

USING QUALITY TACTICS TO ADVANCE VALUE-BASED ORAL HEALTHCARE

A White Paper Describing the
Proceedings from the Oral
Health Quality Expert Panel



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Kaitlyn Esselman, MHS

Director, Discern Health, Part of Real Chemistry

Brittany Perkins, MPH

Project Analyst, Discern Health, Part of Real Chemistry

Nina Regenold, MSc

Project Analyst, Discern Health, Part of Real Chemistry

Elizabeth Brewer, MS, MPH

Head of Government Affairs, US, GSK Consumer Health

Brenda Maggio, RDH, CCRC

Principal Research Scientist, Oral Care, GSK Consumer Health

Eleanor Newman, MA, MSc

Director, Corporate Policy and Advocacy, GSK Consumer Health

Karen Tracy

Vice President, Strategic Alliances & Integrated Communications, The Gerontological Society of America

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Using Quality Tactics to Advance Value-based Oral Healthcare

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Executive Summary

The United States (US) health care system is moving toward value-based care (VBC), a system that links payment to quality and value. Despite the overall shift towards VBC, adult oral health is often overlooked in terms of quality measurement, hindering efforts towards value-based oral health care (VBOHC). To better understand VBOHC opportunities, Discern Health, GlaxoSmithKline (GSK) Consumer Health, and The Gerontological Society of America (GSA) convened an Oral Health Quality Expert Panel on Friday, October 22, 2021. The purpose of this convening was to conceptualize and prioritize quality strategies and tactics to drive momentum in VBOHC. During the meeting, panelists discussed key issues in oral health quality measurement, oral health among aging adults, innovative quality strategies, and tactics to fill gaps and advance VBOHC.

Throughout convening discussions, experts emphasized the need to increase education and acceptance of VBOHC among dental providers, and centering measurement and quality initiatives around patients. Panelists prioritized the following three tactics as immediate steps toward advancing VBOHC: (1) leverage already developed standard sets, such as The International Consortium for Health Outcomes Measurement (ICHOM) Adult Oral Health Standard Set (AOHSS) that incorporate metrics important to patients and include functional outcomes, (2) increase the use of diagnostic coding and interoperable exchange of information, and (3) advance team-based care models that integrate medical and dental care. This report serves as a call to action for all involved in oral health and dental care delivery to take action to advance VBOHC.

Introduction

The US health care system is transitioning away from a fee-for-service (FFS) system toward value-based care (VBC), a system that links payment to quality and value rather than volume of services performed, causing payers, providers, patients, and policymakers to focus on meaningfully measuring and reporting quality of care.

The increasing shift towards VBC includes oral healthcare. For instance, Medicaid dental claims related to VBC represented one third of all government reimbursements in 2017¹ and more than 40 states are working to adopt VBC initiatives.² The increased attention to value-based oral healthcare (VBOHC) is driven by a multitude of factors including increased oral health care costs, enduring and profound oral health disparities, and increasing public awareness of these issues.³ For instance, between 1996 and 2016, United States (US) per capita dental care expenditure increased by 27% for the general population and 59% for the geriatric population.⁴

More people report financial barriers to dental care compared to other health care services.⁵ The high cost of dental care contributes to oral health disparities and represents a major access barrier for adults and seniors, since Medicaid offers limited coverage of dental services and Medicare does not currently cover routine dental care.⁶ Oral health care quality improvement is crucial to reduce oral health disparities, such as higher rates of untreated cavities in Black or Mexican Americans compared to white counterparts.⁶ As highlighted in the recent [National Institute of Dental and Craniofacial Research \(NIDCR\) paper, Oral Health in America: Advances and Challenges](#), a shift to VBC incentivizes providers to improve oral health of the population, decreasing coverage gaps and increasing access to care.

Improving quality of oral health care for aging adults, particularly residents in nursing homes, long-term care facilities, and homebound seniors, is especially needed, as this population has a high burden of oral diseases and unique oral health needs.^{7,8} Many dental diseases are preventable and so the costly burden of oral health issues among aging Americans (e.g., untreated cavities, extensive tooth loss) could be diminished by improving access to and quality of preventive oral health services.⁸ Out-of-pocket payments for dental care often increase as a person ages⁸ and, as noted previously, oral health expenditures in the last few decades have increased at a higher rate among the geriatric population compared to the general population. Value-based approaches to oral health care are therefore critical to improving oral health care, outcomes, and costs and may be especially beneficial for aging adults.

