ENVIRONMENTAL SCAN OF ORAL HEALTH
AND BEHAVIORAL HEALTH INTEGRATION MODELS

Contents

Executive Summary

In the past decade, the health care delivery system in the United States has moved toward an increased focus on value, most often defined as health outcomes achieved per dollar spent. Unfortunately, oral health has largely been left out of the value equation. The American public, policymakers and providers tend to view oral health as separate from general health, even though oral health is a key contributor to overall health and well-being. Further, there has been less focus on the specific connections between oral health and behavioral health—which includes both mental health conditions and substance use disorders—even though the two are very closely related. Health policy experts have also projected that the coronavirus pandemic will contribute to a significant increase in the number of individuals with behavioral health conditions due to increased rates of unemployment, depression, grief, anxiety, domestic violence and/or substance use.

Lack of access to oral health has been amplified due to coronavirus; at times during the pandemic, dental care has only been available for urgent and emergency care. At the same time, significant oral health disparities exist for many racial and ethnic groups, in part because access to oral health is often determined by socioeconomic status and geographic location. Dentists also frequently treat patients who have experienced trauma, such as child sexual abuse or domestic violence, which can interfere with delivery of oral health services, including preventive care. Models of care that are coordinated and integrated can more effectively account for patients' past experiences and conditions, and have the potential to reduce costs, improve outcomes and improve patients' access to and experience of care.
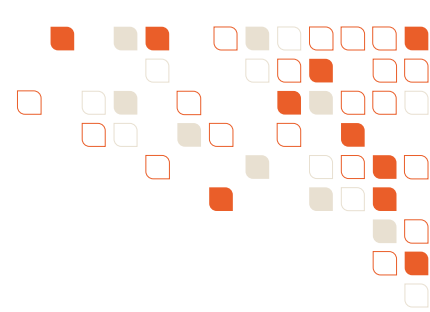
With funding from The National Council for Mental Wellbeing's Center of Excellence for Integrated Health Solutions, Bowling Business Strategies conducted an environmental scan on emerging models of behavioral and oral health integration, as well as organizational or service delivery barriers that organizations face when attempting to adopt coordinated or integrated care models. This work was informed by stakeholder interviews with oral and behavioral health providers (including a Certified Community Behavioral Health Clinic), a national organization representing health care consumers, a state primary care association and faculty with related areas of expertise from a leading state university.

KEY FINDINGS AND POLICY CONSIDERATIONS THAT EMERGED FROM CONDUCTING THIS SCAN INCLUDE:
1. Organizations across the country have begun to experiment with more coordinated and integrated models of oral and behavioral health care.
2. These models can be described across a broad continuum that is outlined in an integration framework developed for this report (see Exhibit 3).
3. Numerous barriers exist to implementing more coordinated and integrated models, such as lack of access to oral health care generally, lack of data and integrated electronic medical records and lack of clarity on what exactly integration means with respect to oral and behavioral health.
4. Cross-system partnerships, certain types of value-based payment models and mobile dentistry, among other things, may act as facilitators to more coordinated and integrated care models.
5. Stakeholders interested in pursuing more coordinated and integrated models of oral and behavioral health have a range of policy options available to help advance work in this area, as outlined in the table below. These are expanded upon in more detail in the body of the report.

POLICY AREA	POLICY CONSIDERATION
Access and Advocacy	• Ensure access to oral health care for individuals with behavioral health needs. • Identify champions to promote integration. • Support advocacy efforts to change public perceptions so oral health becomes an accepted component of general health.
Education and Workforce	• Assess new types of provider education within dental schools and behavioral health programs, as well as options for interprofessional education. • Expand prescription drug monitoring programs to mandate that all prescribers (including dentists) check the database prior to initial opioid prescriptions and include resources to train dentists on how to conduct Screening, Brief Intervention and Referral to Treatment, as needed. • Encourage all medical and behavioral health providers to integrate oral health education messages into their practices to remind families about the importance of daily care, good nutrition and healthy habits.
Data, Payment and Quality	• Build oral health-related quality and access measures into existing state and federal payment and delivery system reform programs that include provision of behavioral health services. • Define clear quality measures and "never events" that the system can rally around (e.g., never lose a child because lack of ability to get a basic dental routine) and use approaches such as racial disparity dashboards to help identify and address disparities in oral health care. • Fund initiatives that expand data sharing and research across oral and behavioral health systems to help study the reach and impact of coordinated/integrated care models. • Make use of the rapidly growing, publicly available datasets to help make the case for increased oral health access and integration of care.
Training and Technical Assistance	• Develop a consensus integration framework for oral and behavioral health, along with technical assistance tools for implementation. • Create learning or affinity groups composed of individuals focused on promoting and testing coordinated/integrated oral and behavioral health. • Share concrete tips for dental providers caring for individuals with different kinds of behavioral health conditions, as well as training on relevant treatment approaches such as motivational interviewing and trauma-informed care.
Special Considerations for Community Behavioral Health Organizations	• Forge partnerships between community behavioral health organizations and local college or university-affiliated dental clinics and Federally Qualified Health Centers to provide referral pathways to low-cost or free dental care. • Incorporate dental health into client assessments and person-centered planning processes. • Train staff at community behavioral health organizations to equip them with generalist knowledge on the importance of dental health, its connection to behavioral health and available low-cost resources in the community. • Review the "Examples for Behavioral Health Providers" enumerated in the Sample Integration Framework for Oral Health and Behavioral Health Care (Exhibit 3) for further exploration and potential implementation.

