achieve full implementation.

Sample Oral Health Integration Kickoff Meeting Agenda: This modifiable Word tool presents a draft agenda used by field-testing sites to guide the kick off meeting for the oral health integration program. The agenda suggests timing and topics for discussion, and includes resources to share with attendees.

These clinical content presentations were designed for the sites field-testing the Framework with the goal of providing the necessary information a primary care practice would need to understand the anatomy and physiology of the mouth, teeth, and gums; the pathophysiology of oral disease; and the actions a primary care team can take to protect and promote oral health. They are designed for a clinical champion to provide to a care team at the beginning of the oral health integration work, and they include two case studies on each topic that can be used to engage a care team and begin the conversation about how the work can be done.

Clinical Content Presentation and Case Studies: Pregnancy

Clinical Content Presentation and Case Studies: Diabetes

Clinical Content Presentation and Case Studies: Pediatrics

Oral Health Integration Workflow Optimization: A Streamlined Guide for Primary Care Practices: This PDF tool provides a detailed guide for anyone who is planning to conduct a workflow optimization mapping session to integrate oral health into primary care. It reviews the seven key steps in the workflow optimization process, and describes in detail how to execute each step including time commitment, supplies needed, and tools to support the mapping.

Workflow Optimization for Oral Health Integration: This interactive PowerPoint tool was developed to streamline the traditional workflow redesign process. It allows a practice to walk through the standard steps of a primary care practice visit and determine where to fit in the components of the Framework they plan to implement, and determine who should carry out each component.

Oral Health Information Technology Assessment: This PDF tool guides a practice through the process of identifying their practice's technical capabilities and organizational willingness to modify their EHR to support oral health integration. Assessing existing barriers is helpful to determine what work-arounds may be needed.

SECTION 5

Staffing Options and Workflow

Introduction

The Oral Health Delivery Framework (the Framework) defines what can be done in primary care to protect and promote oral health. Exactly what this looks like in any given practice will depend on the staffing model in the practice and the processes by which care is delivered. This section will first review the range of staffing options available to a primary care team. This is followed by a description of how the Framework can be included in the primary care workflow so that it:

- Aligns with practice transformation in preparation for value-based reimbursement.
- Works with all staffing models.
- Can be used with any target population.
- Supports small steps in oral health integration.

"Clinicians see the importance of oral health—we haven't had to convince anyone that it is important. The challenge for clinicians is time and competing interests. The more that we can do to make oral health integration just a part of the regular process and the more we can do to simplify it, the better."

—Samantha Jordan, DMD, MPH, Lowell Community Health Center

Staffing

Terms used to describe different staffing roles and their scope of practice vary from state to state. The terms used and their intended meaning within this implementation guide are shown in Table 5.1.

Table 5.1: Terms used to describe roles in the typical primary care team

Term	Title
Clinician	Physicians: Medical Doctor, Doctor of Osteopathic Medicine Other Clinicians: Physician Assistant, Nurse Practitioner
Nurse	Registered Nurse Licensed Practical Nurse
Clinical Assistant	Medical Assistant
Clinic Personnel Supporting All Teams	Pharmacist, Lab/Imaging Technician, Social Worker, Referral Coordinator, Patient Educator, Reception Staff, Billing, Patient Service Representative, Community Health Worker/Promotora, Dental Hygienist*

*The presence of a dental hygienist in a primary care clinic is not typical of primary care practices unless the clinic contains a co-located dental practice. None of the supporting roles for clinic personnel listed here are required for a primary care practice to address oral health, yet for clinics in which these roles are present they offer opportunities for an expanded oral health program (e.g., offering dental sealants) depending on scope of practice laws that vary from state to state.

The staffing models described here represent the spectrum of care team compositions observed in the field-testing sites. They are presented as a way to discuss advantages, disadvantages, and work-arounds for various staffing options, and are not intended to advocate any particular model as a "best practice" for integrating oral health into primary care. Oral health integration has been successful across a variety of staffing models. The key is for a team to determine the best utilization of the staffing resources they have for addressing oral health. For example, a pediatrician may decide to apply fluoride varnish while examining a child because it works best for that clinic's workflow.

Staffing model option one—clinician/clinical assistant dyad

The most common structure in many settings is a single clinician working with a single clinical assistant, whose job is primarily to manage patient flow.

Advantages

The advantage of this "teamlet" is that it is often stable and based on a close working relationship. In this setting, parts of the Framework can be relatively simple to implement if the clinical assistant asks the oral health questions and looks in the patient's mouth while the clinician reviews the clinical assistant's work, verifies positive findings, and makes the clinical decisions. A stable teamlet can identify patients who are overdue for an oral health assessment and take advantage of all opportunities to address oral health, such as conducting the risk assessment during an episodic care visit if the patient has not been coming to their well visits.

"Don't overcomplicate the work, keep it simple, and keep your goals within reach. Make sure you get staff buy-in—not just from clinicians but also from the clinical assistants. If the clinical assistant doesn't start the screening and remind the clinician, it won't happen, so they play an important role."

—Benjamin Lightfoot, MD, Brockton Neighborhood Health Center

Disadvantages

- If visit times are short (15–20 minutes), the clinical assistant will frequently be multitasking. This generally means little capacity to add work while rooming patients, and no time at the end of a visit for coaching. A teamlet may need to limit its oral health focus to simply identifying patients with active oral disease and referring them to a dentist. This disadvantage may be overcome by using non-care team clinical personnel (e.g., a Women, Infants, and Children [WIC] nutritionist) to perform educational tasks or apply fluoride varnish.
- If the teamlet relationship is unstable, it may be impossible for a clinician to be comfortable delegating oral health tasks to the clinical assistant.
- In this structure, if the dyad does not have the support of a referral coordinator, care coordination may be a challenge. Care coordination is most effective if a designated individual on the team or in the clinic is responsible for following clearly defined procedures.

Leveraging the clinician/clinical assistant teamlet for oral health integration

For clinician/clinical assistant teamlets, the volume of work clinical assistants do while rooming patients is often a bottleneck, which may be worsened with additional tasks. There are several useful tactics for minimizing this risk:

- Limit oral health assessment in young children (under age six) to well-child exams, and to a yearly basis for older children, adolescents, and adults.
- Configure clinical decision support in the electronic health record (EHR) to make it easy for the care team to identify patients on the schedule who are due for an oral health assessment while reviewing a chart in the huddle.
- Use the huddle to prioritize tasks to be completed while rooming each patient on the schedule. Create an expectation that while rooming a patient, the clinical assistant will work his or her way down the priority list as far as possible without negatively impacting patient flow.
- Limit the oral health assessment to four questions. Script the clinical assistant to ask the questions using a language level appropriate for the patient in order to minimize time spent explaining a question.
- Limit the scope of oral health integration (at least initially) to activities requiring minimal additional clinical assistant work. Focus efforts on identifying patients with active tooth decay and gum inflammation, and referring those patients to a dentist. Leave assessment of behavioral risk factors, coaching on diet/oral hygiene, and fluoride varnish for later.
- Create a protocol by which the clinical assistant can enter an order for a referral to dentistry for the clinician to sign based on a positive response to the pain and bleeding question or suspected oral disease on visual exam, or if the patient would simply like a referral.

> "The clinical assistant goes through the charts for the day and determines who is due for an oral health assessment. We're focusing on patients with diabetes and have tried doing the screening at different visits—figuring out the best visit to do the assessment during has been a bit of a challenge. The clinical assistant asks five questions, and a positive answer to any of them triggers an oral exam by the clinician. A positive answer to any of the screening questions and/or an abnormal exam generates a referral. Oral health education brochures get printed from the EHR."
>
> **—Michael Purdy, MD, Hilltown Community Health Center**

Limit the job of the clinician to:

- Reviewing the clinical assistant's findings.
- Looking at the patient's teeth and gums.
- Following up on oral dryness as a possible side effect of a medication.
- Underscoring and reinforcing oral health messages delivered by the clinical assistant.
- Reviewing and signing (if appropriate) orders placed and pended by the clinical assistant.

Summary of staffing model one

Clinician/clinical assistant dyads are a common care team structure that frequently offer stability and close working relationships. However, there are disadvantages to this structure, which can be minimized by deliberate attention to decreasing the impact of oral health integration on the jobs of the clinical assistant and clinician. This can be accomplished by limiting the frequency of the oral health assessment, the number of assessment questions, or the scope of oral health integration; configuring the EHR to support clinical decision-making; and using the huddle to prioritize tasks.

Staffing model option two—advanced primary care teams

Increasing the size and complexity of the team expands the potential for preventive and chronic illness care, including oral health, during and in between office visits. There are numerous potential configurations for multidisciplinary care teams.

One clinician/multiple clinical assistants

Care teams with two clinical assistants (medical assistant and/or LPN) have greater capacity to integrate oral health into their workflow:

- With this configuration, the clinical assistants can improve preparation for the visit by scrubbing the chart for care gaps that can be closed during the visit, and then work with the clinician to prioritize them during the huddle.
- The work of rooming patients is less likely to compete with other care team tasks. This decreases pressure on the clinical assistant to omit the Framework while rooming patients, and allows more time to engage patients in conversations about oral health.
- The team has the capacity to organize end-of-visit activities to include oral health risk factor coaching, application of fluoride varnish, and setting up of referrals.

Patient educator role

The presence of a nurse, dietician, or diabetes educator will enable a practice to provide coaching on oral hygiene and diet with minimal impact on workflow. Practices without health education staff can devote a clinical assistant to this work or, if staffing resources are unavailable, use print or media resources instead. Refer to Summary of Patient Education Resources for oral health education materials in a variety of languages that can be shared with patients. Refer to Summary of Primary Care Clinical Interventions for a summary of techniques for more robust oral health hygiene and dietary counseling.

Complex teams

Larger interdisciplinary teams comprising, for example, a clinician, an NP/PA, a nurse, and multiple clinical assistants have sufficient depth and flexibility to address the components of the Framework during an office visit through task sharing and cross coverage. A model for oral health integration for multidisciplinary teams to consider for the future would be one that includes a dental teamlet in the care team, for example, a dentist and/or dental hygienist, and multiple dental assistants.

Advantages

- Well-resourced teams can unload many tasks from busy clinicians, allowing them to focus on complex clinical issues and increasing the likelihood that preventive and chronic illness activities will be completed.
- Non-clinician staff often find greater satisfaction as they are given larger roles in patient care.
- Clinicians frequently experience greater professional satisfaction working in complex teams.
- Clinical protocols, which are necessary for delegation of tasks to non-clinician care team members, are an opportunity to make standards of care explicit and based on clinical evidence.
- A care team member can be given responsibility for care coordination, resulting in a more personal referral connection for the patient.

Disadvantages

- Many clinicians have little experience working in interdisciplinary teams and have not developed some of the necessary skills to do so. For more information on team-based care and team skills development, refer to the Continuous and Team-Based Healing Relationships Implementation Guide. Practices that are newly working in teams may find that engaging in oral health integration work helps build teamwork skills.
- Successful delegation of clinical tasks requires reliable and skilled team members, which may not be available.
- Fee-for-service reimbursement, which limits revenue to office visits with the clinician, may be insufficient to support a complex care team.

Summary of staffing model two

Advanced primary care teams, which come in several configurations, allow more flexibility in integrating oral health into the workflow and offer the clinician more opportunities to focus on complex clinical issues, while offering non-clinicians greater job satisfaction as they assume more responsibility for patient care. Disadvantages include potential lack of experience with interdisciplinary teamwork and delegation and fee-for-service reimbursement limitations.

Staffing model option three—population health personnel

A number of different types of skilled personnel (nurse, dietician, social worker, pharmacist) are capable of playing essential care management roles in population health. When primary care teams are given additional resources, often shared across several teams, there is an opportunity to expand the expertise of these highly trained team members to include activities that support oral health integration:

- Care team members can provide additional capacity for behavior modification coaching.
- Oral health can be incorporated into other disease management activities that entail patient engagement and self-management support.
- Oral health can be part of condition-specific events such as planned diabetes visits, prenatal groups, or group visits for frail elderly.
- Outreach activity for population health can be expanded to include contacting patients in target populations due for oral health assessment.
- Pharmacists can play an important role by counseling patients about sugar in liquid medications, and about oral dryness as a potential side effect of medications.
- There is growing experience in select populations utilizing community health workers (CHWs) and promotoras for community needs assessments, patient engagement, and patient education.

"I work with the patients with diabetes, and I'm enjoying the new oral health program—it's something good for my patients and my community. I have a close relationship with my patients, so I explain that this is a new service for them that is available here. Part of my vision for the future is to see more community health workers working with patients and educating them. This community has limited education, they have a lot of barriers, and I can help with that. I didn't have a lot of education about oral health, and I am part of the community. After I learned about it, I understand how important oral health is for all of my patients, and for all of the One Community Health patients." **— Alicia Sandoval, Community Health Worker, One Community Health**

The advantages and disadvantages for staffing model option 3 are nearly identical to those for staffing model option two listed on page 59–60.

The availability of additional care team members increases the ability of the team to provide the oral health assessment to its entire panel of patients instead of limiting its effort to one or two target populations. It also increases the ability of the team to expand the scope of their efforts to identifying behavior-mediated oral health risk factors such as diet and oral hygiene. The role of the clinician would not be expected to expand, remaining limited to the actions described above on page 58.

Summary of staffing model three

A staffing model offering greater numbers of skilled personnel in management roles creates greater opportunity to support oral health integration. Advantages and disadvantages of this model closely parallel those of the advanced primary care team model.

Workflow Structure

The general structure of a primary care office visit is shown in Figure 5.1. Primary care clinics have all developed workflows within this structure based on their staffing model and influenced by a number of additional factors that will vary from clinic to clinic:

- Clinician level of comfort with clinical task delegation.
- The skills and abilities of available support staff.
- Reimbursement considerations.
- Additional considerations for practices with co-located dental services.

It is possible to fit some of the Framework actions into existing preventive and chronic care visits for both children and adults, with minimal impacts on workflow.

Clinician comfort with delegation of clinical tasks

Clinicians vary in their willingness to delegate clinical tasks to support staff. There are many reasons:

- Clinicians may be concerned that adding more tasks for their clinical assistant means it will take longer for them to room patients.
- Clinicians may not trust their clinical assistant's ability to perform the tasks reliably.
- Clinicians may have a culture of working alone and be new to the concept of teamwork.

Skills and ability of available support staff

Clinical support staff often vary in their ability or willingness to adopt new skills or manage new tasks. Commonly, complex new tasks, e.g., pulmonary function testing or phlebotomy, are embraced by some clinical assistants and avoided by others. In comparison, preventive oral health tasks, such as fluoride varnish application, are relatively simple, and in the field-testing sites, many found that clinical assistants were eager to perform this skill. It is important to decide for oral health what constitutes a core competency checklist for all clinical support staff and then develop standardized training and procedures, so that all clinical support staff members develop competence and confidence. As with any clinical task, there must be a mechanism for monitoring how oral health tasks are

being performed. Many of these core competencies can be maintained with online training, such as Smiles for Life, as an adjunct to in-service training, which, although developed for clinicians, is reasonable for clinical support staff as well. Refer to the clinical content training developed for the field-testing sites and described in Section 4: How to Prepare for Successful Implementation. Clinics with co-located dental practices may be able to get dental hygienists or dental assistants to lead onsite training to update the skills of clinical assistants.

Case Vignette: Integrating a Co-located Dental Hygienist at Community Health Centers of Benton and Linn Counties

At Community Health Centers of Benton and Linn Counties, a multi-site federally qualified health center located in and around Corvallis, OR (population 54,000), the leadership team chose to begin its oral health integration pilot with a new clinician who has a single clinical assistant and a small total patient panel. "I've gone through all of our patient panel—about 150 patients—and put a private sticky note in the patient chart that says 'needs dental assessment' because there's no easy way to enter it in the EHR. We're a new practice with a small panel, so it's relatively easy to manage it this way," shares Sheila Lien, the clinical assistant for the pilot clinician. Initially, the leadership team thought they would focus just on the patients with diabetes on the panel, but they realized that scale would be too small, and it would create additional work to determine who was due for a screen. Lien explains, "When a patient comes in who has that sticky note, I ask them the screening questions including whether they would like a referral to the dental hygienist. If their answers indicate they are high risk, then I look in their mouth as well. I ask everyone if they would like a referral to the co-located dental hygienist for a cleaning and evaluation, and I schedule them directly before they leave the appointment. I give out toothbrushes and toothpaste, and if they have an outside dentist that they already see, then I make a referral to that dentist and I call their office to get the scheduling process underway." Using the co-located dental hygienist in this way maximizes efficiency within a small team. Patients who do not have an existing relationship with a dentist will get referred if necessary by the dental hygienist.

Practices with co-located dental facilities

Medical practices in facilities with co-located dental practices have additional opportunities for workflow innovation to integrate oral health into primary care:

- For patients referred to dentistry, the clinical assistant can make the dental appointment during the end-of-visit segment of the primary care visit in the exam room, and can make a warm handoff directly to a member of the dental care team. Although a referral order is still important for communication and referral tracking, co-located practices may be able to minimize the administrative work necessary for dental referrals.
- Dental personnel are available to monitor, provide oversight, and improve the primary care team's clinical skills in interpreting the answers to oral health questions and identifying subtle findings on examination.
- Clinicians on both medical and dental teams are available to each other for informal, real-time clinical advice.
- Dental assistants can be trained to monitor blood pressure, check for overdue screening or chronic care monitoring needs, and pay attention to immunization schedules, including giving influenza vaccines during flu season.

