SANTA FE GROUP
Improving Lives Through Oral Health

Santa Fe Group Continuum on the Benefits of Integrating Oral Health into Overall Health*

Goals and Background

Through a series of webinars, background analyses, published papers and a virtual Salon in 2021, the Santa Fe Group (SFG) undertook to explore the Benefits of Integrating Oral Health into Overall Health. The Continuum engaged stakeholders from multiple sectors and disciplines, including science, clinical care, public health, economics, education, health systems, insurance plans, the private sector, and non-profit and advocacy entities, to explore real-world examples of integrating oral health into overall health, along with challenges and opportunities. The Continuum aimed to share the evidence, determine the need for additional evidence, and examine current policies and practice. Through its many events and discussions, the SFG identified alignment on needed policy and practice changes with the goal of helping to catalyze an oral health integration movement and learning community.

The context for the Continuum is the US healthcare system: it is the most costly in the world, but delivers poorer outcomes compared with other developed nations.[1] Racial and ethnic health disparities abound, as has become painfully evident during the pandemic. Meanwhile disparities in oral health and access to care are more exaggerated than for any other area of health, and potentially aggravated by the pandemic.[2] They are embedded in the separation of medicine and dentistry, and integration of oral health is a necessary step towards achieving health equity.

While dental care was made an essential health service for children under the Affordable Care Act, no similar strategies have shored up access to dental care for adults. In all, some 75 million Americans still lack dental coverage, including 27 million seniors and other vulnerable individuals, because Medicare beneficiaries are not entitled to regular dental care. The growing numbers of older adults and an increase in chronic conditions (85% of persons aged 65 and older have at least one chronic health condition) are contributing to the rising costs of health care, which is unsustainable: Medicare is predicted to be insolvent by 2024.

Regular preventive oral health care could make a big dent in disease (and save dollars). Indeed, as the webinars and Salon highlight, there is a growing body of evidence that supports the biological, economic, and social importance of oral health for overall health and quality of life. More studies now provide evidence of lowered medical and hospital costs when patients access regular preventive dental care, especially those with chronic health conditions.

To achieve improved patient health at lower costs, the health system must incentivize health. Value-based models offering team care in patient-centered health homes are at the forefront of this transformation. Yet oral health is typically left out of these initiatives and calculations, owing to the long separation of medicine and dentistry. Continuing disparities, a rapidly transforming health system, and the pursuit of health equity mandate the integration of oral health into overall health. This is our defining moment.

What follows is an overview of key themes, recommendations and summary points from all sessions, linked to relevant components of the Continuum.[3] Although much work remains, the examples and cases highlighted throughout the Continuum provide substantive hope for change as evidenced by new science and technologies, successful initiatives and policy steps already underway.

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*All summaries were prepared by Wendy E. Mouradian, MD, MS, Dushanka Kleinman, DDS, MScD, Continuum Co-Chairs, and Joan Wilentz, MA, incorporating comments from all Session Moderators.

Overview of Continuum Components	
REFERENCE KEY: W = Webinars 1-4; S = Salon Sessions I-VI; F = Frontiers in Dental Medicine publications	
WEBINARS	
W-1	Learning from Science: How oral-systemic collaborations can advance research, policy, and health outcomes
W-2	Learning from Clinicians and their Patients: Why oral health collaboration is essential to overall health outcomes
W-3	Learning from Health Systems: What can be done to scale up integration?
W-4	Learning from the Convergence of Medical and Dental Insurance: Who's driving change?
SALON SESSIONS	
S-I	The Imperative for Integration
S-II	The Face of Integration: From Science to Clinical Care and Back Again
S-III	Technology-Empowered Consumers: Important Force for Healthcare Integration
S-IV	The Face of Integration: Learning from State and Federal Health System Integration Initiatives
S-V	The Business of Integration: Paying for Dental Care; Economics, Health Policy, and Integration
S-VI	Collaborations to Accelerate Integration
FRONTIIERS PAPER	
F	The entire collection of papers, "Integrating Oral and Systemic Health: Innovations in Transdisciplinary Science, Health Care and Policy," a Research Topic collaboration between *Frontiers in Dental Medicine* and the SFG in parallel with this Continuum, can be accessed in a downloadable e-book format at https://www.frontiersin.org/research-topics/16161/integrating-oral-and-systemic-health-innovations-in-transdisciplinary-science-health-care-and-policy.

KEY THEMES FROM THE SANTA FE GROUP CONTINUUM

The Salon opened by asking: How can we accelerate change to achieve health equity through collective action in a rapidly changing and evolving health care system? A series of themes and answers emerged across the two days, revisiting many insights from the webinar series. A vision of what an equitable health care system would look like bookended the Salon itself, inspiring participants to think of a system where care is available to all. It includes oral health, which is no longer siloed from overall health.