Background and Rationale for Oral Health and Behavioral Health Integration

In the past decade, the health care delivery system in the United States has moved toward an increased focus on value, most often defined as health outcomes achieved per dollar spent.[1] Four goals widely used to monitor improvement and the move toward value in the United States health care system are encompassed in the Quadruple Aim: improving the individual experience of care, improving the health of populations, improving work life of provider staff and reducing the per capita costs of care for populations.[2]

Unfortunately, oral health has largely been left out of the value equation. The American public, policymakers and providers tend to view oral health as separate from general health, even though oral health is a key contributor to overall health and well-being.[3]

The specific relationship between oral health and physical health has been more widely documented in literature. However, there has been less focus on the connections between oral health and behavioral health – which includes both mental health conditions and substance use disorders – even though the two are very closely related. Individuals with mental health and substance use disorders tend to have poorer oral health than the general population, including greater and more severe dental caries (tooth decay) and periodontal disease (gum disease), but are less likely to have received dental care.[9] [10]

The precise type of oral health impact can vary by behavioral health condition and for substance use disorders, the specific type of substance(s) used and the route of administration.[11] For example, people who use opioids suffer from increased rates of tooth loss, tooth extractions and generalized tooth decay.[12] Cannabis (for example, hashish or marijuana) use is associated with dental caries, significant xerostomia[13] (dry mouth) and possibly increased oral cancers. Cocaine can be applied to the gums, snorted, smoked or injected intravenously and users may present with oronasal defects, periodontal diseases and increased dental attribution from bruxism (grinding).

> The Surgeon General's Report on oral health, "Oral Health in America," referred to oral health as a "silent epidemic" of dental and oral diseases that burden children and adults throughout the United States.[4] Although tooth decay is largely preventable, it affects more than nine in 10 adults[5] and is the most common chronic childhood disease.[6] Many oral health conditions can undermine self-image and self-esteem, discourage normal social interaction, lead to chronic stress and depression and incur great financial cost for individuals, families and the health care system at large.[7] Further, oral health conditions can interfere with vital functions such as breathing, eating, swallowing and speaking; they can also make it difficult to partake in activities of daily living such as work, school and family interactions.[8]

Likewise, many psychiatric disorders, such as severe mental illness and eating disorders, are associated with dental disease.[14] This can include dental erosion, dental caries and periodontitis. Left untreated, dental diseases can eventually lead to tooth loss. In fact, people with severe mental illness have 2.7 times the likelihood of losing all their teeth, compared with the general population.[15] Dentists frequently treat patients who have experienced trauma, such as child sexual abuse or domestic violence, which can interfere with delivery of oral health services, including preventive care. Further, individuals with significant trauma histories may tend to demonstrate habitual teeth grinding and clenching and experience increased risk of periodontal disease.[16] Finally, behavioral health conditions are often associated with other behavior and social risk factors, such as neglected oral hygiene, malnutrition, high-sugar diets, homelessness and sporadic dental appointment patterns, that can indirectly lead to worse oral health outcomes.[17] [18]

Conversely, oral health-related conditions can create or exacerbate certain behavioral health conditions. For example, physical inflammation due to periodontitis may be a risk factor in exacerbating mental health issues, including cognitive decline and dementia. In addition, dentists prescribe one in 10 opioid prescriptions in the United States,[19] and they are the most frequent prescribers of opioids for individuals ages 10 to 19 — often after wisdom teeth extractions.[20] (Note: Exhibit 1 provides a more comprehensive overview of the relationship between oral health and behavioral health.)

EXHIBIT 1: VALUE PROPOSITION FOR INTEGRATION OF ORAL AND BEHAVIORAL HEALTH CARE
• Increased focus on health care "value" in the United States
• Behavioral health conditions often associated with poor oral health
• Behavioral health needs increasing, especially in light of the coronavrius pandemic
• Poor oral health associated with higher costs, worse patient outcomes
• Integration of oral and behavioral health care can reduce costs and improve access & outcomes

Further, behavioral health conditions affect millions of adolescents and adults in the United States and contribute heavily to the burden of disease in the nation.[21] In 2018, it was estimated that 47.6 million adults suffered from a mental health condition, 9.3 million from a substance use disorder and 9.2 million from both.[22] Health policy experts have projected that the COVID-19 pandemic will contribute to a significant increase in the number of individuals with behavioral health conditions due to, for example, increased rates of unemployment, depression, grief, anxiety, domestic violence and/or substance abuse.

Not only are many types of behavioral health conditions associated with poor oral health; poor oral health is associated with higher health care costs and worse patient outcomes overall.[23] Between 2000 and 2010, dental-related emergency department visits nearly doubled, from 1.1 million visits in 2000 to 2.1 million visits in 2010.[24] The United States has spent up to $2 billion on dental care in emergency departments annually, with most visits for nontraumatic dental conditions that would be better and more efficiently treated in a dental office.[25] Each emergency department visit costs nearly $1,000 on average and typically culminates with patients being discharged with an antibiotic and a painkiller, rather than resolving the underlying oral health condition.[26] Further, poor oral health may increase the risk of certain physical health conditions, such as heart and lung disease, stroke, diabetes, low birth weight and premature births. Unfortunately, lack of access to oral health care has long been a concern in general, meaning that individuals may not be able to receive oral health care due to costs, lack of insurance or other constraints, even if they would like to do so.

Lack of access to oral health has also been amplified due to coronavirus; at times during the pandemic, dental care has only been available for urgent and emergency care. During the crisis, the Centers for Disease Control and Prevention has been advising patients and providers to avoid non-emergent dental care and to weigh the risks for and capacity to protect providers and patients before seeing patients in person. While that has rebounded to some degree, employment in dental offices has remained 30% lower than pre-pandemic.