To read more about an innovative co-located education and practice model, refer to the Interprofessional Education and Care at the New York University Nursing Faculty Practice case example.

The availability of a dental assistant or dental hygienist within the primary care practice and/or a co-located dental practice does not diminish the importance of integrating oral health preventive services into the primary care workflow. In order to expand access for the entire panel and emphasize the centrality of oral health in overall health, it is important for the primary care team to create and maintain a focus on integrated oral health. In a co-located practice, the emphasis can shift to reinforcing a common message collaborating on a common approach to population management for oral health. For example, a dental hygienist shared across multiple primary care teams might support a clinic-wide initiative to ensure that children receive sealants and older adults at risk for caries receive fluoride varnish. Both of these efforts would be carried out in the primary care setting with dental leadership. The ability of a clinical setting or delivery system to pursue any of these opportunities will depend upon the stability of the clinic as a whole, the level of interdisciplinary collegiality, and the presence of adequate resources for each side to take on additional tasks to assist in the effort.

Reimbursement opportunities

One of the reasons it is important to have the chief financial officer or office manager on the program team is that quality improvement initiatives are most likely to be sustained when they are responsive to the financial realities of the organization. Given the limited financial reserves with which most primary care practices operate, it may be necessary to limit initial services to those that are associated with at least some level of reimbursement (e.g., fluoride varnish for children), those for which there is a clear business case under alternative payment models, and those deemed to have no negative financial impact on the organization (e.g., provisioning of patient education resources).

When considering reimbursement opportunities, the chief financial officer will be considering the following:

- The value of developing population management competency and whole-person care in preparation for value-based reimbursement.
- Projected revenue from reimbursable services*:
  - Fluoride varnish.
  - Oral health screening and family education.
- Costs of applying a single care standard to all patients, regardless of coverage or reimbursement, that includes:
  - Fluoride varnish.
  - Documenting clinical information for reimbursement.
  - Additional staff, if any required, to support the workflow.

For more information on reimbursement opportunities and issues, refer to Section 8: Leveraging Success: Spreading and Sustaining.

"We can get reimbursed for the assessment and the fluoride varnish. Due to an insurance company requiring an additional form be filled out in order to be reimbursed for the oral health assessment, we decided to just go forward and do the assessment knowing we may not get reimbursed. We're trying to make the process as seamless and simple as we can for staff, and adding one more form for staff to complete increases the change that the workflow won't work. Reimbursement is important, but we're not going to not provide oral health services because of that."

—Aron Goffin, MPH, Multnomah County Health Department–East County Health Center

*The American Academy of Pediatrics (AAP) Oral Health Reimbursement Chart maintains state-specific information on delegation of oral health activities and reimbursement rates.

A common-sense workflow for oral health integration

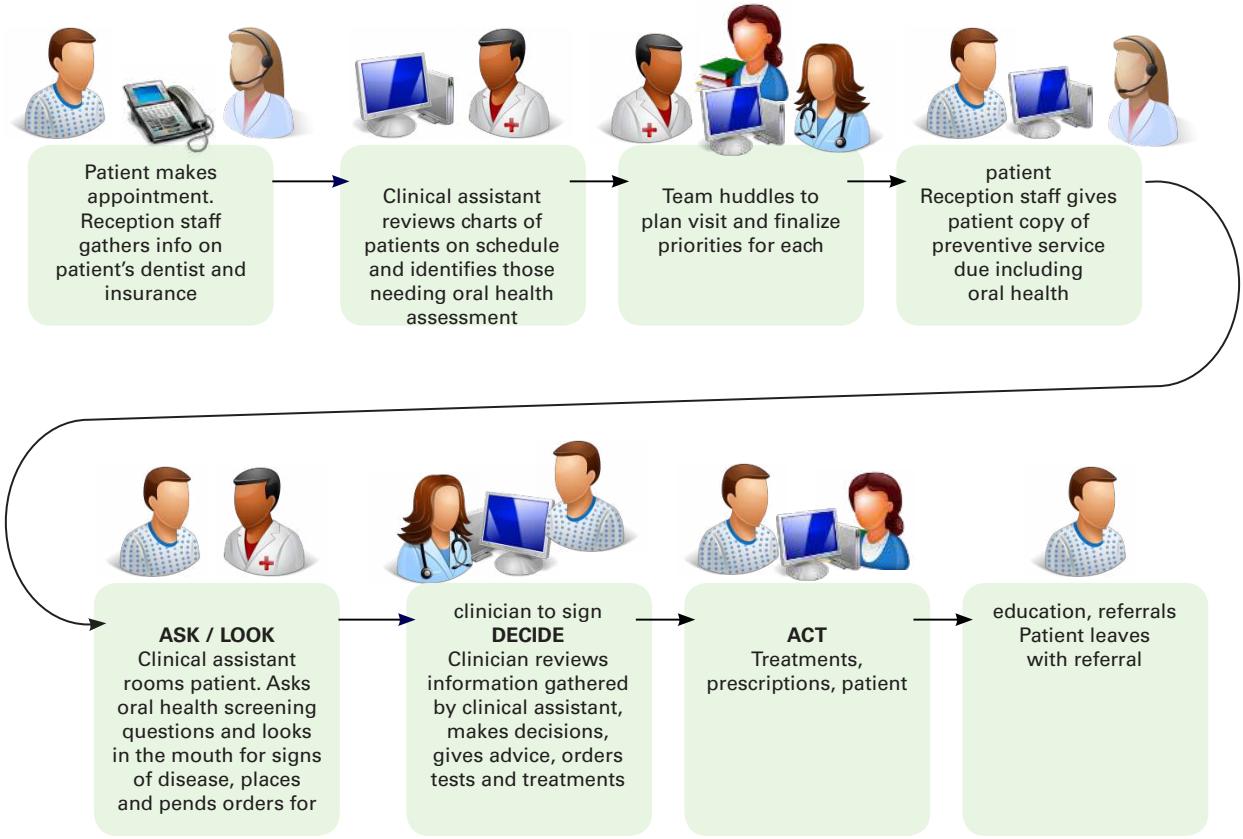
Figure 5.1 graphically depicts a workflow in which the Framework is integrated into the primary care office visit, applying the principles that have been stressed in this implementation guide so as to maximize the benefit to patients with the minimum disruption of the underlying workflow. These principles include:

- Sharing the work of gathering and organizing clinical information across the care team.
- Creating protocols for clinical decisions that require minimal clinical judgment and are algorithm driven, so they can be delegated to clinical support staff.
- Configuring clinical decision support within the EHR to present information necessary for decision-making to the person responsible for a decision, so that the right decision can be made with the least amount of effort.

Before the visit

- The reception staff has an opportunity both as the patient makes an appointment and in preparation for the appointment to update dental insurance and the name of the patient's dentist.
- The clinical assistant reviews the charts of all patients on the schedule in preparation for the huddle prior to the first patient appointment. Among the purposes of this activity is to make a list of all preventive actions that are necessary for each patient. The clinical assistant will bring this list, including the oral health assessment, to the huddle where it will be prioritized for each patient.
- In the huddle, the care team prioritizes the list of tasks the clinical assistant will try to do while rooming the patient.

Figure 5.1: A common-sense approach to integrating oral health into the primary care workflow



During the visit

- As the patient arrives at the clinic for the visit, the reception staff gives the patient a list of the screening and preventive services that are due, including oral health assessment.
- As the patient is roomed, the clinical assistant asks the age-appropriate questions that are part of the Framework, and performs a look in the mouth to identify signs of oral disease. Based on the result of this screening assessment, the clinical assistant may set up an order for a preventive intervention or referral corresponding to the findings in the patient's chart.
- The clinician reviews the clinical assistant's findings, checks positive findings, and signs the orders. For any findings that require advanced clinical judgment, including acid reflux and oral dryness, the clinician gathers the information necessary for diagnosis/treatment and develops a treatment plan.
- At the end of the visit, the orders for the actions are carried out by one of the care team members. This includes orders for fluoride varnish, coaching, and referral to dentistry.

On the following pages are two examples of primary care workflows from field-testing sites that were optimized to include portions of the Framework.

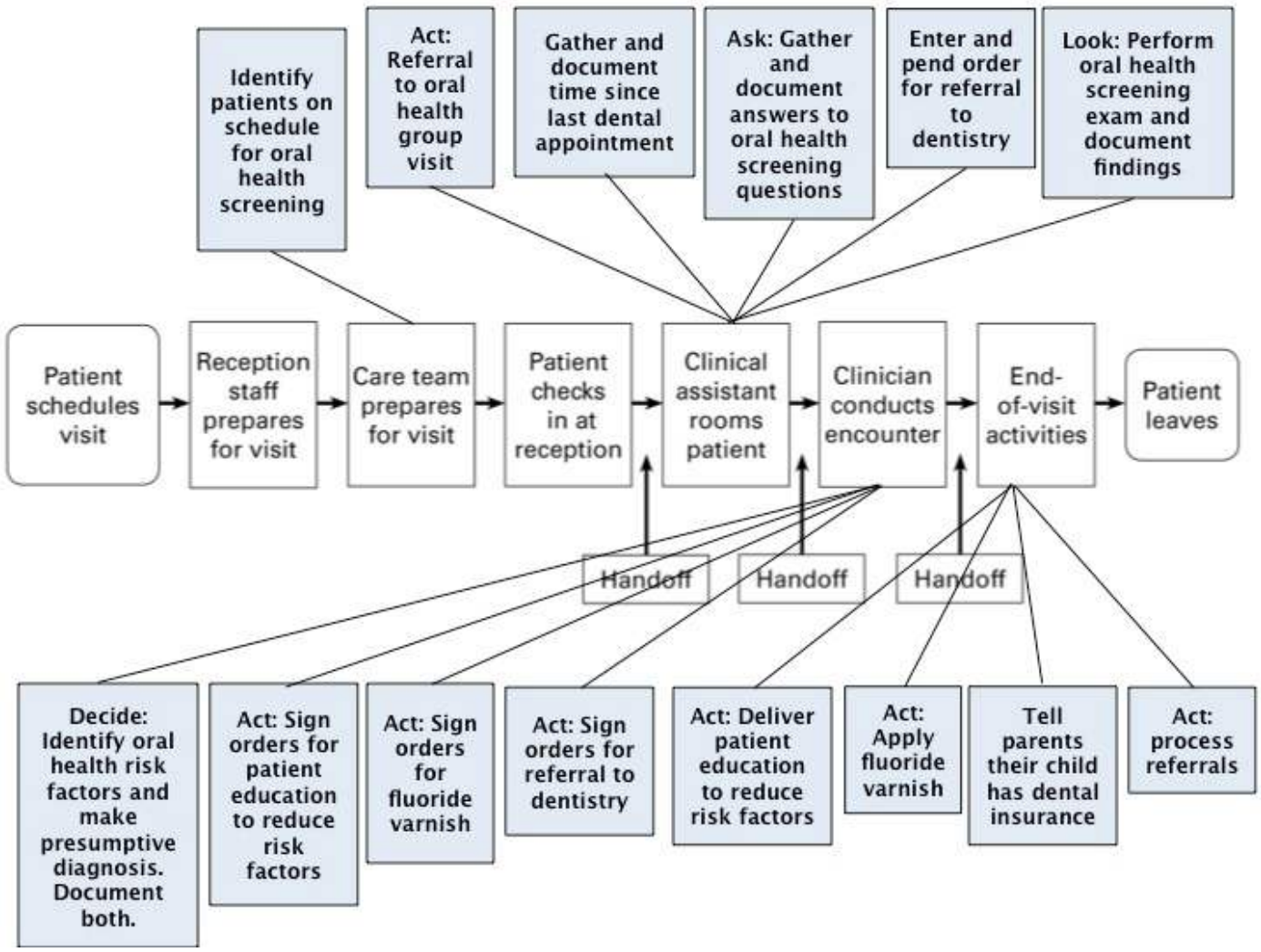
"This has been really good for me, as a clinician, to remind me of the importance of oral health and how easy it is to incorporate it into the practice, and the benefit for my patients. I've had a small handful of patients who have had important significant dental issues that got addressed, and they wouldn't have been addressed otherwise."

—Deborah Nalty, MD, Providence Medical Group–Monroe Clinic

Figure 5.2: Examples of workflows successfully used by field-testing sites

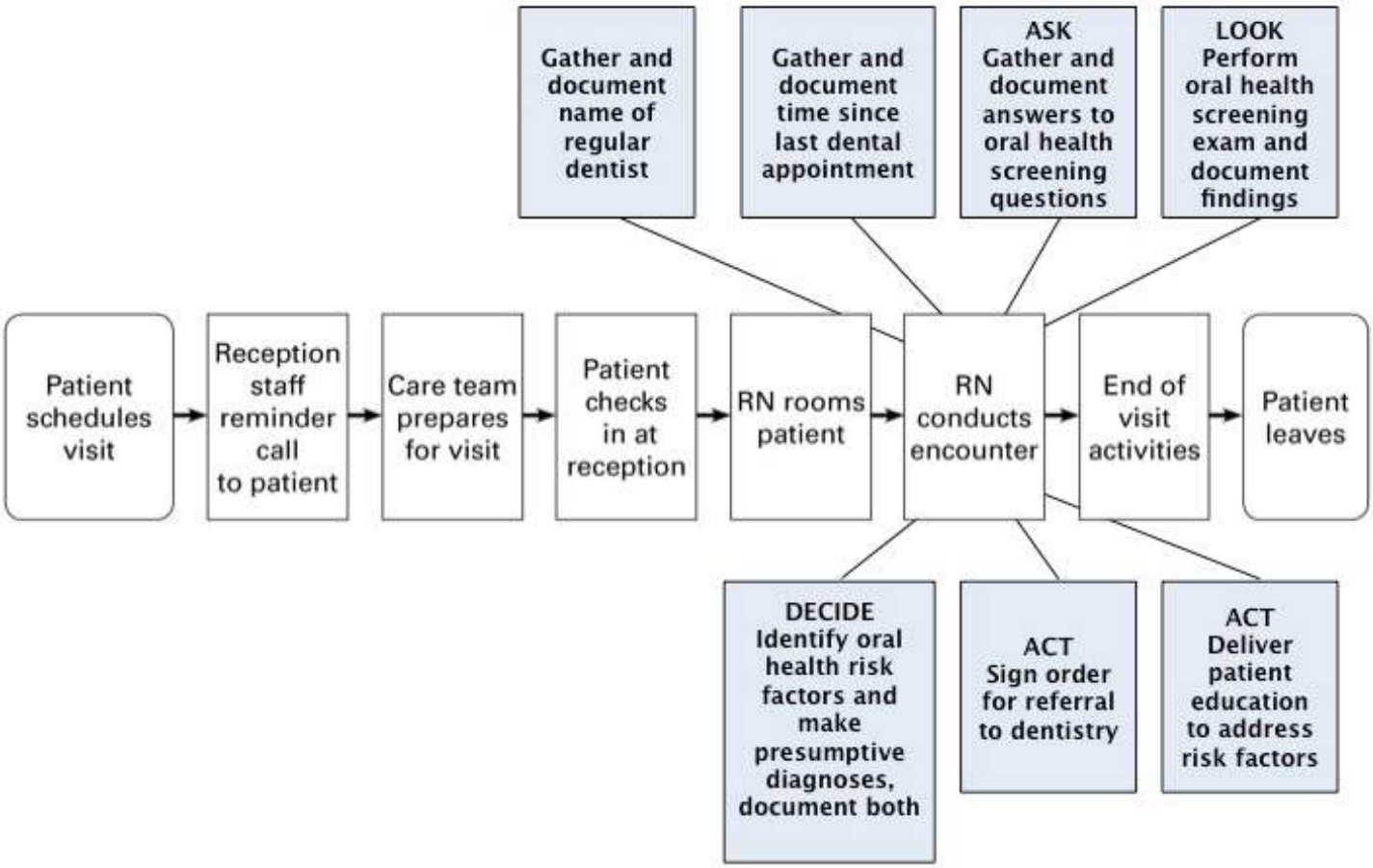
Well adult visit—Rodger's Health

This field-testing site found that by moving the information-gathering steps earlier in the workflow to be completed by the reception staff at check-in, efficiencies were created that freed up other staff later in the workflow to perform other actions as needed.



Prenatal visit—Harborview Medical Center

This field-testing site found that having the nurses be responsible for addressing oral health during the first new OB visit was the most efficient and effective way to accomplish the work, because the nurses played such an important role in patient education.



Health Information Technology

Use of Health Information Technology Within the Optimized Workflow

The role of health information technology (HIT) in developing a streamlined process to fit oral health into the busy primary care workflow is to match the tools available in the EHR to the unique characteristics of the micro-environment in which a care team is working, as determined by the team configuration, the patient population, and countless other factors. This means that the HIT tools for entering and using information pertaining to oral health should be designed so that potentially any care team member could use them. This gives the care team maximal flexibility with different staffing models and workflow innovations. Potential ways to support oral health integration using HIT could include:

- Creation of a tool or field to display the date of the most recent oral health assessment, which informs the clinical assistant whether a patient is due for an assessment or not.
- Utilization of the specifications for data entry fields to accept information gathered in the ASK and LOOK parts of the Framework described in Section 4: How to Prepare for Successful Implementation. These have been kept as simple as possible to allow their use by anyone on the primary care team.
- Orders for actions defined by a written protocol placed using the order set, by any care team member, and then signed by the appropriate person depending on the order.