The Need for Quality Measures

Quality measures are an important tool for VBC initiatives since they are essential in assessing the quality and value of care delivered. Measures are used for a variety of purposes such as certification or recognition purposes within health care organizations, to highlight opportunities for improvement among providers, and to inform public reporting about the value of care among competing plans or providers. Importantly, measures are also used to support payment models that hold health care providers accountable for delivering high-quality care and reducing cost. In addition, measures, especially patient-reported measures, can facilitate improved patient and provider communication and empower patients to take responsibility for their health. Gaps in quality measures could promote insufficient or delayed care.

Quality measures can support the delivery of high-quality oral health care, which is central to maintaining whole-person health and functionality (e.g., communication, eating).⁹ Oral health quality measures are therefore important not only to support adult oral health but also overall health, wellbeing, and quality of life. However, despite the shift towards VBC, adult oral health is an overlooked measurement area in the US and there is a lack of adult oral health quality measures used in state and federal quality and reporting programs. In the [recently updated Oral Health in America report](#), NIDCR also notes that quality measurement for dental programs is limited by current infrastructures and the ability to assess oral health care outcomes with the current coding system.

The Oral Health Quality Expert Panel

To better understand opportunities to advance VBOHC, Discern Health, GlaxoSmithKline (GSK) Consumer Health, and The Gerontological Society of America (GSA) convened an Oral Health Quality Expert Panel on Friday, October 22, 2021. The panel was composed of eight dental quality experts, including dental practitioners, payers, dental researchers, and leaders in dental quality measurement. See the appendix for a list of experts.

The objectives of the meeting were to:

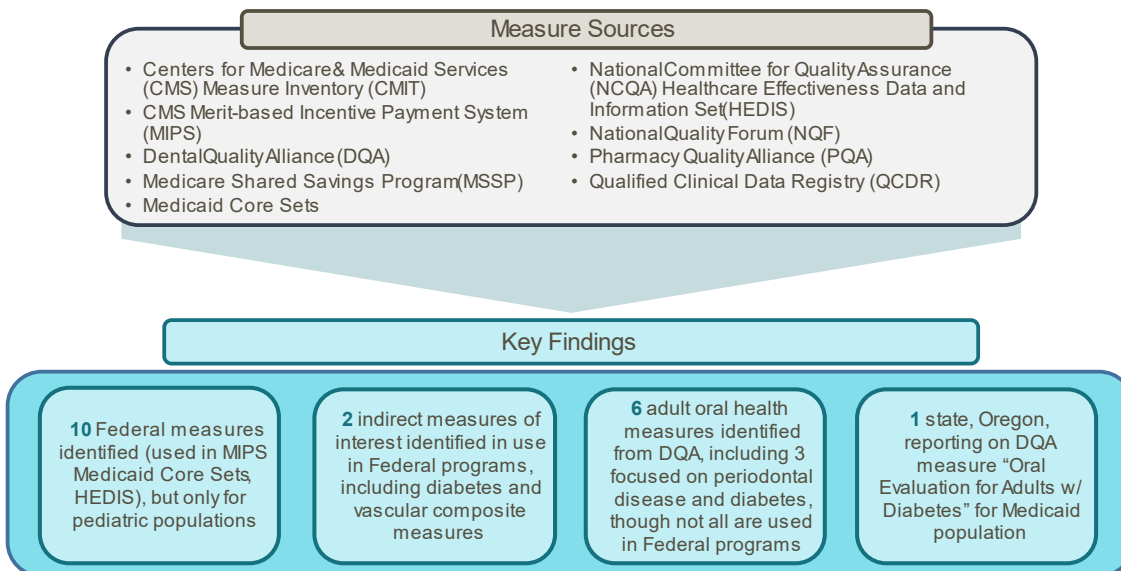
- Present gaps in oral health quality and quality measurement
- Develop action steps to fill measure gaps and advance quality measurement
- Discuss and prioritize innovative quality strategies and tactics to advance VBOHC

Presentations during the convening focused on the current VBOHC environment and the specific oral health needs among aging adults to set the stage for expert discussions, which represented the majority of the meeting. These conversations were guided by discussion questions and included a prioritization exercise to rank identified quality tactics.