1. FOCUS ON HEALTH EQUITY BY ADDRESSING DISPARITIES in oral health and access to care through multiple strategies. Continuum participants, including academicians, scientists, public health leaders, non-profit representatives, health advocates, the private sector and attendees, considered strategies to reduce disparities by integrating oral health. (S I, S IV)

- **Integrate oral health into medical care systems by removing structural barriers.** The separate systems are at the root of disparities in oral health and access to care, and extend to all aspects of health care, including professional education, clinical practice, government and institutional policies and regulations, insurance models, health system administration, billing, coding, health records management, and culture, among others. Some or all of these structural barriers may need to be addressed in integration initiatives.

- **Recognize and accelerate the convergence between medicine and dentistry** that is already taking place. Take advantage of the fact that medicine and dentistry are being transformed by many similar trends from within the professions (eg, interprofessional education, precision medicine/dentistry, value-based payment models, practice and corporate consolidation) and from the larger societal context (eg, shifting demographics, consumer activation, the social justice movement). This synergy provides the opportunity and the context for partnerships, learning, and collaborative action. Such efforts could help overcome current structural barriers and allow all health care providers to address each patient's needs holistically.

- **Build the next generation of leaders.** This includes the need to build diversity, equity and inclusion perspectives into all efforts, and the requirement to recruit, mentor, empower and support the next generation of health care leaders for an increasingly diverse country; this goal involves acknowledging our legacy of racism and its influence on all health systems. We also need to provide all health leaders with an appreciation of the importance of oral health.

- **Listen to family and community voices; learn from community efforts.** Listening to stakeholders empowers them so they can engage in problem-solving for their own communities. We need to think across the lifespan stages, from pre-conception to senior years, and consider intergenerational structures (child and parent; caregivers of infants and the elderly), as well as recognize the importance of safe neighborhood and built environments, social and community supports, food and nutrition availability, economic stability, and educational access and quality in order to advocate for public health/policy changes. The breadth of influences calls for cross-sector approaches to address social determinants of health.

2. LEVERAGE THE EXISTING SCIENCE and expand basic, applied and behavioral research initiatives to include oral and systemic health components. This includes implementation and translation science, health services research and epidemiology. Collaborative efforts are needed to optimize scientific progress and avoid stalled science resulting from silos, and to facilitate translation of knowledge to clinical and policy levels to improve the health of all communities. (W1, S II, F[4,5])

- **Create strategies to increase science collaboration,** such as adding oral health components to existing grant programs.

- **Leverage existing training mechanisms and develop new ones** to create integrated research training experiences and interdisciplinary mentoring.

3. LEVERAGE TECHNOLOGIES to connect to consumers and patients, and to better integrate medical and dental care systems. (S III, S II, S V)

- **Advocate for the use of interoperable electronic health records** (EHRs) to promote collaboration, ensure patient safety, and facilitate medical and dental integration. EHRs are also an essential component of Learning Health Systems, along with other information technology tools. Such "smart systems" integrate internal data with external evidence, share new data with clinicians, and apply the best evidence to patient care in real-time.

- **Utilize Teledentistry more effectively.** Although the use of Telehealth has become widespread in health care, dentistry has not continued to use this modality since early in the pandemic. While dental culture still favors procedures, and 1 – 2 preventive visits a year is typical, more contact could improve patient engagement and health outcomes.

- **Assess new technologies** (eg, smart toothbrushes) and health apps with oral health components (eg, GoMo app to help cancer patients manage their oral health) for appropriate applications in clinical care and research.

4. STUDY NOVEL INTEGRATION INITIATIVES FOR SCALING UP. Integration initiatives are complex efforts that utilize workforce, policy and financing strategies, typically require administrative buy-in, and are most effectively implemented when affected individuals or communities are involved in planning. A wide variety of settings and integration programs were considered.

- **Learn from clinicians and patients** to develop policies and practices that integrate oral health, especially for at-risk patients. At-risk groups include those with chronic conditions, and patients undergoing cancer treatment or transplantation (all of whom need regular and sometimes urgent dental assessment), among others. In Webinar 2, the incoming President of the United Network for Organ Sharing (UNOS) noted that oral health influences the success of transplantation and that timely and effective dental care was very important. Other at-risk groups include hospitalized patients; individuals who present to Emergency Departments (EDs); or those who are otherwise vulnerable. The ED setting is particularly problematic: While the federal Emergency Medical Treatment and Labor Act (EMTALA)[6] requires that EDs accept such patients, the lack of facilities and staff trained to assess and treat oral health problems is a continual conundrum in EDs, where dentists are rarely available. Dental diversion programs have been developed to get patients to dental offices for care, but their use is not widespread, and may not extend to off-hours. Additional focus on this problem is desperately needed (particularly now when EDs are burdened by COVID-19 patients seeking care). (W 2, S IV)