Administrative data

HIT pertaining to the Framework focuses on clinical information that is used for making clinical decisions. There is also a set of administrative data that practices will need to consider how to manage that includes the name and contact information of the patient's dentist as well as dental insurance information:

- Most EHRs have a place to keep contact information for medical and surgical specialists. The identical information for dentists should be kept in the same place.
- The practice will need to decide where in the workflow to collect and record dental insurance information to help determine where to refer the patient if needed. The two choices are to collect, verify, and record it prior to the visit of every patient, or to only collect it on those patients for whom a referral to dentistry has been made.

Integrated workflow optimization

A representative of the HIT department or the local HIT staff member is an essential member of the workflow optimization team. The care team members will do most of the work in the workflow mapping; however, questions will arise that only the HIT staff member can answer. It is during the second part of the mapping, when the Framework is being translated into tasks that are to be performed at specific points in the future state workflow by designated individuals, that someone who understands the HIT perspective needs to be present. The care team may or may not understand the limitations and the potential of different EHR features, and the HIT staff member's role is to help find solutions to the challenges the care team may face. The following are examples of the types of questions that can arise:

- What are the options for quickly identifying patients on the schedule who should have their oral health assessed during the visit?
- How can the system be set up to print the oral health questionnaire to give to a patient at reception when checking in?
- How can information that a clinical assistant enters into the chart be incorporated into the clinician's note?
- What are the options for a clinical assistant to communicate a positive finding to the clinician?
- What decision support tools are available to ensure that a patient with a modifiable oral health risk factor receives all the corresponding interventions?
- What are the options for documenting coaching for diet/oral hygiene that takes place during the office visit?
- What are the options for maintaining oral health education handouts and tools in the EHR?
- What are the options for separating internal referrals from external referrals to dentistry in the order menu?
- What features does the EHR have to track referrals, and can they be configured to track dental referrals?

At the end of the workflow optimization mapping, many of the tasks to be completed before the future state can be tested are likely to involve HIT, and the person who is responsible for such tasks will need to fully understand the context of the request. The HIT staff member will need to work with the leadership of the workflow optimization group to make sure that the HIT modifications are made to meet the needs of the care team.

Click here to jump to Section 6: HIT: Support for Structured Referrals

SECTION 6

Structuring Referrals to Dentistry

Introduction

Many patients screened during the course of a primary care visit will need dental care, including definitive diagnosis and treatment that only a dental team can provide. Whenever possible, the primary care team should support patients' existing relationships by referring patients who have a regular source of dental care to their respective dentists. It can be expected, however, that many patients seen in the primary care setting will not yet have a relationship with a dentist and will need guidance on referral resources. The basic premise of the Oral Health Delivery Framework (the Framework) is that referrals to dentistry ought to be as smooth as referrals to any other medical or surgical specialist—the burden should not be on the patient to coordinate transitions of care.

This section describes referrals from primary care to dentistry and:

- Presents the goals of a structured referral (relevant for both internal and external referrals).
- Describes the key components of an effective referral process.
- Offers guidance on how practices can build referral networks able to serve the full diversity of their patients.

Structured Referrals

A structured referral is an order for a referral placed in the electronic health record (EHR) to a specific dentist. Just like a medical/surgical referral, it specifies the reason for the referral and contains relevant clinical information, including lists of the patient's medical problems, active medications, and medication allergies. There is an expectation that the dentist will return a consultation note to the primary care team.

"From the patient perspective, what they see is that their healthcare clinicians are adding dentists to the mix, and that sends the message that dental care is critical and important, that they're not separate. It moves patients towards the understanding that oral health and overall health are strongly related."

—Angie Dunn, DDS, Light Dental Studios

Co-Located Dental Services

Primary care practices with co-located dental services have a "built-in" internal referral network. However, field-testing experience shows that practices with co-located dental services have many opportunities to improve referral processes and streamline care. Moreover, many co-located dental practices are at capacity, and will not be able to absorb either the number or type of referrals that may be generated by primary care. For these reasons, we recommend co-located practices do the following:

1. Optimize the internal referral process using the principles of integrated care, as described in this section.
2. Ensure that referral orders include the reason for referral in addition to the other information that needs to accompany it.
3. Recruit external referral partners. This could include local dental practices or other community health center dental practices in the community.

Goals of a Structured Referral to Dentistry

The goals of a structured referral to dentistry include:

1. The patient should leave the primary care office with a referral to a specific dentist or dental office with which the primary care practice has a referral agreement. Instructions should make it clear to the patient what to do, what to expect, and whom to contact if problems arise.
2. An agreed-upon set of information should be sent from the primary care office to the dentist, so the dentist understands the reason for the referral and has sufficient information about the patient's health condition to be able to safely provide appropriate treatment including prescribing medications.
3. The dentist should send the primary care clinician a consultation note documenting when the patient was seen, what was done, and any future treatment plans.
4. All referrals should be documented in the EHR as structured data so they can be tracked by the primary care team and so that the referral process can be monitored to ensure patients found to have active disease are, in fact, referred.

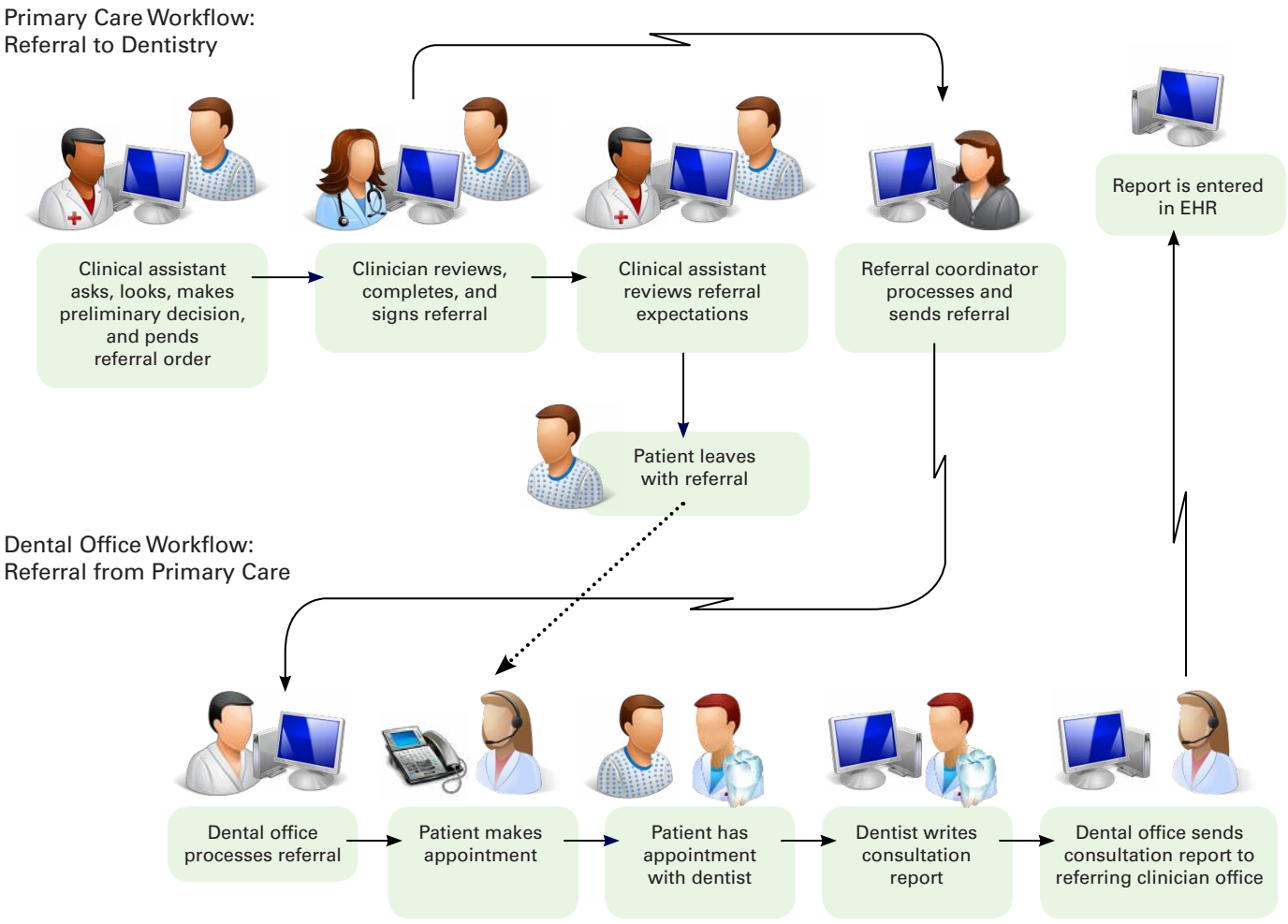
These goals exist irrespective of the patient's dental insurance status and whether or not the patient has a preexisting relationship with a dentist.

Achieving these goals requires that the primary care practice track and support the referral until it is completed when a consultation note is received from the dentist. This process is known as "closing the loop," and it is the gold standard for effective care coordination. For more information on referral tracking, refer to Improving Chronic Illness Care. Moreover, having a process in place to help patients find and make appointments, and receive additional support when needed, is an important component of care coordination. Support needs may include transportation, medical interpretation, or other services. Practices should offer the same level of support for dental referrals as they do for all other medical and surgical referrals.

Primary care referral pathway

Figure 6.1 demonstrates a common workflow for a primary care referral to specialty care, adapted for dental referrals. There are several key features of this workflow as it pertains to dental referrals, described in more detail below.

Figure 6.1: Referral workflow from a primary care practice to a dental practice



Key Features of a Dental Referral

Care coordination is a central element of the Framework. Traditionally this has been a burden placed on the patient, resulting in inefficiencies, a negative experience of care, and potentially even risk to the patient. Primary care teams will need to identify an individual to take responsibility for this process and ensure that referrals to dentistry flow smoothly. Care coordination is often a challenge with medical/surgical referrals, and developing a standard process for dental referrals may help improve care coordination processes for other referrals as well.

1. The referral is a clinical decision that the primary care clinician and the patient/family make together, and is reflected as an order in the electronic health record.
2. The referral order is designed to prompt the ordering clinician to enter the clinical context and any health information the dentist needs to address the reason for the referral. For example, for a referral for gum inflammation, the order would prompt the ordering clinician to include the presence of a systemic disease such as diabetes, or habits like tobacco use, known to accelerate periodontal disease.
3. The clinical assistant or referral coordinator ensures the patient leaves the primary care office with written information on the referral, including contact information for the dentist, what should happen next, and instructions for what to do if there are any problems with the referral. If possible, it may be most efficient to schedule the appointment before the patient leaves the primary care office, to create a "virtual warm handoff." Some sites may be able to include the referral information in the after-visit summary or make it available on the patient portal.
4. Once the clinician signs the referral order, it is commonly routed to a referral coordinator or the staff member responsible for referral management for processing, which may include verification of insurance, and clerical and clinical information accompanying the referral. The referral is then transmitted to the dental office.

> "Having that referral relationship established is great. I feel confident that when I have a patient in the room with a dental issue that needs to be taken care of, I can refer them."
>
> **—Wendy Hughes, ARNP, Grand Coulee Medical Center**

5. The dental office will review the referral. This review may lead to the dentist contacting the referring clinician, either to get more information or, in some cases, to answer the referring clinician's question without having to see the patient.
6. Once the appointment is made and the dentist sees the patient, the dentist will complete the consultation report.
7. The consultation report is sent to the primary care practice, where it will be associated with the referral order and sent to the referring clinician to review.

The manner in which information is sent back and forth between the ordering (primary care) clinician and the consultant (dentist) is subject to available technology. What is most important is the content and timeliness of the messages, and the commitment to share information with one another.

The various technologies that can be used in this workflow include fax, e-fax, traditional mail, asynchronous secure messaging via email, direct messaging of a continuity of care document, or via a health information exchange. Inability to utilize health information exchange options to electronically communicate should not be viewed as a barrier. Opportunities to use health information technology (HIT) to support referrals are described on page 81.

Challenges and barriers

As with all referrals, there are potential barriers that might arise for the patient. These include:

- Transportation difficulties.
- Lack of time.
- Fear of dental care.
- Language barriers.
- Insurance coverage.
- Affordability (e.g., co-pays).

Primary care teams should make every effort to address these in the same manner they would address them for a referral to a medical specialist. Additionally, a patient may encounter challenges once the referral has been completed. The primary care team should provide what support they can to help ensure the patient receives the treatment they need.

If a practice observes that a high number of patients are not following through on referrals, it may be worth determining whether there is a persistent barrier that can be addressed.

Strategies for Building a Referral Network

Primary care practices will need to identify supportive dental partners in order to build a referral network able to serve the full diversity of its empaneled patients. Primary care practices should be prepared to identify multiple referral partners in order to meet the access needs of established patients. Even federally qualified health centers with co-located dental practices may need to partner (or contract) with local dentists or other community health centers in order to meet the access needs of their medical patients.

How can a primary care practice build a referral network? Begin by assessing the specific needs and preferences of the patient population.

- Insurance status, age, prevalence of chronic illness: For example, a pediatric practice will need to secure referral partners able to see very young children (under age 2).
- Location, public transportation options, language preferences, and literacy levels, among other factors. If the practice has a patient and family advisory panel or quality improvement team, ask for their ideas and input.
- Because many patients lack dental insurance, all primary care practices should secure referral partners that accept a mix of referrals, including people enrolled in Medicaid and a limited number of uninsured patients, or offer a sliding fee scale.

"Having a good relationship with a dental partner is key to the work. When you reach out, the medical director or someone involved in community relationship-building should begin that conversation and relate it to the common goals the organizations share—the goal in healthcare is always to help people, and that's something that is easy to connect with." **—Allie Nicholson, Operations Manager, Heartland Community Health Center**

Identifying potential referral partners

There are a variety of options for identifying supportive dental partners. Consider these approaches:

- Build a local culture of collaboration based on personal relationships, and self-identify supportive referral partners. For example:
  - Primary care practice staff can nominate dental practices they know and trust.
  - Consider asking patients with established dental relationships to recommend their dentist.
  - Anecdotal experience suggests that dentists establishing new practices (and those looking to increase their patient base) may be the most willing to accept a mixed stream of patients (commercially insured, Medicaid-insured, uninsured).
- The Insure Kids Now website maintains a searchable, national dentist locator for dentists who see children enrolled in Medicaid and Children's Health Insurance Program (CHIP) programs. It contains general dentists as well as specialty dentists and indicates if they are accepting new patients. This is a starting place for practices focusing on their pediatric population to begin identifying possible dental practices to engage.
- Contact the local and/or state dental society for assistance. Many dental societies maintain a list of dentists open to new patients, including practices that accept Medicaid and/or offer sliding fee scales.
- Some states maintain a searchable website run by the state Medicaid program that enables searches by town or ZIP code for dentists who accept Medicaid plans. Nationwide, 42 percent of dentists participate in Medicaid programs, though there is significant variety from state to state (Health Policy Institute, 2015). Some practices may be able to find multiple referral partners who accept both commercially and Medicaid-insured patients, while others may have fewer options.
- Invite local dentists to an open house to network and connect with the practice team, or to provide an educational lunch-and-learn session for the practice team. This time can serve to both educate care team members on oral health topics and build relationships.
- Contact a local dental school and explore opportunities to create interprofessional education opportunities with dental students, as a means of building relationships with future referral partners.
- Identify an intermediary who can help facilitate conversations and broker referral agreements. This could include a medical society or professional association chapter, state primary care association, office of rural health, local health improvement network, a local foundation, or other neutral party.

Case Vignette: Referral Workflow Development at Brockton Neighborhood Health Center

At Brockton Neighborhood Health Center, a large multicultural health center located just south of Boston in Brockton, MA (population 94,000), referrals are made to a co-located dental clinic. Benjamin Lightfoot, MD, explains, "A referral to dentistry is made by the clinician if there is significant pathology in the mouth, if they're having significant symptoms, or if they haven't seen a dentist in a few years. The referral gets entered in the EHR [electronic health record], and it goes to the dental referral team and they reach out and contact the patient to schedule the appointment." The process of making the referral works well, though challenges arise when it comes to documenting that the referral was completed. "The real trick is closing the loop; someone has to go in and check and see if the patient kept their appointment and completed the referral. There's not an automatic process to close the loop and get the information back. It is being closed, but it's not happening as quickly as we'd like," admits Lightfoot. The process has evolved over the course of the integration pilot. "Our referral process has improved significantly over the course of the pilot. We're on the same EHR as the dental clinic, but it's not as integrated as I'd like. Patient information flows from the EMR [electronic medical record] to the EDR [electronic dental record], but nothing flows back to the EMR. It would be really nice to be able to get that. We just got a new dental director on staff; I'm planning to ask him to come to some of our oral health integration team meetings so we can build a closer collaboration," shares Lightfoot.