Overview of the Oral Health Quality Landscape

In 2020, Discern Health conducted a landscape scan of the oral health quality landscape, which included a review of oral health quality measures in use in Federal and state programs, and state oral health quality initiatives and tactics. The findings from the landscape scan indicated that while VBOHC is emerging, there is an opportunity to further advance initiatives through quality measures and other innovative quality tactics. For instance, the review of quality measures identified that adult oral health is a gap measurement area in federal quality and VBC programs (**Figure 1**).

FIGURE 1. SUMMARY OF ORAL HEALTH MEASURE SCAN



While there are not adult measures widely used in federal quality programs, some states are using innovative tactics to drive improvements in oral health quality, such as patient education, mid-level provider training, alternative payment models, and quality improvement initiatives. One example is Oregon’s Coordinated Care Organization (CCOs) program that uses oral health measures to incentivize providers to improve and integrate oral health care for Medicaid beneficiaries.¹⁰

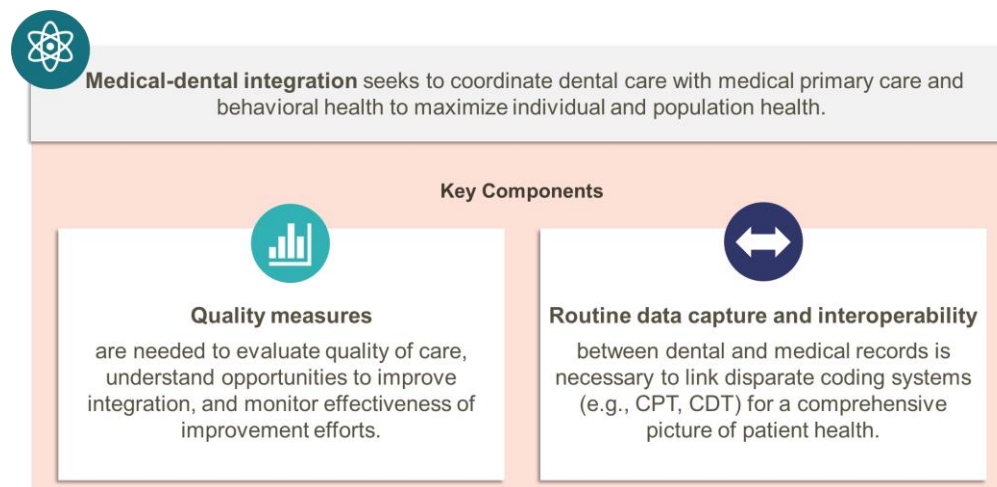
Much of the activity in the oral health quality environment is conducted by stakeholders such as dental specialty societies, quality coalitions, and individual health care organizations. Notable initiatives include programs focused on access to dental care, the development of dental health quality measures, and state oral health coalitions and collaboratives. Organizations such as the [Health Right](#) and [Administration for Community Living \(ACL\)](#) have developed initiatives to improve access to dental care for under-served populations. The Dental Quality Alliance (DQA), established by the American Dental Association (ADA), is the key developer of oral health care measures in the US¹¹ and has developed [six adult-specific quality measures](#).

Lastly, state coalitions and collaboratives support reaching state population oral health objectives and are dedicated to improving oral health preventive care and outcomes throughout states through leadership, advocacy, and quality improvement activities.¹² Currently, twenty-nine states have a state health coalition or collaborative related to adult oral health, such as the [North Carolina \(NC\) Oral Health Collaborative](#) and [New Hampshire Oral Health Coalition \(NHOHC\)](#).¹²

Key Components of Value-Based Oral Healthcare

Three components emerged as necessary for advancing VBOHC: Medical-dental integration, quality measures, and routine data capture and interoperability between medical and dental records (**Figure 2**).