Significant oral health disparities also exist based, in part, on age, race and ethnicity.[28] According to the Centers for Disease Control and Prevention, non-Hispanic Black people, Hispanic and American Indians and Alaska Natives have the poorest oral health of any racial or ethnic groups in the United States. For all adults age 35 to 44 years, for example, African Americans, Hispanics and Mexican Americans have untreated tooth decay nearly twice as much as non-Hispanic White people. Oral health disparities are also significant for minority children – particularly for African American children – compared to non-Hispanic White children. For example, African American children have nearly double the rate of dental caries, as 19% of three- to five-year-old African American children experience dental caries compared with 11% of White children.[29] These inequities have considerable consequences for the overall health and quality of life for individuals.

Integrated and coordinated care models have the potential to reduce costs, improve outcomes and improve patients' access to and experience of care. For example, several private insurers have conducted studies showing that appropriate periodontal treatment improved patient outcomes and reduced annual medical costs by 25% for patients with heart disease, 28% for patients with diabetes and by 35% for patients with stroke history.[30] While a number of frameworks and federally-sponsored initiatives have been developed to explore how oral health care can be integrated within the physical health care system – especially by primary care providers, obstetricians and pediatricians – to help improve patient outcomes and access to care, less work has been done to explore models of coordination and integration across oral and behavioral health. As a result, providers, academic institutions and other organizations have begun to experiment with different models of integration of oral health and behavioral health care.

EXHIBIT 2: RELATIONSHIP BETWEEN ORAL HEALTH AND BEHAVIORAL HEALTH – SELECTED EXAMPLES A

Mental Health Impact on Oral Health	• **Anxiety.** Teeth grinding (or bruxism) is associated with anxiety.[31][32] • **Bipolar and obsessive-compulsive disorder.** Patients with bipolar disorder or obsessive-compulsive disorder can be overzealous with brushing, flossing and mouth washing.[33] • **Depression.** Patients with depression have higher levels of dental caries, partly due to poor oral hygiene resulting from self-neglect and partly from dry mouth related to anti-depressants.[34] • **Eating disorders.** Patients with eating disorders, in particular patients with self-induced vomiting, suffer from tooth erosion.[35] • **Trauma.** Individuals with significant trauma histories may reject oral health services and/or present with habitual teeth grinding and clenching and associated periodontal, abfraction (tooth tissue loss) and occlusal wear (tooth attrition) problems.[36] • **Medications for Mental Health.** Xerostomia, or dry mouth, is a common side-effect of medications used to treat mental health disorders, such as anti-depressants, anti-anxiety and anti-psychotics.[37][38][39]
Oral Health Impact on Mental and Cognitive Health	• **Cognitive functioning.** Physical inflammation from periodontitis may be a risk factor in exacerbating cognitive issues, including cognitive decline.[40][41] • **Dental phobia.** A significant number of individuals experience anxiety about dental visits; some cases lead to phobia.[42] Dental treatment has also been identified as a trigger for memories of traumatic events.[43] • **Quality of life.** Poor oral health can negatively impact an individual's employment, school and relationships. • **Self-esteem.** Oral health issues like tooth loss and tooth decay produce significant negative effect on an individual's self-esteem and quality of life.[44] • **Vital Functioning.** Poor oral health can impair functional abilities such as eating, breathing, swallowing and chewing, which can in turn impact social functioning and mental health.[45][46]
Substance Use Disorder Impact on Oral Health	• **Cannabis.** Use of cannabis (hashish and marijuana) can lead to increased risk of oral cancer, dry mouth and periodontitis.[47] • **Cocaine.** Cocaine snorting is associated with nasal septum perforation, while crack cocaine smoking produces burns and sores on the lips, face and inside of the mouth.[48][49] • **Methamphetamine.** Use of methamphetamine is associated with bruxism, excessive tooth wear, xerostomia and rampant caries. • **Opioids.** Use of opioids is associated with tooth loss, tooth extractions and generalized decay.[50] • **Medications for Substance Use Disorders.** Medications used to help treat substance use disorders (e.g., buprenorphine and methadone) can result in tooth decay/dry mouth.[51]
Oral Health Impact on Substance Use Disorder	• **Oral pain.** Oral pain can exacerbate factors that lead to substance use (in part to help alleviate pain) or impede substance use recovery.[52] • **Opioid prescribing patterns.** Oral health providers have been among the top prescribers of opioids in recent years.[53] • **Use of emergency rooms.** Individuals seeking care for oral health problems in emergency rooms are often prescribed pain medications rather than receiving complete oral care.[54]

a. **Table Note:** This table provides selected examples of the relationship between oral health and behavioral health. It emphasizes direct relationships, often physiological, between selected behavioral health conditions and oral health. There are many indirect effects and social risk factors associated with behavioral health conditions that can negatively impact oral health that are not listed in the table. These can include, among other things, neglected oral hygiene, malnutrition, high-sugar diets, homelessness and sporadic dental appointment patterns.[55]

Environmental Scan of Integrated Models

To our knowledge, there are currently no universally agreed upon models or frameworks for integration of oral health and behavioral health. The models identified in the environmental scan have been described along a basic continuum, which is adapted from a Substance Abuse and Mental Health Services Administration framework developed for integration of primary care and behavioral health, as well as the Oral Health Delivery Framework developed by Qualis Health (see Exhibit 3).[56] The examples listed in the framework below are "bi-directional," meaning they cover both strategies for integrating behavioral health care into traditional oral health settings and strategies for integrating oral health care into traditional behavioral health settings.

Nearly all the oral health and behavioral health integration initiatives described below are in their early stages, so information about impact on cost, access and patient outcomes is limited. To identify existing models of integration, Bowling Business Strategies conducted a series of stakeholder interviews and reviewed academic and gray literature (see Appendix I for the complete list of interviewees).