Case Vignette: Referral Challenges and Work-arounds for Heartland Community Health Center

Heartland Community Health Center, a federally qualified health center located in Lawrence, KS (population 88,000), began its oral health integration work with a community oral health partner that is a safety net dental provider. They had already been referring patients to them, and had an established referral process that worked smoothly. "Our referral coordinator helps the patient complete the necessary paperwork so they can get a dental appointment. Once we fax the paperwork to the dental clinic, they reach out to the patient to schedule the appointment. If they can't reach the patient, they ask our referral coordinator for help. Once the patient is seen in the dental clinic, they fax a note back to us so we can close the referral. Our referral coordinator tracks the referrals on our end too, so she can reach out if necessary to ensure we always get the information or know if the patient no-shows," explains Lanaya Henry, quality assurance coordinator. However, entering into the oral health integration work, the Heartland team expected referrals to be a challenging issue due to cost barriers. "We have a great community dental partner, but we can't change their fee structure, and dental care is expensive for our patients," admits Allie Nicholson, operations manager. "Starting out, our pilot clinician was eager and excited to begin. After a couple of months when we checked back in, she was feeling frustrated. She was doing the screening, exam, and education, but she didn't feel like she could do anything for the patients because connecting them to care was such a challenge due to the financial barriers as well as the psychological barriers associated with dentistry." The leadership team made a decision to begin offering fluoride varnish as a preventive intervention, so the primary care team would have something tangible and useful to offer patients. "Our pilot clinician began to feel more energized by having something she could do in the office to help patients. Then, we learned that we received a dental expansion grant from HRSA, so we will be able to bring in a co-located and integrated dental program, and that was very exciting for our pilot team to hear," explains Nicholson. "We had been delaying spread because of the frustration around financial barriers for our patients, and we didn't want to spread in that state. But we know now that dental care is coming and will be more accessible for our patients, so we will be spreading to all care teams for their patients with diabetes, and to pediatrics as well, so that all clinicians and the clinic as a whole are familiar with the oral health integration process." Nicholson expects that having an integrated clinic will help reinforce the importance of oral health for patients, as they receive education about it from the clinical assistant, clinician, and dental hygienist during a single office visit. "We expect there will be more motivation to continue with oral health integration in the primary care setting since we can do live referrals and warm handoffs to dentistry. We don't want to just co-locate, we want to fully integrate."

To learn more about how some of our field-testing sites approached referral network development, see the Oral Health Integration Referral Experiences case example.

Once identified, outreach is often most successful when conducted by a call from a clinician to a dentist, or a clinic administrator to dental administrator. A compelling introduction to the collaboration proposal is to share the reason for outreach, such as "I'm reaching out to explore collaborating on patient referrals because most of my clinical staff are your patients and recommended you highly" or "Our practice is interested in partnering with yours to support patient referrals because many of our patients already see you and we'd like to support their oral health." It may take multiple outreach attempts to connect with the right person at the dental practice, and relationship building can take some time.

Screening potential referral partners to ensure that they provide the types of care to the types of patients seen in the primary care setting is important. The American Academy of Pediatrics (AAP) has developed a modifiable screening tool, Creating a Relationship with a Dental Home: Questions to Ask When Calling a Dental Provider, for use during the initial outreach conversation to help the primary care practice gather information about what the dental specialty is (cosmetic, restorative, etc.) and what type of insurance they accept.

Field-testing sites that sought community dental partners found that most were open to partnering once the oral health integration pilot was explained. They were reassured to learn that a mix of commercial- and Medicaid-insured patients would be referred and that the volume of patients was not likely to be high at first because the size of the target population was relatively small during the pilot test of change. Over time, as practices spread, the volume of referrals will grow, so practices may need to identify multiple referral partners to handle patient volume as well as to ensure referral options for all patients in their population.

"We're reaching out to the community dental offices to figure out a workflow so we can get a consult to them and they can send it back to us. We've connected with a couple of community dentists who feel excited about working with us. They like that now they have someone to reach out to if they need medical support (like if a patient needs a blood pressure before oral surgery)." **—Practice Manager in an urban federally qualified health center**

The referral agreement

Referral agreements are an important step in building a shared understanding of roles and responsibilities for communication and care coordination between clinicians. They provide an opportunity to discuss protocols and processes in advance to ensure smooth communication and clear expectations of the referral process. Specifically, they help clarify each party's role in meeting the expectations of a closed-loop referral. As relationships and trust develop over time between medical and dental clinicians, referral efficacy and patient access to care is increased.

Referral agreements include agreement on:

General expectations

- Clinical and administrative information that will be sent from the referring clinician to the consultant in preparation for the consultation visit.
- Clinical and administrative information that will be sent from the consultant to the referring clinician each time the patient is seen by the consultant.
- Availability for brief phone or email consults (consults involving a question about a potential clinical issue).

Access expectations

- Reasonable timeframe for routine, urgent, and emergency consultations.
- Referral volume (if necessary), maximum number of referrals per week/month.
- No-show policy and how it will be communicated to patients.
- Dental fee schedule and willingness to use a sliding fee scale for uninsured or low-income patients.
- After-hours care and support.

Care management expectations

- Seamless transition of care for patients and families/caregivers.
- Shared pain management protocol and shared information about pain medication prescriptions.
- A plan to manage recommended follow-up appointments.

Patient communication expectations

- Protocol to ensure that patients leaving the referring clinician's office have written information that includes the name and contact information for the dental consultant to whom they have been referred, what to expect as the next step in the referral process, and what to do if the next step does not occur within a specified timeframe.
- The process for tracking referrals and following up with the patient.

A modifiable referral agreement template is provided as an example.

The referral order

Both primary care clinicians and dentists should take care to use language free from specialty terms and acronyms in their communication, to ensure clear understanding on both sides.

What information needs to accompany a referral from primary care to dentistry?

The information needed to accompany a dental referral is the same as the information that accompanies a medical/surgical referral. That information includes:

- Service requested of the dentist/reason for referral.
- Demographic information.
- Additional relevant clinical information, such as:
  - Problem list.
  - Relevant past medical/surgical history (e.g., temporomandibular joint dysfunction [TMJ] disease or sinus surgery).
  - Current medication list.
  - Current allergy list.
  - Immunizations.
  - Pertinent labs and imaging.

Primary care practices typically have a template for medical/surgical referrals. This should be modified, as needed, and used for dental referrals as well.

Implications for dental practices

Dental practices will need to be able to identify the referred patient and his/her primary care clinician (so that the dentist and dental care team are aware that a summary/consultation note is required), and have a process in place to ensure that the summary document is sent to the primary care clinician consistent with the terms of the referral agreement.

What information needs to accompany a consultation note from dentistry to primary care?

- Date the patient was seen.
- What was found (e.g., caries in multiple teeth, or severe periodontal disease in three quadrants).
- What was done (e.g., procedures, medications prescribed).
- Brief treatment plan (e.g., three-quadrant scaling).
- Follow-up arranged.

A modifiable referral form and a sample completed form are provided as tools for practices to begin.

For referral coordinators

The role of the referral coordinator is particularly important here, as they will likely be the primary contact person for the dental referral partners. If a practice does not have a staff member with this title, then this role refers to the care team member who manages this work. Key concepts to review include:

- Ensuring that a protocol is in place to track the patients who are referred to dentistry, including where they are referred if multiple referral partners exist.
- Establishing a method of communication with the referring partners, and a primary contact at those offices. During the initial pilot it can be helpful to arrange regular check-in calls with the primary contact at the referring partners to do a quick review of the referral workflow and ensure that referrals are proceeding as expected.
- Coordination with the data reports to ensure effective referral tracking and identification of any obstacles early in the process.

Health Information Technology Support for Structured Referrals

Health information technology (HIT) supports structured referrals to dentistry in three ways:

1. A formal order to dentistry.
2. Sharing administrative and clinical information between the clinicians.
3. Referral tracking.

The referral order

A referral order to dentistry provides structure to the referral process. If there is no dental referral in the electronic health record (EHR), it will be necessary for the HIT department to create one. That structure is used to ensure that:

- The ordering clinician is prompted to include all necessary clinical information in the referral.
- The ordering clinician specifies to which dentist or dental office the referral is made. If the practice has an in-house dental service, it is necessary to distinguish between "internal" and "external" referrals. External referrals will be easier for clinicians to use if they include a drop-down list of names and contact information for dentists in the referral network.
- The referral order is processed by the referral coordinator, who verifies that insurance information is valid and that the referral is sent to the correct dental clinic.
- Information the patient needs to make an appointment with the dentist is included in the after-visit summary.
- The clinic's referral tracking workflow is activated. Most EHRs have a feature to help clinics track referrals from the time they are ordered until the report from the consultant arrives at the clinic and is entered into the EHR.

Information exchange between medicine and dentistry

In most settings, practices (even those with co-located dental practices) do not have EHRs that can communicate with electronic dental records (EDRs).

Sending information from the ordering clinician to the dentist

In the absence of such an ideal state in which both medical and dental teams use the same EHR, the referral request generated by the referral order is the most useful medium for transmitting information from the ordering clinician to the dental consultant. The exact informational content will be subject to the referral agreement, but most of the time it will include at least:

- Administrative data, including demographic and insurance information.
- Clinical context for the referral and the specific request.
- Key lists from the EHR: problem list, medication list, and allergy list.

Methods of data exchange

As standards for EHR interoperability become more widely adopted and expand to include dentistry, information for dental referrals will likely be handled using electronic health information exchange like any other referral. In the meantime, most practices will need to get started using less advanced methods of information exchange, such as secure email, standard mail, and fax.

Sending information from the dental consultant to the ordering clinician

Information to be included in the dental consultation will be determined in the referral agreement. It is likely that the information will be text, limited to information about the date the patient was seen, what work was performed, including any medications ordered, and the general care plan. This report is likely to be received at the clinic as a letter or fax.

Closing the loop

Once the consultation report is received in the primary care clinic, it should be electronically attached to the referral order and sent to the clinician's in-basket. This method ensures that when the clinician wishes to review the consultant's note in the future, it can easily be found and attached to the order for the referral. As with all referrals, it is important to have a process to ensure that the consultant's note has come back and been entered in the EHR before closing the order, so that teams are able to identify orders that are still outstanding.

Referral tracking

Most EHRs have a feature that is designed for tracking referrals and a recommended workflow for using this feature. Many practices do not use their EHR referral tracking features for a variety of reasons:

- It may not have been installed.
- It may be inadequate to meet the practice's referral tracking needs.
- It may require redesigning the referral workflow in ways the practice is not prepared for.
- Referral tracking may not be a priority.

If using the EHR to track referrals is not an option, it is reasonable to create a standalone system using an electronic spreadsheet. The referral coordinator is probably the person best suited to operate it, because referrals go out through the referral coordinator and consultant reports usually are routed to the referral coordinator as soon as they arrive in the clinic. A referral tracking spreadsheet can be set up to document the date of key events, including:

- Referral ordered.
- Referral sent to consultant.
- Date the patient was seen.
- Consult report received.
- Consult report attached to referral order and routed to ordering clinician.

For most delivery systems, very little HIT modification is required to activate dental referrals, although structured referrals to dentistry may represent an opportunity to establish an optimized referral workflow in the absence of a historical process. Oral Health Referral Workflow Optimization is an interactive PowerPoint tool for a practice to use to optimize their existing referral process and customize it for oral health referrals.

Click here to jump to Section 7: Using Data for Quality Improvement.

Supporting Materials, Section 6

Referral Agreement Template: This modifiable form walks a practice through the content that might be included in a referral agreement. Practices can use the form as a prompt for discussions with referring partners and remove, modify, or add elements they agree upon. A good practice is for both the primary care practice and dental practice to sign and retain copies of the agreement to refer back to as the referral workflow and processes are worked out.

Referral Template for Primary Care Referrals to Dentistry: This modifiable form provides a template for a primary care practice and dental practice to use to communicate the essential information back and forth. The top half is intended to be filled out by the primary care practice and then sent to the dental practice (via secure email, fax, etc). After the patient is seen, the dentist completes the bottom half and sends it back to the primary care practice's designated contact.

Sample Completed Referral for Primary Care Referrals to Dentistry: This is a sample completed referral form from a fictional practice to show what the information might look like when completed.

Oral Health Referral Workflow Optimization: This PowerPoint presentation is designed to be conducted as a 60–90-minute webinar with the primary care and dental staff involved in the referral process. It is based on the overall oral health workflow mapping process, and focuses specifically on the steps involved in making a referral to dentistry, and communicating the results of that referral back to primary care for referral tracking purposes. This "micro" workflow within the larger oral health integration workflow may need some adjusting and refining as referrals start to happen, including regular check-ins between the staff designated as the primary referral contacts.

SECTION 7

Using Data for Quality Improvement

Introduction

Quality improvement relies on information technology to:

1. Define what the practice is trying to accomplish, including defining target populations and setting quality goals.
2. Develop measures so the care team can tell that a change is an improvement by showing that workflow and decision support modifications are having the intended effect.
3. Support workflow changes by organizing information and placing it at the fingertips of the people whose job it is to use the information to make decisions that drive improvement.

In this section, the first two topics are explored, utilizing the Institute for Healthcare Improvement's Model for Improvement**.** The topic of using health information technology (HIT) to support workflow optimization with the goal of improving oral health has been addressed in Section 3: The Oral Health Delivery Framework and Section 5: Staffing Options and Workflow.

"We hold regular staff meetings, and that engages all of the staff throughout the clinic. We focus on a variety of topics, including oral health. We discuss the rates, analyze what happened when rates drop, share how things are going, and celebrate successes. We print the run charts and post them in places the staff will be able to see them."

—Nandini Sengupta, MD, MPH, Dimock Community Health Center

What Is the Oral Health Integration Goal?

For oral health integration, an answer might be "We are trying to ensure that at least 90 percent of the adult patients with diabetes in our panel receive an oral health screening assessment at least once a year." This answer has three parts, each of which requires a data definition if it is to be translatable into a useable reporting framework:

1. **Population:** Population refers to age, gender, and other demographic characteristics of the population to be targeted, in this case, active patients over age 18. The data used for population definition are located in the demographic tables of each patient's electronic health record (EHR).
2. **Clinical condition:** Quality improvement efforts, including oral health integration, frequently focus on a target population defined by a clinical condition, in this case, diabetes. For diabetes, an ICD-10 code on the problem list is the best data definition. For other clinical conditions such as pregnancy, the most recent visit diagnosis or visit type may be more accurate.
3. **Standard of care:** This consists of two components: what has the care team decided to do, and how frequently will those actions happen? Figure 7.1 shows the relationship between the clinical conditions for which the care team is screening and the data definitions for each condition as structured EHR data. Each of these is linked to data definitions for a limited number of actions. Notice that the only difference between this and Figure 3.2 is that medical treatments for oral dryness and acid reflux are omitted, because for these conditions there is no simple data definition for individualized medical therapy to represent all possible correct actions.

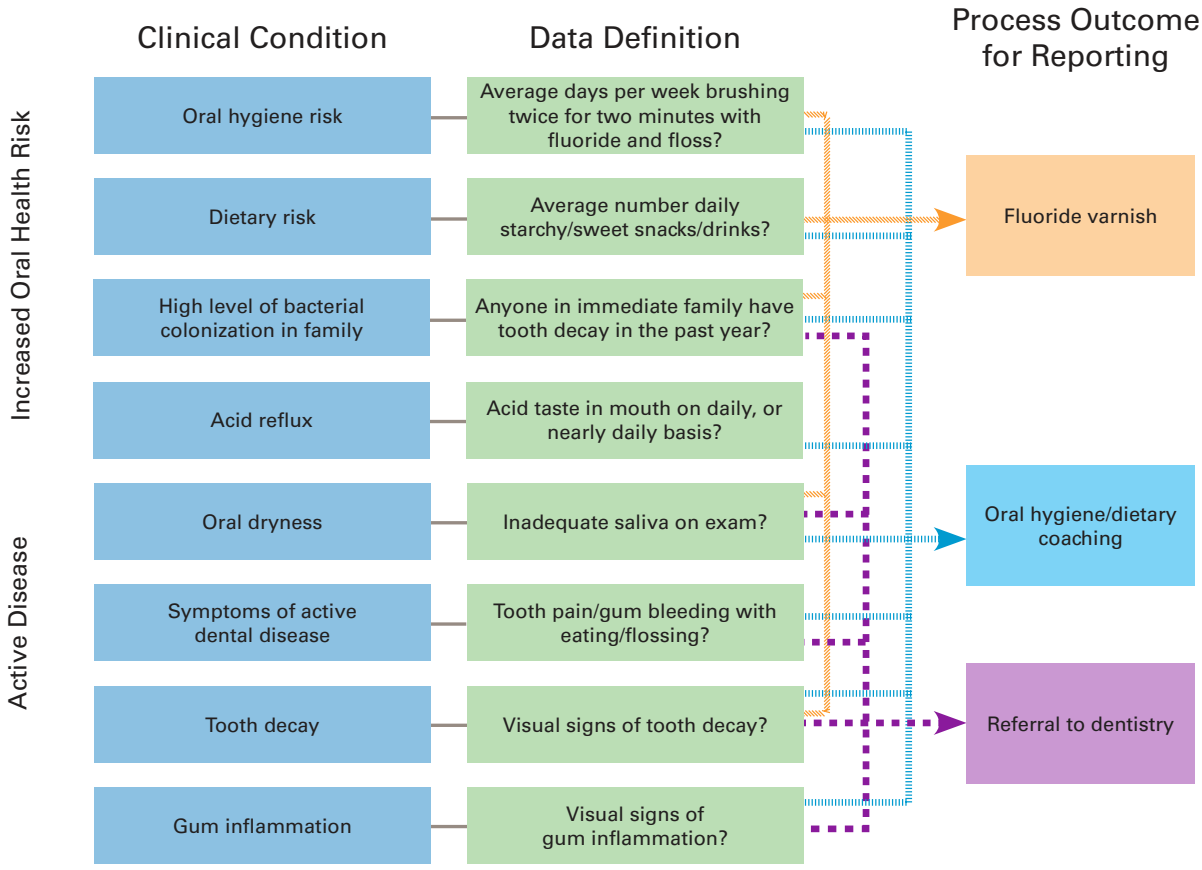
Examples of other stated goals include:

- "We are trying to ensure that all prenatal patients receive oral health education and counseling during the first trimester."
- "We are trying to ensure that all patients under age six receive fluoride varnish at least once a year."