FIGURE 2. COMPONENTS NECESSARY FOR VBOHC



Medical-dental integration is an approach to care that integrates and coordinates oral health with primary care and behavioral health. Because of the interdependency between oral and overall health, medical-dental integration is one of the most impactful ways to support individual and population health. Examples of integration tactics include interprofessional education, interprofessional collaborative practice, closed-loop referral processes, and public and private partnerships.¹³

Although momentum to integrate medical and oral health has been building for the last few decades, there is still room for improvement. In the Report on Oral Health published in 2000, the US Surgeon General called for increased involvement of all healthcare providers in enhancing oral health.¹⁴ While this call for medical-dental integration has been reaffirmed since, major barriers persist and hinder the realization of medical-dental integration throughout the US. As the primary care system shifts toward more patient-centered, value-focused, and coordinated care, there is an opportunity to advance medical-dental integration and transform oral health delivery.¹⁵

Quality measures are necessary to promote effective medical-dental integration since they can evaluate quality of dental care and the impact of integration efforts. Although oral health measures for children are currently used in major US quality programs (e.g., National Committee for Quality Assurance Healthcare Effectiveness Data and

Information Set ([HEDIS](#)), [Merit-based Incentive Payment System \(MIPS\)](#), [Medicaid Core Set](#)), there are no quality measures tied to oral health used in these programs for adults. Promoting the development and use of adult-specific quality measures may improve integration of dental and medical care, but barriers regarding data capture and interoperability must be considered.

Routine data capture and interoperability between medical and dental records are essential to capture a comprehensive picture of patient health and understand the interaction and connection between oral and systemic health. However, most dental record systems are separate from medical records, restricting information sharing,¹⁶ creating barriers to medical-dental integration and the use of quality measures.

Another data capture challenge is the disparate coding requirements between the medical and dental professions. Dental providers use Current Dental Terminology (CDT) codes to record dental treatment and inform the dental payer of the procedures performed¹⁷ whereas medical providers use Current Procedure Terminology (CPT) codes to document medical procedures for the same purposes.¹⁸ Diagnostic codes (e.g., International Classification of Disease, 10th edition (ICD-10) codes) can be used by both providers to communicate the patient's diagnosis and justification for the accompanying procedure to payers. While diagnostic codes are required for medical providers, there are inconsistent coding requirements for dental providers and utilization of dental diagnostic codes.^{19,20} Without consistent documentation of diagnostic codes and interoperable electronic record systems, efforts to measure the quality of dental care or integrate medical and dental care will be limited.

Innovative Approaches to Dental Quality Measurement and VBOHC

A variety of innovative approaches are used to improve quality of oral healthcare, including measure development, measure reporting, and team-based approaches to care. [Oral health measures developed by the DQA](#) provide a range of measures that are already developed and can be used to understand and evaluate oral health quality of care. Measure sets, particularly those developed in collaboration with patients, such as [ICHOM Adult Oral Health Standard Set \(AOHSS\)](#) developed in partnership with FDI World Dental Federation, include other important metrics for quality of care and functional outcomes. Incorporating the patient perspective is particularly important in dental and oral health care since clinician and patient perceptions of desired outcomes often differ.

State oral health collaboratives serve as another way to understand and generate evidence on innovative tactics to improve oral health quality. For instance, the [Wisconsin Collaborative for Healthcare Quality \(WCHQ\)](#) initiative focuses on transparency and public reporting of quality measures among regional dental practices.²¹ Part of the WCHQ initiative involves a dental quality dashboard which reports quality measures at the system, practice, and individual provider levels to facilitate comparisons and quality improvement. This type of dashboard allows health systems to evaluate medical and dental metrics in an integrated approach. One health system participating in WCHQ, [HealthPartners](#), implemented a rating system for providers based on quality metrics²² and increased interoperability and communication between medical and dental providers through a shared electronic health record (EHR) system.²³ The success of these initiatives was attributed to a pre-existing culture of quality measurement and improvement within the health system and strong leadership from medical and dental providers.