- **Learn from health system integration models,** including non-profit, private, state and national initiatives. There are currently many models of integration, each with varying targets and levels of integration. Health systems that have access to both medical and dental services, and may have integrated EHRs, are especially well-positioned to advance clinical integration initiatives. Health system integration initiatives presented at the Salon involved the Veterans Health

Administration, the Indian Health Service, Kaiser Permanente, the Marshfield Clinic, Rocky Mountain Network of Oral Health Integration, Apple Tree Dental, and the Oregon Health Plan—but there are many others. Documenting and sharing approaches and pathways used to reform existing systems (including information on the funder, design, scope, evaluation, etc) can greatly facilitate others' adoption of similar programs. (W 3, S IV, S V, F[7,8,9,10])

- **Learn from insurance companies' experience and economic analyses.** Many studies have demonstrated the health benefits and cost-effectiveness of providing regular dental care, especially for patients with chronic conditions, as summarized at the Salon. A new study sponsored by the SFG, the first demonstrating that preventive dental care can generate substantial total health savings in a large Medicaid population, was published in 2021 and presented at the Salon.[11] Also discussed there were the experiences of several insurance companies currently offering such care (eg, United Concordia, Blue Cross Blue Shield of Massachusetts, Life and Specialty Ventures). These programs continue to show positive results. These findings should be tested in future studies and initiatives, eg, through demonstration projects within Medicare/Medicaid and other programs. Perhaps not surprisingly, considering the evidence for the economic benefits of dental care, the trend towards convergence of dental and health insurance is increasing, according to surveys by the consulting firm West Monroe; that trend is another potent driver for integration.[12] (W 4, S V)

- **Learn quality improvement lessons.** To mobilize change in systems, consider lessons from the Veterans Administration successful non-ventilator hospital-acquired pneumonia prevention program (NVHAP) (which utilized nurses to deliver oral hygiene to patients); the Oregon Experiment (which utilized value-based strategies and incorporated dental care into a primary care model); and the Joint Commission's (JC) extensive experience with quality improvement (QI). Elements for success include engaging end-users, planning for sustainability from the beginning, and developing process and outcome measures to assess change. However, to drive change requires more than measurement: it takes leadership (with a clear vision and broad support), a safety culture (characterized by the ability to report problems without fear of retribution), and QI capacity. Programs must be comprehensive: instead of just thinking of "doing the right thing," focus on "doing everything right." There is much for dentistry to learn from these quality initiatives, although there is currently not that much incentive for QI efforts in solo or small group practices. However, larger dental systems are utilizing these approaches. The continued development and testing of appropriate quality measures and national leadership will also advance QI in the dental context. (S IV)

5. OPTIMIZE THE USE OF THE HEALTH WORKFORCE. Although there was not a specific session on the topic, the value of a diverse and diversified workforce came up multiple times within integration initiatives and policy discussions. Several examples typified optimal utilization of workforce. (S I, S VI, F [7,13])

- **Training non-dental workforce in oral health can lead to big change.** For example, the VA program discussed above utilized appropriately trained nurses to provide oral hygiene to patients to decrease "infection load" (which was very helpful framing), and thereby decrease pneumonia rates and save lives. This powerful approach should be considered broadly, according to the Joint Commission brief on this topic.[14] Currently the VA is implementing this approach in nursing homes and long-term care facilities, and discussing with other non-VA systems as well. A critical next step also under consideration is elevating nurse-delivered oral hygiene to a national nurse quality measure. This is an example of how non-dental professionals trained in oral health can lead change. The importance of oral health knowledge was also very clear in the clinical settings of cancer therapy and transplantation, where knowledgeable providers refer patients for dental care and maintenance; good oral health is mandatory in the setting of immune suppression. (S IV, W 2)

- **Primary care providers can deliver pediatric oral health** preventive interventions, a recommendation of the American Academy of Pediatrics that has been adopted by many; it is now reimbursed by Medicaid and some private insurers. This strategy is utilized within the Oregon Experiment, and the Rocky Mountain Network of Oral Health Integration, among other programs. In some programs, health providers counsel pregnant women on the importance of their oral health and its role in caries transmission. However, there is in general much room for adult medical providers to acquire more oral health knowledge and skills. This could make a big difference for patients with diabetes and cardiovascular disease, for example. Practical training programs exist (such as the Smiles for Life curriculum), but implementation in busy medical practices is not widespread. (S IV, W 3)

- **Dental providers have an important role to play in screening for medical conditions,** as was considered by several presenters. The potential for closing medical care gaps in patients attending the dental clinic is a strategy being utilized and evaluated within the Kaiser Permanente system and Marshfield Clinic systems. (S V, F [9,10])