EXHIBIT 3: SAMPLE INTEGRATION FRAMEWORK FOR ORAL HEALTH AND BEHAVIORAL HEALTH CARE	
EXAMPLES FOR ORAL HEALTH PROVIDERS	
Provider Education	• Oral health providers receive Mental Health First Aid training • Oral health providers receive opioid prescribing training • Oral health providers receive trauma-informed oral health care training
Screening	• Oral health providers screen patients for mental health or substance use disorders • Oral health providers check prescription drug monitoring database for history of prescription drug use
Physical Assessment	• Oral health providers assess mouth for risk factors associated with mental health or substance use disorders (e.g., use of the Evaluate, Assess, Treat Framework[57] for early detection of oral manifestations of disordered eating behaviors)
Service Provision	• Oral health providers offer brief intervention[58] for behavioral health needs, as appropriate (e.g., motivational interviewing)
Referral/Care Management	• Oral health providers make referrals and coordinate as needed (including a "warm handoff") to local behavioral health providers
Co-location	• Oral health provider (e.g., a dental hygienist) is embedded within a behavioral health clinic
Full System Integration	• Oral health and behavioral health providers share a physical office space, use a common electronic health record and co-manage patients as needed

EXHIBIT 3: SAMPLE INTEGRATION FRAMEWORK FOR ORAL HEALTH AND BEHAVIORAL HEALTH CARE

EXAMPLES FOR BEHAVIORAL HEALTH PROVIDERS

Provider Education	• Behavioral health providers receive training on common oral health issues associated with mental health or substance use disorders
Screening	• Behavioral health providers screen for basic oral health hygiene habits and dental visits • Peer specialists or peer recovery coaches trained to screen for oral health needs
Physical Assessment	• Behavioral health providers include a domain for dental health in their biopsychosocial assessments • Behavioral health providers (e.g., psychiatrists) assess the mouth for obvious signs of disease
Service Provision	• Behavioral health providers (e.g., social workers, community health workers) apply fluoride varnish
Referral/Care Management	• Behavioral health providers make referrals and coordinate as needed (including "warm handoffs") to local oral health providers • Behavioral health providers (e.g., for residential patients) transport patients to and from dental visits
Co-location	• Behavioral health provider (e.g., a social worker) is embedded within an oral health office
Full System Integration	• Oral health and behavioral health providers share a physical office space, use a common electronic health record and co-manage patients as needed

NOTE: Bowling Business Strategies developed this sample integration framework, which is adapted from a Substance Abuse and Mental Health Services Administration and Health Resources and Services Administration Center for Integrated Health Solutions framework developed for integration of primary care and behavioral health,[59] as well as the Oral Health Delivery Framework developed by Qualis Health.[60]

Wisconsin Primary Health Care Association Integration: A Provider Education Model

The Wisconsin Primary Health Care Association plans to begin efforts to more closely integrate oral health and behavioral health within selected health center locations. The impetus for this work was largely generated by behavioral health staff embedded within the health center sites. Dental staff also recognized the need for additional resources in supporting patients with behavioral health-related needs. For example, dental hygienists said patients often "spilled their guts," and there were varying levels of comfort with how to best respond to and support patients with any reported or suspected behavioral health-related needs. Health center staff also recognized the importance of team-based, integrated care for individuals receiving medication-assisted treatment to treat substance use disorders. This is due to the oral health related side-effects of certain medications used to help treat substance use, such as buprenorphine and methadone.

The efforts in Wisconsin will begin primarily with education for the health centers, focusing on those that already have oral health providers working onsite. The initial plan is to: (1) learn from other health centers that have begun oral and behavioral health integration work, including Asian Health Services[61] and Northwest Michigan Health Services, Inc.; (2) conduct Mental Health First Aid training for oral health providers working within the Wisconsin health centers; and (3) facilitate peer-to-peer learning for all health centers interested in beginning oral health and behavioral health integration efforts. The Wisconsin Primary Health Care Association already has oral health and behavioral health peer learning networks, which provide a mechanism for facilitating trainings and integration work. At the time of this brief, these efforts were on hold due to COVID-19, but the plan is to begin trainings and technical assistance in 2021.
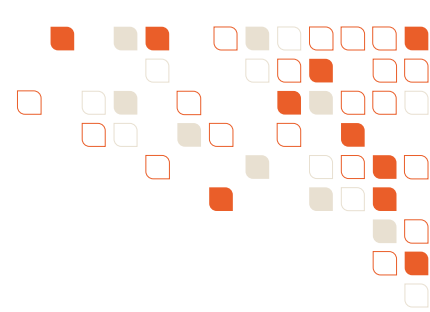
New Hampshire:
A Screening Model

The New Hampshire Department of Health and Human Services is receiving support from the Health Resources and Services Administration's State Oral Health Workforce program. The New Hampshire Department of Health and Human Service's enhanced prescription drug monitoring program uses prescriber reports, education on Screening, Brief Intervention and Referral to Treatment and evidence-based pain management to help reduce the total amount of prescribed opioids for dental procedures. While 49 states currently have prescription drug monitoring programs, only 25 states require all prescribers to access the database prior to making an initial opioid prescription.[62]

Through this federal grant, New Hampshire plans to increase training for dentists on best practices for pain management in dental pain and to increase dentists' use of New Hampshire's enhanced prescription drug monitoring program to help inform their opioid prescribing patterns. It also plans to increase the number of dental providers who have participated in trainings on Screening, Brief Intervention and Referral for Treatment for their patients. Other states, such as Maryland[63] and Pennsylvania,[64] have also included training on Screening, Brief Intervention and Referral to Treatment as part of their prescription drug monitoring program training.