Innovative team-based approaches used at Federally Qualified Health Centers (FQHC) can be extremely effective since this setting is focused on providing comprehensive, person-centered care.²⁴ FQHCs can facilitate an improvement in VBOHC through improved interoperability, increased knowledge among providers, and aligning and incentivizing providers around the overall health and wellness of each patient. It also allows medical and dental providers to share knowledge and build trusting relationships. A similar [team-based care model by Clinica](#) in Denver – which brings together pharmacy services and medical, dental, and behavioral healthcare – has also shown success in developing and maintaining a team-based approach to caring for the patient.

Key Findings from the Oral Health Quality Expert Panel

The Oral Health Quality Expert Panel was assembled to identify the gaps and understand the opportunities to advance VBOHC. Throughout the panel discussions, experts discussed their own experiences with innovative tactics and approaches, as well as key issues, gaps, and opportunities in VBOHC. The following sections highlight the main themes from expert discussions.

Gaps and Opportunities to Advance VBOHC

Importance of Defining Quality and Quality Measurement

One of the first topics raised in the discussion was the definition of quality of dental care. There are different perspectives, and it is important to establish the definition when considering measurement. Quality is multidimensional; it includes the effect of healthcare on patients' health and the patients' perspective on their care. As one expert described, quality is the right care for the right patient at the right time, and the patient is satisfied with the care and their own health. Defining what matters to patients and their caregivers is a key component of measuring quality. When discussing quality and quality measurement, the expert panel was focused on quality improvement rather than just assessment. The ultimate goal of quality measurement is not simply to measure but rather to improve care and experience of care.

Importance of Outcomes that are Important to Patients

A consistent theme throughout the expert panel was the importance of centering quality measurement and care around the patient. Quality measures often focus on a procedure or outcome from the clinician's perspective. However, the patient's perspective is essential when assessing patient care and developing metrics for evaluation of dental care. For instance, dental patients may focus on functional outcomes such as dry mouth whereas dental providers may be more concerned with periodontal disease staging. As one expert pointed out, the quality measurement system in the US is good at measuring what is done *to* patients but not what is done *for* patients and how that care impacts their overall health and wellbeing.

The value of assessing the patient experience of care (e.g., satisfaction, health status, care experience, psychosocial impacts) and overall patient health is especially important among older adults. Measuring successful care for geriatric patients must take into account the increased heterogeneity of the older population, who are more likely to have multiple chronic conditions than younger and middle-aged adults. For instance, in discussing VBC for people with multiple chronic conditions, it may be important to move away from disease-centered approaches and towards quality measurement approaches that consider the patients' own health concerns and priorities.²⁵

Challenges with the Measurement Infrastructure

Expert discussions reaffirmed the landscape scan findings that quality measurement is a key component of VBC. However, establishing standardized documentation among dentists and interoperability between medical and dental systems is necessary for comprehensive and streamlined quality measurement. Within dentistry, there are challenges to the coding system that present challenges to quality measurement and medical-dental integration. For instance, dentists are not required to use dental diagnosis codes available in the ICD-10. Instead, dental procedure codes are often used as a proxy to understand the patient's diagnosis. This is in contrast to medical systems, where documentation of diagnosis codes is required for submission of healthcare claims for reimbursement.

Experts discussed the importance of engagement across dentists, payers, and EHR software vendors to advance quality improvement and payment reform. EHR vendors are essential in supporting interoperability and standardized communication between medical and dental records. Like medical systems, dental plans should require diagnostic terminology when providers submit claims. Moving away from procedure-based billing toward

diagnostic-based billing would facilitate quality measurement and reimbursement based on outcomes among dental providers.

Need for VBOHC Education and Exposure

The panelists acknowledged that there may be hesitancy among dental providers to embrace the change associated with VBOHC. Teaching value-based and team-based care in dental and medical schools and reinforcing these concepts in clinical practice will be important as VBOHC continues to increase. Additionally, sharing best practices from early adopters of quality and VBOHC initiatives, such as those from the WCHQ, provides an opportunity for others to see the value of these initiatives. Experts recognized the utility of sharing best practices from these early innovative approaches with health systems and others in order to inform future efforts.