What is population health management?

Population health is a term that connotes accountability for the care of a group of patients attributed to a clinician, a clinic, or a delivery system. Population health represents a paradigm shift away from fee-for-service medicine and away from looking at each individual patient's experience in isolation, to the world of accountable care and value-based reimbursement. The quality measures and total cost on which value is based are measured for the entire population, whether or not they come into the clinic for an office visit. In order to practice population health successfully, clinicians must work in care teams, because the amount of work required to know who is in the population and ensure that all members of that population receive the guideline-based standard of care is more than any single clinician can do alone. It also requires care teams to fully engage patients in self-managing their health, including chronic conditions, because many of the most powerful determinants of health, such as diet, exercise, taking medications correctly, and responding appropriately to important signs and symptoms, are things over which patients, working with their families, have the most control.

Figure 7.1: The oral health screening assessment



How To Determine if a Change is an Improvement

Once the target population and the standard of care are defined as structured data, it is possible to build reports that provide a visual representation of the results of the implemented change over time. A picture of population health consists of the following elements:

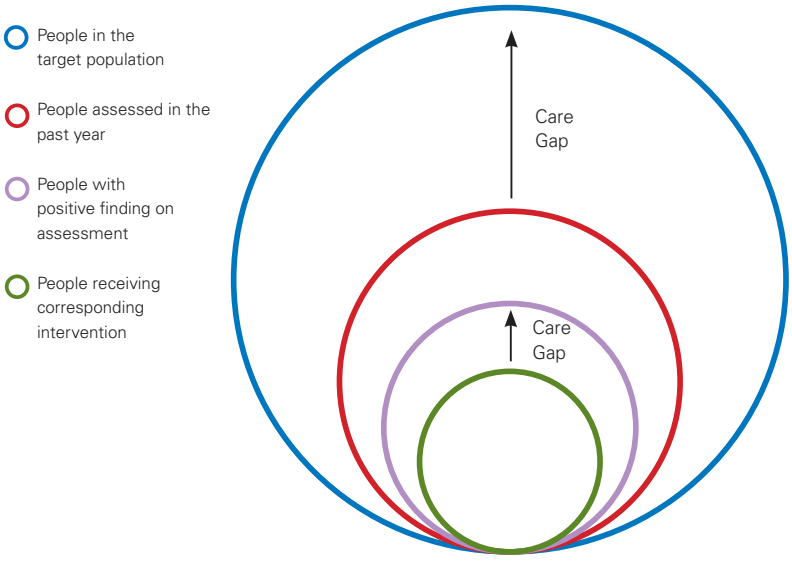
- The target population.
- The patients being assessed within the interval specified in the standard of care.
- What was found in the patients assessed.
- What was done for the patients in whom a problem was found.

An example of this approach would be a practice that has chosen a target population of adults with diabetes. The standard of care the practice selected is for every member of the population to have their oral health assessed at least yearly, with the care team looking for signs of active gum inflammation and tooth decay. Those patients found to have active disease who are not already being treated by a dentist for this condition are to be referred to their own dentist if they have one. Patients with disease who have no dentist are to be referred to a dentist with whom the clinic has a referral agreement.

Point prevalence reporting

For reports to be useful in creating this picture, they need to be designed as "point prevalence" reports. This means that the report identifies a population and the prevalence of some characteristic within that population at a specific point in time. This is appropriate for population reporting because the unit of analysis is the patient, meaning each patient is counted once. For example, the report determines, for each patient in the target population, whether the patient was screened within the prior 12 months or not. A patient screened twice during the past year is counted once as having met the standard of care as of the date the report is run. Figure 7.2 shows a picture of a population taken at a single point in time. Each circle represents a subset (numerator) of the patients in the next-largest circle (denominator).

Figure 7.2: Visual representation of the Oral Health Delivery Framework applied to a target population highlighting care gaps



Source: Hummel J, Evans P. Producing Accurate Clinical Quality Reports for Population Health: A Delivery System-Oriented Approach to Report Validation. Seattle, WA: Qualis Health; March, 2016. Reprinted with permission.

The identified gaps between the colored circles illustrated in Figure 7.2 represent care gaps, while others simply reflect the prevalence of a condition in the target population, such as the percentage of patients in the target population with active caries. The picture created by the reports reveals care gaps, allowing the care team to quickly determine which processes are working well and which ones require attention to close a care gap.
For a more in-depth discussion of population health reporting, refer to Producing Accurate Clinical Quality Reports for Population Health: A Delivery System-Oriented Approach to Report Validation.

"Our biggest challenge has been getting clinicians and clinical assistants to use the oral health template. We're a busy clinic in terms of volume per day, and so the pace is pretty quick here, and it is one more thing to do. Getting clinicians to see the benefit to the patient has been a challenge. Our numbers have picked up over the course of the pilot but not quite to the place that I'd like. I'm seeing that some clinicians and clinical assistants do really well and then some partnerships that don't do as well. This has happened with past improvement efforts, and we have focused on coaching the clinical assistants and clinicians together to help them understand the importance of the work they're doing." **—Benjamin Lightfoot, MD, Brockton Neighborhood Health Center**

Using Run Charts To Tell a Story Over Time

Just as a series of pictures shown in rapid sequence produces a moving picture that tells a story, similarly, a series of reports repeated at regular monthly intervals can be used to tell a clinical quality story that unfolds over time. A simple and effective way to represent this visually is with run charts, an example of which is shown in Figure 7.3. The numerators and denominators are entered into an Oral Health Data Reporting Template and Run Chart tool to create a visual display of the impact of the care team's efforts over time to assess the target population's oral health status and respond appropriately to what they find on assessment. It can be useful to insert a goal line in the run chart once a primary care team has determined what their goal will be.

Figure 7.3: Run chart from Sound Family Medicine showing, for a single clinician, the percentage of patients with diabetes having a yearly oral health screening examination

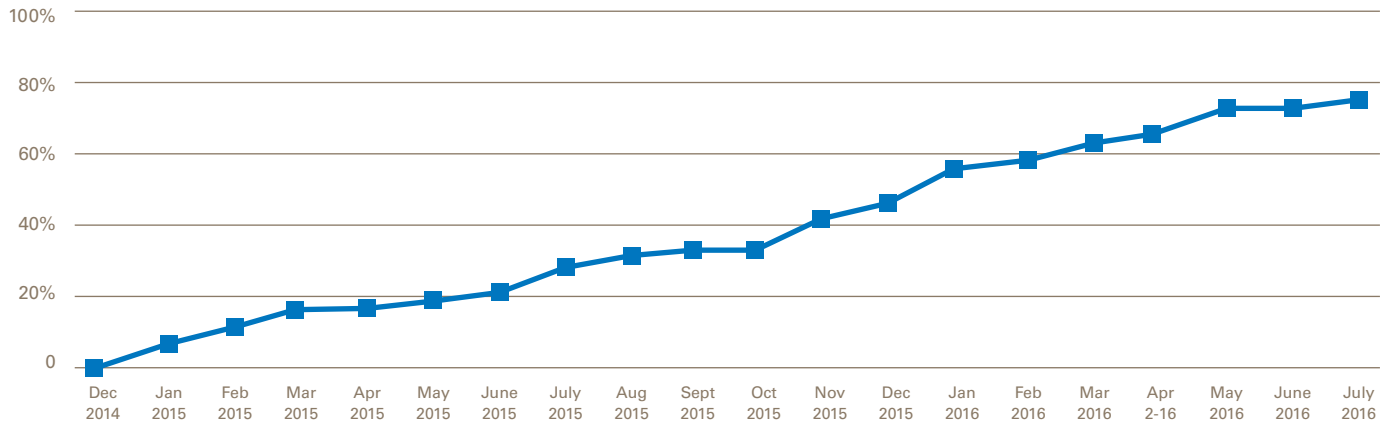
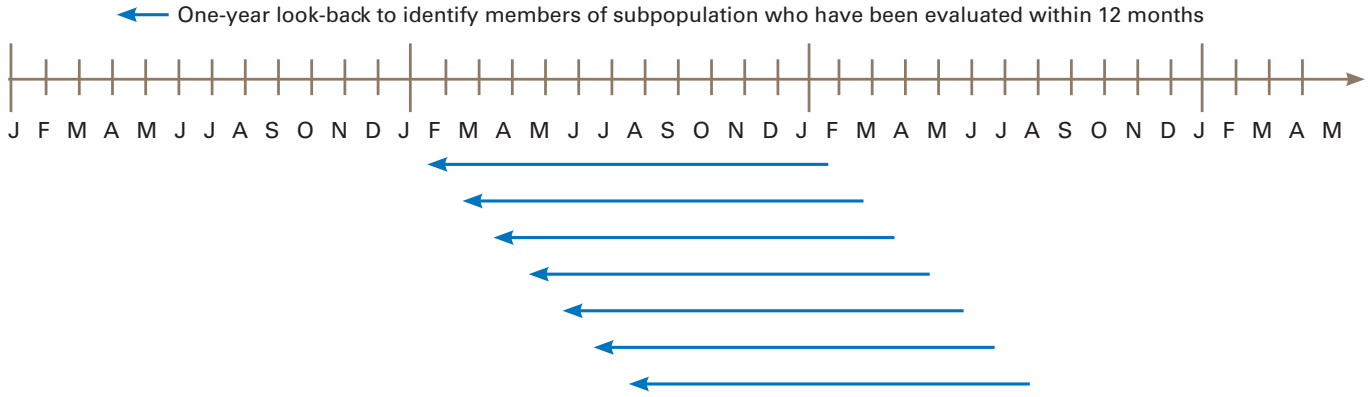


Figure 7.3 shows the findings of a report that was run at the beginning of each month showing the size of the target population and how many members of that population had had an oral health screening assessment within the prior year. These reports have a rolling look-back interval of 12 months, as shown in Figure 7.4.

Figure 7.4: A rolling one-year look-back



Case Vignette: Heart of Kansas Clinic Refines the Data Reporting Process

At Heart of Kansas Clinic, a rural federally qualified health center located in Great Bend, KS (population 16,000), the internal quality improvement staff member was able to make EHR modifications to support documentation and extract that data as regular reports. "We were able to modify our EHR to make a tab in our form for oral health. I created one spot for clinicians to put all of their oral health information, which allows me to get the data out easily in reports. When we first started, I was running data every other week and taking it around to the clinicians' desks. We have a monthly clinician meeting and monthly quality meeting, and they were also being shared there. When we were writing the quality plan for 2016, we included oral health in the quality goals," shares Heather Hicks, RN, quality improvement coordinator at Heart of Kansas Clinic. After several months of implementation, the process has stabilized and the reporting frequency has changed. Hicks explains, "Now I am running the data monthly and just sharing the clinician data at the quality meeting. The clinicians are actively working on their numbers—for example, a clinician asked for a list of the patients that haven't had the assessment done yet, so they could focus on bringing them in for a screening. If someone thinks the data doesn't reflect what they're doing, I can help problem solve—usually it's that the information isn't being put in the right spot." Heart of Kansas had previously maximized the capacity of their EHR system, which set them up for success with this work. "Because we've invested in learning what our EHR system is capable of, we were able to utilize that, and it made the reporting and data part a lot easier than it could have been. If we had to ask the vendor to write a report for us, it would have cost money. But because I could write reports myself, I could write it and revise it as needed. It helped to let the clinicians tell us exactly what they wanted and how they wanted it to look, and then we could write the report around that," shares Hicks.

Putting It Into Practice

One of the most important roles in this process is the individual who will be responsible for producing regular data reports and sharing them with the team. The team can respond by conducting Plan-Do-Study-Act (PDSA) cycles to refine and solidify the workflow. The Plan-Do-Study-Act (PDSA) Worksheet is a helpful tool for teams to use to document a test of change and work through the PDSA cycles. In most cases, monthly reports are sufficient for detecting an effective workflow change if data are viewed on a run chart. As a pilot spreads and the oral health integration program stabilizes, the reporting frequency may change. Ideally, oral health measure reporting will become part of the standard report dashboard that a primary care team reviews regularly. Quality reporting using process measures can be used to bring to life a number of stories about managing oral health in a target population.

For example:

- Patients with signs of gum inflammation who needed a referral to dentistry for diagnosis and treatment and who received it.
- Children at high risk for tooth decay who received fluoride varnish.
- Patients with signs of tooth decay who needed a referral to dentistry for diagnosis and treatment and who received it.
- Patients with signs of tooth decay who received fluoride varnish.
- Parents of young children in families with active tooth decay who received coaching on oral health best practices for the entire family.
- Prenatal patients who were referred to the dentist and received dental care while pregnant.
- Patients at increased risk for tooth decay because of inadequate oral hygiene and/or excessive sugar in the diet, who received coaching for diet/oral hygiene and received fluoride varnish.

The Recommended Oral Health Integration Metrics tool outlines process measures used by field-testing sites to assess their oral health integration experience.

Differences in process measures between clinicians can shed light on where workflows are functioning in an exemplary fashion and where a care team may need additional support.

Each of these scenarios is based on using structured data to track the target population and oral health intervention provided, which allows the care team to tell if they are making progress in closing a care gap.

The care team will develop a number of methods to close care gaps that may include workflow interventions within the clinic, outreach to patients to bring them into the clinic for care, or communication with the referral partners to modify that external workflow.

Using a graphic display of data to share the story with patients and the practice team members creates accountability and motivates teams. Reviewing the visual reports at clinic team meetings offers the opportunity to engage the full team and celebrate successes, as well as problem solve obstacles or impediments to workflow functionality.

"We are running reports monthly to monitor the fluoride varnish rate. We have strategy meetings to see what can be done to improve it. It's about constantly revising the process, assessing what the blockades are that are keeping us from getting to those goals, and trying to find solutions."

—Turner House Children's Clinic

Pitfalls of interval-incidence reporting

Traditionally, practices have used procedures or office visits as the unit of analysis for reporting productivity. These reports ask questions such as "How many office visits were produced during a given time interval?" or "How many visits with a given diagnosis (such as diabetes) met a defined clinical quality standard (such as adequate glycemic control)?" There are two problems with using interval-incidence reports for population health:

1. The unit of analysis is an action or event, not the patient; so if a patient experiences multiple actions in a single reporting period, that patient will be counted multiple times.
2. Patients in the target population who do not have the event or action documented in their chart will not be counted at all.

Interval-incidence quality reports are useful for measuring whether a process that should happen with each visit is working as intended (e.g., whether an after-visit summary is printed at every visit, or blood pressure is taken at every visit). In the context of population health, however, it is very difficult for care teams to look at a report for which the unit of analysis is an event, and be able to tell what it means and what they should do to improve the care of the population.

Other types of measures

As noted above, the measures discussed thus far all represent process measures. These include:

- **Screening process:** Documenting answers to questions and findings on examination.
- **Intervention process:** Ordering interventions for which evidence suggests they may result in improved health.
- **Care coordination process:** Tracking referrals to ensure their completion.

Although the LOOK template elements "signs of tooth decay" and "signs of gum inflammation" describe clinical disease, only dental clinicians have the tools and skill to diagnose caries and periodontal disease, so the validity of a primary care clinical finding as a measure of clinical outcomes is unknown. Measuring clinical outcomes accurately for population oral health will require much closer collaboration between medicine and dentistry. On the other hand, there are a number of other metrics that may be useful in monitoring the impact of oral health integration in primary care:

- **Patient experience measures:** Questions about oral health can be added to general patient satisfaction surveys to assess concepts such as how well the oral integration effort:
  - Helped fill an unmet need.
  - Improved the patient's sense of confidence in his/her ability to protect his/her teeth.
- **Practice/clinician experience measures**: The experience of the care team should also be monitored using questions that address:
  - How the oral health program helped or hindered the ability of the care team to meet patients' overall health needs.
  - The effect it had on job satisfaction.
  - Each care team member's confidence that he/she knew how to protect the oral health of the patients in the panel.

Case Vignette: Harborview Medical Center–Women's Clinic's Chart Audit Work-around

Harborview Medical Center-Women's Clinic is a specialty clinic housed within a large Level 1 adult and pediatric trauma and burn center located in downtown Seattle, serving a diverse urban population. As part of a larger hospital system connected to an academic institution, the practice has been challenged by their inability to modify their EHR and to extract data from the system. Leondra Weiss, RN, nurse manager, explains, "Our ability to make changes to our EHR has been very limited. We were able to get the assessment questions added, with the answers available as a drop-down list, which is very helpful. We built it so we would be able to run reports, but we're not using that function right now." After several months working with the internal HIT department to make the requested modifications, they encountered another roadblock. Weiss explains, "We had to get special approval to run reports on the oral health data, which we did, but when we initially ran the reports, the data didn't match what we were tracking manually. It was a complex process to run the reports and took a lot of time, and since it wasn't accurate we had to go back and double-check all the data." Weiss determined that it wasn't worth doing additional work when they had already established a tracking system they felt was reliable, though they would still like to have concrete data to demonstrate the impact they are making. Weiss shares, "It's easier right now for us to continue doing the manual tracking. We are doing a chart audit right now to look at our data." This chart audit compared a four month period (January–April 2014) before beginning the oral health integration program, to a four month period (January–April 2016) after the oral health integration was established.

Measures	January–April 2014	January–April 2016
Total pregnant patients seen for an initial OB visit	60	98
Number of patients given oral health assessment during initial OB visit	0	61
Number of patients referred to a community dentist	1*	52
Number of patients scheduled for dental appointment	1*	28

*patient went to the emergency department for oral health problem.