Peer Workers in Oral Health:
An Outreach and Linkages Model

The University of Michigan has developed and plans to launch a peer worker in oral health model that is designed to help improve oral health and access to dental care among Medicaid-insured individuals with psychiatric disabilities. The initiative builds upon a successful certified peer support specialist workforce in Michigan, as well as the strong evidence base for the ability of peer workers to improve health outcomes, generally. In Michigan, peer specialists are individuals who have obtained treatment for a psychiatric diagnosis and who have been trained and certified by the state to serve others with similar experiences. Certified peer specialists in Michigan provide outreach and support in community mental health settings and their services are Medicaid-billable. The oral health initiative will take place at three peer drop-in centers in Michigan that service Medicaid-eligible individuals with psychiatric disabilities.

THREE KEY COMPONENTS OF THE UNIVERSITY OF MICHIGAN'S ORAL HEALTH INITIATIVE	
Outreach	In the outreach component, the peer workers will identify and engage Medicaid-insured individuals with psychiatric disabilities who may have high oral health needs. This may include flyers and resource lists provided in waiting rooms, recreational spaces and with their current clients.
Support	In the support component, the University of Michigan plans to launch a peer-delivered brief intervention (focused on oral health home-care topics that can be assumed within the peer workers' scope of practice) and referral to treatment model that is designed to improve oral health knowledge, self-care behaviors and health care utilization. The interviewees noted the importance of ensuring that the peer specialists would not be expected to become "oral health specialists," but rather to have a basic understanding of the importance of oral home care, information on how to care for teeth at home and local oral health care resources.
Linkages	In the linkage component, the peer workers will provide warm handoffs to local dental clinics and follow up to ensure appointments are completed.

The University of Michigan plans to evaluate the impact of this model on peer knowledge building and capacity, as well as the extent to which access to oral health care increased, in fall 2021. Previously, the University of Michigan received a grant from the Michigan Endowment Fund to develop oral health training materials for peer workers such as peer specialists, peer recovery coaches and community health workers. These materials will be embedded within the Michigan Community Health Worker Alliance's continuing education programs moving forward and will serve as a springboard for training peer specialists in the outreach and linkages pilot.

AllCare Health Coordinated Care Organization: A Co-location Model

AllCare Health is a coordinated care organization[65] based in southern Oregon that manages care for about 50,000 Medicaid members. It is paid a global budget by the state to manage physical, oral and behavioral health services. AllCare Health subcontracts with three dental plans. In 2018, AllCare Health worked with Capitol Dental Care to integrate dental hygienists into selected clinics. This work started by integrating oral health into pediatric offices to help build a good foundation to move forward with integration in other settings. This included "first tooth" training for pediatricians and medical assistants, which trains staff on how to integrate preventive oral health services into existing services, as well as instruction on fluoride varnish application.[66] This was expanded upon by following the "chronic disease management" training modules for the physical health and behavioral health clinics.

In 2019, Capitol Dental Care and AllCare administered a short survey to patients receiving care at Options for Southern Oregon, a clinic that serves members of all ages with behavioral health needs, about their dental care needs. In that survey, 99.9% of respondents said they would see a dental provider located within Options for Southern Oregon, if available. Approximately six months later, AllCare Health worked with Capitol Dental Care and embedded an expanded practice dental hygienist within the Options clinic one day per week. The hygienist's salary is largely covered by the payments received by the dental subcontractors, as well as the outreach program partially funded by quality payments made by AllCare Health to the dental subcontractors.[67]

In Oregon, dental hygienists have an expanded scope of practice, so they can practice without a dentist onsite. Depending on the collaborative agreement with the dentist, the hygienist may also be able to prescribe antibiotics and nonsteroidal anti-inflammatory drugs, administer local anesthesia and provide temporary restorations without excavation.[68]

Moving forward, AllCare hopes to expand its integration model to include dentists onsite at these clinics. In addition, the dental hygienist currently onsite at Options for Southern Oregon may obtain access to the electronic medical record, which would help inform the dental hygienist on providing patients with targeted oral health preventive therapies. This could further drive integrated and coordinated care across multiple disciplines including primary care, behavioral and oral health disciplines.

Swope Health Services:
An (Almost) Integrated Model

Swope Health Services is a Federally Qualified Health Center and a Certified Community Behavioral Health Center that provides primary health care, behavioral health services and dental care for more than 40,000 patients throughout Greater Kansas City. It has approximately 550 employees, with nine sites, including four behavioral health sites. It has a comprehensive dental program that offers cleaning, sealants, fillings, extractions, crowns and dentures and walk-in dental emergency care. The dental department is largely grant-funded. While children up to age 18 have access to dental coverage through Medicaid, there is often a lack of a direct payer source for adult dental care.

Swope's overall mission is to "improve the health and wellness of the community by delivering accessible, quality, comprehensive patient care." According to staff interviewed, this mission and organization focuses on whole-person care, including access to oral, behavioral and physical health care and has been more of a driver toward integrated care than any specific incentive funding or requirements from external sources. Swope has co-located dental and behavioral health services embedded within its main clinic site, as well as dental services within four satellite clinics. Approximately 15% to 18% of individuals with behavioral health needs receive oral care from Swope's dental department. This has enabled increased communication across the oral and behavioral health departments and underscored the need to develop better systems to better identify more of each system's patients to provide more holistic care. For example, one of Swope's goals to further increase integration is to develop a behavioral health intake plan that would include enhanced dental screening, basic oral health education, a home care kit, a toothbrush, toothpaste and floss and resources to schedule a dental visit (as needed) within the behavioral health department.