Encourage Dental Providers to Set the Direction

Although there are challenges with widespread implementation of VBOHC initiatives, the expert panel acknowledged that the transition to VBOHC is inevitable. Therefore, a major theme from the convening was the need for the dental profession to set the direction of VBOHC (e.g., create measurement tools, use diagnostic terminology, etc.) since the dental profession is most aptly suited to drive this transition.

Tactics to Advance VBOHC

After the discussion, Discern Health synthesized the opportunities and strategies identified by experts (**Table 1**). Experts prioritized the listed tactics. The top three tactics were: 1) leverage the ICHOM standard set, 2) increase use of diagnostic codes by dentists, and 3) establish team-based care model. Other prioritized tactics included providing VBOHC education to providers, using patient-reported outcomes and experience measures, sharing best practices from early adopters, increased interoperability with medical systems, and standardizing the definition of “quality measurement.”

TABLE 1. TACTICS TO ADVANCE VBOHC

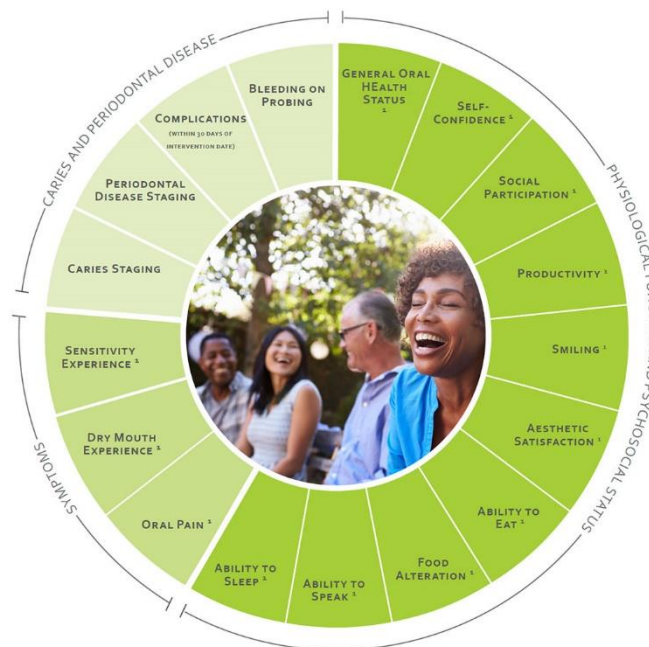
Quality Measure Tactics	Use patient-reported outcomes and experience measures
	Leverage ICHOM standard set
	Focus on functional outcomes
	Agree/standardize the definition of ‘quality measurement’
Data Infrastructure	Promote interoperability with medical systems
	Increase use of diagnostic codes by dentists
Education and Dissemination of Best Practices	Increase VBOHC education to providers
	Increase oral health education for medical providers
	Share health systems best practices (early adopters)
Other Approaches	Conceptualize and implement alternative payment models
	Advance team-based care model
	Define dental provider role in accountable care organizations (ACO)

Prioritized Tactic #1: Leverage ICHOM Standard Set to Develop Patient-Centered, Functional Outcomes Measures

The International Consortium for Health Outcomes Measurement (ICHOM) Adult Oral Health Standard Set (AOHSS), developed by FDI World Dental Federation and ICHOM, provides a standard set of metrics to measure oral health outcomes that are important to consumers and meaningful for clinicians. It focuses on the overall health and wellbeing of an individual by considering quality of life, psychosocial, and other factors beyond disease.²⁶

Leveraging the ICHOM standard set for future measure development was prioritized because it addresses many of the gaps that experts had previously identified. For instance, the ICHOM AOHSS uses patient-reported outcomes and experience measures, which address key functional outcomes that matter to patients, such as social participation and aesthetic satisfaction.²⁷ Additionally, the ICHOM standard set supports whole-person, integrated care by incorporating medical history and chronic conditions and encouraging a team-based approach. Developers of oral health measures in the US, such as the DQA, could use the ICHOM standard set as a list of potential measure concepts for patient-reported outcome (PRO) measure (PRO-PM) development consideration.