Refer to the case examples below to see how some field-testing sites used data to tell their story of oral health integration.

Implementation of the Oral Health Delivery Framework at Dimock Community Health Center

Integrating Oral Health into Primary Care: Lessons Learned from Rodgers Health

Sound Family Medicine Integrates Oral Health into Primary Care for Adults with Diabetes

Supporting Materials, Section 7

Recommended Oral Health Integration Metrics: This PDF tool details the recommended oral health measures used by the oral health integration field-testing sites. The denominators and numerators are defined for each measure. This tool includes the recommended screening questions for adults and pediatrics.

Oral Health Data Reporting Template and Run Chart: This modifiable tool supports oral health integration data reporting. The first tab provides a description of the recommended measures for adults and pediatrics and instructions for using the tool. The second tab is where a practice can enter the numerators and denominators for the oral health data they are reporting. Subsequent tabs automatically generate run charts to show progress over time.

SECTION 8

Leveraging Success: Spreading and Sustaining

Introduction

Including considerations for sustainability and spread in the initial planning of the oral health integration program will support long-term success. In this section, strategies to support sustainability are described, including considerations related to:

- The use of data to promote spread.
- Staff turnover, training, and workflows.
- Finances.

Methods of spread (e.g., by population, by clinician) are described, as well as strategies to ensure successful spread.

"The challenge is to not underestimate the work of actually doing it. Challenges will come up, with referrals, with the EHR [electronic health record]. The best way to approach them is to break them down into their basic components and identify what is working and what isn't, and then identify a person to own the pieces that aren't working. It's going to seem that it goes a lot slower than you anticipated, but it's important to take small pieces and keep moving forward." **—Michael Purdy, MD, Hilltown Community Health Center**

An oral health integration program can be considered sustainable when it becomes an integral part of the primary care practice's processes and mindset. When the cultural norm is that diseases of the mouth are equivalent to those in other body systems, and neither patients nor clinicians can imagine not addressing oral health during the course of a primary care visit, sustainability will be achieved. This section discusses some strategies for a practice to consider when planning for the long-term sustainability of oral health integration, as well as important considerations for the program leadership team when planning the spread of the pilot test of change.

Strategies for Sustainability: Clinical, Operational, and Financial Factors*

How to best ensure an organization's integrated oral health program continues into the future? When people think of sustainability, they often confuse it with financing. While financing is critical, it is only one component of what makes integrated care stick. A solid sustainability plan includes both administrative and clinical components. Designing reports to tell a story is the key to successful implementation, sustainability, and spread. Set up reporting at the outset of the program, preferably before making changes to the workflow. Clearly define the target population and create reports showing the target population for each clinician and care team. Define the standard of care for management of the target population, focusing on:

- How the target population will be assessed and how findings will be documented as structured data, in this case, use of the Oral Health Delivery Framework (the Framework).
- How frequently the target population will be assessed, for example, yearly for patients with diabetes, or at the first prenatal visit for pregnancy.
- What the standard set of responses for specific issues found on assessment will be, e.g., high risk of caries will be addressed with fluoride varnish and oral hygiene/diet coaching; caries or periodontal disease will be addressed with referral to dentistry.
- How the responses will be documented.

Create reports that focus on the following care gaps:

- Patients in the target population who have not been assessed.
- Patients in the target population who were assessed and found to have oral health problems but who did not receive the standard intervention.

The Oral Health Data Reporting Template and Run Chart tool can be used with the data reports a practice generates to create run charts in order to visually monitor progress over time.

Set aside designated time on at least a monthly basis to review progress on goals and make any workflow changes as necessary. Staff should protect the time needed to review quality measure reports and take steps necessary to improve.

Once the care gaps are defined, the pilot team will make workflow and health information technology (HIT) changes intended to close the care gaps. Reporting at one-month intervals with a rolling look-back will determine the impact of the workflow/HIT changes.

Take time for a team tune-up

An essential component of sustainability is regular time for the care team to gather together and assess their function, discuss disruptions to the planned workflow, orient new team members, and develop team communication and trust. Gathering as a team to review data reports and discuss the workflow process allows team members to examine and problem solve as challenges arise. Common challenges might be that a change to the workflow is not working for a member of the care team, or that an intervention rate has plateaued because of an unanticipated obstacle. This can be done in different ways, such as meeting over coffee once a month, or blocking a regular team lunch session. The goal of this time is to allow the team to analyze their current state, review data, and discuss progress, obstacles, and solutions to implement in order to ensure that the team is continuing to develop the communication skills and processes needed to ensure successful oral health integration.

* This section draws on the learnings from the Safety Net Medical Home Initiative. Ratzliff A. Organized, Evidence-Based Care Supplement: Behavioral Health Integration. Phillips KE, Holt BS, eds. Seattle, WA: Qualis Health, MacColl Center for Health Care Innovation at the Group Health Research Institute, and the University of Washington's AIMS Center; 2014.

Maintain leadership support

Leaders are essential for the development of a sustainable oral health integration program. While the bulk of the initial pilot work is carried out by the pilot team, it is important for program leadership to maintain a connection to the work, and to make time to assess the progress of the pilot, support the development of the program, and celebrate and share the success of the pilot team with the broader practice and stakeholders. Leadership develops the vision for the long-term oral health integration program and will need to continue to refine that vision over time, as well as planning and supporting the necessary spread efforts. To learn more about how leaders can support transformation efforts, review the Engaged Leadership Implementation Guide.

Leaders can also reach out to community stakeholders, elected officials, hospitals, and foundations to let them know that their practice is improving care and how those efforts might affect issues important to them. Remember that audiences may remember some data, but they'll always remember a powerful story.

"We have experienced project leadership turnover. Without a lead, the work got a little lost. We were able to get back on track with a new lead—you should document all processes and make sure they are kept somewhere clearly marked. You should also always have a second hand person, someone you can bounce ideas off of and who is involved in everything, so that ownership of the work doesn't live with just one person."

— Practice Manager in an urban federally qualified health center

"Early in the pilot, we had two instances of staff turnover that impacted the progress we were making. The key to overcoming that turnover was having the remaining clinicians own the idea of oral health integration and decide what they could do, while shifting as much work as we could to the support staff."

—Heather Hicks, RN, Heart of Kansas Clinic

Prepare for turnover

Staff turnover can undermine the intervention. Turnover happens within all teams, and at all levels of the team. This was a common challenge experienced in the field-testing sites, and in all cases, it forced teams to develop creative ways to keep the oral health integration pilot on track. The practice's emphasis on integrated care should be a part of orientation for all new employees. Planning ahead for this reality includes developing tools and processes to support team members who are tasked with training new members of the team on the existing protocols and workflow. Such tools might include documented oral health workflows; job descriptions that clearly state the role responsibilities for oral health; clinical content training, and training for fluoride varnish application; and orientation checklists including oral health skills, for example, patient education, fluoride varnish administration, referral management, and tracking. The key is to focus on processes, not on people, and for new staff to be brought up to speed on oral health integration work and processes during their orientation, so they are ready to participate as soon as they join the care team.

Prepare for skills maintenance

Embedding oral health services into an organization's culture of integrated care means that every employee understands the importance of these services and operates with the expectation that all patients receive this care. Administrative policies, job descriptions, performance reviews, confidentiality agreements, and care coordination practices all support an integrated practice. Supervisory discussion during team meetings includes a review of physical health and oral health goals.

Ongoing staff and clinician skill brush-ups will be needed. Continue to build all employees' whole-health literacy. Consider routine review of the Smiles for Life curriculum for clinical staff, inclusion of fluoride varnish administration in clinical staff members' annual skills competency checklists, and routine review of patient teaching materials and methodology.

> "As new staff have come on board, we have just presented it as one of the components of their quality plan."
>
> **—Heather Hicks, RN, Heart of Kansas Clinic**

Monitor and communicate metrics

Clinicians looking to sustain their current array of integrated services must be able to make data-driven decisions to determine which integrated care components actually improve care. Regularly reviewing the clinic-wide metrics and clinician-level metrics will allow the team to assess which workflow changes they have made are working, and where they can most effectively focus their quality improvement efforts. Consider including a set of key metrics, such as those outlined in the Recommended Oral Health Integration Metrics tool, in the practice's quality improvement dashboard, sharing these metrics on a monthly basis with clinicians and staff members and posting metrics in public areas within the practice for greater accountability. If resources are not available for robust reporting, consider performing periodic small-scale chart reviews to audit oral health integration processes. Continuous quality improvement is a valuable way to make sure that an organization is meeting its goal of improving the oral health status of its clients.

Continue to improve workflows

Clinical and operational workflows need to be reviewed regularly. Consider using clinician meeting time to walk through a typical episode of care. This can help the team identify internal care transitions, external referrals, or other "pain points" that could become the focus of a quality improvement effort.

Consider financial impacts

Financing options for oral health integration vary, depending on the state, clinician type, and/or population of focus.

Pediatrics

Reimbursement for selected oral health interventions for medical clinicians is largely in place for pediatric populations. All but one state Medicaid program reimburses medical clinicians for administering fluoride varnish, and most states provide additional reimbursement for caries risk assessment and family oral health education. Moreover, nearly all states allow medical clinicians to delegate care to clinical staff. Refer to the American Academy of Pediatrics (AAP) Oral Health Reimbursement Chart for state-specific delegation and reimbursement information. Fluoride varnish and fluoride supplementation were given B ratings by the United States Preventive Services Task Force (USPSTF) in 2014, and are now required benefits for all qualified commercial health plans, meaning there is no charge to patients for the intervention.[26] Age ranges vary by payer. Many Medicaid programs provide reimbursement for preventive oral health services for children birth through age 21; some states and some commercial payers limit reimbursement to children six and under, consistent with the USPSTF guidelines.

Adults

Adult dental services are optional in Medicaid plans, and many states do not include an adult dental benefit. A recent report from the Medicaid and CHIP Payment and Access Commission (MACPAC) summarizes the coverage of Medicaid dental benefits for adults in each state. Federal statute specifically excludes payment for the treatment of teeth and supporting structures under Medicare. Advocates are working to improve dental coverage for adults.

It is possible to fit some of the Framework actions into existing preventive and chronic care visits for both children and adults, with minimal impacts on workflow and finance. For more information on designing efficient workflows, refer to Section 5: Staffing Options and Workflow. Practices have successfully integrated oral health preventive care into primary care under a wide array of payment models, indicating that integration is possible even in restrictive payment environments.

"Basically, we're just paying for it and see it as part of the service we offer…In the scheme of things, if you realize that you're doing this a couple of times a year for patients, and if you're reducing the caries rate by 1–3 caries per child, that's ultimately a big cost savings for the system." **—Steve Wrightson, MD, Bluegrass Community Health Center**

Some states will allow reimbursement for oral health preventive activities for adults under expanded Medicaid guidelines, and it is important to know what documentation is required. Practices can check with their local state Medicaid office to learn the guidelines in their state.

With the release of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) and alternative payment models (APMs), the outline of the emerging reimbursement structure is becoming clearer. Practices need to be poised to develop serious strategies to address clinical quality and manage cost. Oral health is part of that strategy.

"Two ingredients that will move the needle in a significant way are if oral health was a part of required quality improvement benchmarks, and if there is reimbursement for it. Healthcare is moving in the direction of value-based reimbursement. When you're being paid for patient outcomes, and oral health is part of that outcome, then it will be worth people's while to take that extra minute."

—Judith Haber, PhD, APRN, BC, FAAN, Ursula Springer Leadership Professor in Nursing, New York University

Spreading Improvements

Spread is based on generalized acceptance of a compelling story that the pilot care team can tell using their data and should be considered from the beginning. To spread a successful pilot effectively, the care team needs to be able to show who their target population is, what care gaps they found when they assessed the target population systematically, what they did to close the care gaps, and the impact their efforts had on the target population. Opportunities to implement oral health integration more widely may include intensifying the intervention, including:

1. Spreading from a single target population to other target populations.
2. Spreading from a single care team to other clinicians within the same practice site.
3. Spreading from care teams at one practice site to multiple other sites in the system.
4. Spreading from a single component of the Framework to multiple components.

"We started with one clinician, and we have now spread to two others. We waited until we had the SmartPhrases set up in the EHR and had the workflow figured out, including how information would be documented, before rolling it out. While we were still making adjustments we didn't want other people doing it their own way. It took a few months to have a process that was stable enough to spread, where I was comfortable in my workflow and documentation, and my clinician was regularly documenting."

—Justina Johnson, MA, Community Health Center of Cape Cod

When spreading oral health integration, keep in mind the following strategies for securing buy-in and engagement for maximum effectiveness:

- During the pilot, involve representatives from care teams or sites who will be engaged in spread efforts, which may increase their level of buy-in.
- Use the pilot team to coach others. Identify training and mentorship opportunities for members of the pilot team.
- Involve key administrative and clinical leaders to develop and support the spread plan.
- Facilitate clinician-to-clinician discussion and planning; this increases the likelihood that clinicians will recognize value in oral health integration and may allay anxiety about the amount of work involved.
- Use data from the care gap reports collected by the pilot team, patient success stories, and staff and clinician satisfaction testimonies to inspire new care teams.

Case Vignette: Using Data to Support Spread at Sound Family Medicine

Sound Family Medicine, a four-site private primary care clinic system in Puyallup, WA (population 38,000), a suburb south of Seattle, started its oral health integration pilot with a single clinician team and spread to other clinicians within the original clinic location. Marc Aversa, MD, medical director, explains, "The main thing we've done with the data is to look at it in terms of spread. When we first looked at the overall clinic data, we thought our pilot clinic was doing well and we were ready to spread to our other clinic locations. Then we decided to look within the pilot clinic and saw that there was a lot of variation from clinician to clinician." Aversa decided to delay spread to other clinics and focus first on getting all clinicians within the original pilot site to a more stable level of implementation. "We shared the data with our clinicians, and our floor supervisor is looking at ways to standardize and improve the workflows. Once we get that sorted out, we'll spread to our other three clinic locations and we will look at adding other target populations," shares Aversa.

Some organizations include a spread plan in their initial implementation plan. Consider using the Institute for Healthcare Improvement (IHI) Spread Planner, which is based on the Framework for Spread and uses questions to prompt the user to consider the actions needed to effectively guide the spread process. There are some common errors that practice teams often make when beginning the spread process. IHI's Seven Spreadly Sins describes these and provides alternative steps to take.

Oral health integration offers opportunities to improve workflow efficiencies, streamline processes that may not be working smoothly (e.g., structured referrals), and meet a currently unmet patient need. Ensuring sustainability and successful spread so that all care teams and all patients in a practice can benefit from these outcomes is essential to the ongoing success of oral health integration.

Case Vignette: The Spread Process at Rodgers Health

At Rodgers Health, a four-site federally qualified health center located in the urban core of Kansas City, MO (population 467,000), oral health integration began within the smallest of the four clinic locations, Lafayette Family Medicine, a rural practice located 45 miles east in Lexington, MO. First, a program leadership team was developed, which included clinic managers from all four clinic locations, the Lafayette clinic's clinician, Rodgers Health's quality improvement coordinator and HIT manager, corporate dental and medical directors, and the chief quality and clinical officer. The leadership team identified a pilot team at the Lafayette Family Medicine clinic, which included the APRN clinical leader, the clinical assistant, an LPN, and a reception staff member. They were supported closely by the quality improvement coordinator and the HIT manager, who were felt to be of crucial importance to Rodgers Health's goal of eventually spreading the oral health integration work to all sites within the system. The program leadership team met regularly to track progress, remove roadblocks, and monitor data. They have continued to meet to guide the spread process across all four clinics.

After beginning with well visits for adults and pediatrics, the pilot team spread to all obstetric patients, and then added patients with diabetes within the original site. That process took seven months, at which point the leadership team decided to spread to the other clinic sites in the Rodgers Health system.

Patricia Beatty, quality improvement coordinator, shares, "It took longer to get up and running at the new sites than it originally did at the Lafayette Family Medicine clinic. Lafayette is small, and the medical and dental practices are located on the same hallway, around the corner from each other. We thought we would start with that team and develop a process that we could roll out to everybody." Beatty explains, "When we started to spread to the Cabot Westside Medical clinic, we realized that every site was a little different, so there was going to need to be some variety in the implementation. It was a little more involved than we originally anticipated, and we had to take a step back and look at the workflow at the new site." The team decided that they did not need to start from scratch at the Cabot clinic, or at the Clay County Family Medicine clinic, which was their third site in the spread process. "We started with the Lafayette clinic's workflow and wound up taking some of it and then creating some new components based on feedback from the new teams. When we spread to the Cabot clinic and the Clay clinic, we spread to all clinicians at the site at the same time," explains Beatty. When the team prepared to spread to the largest site in downtown Kansas City with ten primary care teams, they felt the workflow process would be different enough that they started with just one department (pediatrics) before spreading to the others.

Conclusion

Oral disease has a significant negative impact on patient health, and untreated oral disease has been linked to increased medical costs and reduced quality of life. In a primary care medical home, attending to patients' oral health is thus an inextricable part of providing organized, evidence-based care. Primary care teams have the core competencies to understand and intervene in the oral disease process by identifying risk factors, initiating appropriate preventive interventions, and coordinating care for those with active disease. The Oral Health Delivery Framework presented in this guide provides a practical and flexible approach for achieving comprehensive, whole-body care. The Framework was tested and vetted by 19 diverse primary care practices in five states, demonstrating that implementation is feasible in a wide variety of practice settings and policy environments. The experience of field-testing sites, described in case examples and vignettes throughout this guide and Section 9: Field-Testing Results and Case Examples, further highlights the benefits of integrated care, including improved patient care, improved care coordination, and opportunities to improve care processes. A full and annotated toolset to help guide your own journey is provided in Appendix A.