Swope is also considering whether it makes sense to target expanded oral health integration efforts for specific behavioral health subpopulations, such as those receiving care in residential treatment facilities, the pediatric behavioral health population or Swope's large community psychiatric rehabilitation program. The organization also has a fully integrated electronic medical record, meaning that the behavioral health team can assess whether their patients are receiving dental services within the clinic and, if so, what kind. Likewise, oral health providers can use the integrated medical records system to assess their patients' behavioral health diagnoses and treatments, including any prescribed medications that may impact oral health (e.g., medications for treatment of mental health or substance use conditions that have oral-health related side-effects). Moving forward, Swope would also like to improve quality and outcomes tracking to assess how individuals with behavioral health needs perceive their oral health care, including whether their oral health has improved overall and whether their needs were adequately met.

Integration Barriers and Facilitators

This section provides a summary of key integration barriers, facilitators and policy considerations. It draws on the interviews conducted for the environmental scan, as well as a review of academic and gray literature.

BARRIERS

- **Lack of access to oral health care.** While most state Medicaid programs cover emergency dental procedures for low-income adults, only 28 states provide dental benefits to Medicaid-enrolled adults beyond medically necessary care in emergency circumstances.[69] Only 15 states provide extensive coverage for adults.[70] In addition to inadequate dental coverage, Medicaid enrollees can also face difficulty finding Medicaid-contracted dental providers. Only 39% of dentists nationwide accept Medicaid or the Children's Health Insurance Program, citing issues such as burdensome administrative requirements, missed appointments and low reimbursement rates.[71]

- **Lack of trauma-informed oral health care.** Dental patients may display fear of routine dental care, avoid oral health care until it is a crisis and engage in harmful health habits due to a history of traumatic experiences. Research and practice indicate a significant portion of the population have had traumatic experiences in their lifetime, such as sexual abuse or domestic violence, which can negatively impact utilization of oral health services and their outcomes.

- **Lack of data and integrated medical records.** In most cases, the electronic medical records used by dentists and health care providers are separate. Even when they are integrated, there can be protections on what behavioral health-related information can be shared with dental providers, in part due to 42 CFR Part 2. Similarly, dental records tend to be separate from behavioral health and medical records, making it difficult to track patients who might need integrated care and/or the outcomes of any related programs.

- **Lack of clarity on integration models.** The integration of oral health and behavioral health needs more clarity and definition. Ideally, providers would have a standardized framework to draw from, along with implementation tools and guidelines.

- **Independent practice models.** Both dental and behavioral health providers tend to operate in small, independent practice models. Although this is changing, most independent dental and behavioral health providers do not have capacity for integrating care in a meaningful way, as integration efforts often involve additional time and staff resources including changes in workflows, training, data analytics, provider referrals/partnerships and care management.

- **Space constraints.** Often, the rooms in dental offices are not completely private, making it difficult to discuss sensitive behavioral-health related information. Conversely, behavioral health offices often do not have sinks, therefore adding complications to embedding dental health providers in behavioral health specialty providers.

FACILITATORS

- **Clear "use cases."** Several interviewees pointed toward clear "use cases" for how and why integrated behavioral and oral health care is needed as a facilitator.

EXAMPLE: "USE CASES" FOR INTEGRATED ORAL AND BEHAVIORAL HEALTH

- People tend to confide in dental hygienists; they want to feel better trained to help with any reported or suspected behavioral health needs.

- Medications used to treat substance use disorder (e.g., methadone, buprenorphine) have oral health side-effects, suggesting the need for a team-based care approach; further, individuals often come in daily for methadone administration, creating an opportunity to leverage high engagement to connect patients with oral health care.

- Individuals receiving long-term behavioral health services at a residential facility can be directly transported to and from oral health care.

- Individuals with severe dental anxiety can get a "warm handoff" to connect to needed behavioral health services.

- Dentists accessing a prescription drug monitoring program and identifying an individual with a suspected substance use disorder can be provided training and resources for effectively engaging patients and connecting them to treatment programs as needed.


- **Cross-system partnerships.** For some providers, enhancing care coordination and in particular, integration, across oral and behavioral health may be time- and resource-intensive and could require significant financing, policy and operational changes for successful implementation. Traditionally under-resourced providers such as Community Mental Health Centers may not have the resources readily available to, for example, embed a dental hygienist onsite. For this reason, safety-net behavioral health providers may want to consider forming partnerships to help address the oral-health needs of population. These partnership strategies could include: (1) developing an awareness of local oral health providers that offer low cost or free dental care, such as Federally Qualified Health Centers and/or local universities that offer free dental clinics are part of their training programs; (2) forging strong referral relationships with those oral health providers, ideally formalizing these relationships through development of referral pathways and warm handoffs; and (3) exploring whether existing platforms (e.g., electronic medical records or community resource and referral platforms[72] such as Aunt Bertha or Unite Us) could be enhanced to include identification of and referrals to oral health providers.

> **Success Story: Facilitating a Lifetime of Oral Health Sustainability for Substance Use Disorder Patients and Families**
>
> "The experience is life changing not only for the patients but also dental providers such as dental students who now know how their work can dramatically alter their patients' lives," said Glen Hanson, DDS, PhD, professor in the Department of Pharmacology and Toxicology at the University of Utah. "I think if we do the same thing for patients experiencing other chronic health problems, like diabetes, we could see similar positive results for treatment outcomes."
>
> **See: Oral Health Improves Substance Abuse Treatment**
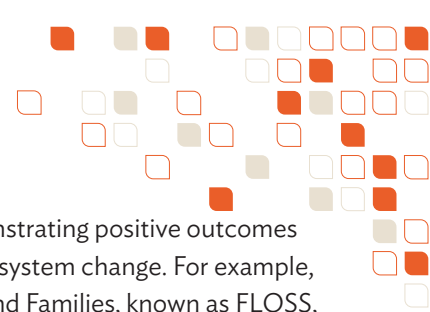
- **Data collection and demonstration of impact.** Collecting data on initiatives and demonstrating positive outcomes may help increase the likelihood of receiving ongoing funding and helping to spur needed system change. For example, Facilitating a Lifetime or Oral Health Sustainability for Substance Use Disorder Patients and Families, known as FLOSS, is a program that provided oral health care – including extractions, root canals, restorations and dentures – to individuals receiving care at substance use clinics.[73] Researchers found that individuals receiving comprehensive dental care were more likely to continue and complete their substance use treatment. The success of this program is credited with spurring the enactment of House Bill 435 in the Utah State Legislature in 2018. The bill also directed the Utah Department of Health to seek an amendment to a 1115 Medicaid waiver to provide dental benefits to individuals receiving treatment for substance use disorders.[74]