FIGURE 3. ICHOM AOHSS



Providers and health systems may also use the ICHOM standard set for internal quality improvement initiatives. To reduce measurement burden and increase feasibility, experts suggested that providers only need to choose a subset of metrics out of the larger core set. These measures should be chosen with the priorities and needs of the specific patient population in mind.

Prioritized Tactic #2: Increase Use of Diagnostic Codes

Strengthening measurement infrastructure is foundational to quality measurement and most of the tactics identified by experts, including leveraging the ICHOM standards. Increased use of diagnostic codes would facilitate medical-dental integration, enhance team-based approaches, support quality improvement initiatives, and enable use of alternative payment models. Although it was acknowledged that the granularity of ICD diagnostic codes for oral health could be improved, experts felt the existing codes are adequate for dental reporting. The primary opportunity is to increase the usage of existing diagnostic codes.

The capability for interoperability between medical and dental practices already exists but barriers remain, in part, due to a lack of widespread implementation and standardization. The [ADA Standards Committee on Dental Informatics \(SCDI\)](#) has established strong data standards, but these standards are not consistently implemented. As these standards are not mandated, EHR software vendors do not have to comply with the standards, which complicates data interpretation and comparisons. The tools and technology for interoperability and integration already exist; payers and providers should work together to drive standardized and consistent usage.

Prioritized Tactic #3: Establish Team-based Care Model

Interoperability is one step towards medical-dental integration, but it is not synonymous with true integration. To reach the goal of improved quality of care, data from quality measures should be used to facilitate integrated team care. Experts noted that integrated care teams, such as the FQHC and Clinica models mentioned previously, are the ideal model of medical-dental integration. This model allows medical and dental professionals to communicate and

collaborate in pursuit of whole-person health. Lessons can also be learned from long-term care clinics and the field of geriatrics, where team-based care and medical/dental collaboration and communication are central.

Conclusion

The overarching themes from the Oral Health Quality Expert Panel were to define quality, especially those outcomes that are important to patients, and bolster the measurement infrastructure to be able to support VBOHC initiatives. Importantly, as quality and value increasingly structure the US health care environment, dentists should be open and ready to set the direction of VBOHC.

To facilitate these changes, the prioritized tactics identified by the expert panel include to (1) leverage already developed standard sets, such as ICHOM AOHSS that include metrics important to patients and functional outcomes, (2) increase the use of diagnostic coding and interoperable exchange of information, and (3) advance team-based care models that integrate medical and dental care.

The transition to VBOHC has the potential to fundamentally shift the dentist's role in care delivery. Provider buy-in, training, enhanced use of diagnostic coding, and a focus towards VBOHC in dental culture in education and clinical practice are essential to success in VBOHC. Convening discussions illustrated the innovative work that is already being done in the dental community to improve interoperability, integration, and quality of care, and there was tremendous enthusiasm and commitment among the group of experts to advance VBOHC. Ultimately, this convening served as a call to action for all involved in dental care delivery, including software vendors, payers, policymakers, and dental providers, to leverage the momentum of the current moment and take action to advance VBOHC.

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Appendix 1: Expert Panel

Expert	Title	Organization
Amit Acharya, BDS, MS, PhD, FAMIA	System Vice President and Chief Research Officer	Advocate Aurora Healthcare
Zachary Brian, DMD, MHA	Director	North Carolina Oral Health Collaborative
David S. Gesko, DDS	Dental Director and Senior Vice President	HealthPartners
Rebekah Mathews, MPA	Director of Value-Based Care	CareQuest Institute for Oral Health
Diptee Ojha, BDS, MBA, PhD	Director of the Dental Quality Alliance and Clinical Data Registry	American Dental Association
Stephen K. Shuman, DDS, MS	Professor and Director of the Oral Health Services for Older Adults Program	University of Minnesota School of Dentistry
Marko Vujcic, PhD	Chief Economist and Vice President of the Health Policy Institute	American Dental Association
David Williams, BDS, MSc, PhD, FRCPath, FDSRCS	Professor of Global Oral Health	Bart's and The London School of Medicine and Dentistry, Queen Mary University of London