SECTION 9

Field-Testing Results and Case Examples

Introduction

The Oral Health Delivery Framework (Framework) was successfully field-tested by 19 diverse primary care practices in Washington, Kansas, Missouri, Massachusetts, and Oregon between 2014 and 2016. These sites included urban, suburban, and rural practices. Collectively, they focused on four unique target populations for their initial pilots and utilized five different electronic health records (EHR). The sites varied in size, and included both private practices (hospital-based, independent, and part of a large integrated delivery system) as well as community health centers (most of which are federally qualified health centers). Summary results and impact data are included in this section, as well as annotated links to in-depth case studies.

Overall Intervention Distribution

Implementation of the Framework varied across the 19 sites, as practices customized the model to fit their circumstances, resources, and clinician interest. Some practices had the resources necessary to fully implement the Framework from the beginning, but as Table 9.1 illustrates, most field-testing sites did not do every possible component of the Framework. Several sites chose to do some additional activities like prescribing chlorhexidine rinse for patients with periodontal disease. All sites focusing on a pediatric target population chose to offer fluoride varnish as a preventive intervention (though the age-range parameters varied), and three sites focusing on an adult population with diabetes also chose to offer fluoride varnish.

Table 9.1: Oral Health Framework Components implemented by field-testing sites by state

Framework Components	Washington field-testing sites	Kansas/ Missouri field-testing sites	Massachusetts field-testing sites	Oregon field-testing sites
	N=4	N=5	N=5	N=5
Screening Assessment: ASK and LOOK	4	4	5	5
Preventive Intervention:	3	5	4	
Changes to the Medication List		2	2	
Fluoride Varnish		4	2	3
Chlorhexidine Rinse			2	
Oral Health Counseling		1	2	
Education Handout	3	2	4	2
Referral	4	3	4	5
Referral Tracking	3	3	1	2

Framework Component Run Charts

Field-testing sites used the Oral Health Data Reporting Template and Run Chart tool to visually display the different components of the Framework that they implemented. Tracking these trends over time allowed sites to follow their progress, determine when their process was stable enough to begin to spread, and in some cases to motivate teams to continue to improve their workflows. This section shows some of the data trends observed among the field-testing sites.

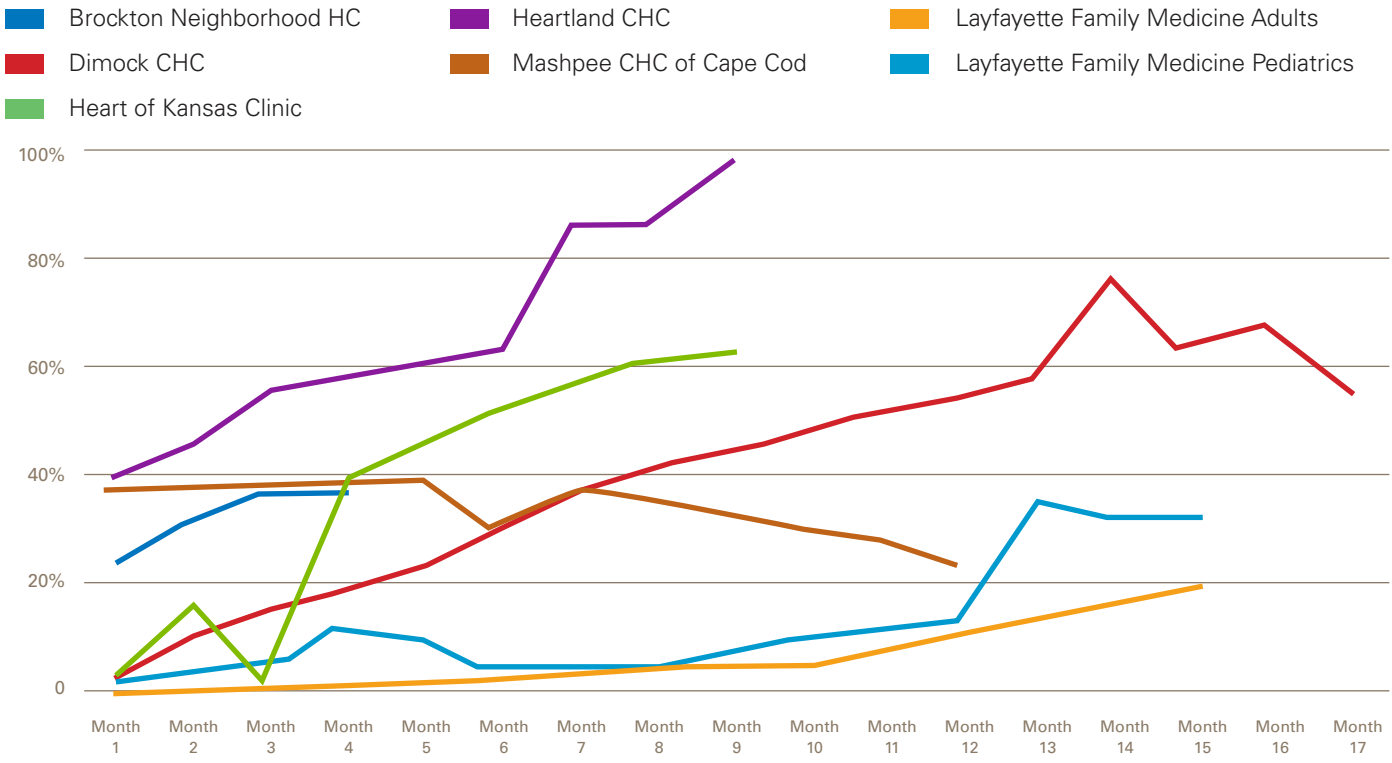
Patient impact

13,771 patients were given the oral health screening assessment during the 20 months of field- testing, across 17 of the 19 sites. Two sites were unable to report this data.

4,518 patients had fluoride varnish applied during the 20 months of field-testing, across eight of the nine sites that selected that preventive intervention. One site was unable to report this data.

1,255 patients were referred to a dentist during 20 months of field testing, across 13 of the 16 sites making dental referrals. Three sites were unable to report this data. This is an under-representation of the actual number of patients connected to dentistry, as additional sites reported making referrals but were unable to capture their referrals to dentistry as structured data in their EHR. Additionally, some sites reported only new dental referrals, and did not track the times where a patient had an existing dental relationship and the primary care clinician referred them for a current concern.

Figure 9.1: Percentage of target population assessed by month of project

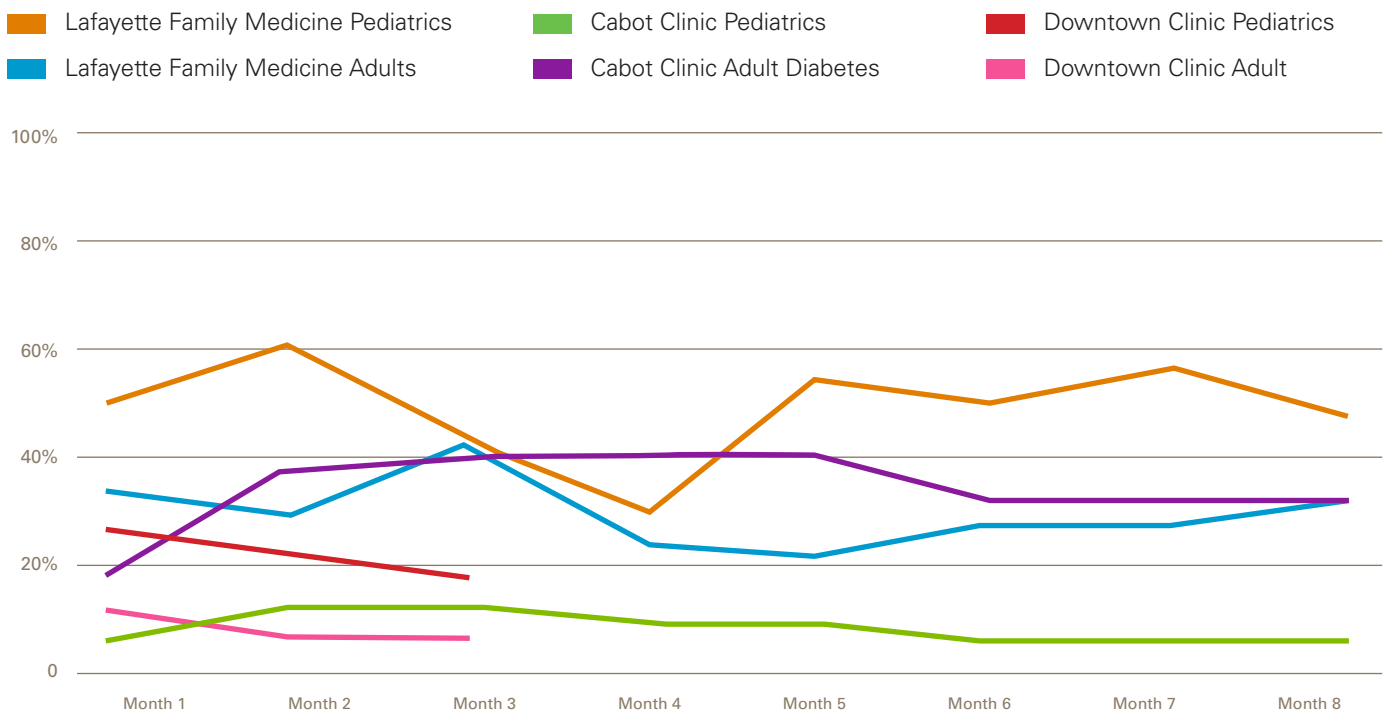


Field-testing sites started the oral health integration work at different times, so Figures 9.1, 9.2, and 9.3 use Month 1, 2, 3 in the x-axis to denote the progress of the sites over time.

Figure 9.1 displays run chart lines for oral health assessments given by pilot teams at a number of different field-testing sites. Some sites were able to progress through the implementation phase rapidly resulting in a steep upward curve as their target population was assessed. Others progressed more slowly. A downward trend, and dips in the upward trend, can occur when the denominator (all patients in the target population) increases significantly from one month to the next without a corresponding increase in oral health screening. At the one year mark, the trends start to shift as patients screened at the beginning of the pilot no longer appear in the numerator of the one year look-back report.

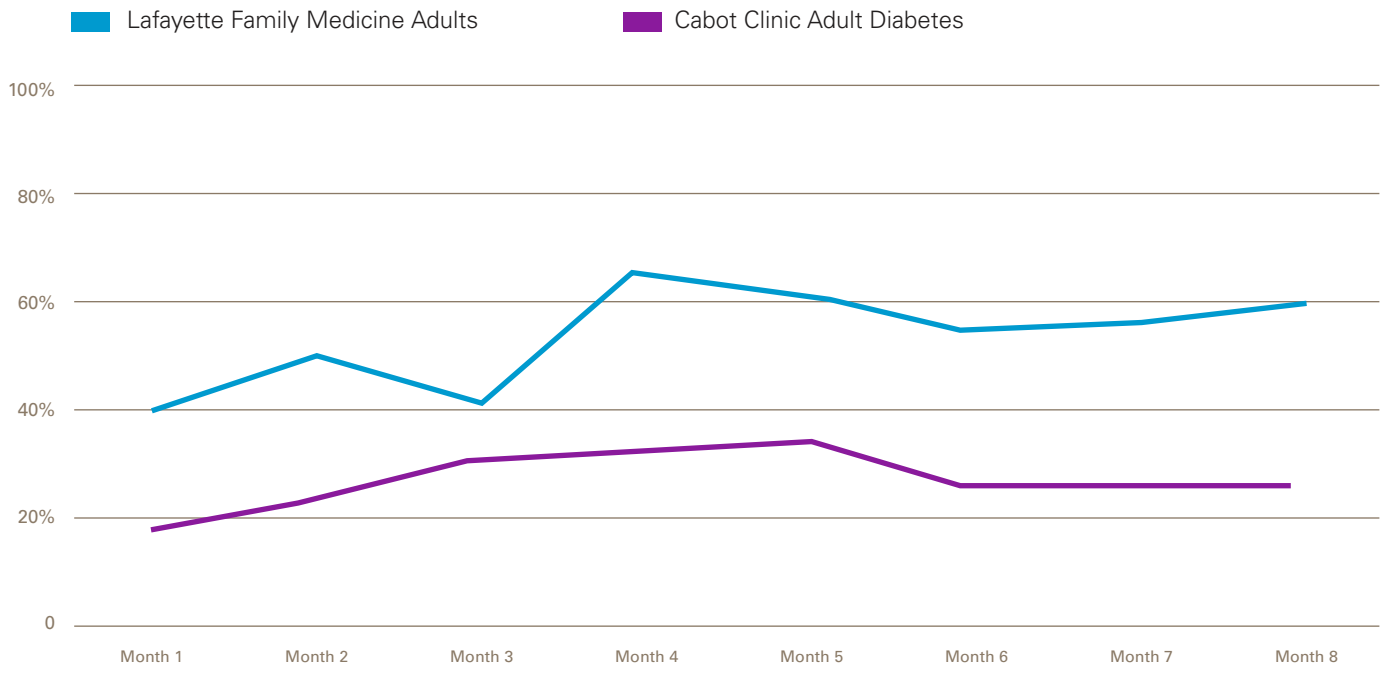
Some sites chose to track the prevalence of signs of oral disease in their patient population. This can be useful to help focus patient education efforts, and to motivate care team members. Other sites were unable track this information as structured data and report it. Sites engaging in an oral health integration program will need to evaluate their report writing resources and prioritize those reports that will be of greatest value to the care teams and their patients. See Section 7: Using Data for Quality Improvement for more information on this process. Figures 9.2 and 9.3 below show the variation in prevalence of signs of disease among different clinics in the Rodgers Health system in different target populations.

Figure 9.2: Prevalence of signs of caries among patients screened at three different practice sites in the Rodgers Health system



It is interesting that Lafayette Family Medicine shows a high rate of suspected tooth decay in the pediatric population compared to the two urban pediatric sites. Lafayette Family Medicine is located in a county in which a significant percent of the population lacks fluoridated water, whereas the populations served by the other pediatric sites have fluoridated public water. It is difficult to know whether this finding represents an accurate reflection of caries prevalence, or whether other factors may be at play such as a small sample size and variation in clinician sensitivity to identifying signs of oral disease.

Figure 9.3: Prevalence of signs of periodontal disease among patients screened at two different practice sites in the Rodgers Health system



Early months of reporting tend to be outliers due to the small number of patients screened as the pilot is beginning. As the program grows and a larger percentage of the population is screened, trends tend to even out and more accurately reflect a stable observed prevalence in the community.

Figure 9.4: Fluoride varnish rate for pediatric patients at Dimock Community Health Center

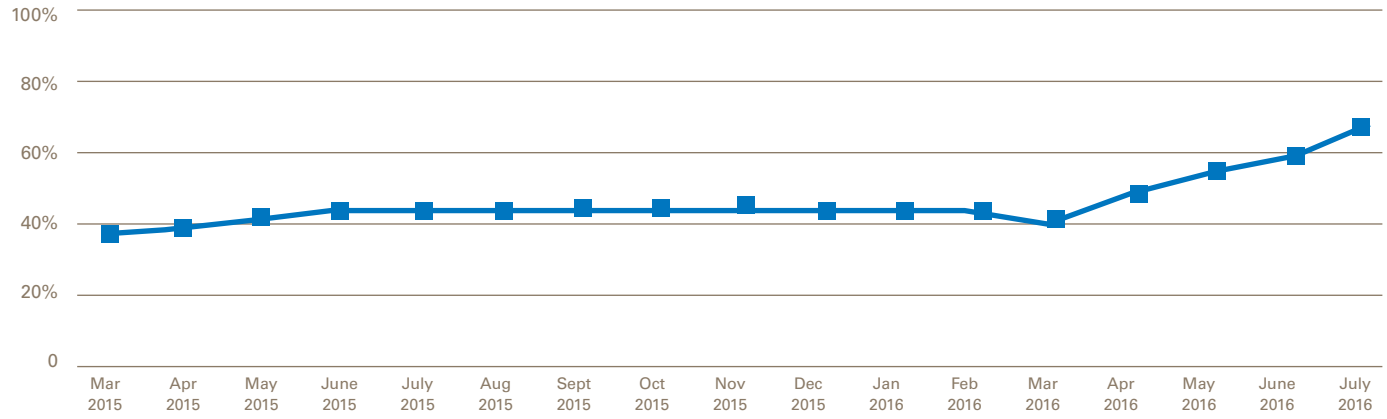


Figure 9.4 is an example of a typical run chart for a preventive intervention offered in the primary care setting. Some field-testing sites chose to offer fluoride varnish to pediatric patients as a preventive intervention, adult patients who screened high risk for oral health problems, or adults who were found to have signs of caries on exam. As the pilot test went on over time, the workflow process improved and the percentage of the screened population receiving fluoride varnish increased.