- **State licensing policies control** which types of providers can perform which services where: changes in these regulations could better meet the needs of underserved groups in many settings from schools to Emergency Departments. For

example, dental therapists can be utilized in many settings in Minnesota, as the Apple Tree Health example illustrated. And during the pandemic, many states authorized dentists to give COVID-19 vaccines, which federal mandates then extended to all dentists and dental hygienists. (W 3)

- While health training programs for nurses and physician assistants have advanced, there is room for more application among other healthcare providers as noted. In addition to physicians providing care for adults, **pharmacists, social workers, frontline and community workers could play important roles** in the stream of oral health care. (S VI)

- All of these efforts would be facilitated if **all health professional training programs** elevated the importance of interprofessional education and practice experiences AND were required to include "missing" oral health content as a perfect example of why collaborative practice is needed.[15] Additional efforts could engage educational and credentialing agencies (eg, ADEA and CODA for dentistry, for example; and other entities of relevance for Nursing, Medicine, Physician Assisting, Pharmacy, Social Work).

- To underscore, increasing the **diversity of the workforce is a critical strategy** for addressing health disparities with carefully thought out and funded pipeline strategies, as reiterated by multiple presenters. (S I, S VI)

6. ADVOCATE TOGETHER FOR MEANINGFUL POLICY CHANGE.

- **Advocate for health system changes that incentivize health** and not procedures and acute care. Even though such a reallocation will not be easy, we are at an existential crossroads. Health equity will not be possible without value-based strategies. Oral health advocates should align with primary care movements calling for payment reform (such as the Patient-Centered Primary Care Collaborative).

- **Continue to advocate for a dental benefit in Medicare Part B;** and short of that, advocate for demonstration projects to consider health and cost-effectiveness of such programs.

- **Consider state level policy changes such as broadening state practice acts** to allow use of mid-level providers in more settings (eg, dental hygienists/therapists in primary care settings, emergency departments, hospital settings), and if needed, to allow dentists to provide basic primary care services.

- **Call for wider application of the use of nurses to provide oral care in hospitals.** Address the difficulties Emergency Departments experience managing dental patients. Call for more discussion with the Joint Commission and other advisory and credentialing bodies.

7. APPLY ORAL HEALTH LITERACY/HEALTH LITERACY. **The pandemic has made very clear the critical nature of accurate health information. Without it, individual, providers and policymakers cannot make informed decisions. Unfortunately, the longstanding separation of oral health from the larger health system has led to a widespread oral health knowledge gap.**

However, the skills, attributes and approaches of health literacy can support and promote integration efforts, as well as paradigm change.[16] As defined by Healthy People 2030,[17] health literacy is an attribute of individuals (personal health literacy), and essential for finding, understanding, and using information and services to inform their oral and general health decisions and actions for themselves and others. Health literacy is also an attribute of organizations (organizational health literacy), the degree to which organizations, such as health care systems, "equitably enable individuals to find, understand and use information and services to inform health-related decisions and actions for themselves and others." Within this broader definition, health literacy is viewed as essential to achieving oral and general health integration. Key strategies to advance integration in partnership with oral and overall health literacy include:

- **Target efforts and address opportunities to improve oral/overall health literacy** at the societal level, within education systems (pre-K, K-12, higher and health professions education), and in all health care settings and systems.

- **Focus on increasing the oral health awareness** of the public, healthcare providers and policy-makers.

- **Incorporate evolving knowledge base,** policies and social determinants of health into health literacy efforts

8. PARTNER! PARTNER! PARTNER! DON'T GO IT ALONE! **The oral health integration movement has suffered from a lack of cohesive and collective action—despite many excellent and important initiatives working independently.[18] There is no place or platform where these efforts coalesce, and the need to jumpstart such a movement was on the minds of the Continuum planners from the beginning.**

- **Join with other transformational efforts** such as the primary care movement for payment reform, which the Patient-Centered Primary Care Collaborative and others are supporting

- **Consider ways for the many oral health integration efforts to stay connected** and magnify impact with many voices for collective action. Suggestions include an annual oral health integration conference; the expanded use of online "platforms" to gather advocates; and quarterly webinars hosted by different groups.

- **Keep a common vision:** integrated, equitable, whole person care for all that includes oral health.

- **Work together to identify priorities.**

- **Use a learning community paradigm** to facilitate continuous engagement.

9. SEIZE OUR DEFINING MOMENT: In the face of grievous health disparities, the extreme challenges of the pandemic, the rapidly transforming health system, and current policymaker interest in oral health (eg, as evidenced by Congressional interest in a Medicare dental benefit), there is an urgent need for broad stakeholder collaboration and forward movement.

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