- **Health centers and behavioral health clinics.** Federally Qualified Health Centers are particularly well-positioned to focus on integration of oral and behavioral health, given the focus on providing comprehensive care for underserved populations, often including physical health, behavioral health and dental services. Similarly, the Certified Community Behavioral Health Clinic model has enabled some clinics to generate the resources and partnerships needed in order to begin incorporating basic medical and dental services into the continuum of care.

- **Mobile dentistry and teledentistry.** The expanded use of telehealth for dental services (in part due to the COVID-19 pandemic) and mobile dentistry have been cited as programs that help to promote integrated oral and behavioral health care. This is because these modalities help enable dental practitioners to bring services to the patients, regardless of where they are located (including in a behavioral health clinic).

- **Strong missions and champions.** Organizations that have a strong mission to provide whole-person, integrated care may naturally begin to integrate oral and behavioral health care, regardless of whether it is financially beneficial and/or required by states or payers to do so.

- **Value-based payment.** Although oral health has largely been left out of value-based payment initiatives to date, some innovative programs have recognized the value of enhancing access to oral health care as part of value-based payment programs. Several innovative accountable care organizations, including Atrius Health Pioneer in Massachusetts, North Texas Accountable Care Organization and Mount Sinai Care in New York, offer dental services.[75] In Oregon, the Coordinated Care Organizations are held accountable for 13 incentive measures, two of which are related to oral health: (1) members receiving preventive dental services for ages 1-5 and 6-14 and (2) oral evaluation for adults with diabetes. Several interviewees noted that Oregon's incentive measures and associated quality payments have helped to incentivize and fund oral health integration initiatives.

- **Workforce facilitators.** Several workforce-related initiatives have been found to help facilitate integration of oral and behavioral health. These include efforts to promote interprofessional education (e.g., Wisconsin Primary Care Association's Oral Health Learning Network), hiring dedicated positions with health plans and/or provider organizations focused on integration of oral health, expanding the scope of practice for dental hygienists and certifying mid-level practitioners such as dental therapists.[76]

Policy Considerations
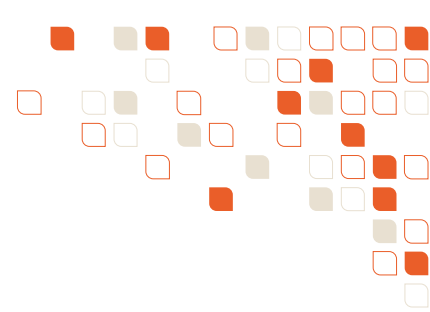
This section contains policy considerations, primarily for states, associations and providers interested in developing more coordinated or integrated approaches to oral health and behavioral health care. These considerations are broken into four overarching categories: (1) access and advocacy; (2) education and workforce; (3) data, payment and quality; and (4) training and technical assistance.

ACCESS AND ADVOCACY

- As a foundational step, ensure individuals with behavioral health needs have access to oral health care.[77] Leverage increased national focus on health disparities to advocate for changes in oral health access and insurance coverage, as profound oral health disparities remain for many racial and ethnic groups.[78]

- Identify champions and "vehicles" for promoting integration; these will likely vary by state and could consist of state Medicaid agencies, provider associations, public health departments, health plans and/or provider organizations (e.g., Medicaid health homes, health centers, community mental health centers and accountable care organizations).

- Support advocacy efforts to change public perceptions so oral health becomes an accepted component of general health.[79] Use slogans as needed (e.g., "no mental health without oral health").[80]

> **The Story of Deamonte Driver:**
> **Importance of Oral Health Access**
>
> "In February 2007, 12-year-old Deamonte Driver died of complications associated with a toothache in Maryland. Deamonte was in need of a simple $80 tooth extraction. Such a procedure would have saved his life. However, Deamonte never received this common procedure. His mother was not insured. The family had lost their Medicaid coverage. Bacteria from the abscess in Deamonte's tooth had spread to his brain by the time he received attention for his toothache. Following six weeks in the hospital and two operations, Deamonte died."
>
> **Excerpt from article published by**
> **O'Neil institute, Georgetown Law.**

EDUCATION AND WORKFORCE

- Assess new types of provider education within dental schools and behavioral health programs, as well as options for interprofessional education. For example, University of Michigan's School of Dentistry offers a course for dental hygienists titled "Patient- and Family-centered Care with Diverse Populations[81]" which covers working with diverse and medically-underserved populations, including lectures on health disparities, health literary, health behavior change and access to care.

- Expand prescription drug monitoring programs to mandate that all prescribers (including dentists) check the database prior to initial opioid prescriptions; include resources to train dentists on how to conduct Screening, Brief Intervention and Referral to Treatment (as needed) and provide ongoing education on dental opioid guidelines.[82]

- Encourage all medical and behavioral health providers to integrate oral health education messages into their practices to remind families about the importance of daily care, good nutrition and healthy habits. See key messages to fill the gap in oral health care from DentistLink.