Figure 9.5: Referral rate to dentistry for signs of gum inflammation at Rogers Health

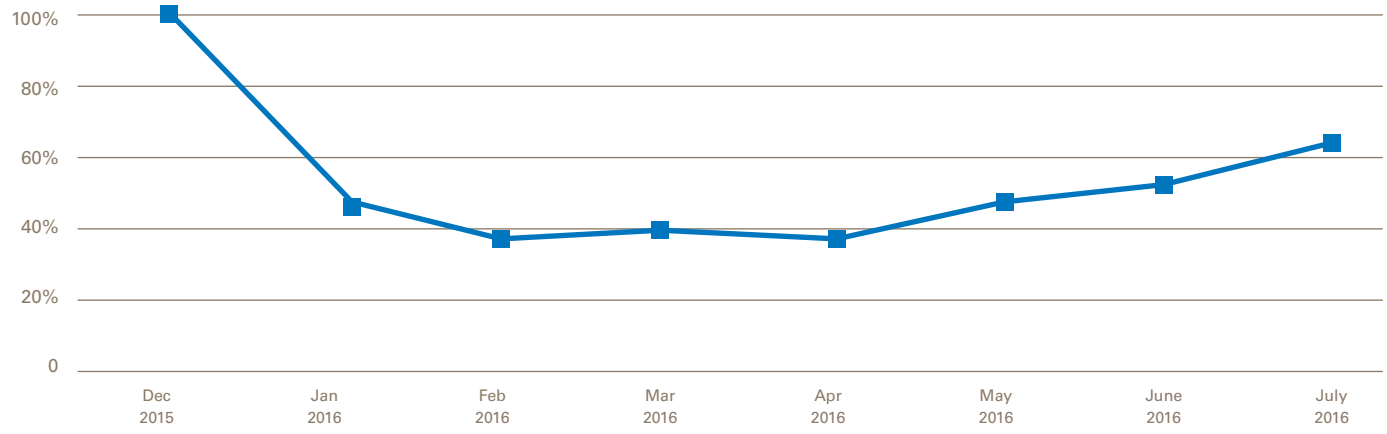


Figure 9.5 shows a common trend among field-testing sites. At the beginning, when the denominator (patients given an oral health assessment and found to have signs of an oral health problem) is small, all patients may receive a referral. Then, as the denominator grows but the workflow processes are still being refined, the referral rate is likely to decrease as patients who should receive a referral do not. Over time, as the workflow processes stabilize, the referral rate will also stabilize around a percent reflecting the reliability of the workflow. The referral rate is unlikely to ever be 100% since some patients may decline a referral and others are likely to already be under the active care of a dentist when the finding is noted on the screening exam.

Reporting the number of patients with a completed dental referral was a far greater challenge for the field-testing sites, and only a few were able to accurately track that information. The barriers included variation in how incoming consultation reports are managed, such as whether the report is attached to the referral order or simply scanned into the EHR as a separate document. In addition, dentists do not normally share consultation reports for their patients with primary care and field-testing dental partners frequently found it a challenge to identify referred patients at the time they were seen. Finally, information exchanged with consultants was, in some cases, stored in a separate database from the EHR in which the referral was ordered, making reporting all the more challenging. Field-testing sites that had an established process for following up on external referrals, and who had staff resources (such as a dedicated referral coordinator) who could regularly communicate with a dedicated contact in the dental office were more likely to be able to follow up on referrals and ensure they were tracked and completed.

Clinician impact

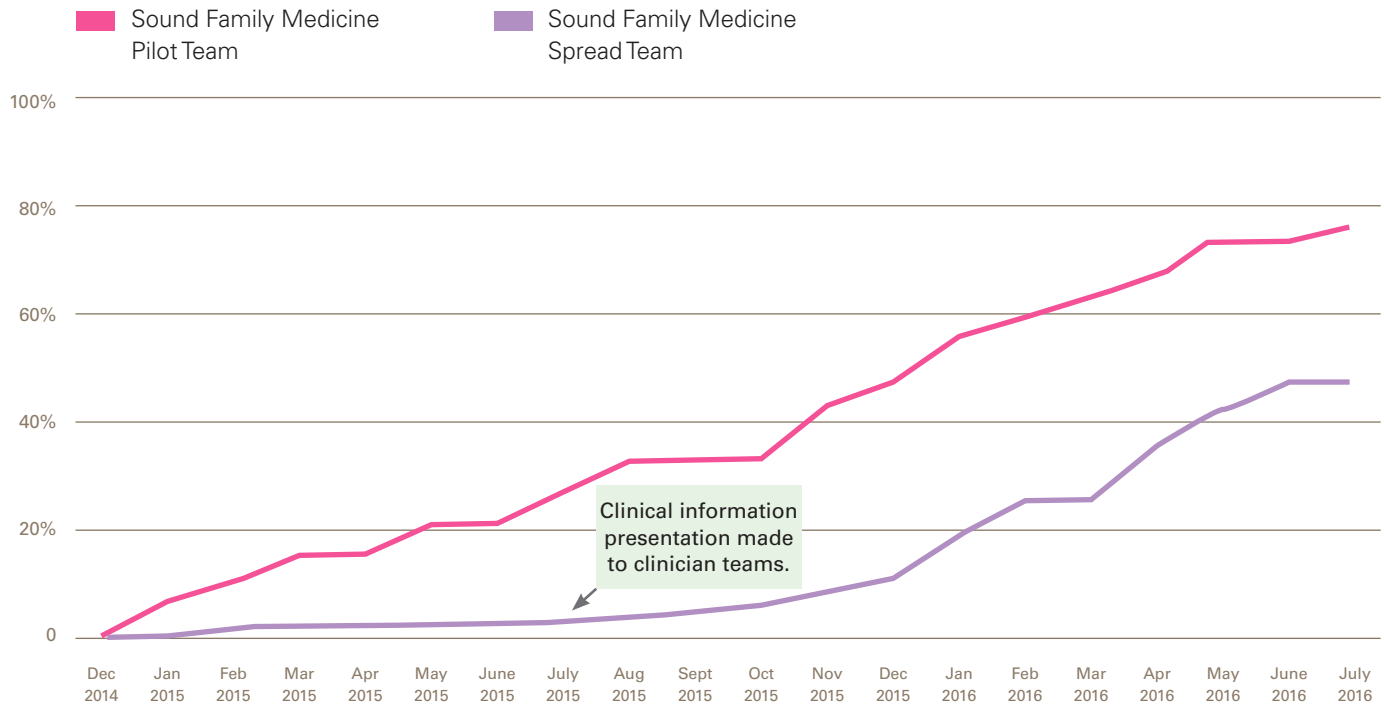
At the outset 27 clinician teams across the 19 field-testing practices engaged in the initial workflow training and piloted the oral health integration program at their practice site. After 20 months of field-testing, 80 clinician teams were engaged in the delivery of oral health preventive services. Spread took place in a variety of ways including:

- From a single target population to multiple target populations.
- From a single care team to other care teams within the same practice site.
- From care teams at one practice site to other sites within the system.
- From a single component of the Framework to multiple components.

Some sites approached spread in a formal manner, utilizing an internal clinical champion (often the medical director or the pilot clinician) to offer oral health clinical content training to other clinicians, sharing the pilot team workflow with other teams, and monitoring data over time to evaluate adoption of the oral health integration components. Other sites saw spread happen more organically, as clinicians and clinical assistants shared their work with colleagues and as EHR changes made decision support and clinical data gathering tools available to all users. One site created a custom EHR template and observed that once it was present in the EHR, some clinicians began to ask the oral health assessment questions during some visits without any formal request to begin assessing oral health.

Figure 9.6 shows two oral health assessment trend lines. One line represents the pilot clinician who participated in the initial clinical content presentation and the workflow optimization work. The other represents a clinician who began assessing oral health status by asking the screening questions for a handful of patients simply because the oral health questions were integrated in the diabetes template. In month 8, the medical director presented the results of the pilot and the clinical information to the EHR remaining clinician teams in the site, and the rate of screening increased rapidly.

Figure 9.6: Two oral health assessment run charts at Sound Family Medicine



Field Testing Results

Overall, there was a high degree of success in implementing the Framework across the 19 field-testing sites. While implementation varied depending on variables such as location, available community dental partners, internal staff resources, and patient population, all 19 sites were able to implement at least three aspects of the Framework and many implemented all five. All of the field-testing sites are currently focusing on spread and sustainability, with a significant degree of clinician support for the idea that oral health integration is a key component of whole-person care.

All 19 field-testing sites experienced challenges during the course of implementation, and creative solutions and work-arounds were often needed. These ranged from small workflow adjustments, such as deciding to hang an oral health "goodie bag" on the doorknob of the exam room when a patient was due for an oral health exam to help the clinician remember to look in the mouth, to more significant actions such as requesting an EHR vendor to build a specialized oral health template. Detailed stories of selected site experiences are shared in the case examples described below, and quotes and case vignettes can be found throughout the Oral Health Integration Implementation Guide.

Annotated case examples

Early leaders

Expanding Oral Health Access for Children: Early Experience from the Bluegrass Community Health Center: In this case example, Dr. A. Stevens Wrightson, MD, describes the early experience of oral health integration and Bluegrass Community Health Center's (BCHC) experience as a leader in the field. BCHC has been integrating oral health into the primary care of their pediatric population since 2010.

Interprofessional Education and Care at the New York University Nursing Faculty Practice: In this case example, Judith Haber, PhD, APRN, BC, FAAN and Madeleine Lloyd, PhD, FNP-BC, MHNP-BC, describe their experience in an innovative interprofessional teaching practice.

Field-testing sites

Integrating Oral Health into Primary Care: Lessons Learned from Rodgers Health: In this case example, Tina Moore, APRN, FNP-C; Brenda Lierman, Practice Manager, and Patricia Beatty, MBA, Quality Improvement Coordinator share their experience as an oral health integration field-testing site which began with a single rural practice site with two patient populations and spread to three additional urban locations and three patient populations.

Sound Family Medicine Integrates Oral Health into Primary Care for Adults with Diabetes: In this case example, Marc Aversa, MD, Medical Director and Beth Thurman, Quality Improvement Manager share their experience as an oral health integration field-testing site which began with a single suburban practice site focusing on adults with diabetes, and spread to additional practice sites and additional clinicians within the original site.

Implementation of the Oral Health Delivery Framework at Dimock Community Health Center: In this case example, Nandini Sengupta MD, Medical Director of Health Services, Katie Dolan, MSN, CPNP, Pediatric Nurse Practitioner, and Chenelle Norman MPH, Quality Improvement Analyst, share their experience as an oral health integration field-testing site which began with the entire pediatric department focusing on offering fluoride varnish as a preventive intervention.

Common topics of interest

Field-testing sites identified two primary areas of common interest which are discussed in the following case examples.

Oral Health Integration Referral Experiences: A critical component of the Oral Health Delivery Framework (the Framework) is the development of a dental referral network so that as oral health issues are uncovered in the primary care setting, there is a clear protocol to follow to ensure those patients are seen, diagnosed, and treated by a dentist. This case example shares the experience of field testing sites, including those that needed to create a community referral network of dental partners, and those who were able to leverage co-located dental clinics as a referral resource.

Electronic Health Record Use in Oral Health Integration: Every field-testing site struggled with the challenges of modifying their user interface to accept new information as structured data, optimizing decision support features, and creating accurate reports. One of the most important findings was the range of creative solutions that practices were able to devise in order to overcome the barriers they encountered in adapting their HIT to support oral health integration. This case example shares stories from three of the 19 field-testing sites, including EHR challenges encountered and work-arounds developed.

Appendix A: Annotated Oral Health Integration Toolset

Section 2: The Case for Change: Delivering Preventive Oral Health Services in the Primary Care Setting

- The Case for Change: Incorporating Oral Health in Routine Medical Care: This modifiable slide deck can be used by a champion in your practice organization to educate and inspire others. It includes basic information on the burden of oral disease and why oral health is an important component of comprehensive care. There are also spaces and directions for customizing messages for your community and audience.

Section 3: The Oral Health Delivery Framework

- Summary of Patient Education Resources: This PDF tool contains links to a variety of patient education materials including handouts, posters, flyers, videos, and websites. The resources are organized by topic, and when available in other languages, the languages are listed.
- Rapid Oral Health Screening and Risk Assessment: This PDF tool is a handout intended for members of the clinical care team. It succinctly summarizes the Framework components, and notes where information can and should be entered into the EHR.
- Summary of Primary Care Oral Health Interventions: This PDF tool is designed for members of the clinical care team. It details the oral health interventions that can be offered in the primary care setting, and provides supporting evidence and references. Links are provided to additional resources that describe coaching techniques that can be applied to oral health topics such as dietary and oral hygiene risk reduction.
- Recommended Oral Health Screening Questions: This PDF handout summarizes the recommended questions a practice can select from to use as the oral health screening and risk assessment questions. Four questions are provided for pediatrics, and six questions are provided for adults and adolescents. A practice may want to use all the questions, or they may select a smaller set, depending on their target population and workflow.

Section 4: Planning for Successful Implementation

- Oral Health Practice Readiness Assessment: This PDF tool walks through the key practice components that are necessary to support oral health integration, and describes conditions that may support full implementation, as well as conditions that may indicate that additional technical assistance may be required to achieve full implementation.
- Sample Oral Health Integration Kickoff Meeting Agenda: This modifiable Word tool presents a draft agenda used by field-testing sites to guide the kickoff meeting for the oral health integration program. The agenda suggests timing and topics for discussion, and includes resources to share with attendees.

These clinical content presentations were designed for the sites field-testing the Framework with the goal of providing the necessary information a primary care practice would need to understand the anatomy and physiology of the mouth, teeth, and gums; the pathophysiology of oral disease; and the actions a primary care team can take to protect and promote oral health. They are designed for a clinical champion to provide to a care team at the beginning of the oral health integration work, and they include two case studies on each topic that can be used to engage a care team and begin the conversation about how the work can be done.

- Clinical Content Presentation and Case Studies: Pregnancy
- Clinical Content Presentation and Case Studies: Diabetes
- Clinical Content Presentation and Case Studies: Pediatrics

- Oral Health Integration Workflow Optimization: A Streamlined Guide for Primary Care Practices: This PDF tool provides a detailed guide to anyone who is planning to conduct a workflow optimization mapping session to integrate oral health into primary care. It reviews the seven key steps in the workflow optimization process, and describes in detail how to execute each step including time commitment, supplies needed, and tools to support the mapping.
- Workflow Optimization for Oral Health Integration: This interactive PowerPoint tool was developed to streamline the traditional workflow redesign process. It allows a practice to walk through the standard steps of a primary care practice visit and determine where to fit in the components of the Framework they plan to implement, and determine who should carry out each component.
- Oral Health Information Technology Assessment: This PDF tool guides a practice through the process of identifying their practice's technical capabilities and organizational willingness to modify their EHR to support oral health integration. Assessing existing barriers is helpful to determine what work-arounds may be needed.

Section 6: Structuring Referrals to Dentistry

- Referral Agreement Template: This modifiable form walks a practice through the content that might be included in a referral agreement. Practices can use the form as a prompt for discussions with referring partners, and remove, modify, or add elements they agree upon. A good practice is for both the primary care practice and dental practice to sign and retain copies of the agreement to refer back to as the referral workflow and processes are worked out.
- Referral Template for Primary Care Referrals to Dentistry: This modifiable Word form provides a template for a primary care practice and dental practice to use to communicate the essential information back and forth. The top half is intended to be filled out by the primary care practice and then sent to the dental practice (via secure email, fax, etc). After the patient is seen, the dentist completes the bottom half and sends it back to the primary care practice's designated contact.
- Sample Completed Referral for Primary Care Referrals to Dentistry: This is a sample completed referral form from a fictional practice to show what the information might look like when completed.
- Oral Health Referral Workflow Optimization: This PowerPoint presentation is designed to be conducted as a 60–90-minute webinar with the primary care and dental staff involved in the referral process. It is based on the overall oral health workflow mapping process, and focuses specifically on the steps involved in making a referral to dentistry, and communicating the results of that referral back to primary care for referral tracking purposes. This "micro" workflow within the larger oral health integration workflow may need some adjusting and refining as referrals start to happen, including regular check-ins between the staff designated as the primary referral contacts.

Section 7: Using Data for Quality Improvement

- Recommended Oral Health Integration Metrics: This PDF tool details the recommended oral health measures used by the oral health integration field-testing sites. The denominators and numerators are defined for each measure. This tool includes the recommended screening questions for adults and pediatrics.
- Oral Health Data Reporting Template and Run Chart: This modifiable Excel tool supports oral health integration data reporting. The first tab provides a description of the recommended measures for adults and pediatrics and instructions for using the tool. The second tab is where a practice can enter the numerators and denominators for the oral health data they are reporting. Subsequent tabs automatically generate run charts to show progress over time.

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About the Oral Health Integration in Primary Care Project

Organized, Evidence-Based Care Supplement: Oral Health Integration joins the Safety Net Medical Home Initiative Implementation Guide Series.

The goal of the Oral Health Integration in Primary Care Project was to prepare primary care teams to address oral health and to improve referrals to dentistry through the development and testing of a framework and toolset. The project was administered by Qualis Health and built upon the learnings from 19 field-testing sites in Washington, Oregon, Kansas, Missouri, and Massachusetts, who received implementation support from their primary care association. Organized, Evidence-Based Care Supplement: Oral Health Integration built upon the Oral Health Delivery Framework published in *Oral Health: An Essential Component of Primary Care*, and was informed by the field-testing sites' work, experiences, and feedback. Field-testing sites in Kansas, Massachusetts, and Oregon also received technical assistance from their state's primary care association.

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- DentaQuest Foundation: www.dentaquestfoundation.org.
- REACH Healthcare Foundation: www.reachhealth.org.
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