DATA, PAYMENT AND QUALITY

- Build oral health-related quality and access measures into existing state and federal payment and delivery system reform programs that include provision of behavioral health services, such as Federally Qualified Health Centers, Certified Community Behavioral Health Clinics, Medicaid Accountable Care Organization programs and Tennessee's HealthLink program.

- Define clear quality measures and "never events" that the system can rally around (e.g., Deamonte Driver: never lose a child because lack of ability to get a basic dental routine).[83]

- Define approaches (e.g., racial disparity dashboards) to demonstrate disparities in care through data analysis of patient panels.

- Fund initiatives that expand data sharing and research across oral and behavioral health systems to help study the reach and impact of coordinated/integrated care models.

- Make use of the rapidly growing, publicly available datasets to help make the case for increased oral health access and care integration. This includes (among other data sources): (1) the Healthcare Cost and Utilization Project,[84] which contains data on utilization and costs associated with oral-health related inpatient stays and emergency room visits; (2) National Health and Nutrition Examination Survey, which includes a series of oral-health related survey questions;[85] and (3) Behavioral Risk Factor Surveillance Survey,[86] which includes state- and county-based data on several oral health-related questions. For example, Minnesota's Department of Health reports publicly on the Behavioral Risk Factor Surveillance Survey data indicators for adults on tooth loss and annual dental visits and analyzes these indicators by chronic disease, age, income, tobacco use and other factors.

TRAINING AND TECHNICAL ASSISTANCE

- Develop a consensus integration framework for oral and behavioral health, along with technical assistance tools for implementation (e.g., workflows, billing, training, etc.).

- Provide training and technical assistance to dental associations, practices and providers on how to incorporate relevant clinical approaches in oral health settings, such as motivational interviewing, trauma-informed care and Screening, Brief Intervention and Referral to Treatment.

- Provide training to Certified Community Behavioral Health Clinics and Community Mental Health Centers on how to incorporate oral health education in their practices and develop direct links to oral health care providers, including those that offer low cost or free dental care, such as Federally Qualified Health Centers and/or local universities that offer free dental clinics are part of their training programs.

- Train oral and behavioral health providers on racial disparities in oral health care and outcomes, including barriers to care and consequences faced.

- Create learning or affinity groups composed of individuals focused on promoting and testing coordinated/integrated oral and behavioral health.

- Share concrete tips for dental providers caring for individuals with different kinds of behavioral health conditions (e.g., dental hygienists may want to allow patients who have dental phobia or claustrophobia to "tap" their arm if or when they need a break).

SPECIAL CONSIDERATIONS FOR COMMUNITY BEHAVIORAL HEALTH ORGANIZATIONS

- Forge partnerships between community behavioral health organizations and local college or university-affiliated dental clinics to provide referral pathways to low-cost or free dental care.

- Develop a relationship and referral/warm handoff process with local Federally Qualified Health Centers (or lookalikes or other community health centers) that provide low-cost dental care.

- Connect clients to local Medicaid offices or health insurance navigator programs to explore and potentially enroll in general health or specialty dental coverage.

- Incorporate dental health into client assessments and person-centered planning processes.

- Train staff at community behavioral health organizations to equip them with generalist knowledge on the importance of dental health, its connection to behavioral health and available low-cost resources in the community.

- Review the "Examples for Behavioral Health Providers" enumerated in the Sample Integration Framework for Oral Health and Behavioral Health Care (Exhibit 3) for further exploration and potential implementation.

Conclusion

In conclusion, individuals with behavioral health conditions tend to have worse oral health outcomes than the general population in the United States. In turn, certain oral health problems can also create or exacerbate challenges with mental health and/or substance use. Additional work is needed to better define integrated oral and behavioral health care and to understand the impact of coordinated and integrated care on health care cost and outcomes. In the meantime, states, payers, policymakers, advocates and other stakeholders can take initial steps to help build interest in integration of behavioral and oral health. This work often starts by identifying champions and spreading the word about the various connections between oral and behavioral health. Providers can also begin to take initial steps toward better coordination, such as facilitating interprofessional education sessions for oral and behavioral health providers, conducting basic oral health screenings and basic patient education about the importance of dental care in behavioral health clinics and conducting basic behavioral health screenings in dental offices.

Appendix I: Acknowledgments and List of Interviewees

The following table outlines the organizations, names and title of the stakeholders interviewed for this paper. This paper was written by Rachael Matulis, MPH, and Jake Bowling, MSW, with Bowling Business Strategies. The authors would like to acknowledge Stacey Chazin, director of capacity building and technical assistance for the Oral Health Progress and Equity Network, and Emily Weldon Tyler, D.M.D, endodontist with Oceanside Endodontics for their advisory support and Julia Babij, a consultant with Bowling Business Strategies, for her research support.

ORGANIZATION	INTERVIEWEE NAME
AllCare Health	• Laura McKeane, Oral Health Integration Manager
Capitol Dental	• Kelli Beaumont, Expanded Practice Dental Hygienist • Linda Mann, Director, Community Outreach
Families USA	• Melissa Burroughs, Oral Health Campaign Manager • Cheryl Parcham, Director of Access Initiatives
Swope Health Services	• Megan Krohn, Interim Director, Dental Services • Mark Miller, Vice President, Behavioral Health Services • Josette Mitchell, Deputy Director
University of Michigan	• Adrienne Lapidos, Clinical Assistant Professor, Department of Psychiatry, Program for Mental Health Innovation, Services and Outcomes, University of Michigan Medical School • Danielle Rulli, Director, Graduate Dental Hygiene Program, Clinical Assistant Professor University of Michigan School of Dentistry
Wisconsin Primary Health Care Association	• Molly Jones, Health Information and Quality Program Manager • Kysa (Stocking) Monette, Program Manager

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