DEVELOPING A VISION FOR
oral health quality improvement
IN AN ERA OF ACCOUNTABILITY

MEETING PROCEEDINGS AND RECOMMENDATIONS
January 24–25, 2012 | Washington, DC
The DentaQuest Institute and the W.K. Kellogg Foundation convened an interactive meeting to engage a group of 80 transformational leaders who have the ideas, will, and influence to begin a national quality improvement movement in oral healthcare.
THE PARTICIPANTS REPRESENTED the dental profession, education, medicine, government, financing, philanthropy, quality improvement, and consumer advocacy. Drawing on their depth of experience and expertise, the group worked together to discuss and envision the objective for all people in the United States to improve and maintain good oral health. On the first day of the meeting, presentations by invited speakers, followed by small-group discussions, drew on the wide range of knowledge and ideas in the room. A smaller group of the meeting’s funders and planners convened again on the second day to synthesize ideas from the first day and shape recommendations for moving this work forward. The two-day meeting took its lead from the seminal report Oral Health Quality Improvement in the Era of Accountability, funded by the W.K. Kellogg Foundation and the DentaQuest Foundation and prepared by Paul Glassman, DDS, MA, MBA, which established the platform for the meeting discussions.

Summaries of presentations and discussions over the course of the two days are provided in this document. Themes and recommendations provided on pages 11–13 were developed on the second day.

FIRST-DAY SUMMARY

Opening Remarks
RALPH FUCILLO, President, DentaQuest Foundation

Ralph Fuccillo welcomed the gathered leaders and spoke to the strength represented in the diversity of participants at the meeting. He acknowledged the advances that have been made in oral health, as well as the enormous oral health disparities that still exist today. Mr. Fuccillo thanked the W.K. Kellogg Foundation for its sponsorship of the report, Oral Health Quality Improvement in the Era of Accountability, which provided a platform for discourse.

“The rapidly increasing cost of oral healthcare, the large numbers of people who cannot or do not take advantage of the current oral health delivery system, unwarranted variability in care, and the existence of profound oral health disparities among segments of the population are attracting increasing attention. Although efforts to institute quality improvement systems in oral healthcare lag behind those in general healthcare, they do exist and are increasing.”

Oral Health Quality Improvement in the Era of Accountability, a report prepared by Paul Glassman, DDS, MA, MBA
The Quality Chasm report said it well, according to Dr. Joshi: “We have opportunities at the community level, at the organizational level, at the microsystem level with the patient, and at an environmental level. We have to work at all four levels to effect change.” He spoke about the significant variations in healthcare that are reflected in differences in hospitalization and utilization rates. The United States spends more money on healthcare than any other country. However, the cost and quality relationship is not where it needs to be. Both can be improved, according to Dr. Joshi, and “we know where we want to get – what we want to achieve.”

He presented a video clip which featured Dr. Donald Berwick, former administrator for the Centers for Medicare and Medicaid Services, who provided valuable insights into improving quality.

Dr. Joshi profiled a decade of lessons learned from healthcare quality improvement:

1. National measures are a good start.
2. Focus on implementing the basics.
3. Need exists to build improvement capability.
4. Leadership and culture are essential.
5. Transparency drives provider improvement.
6. Improvement spread doesn’t happen naturally.
7. Payment alignment for quality can accelerate improvement.

In discussing major hospital measures being examined today, Dr. Joshi focused on measures for harm – though “all measures do not get to harm.” Measures for harm include mortality, infections, readmissions, and a safety culture. He spoke to the need to implement the “basics,” providing examples such as reducing surgical site infection, and improving care for patients with congestive heart failure.
Developing a Vision for Oral Health Quality Improvement in an Era of Accountability

PAUL GLASSMAN, DDS, MA, MBA, Professor of Dental Practice and Director of Community Health, University of the Pacific, Arthur A. Dugoni School of Dentistry

The Institute of Medicine in 1990 defined quality as “the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.” In the report, Oral Health Quality in the Era of Accountability, Dr. Paul Glassman spoke to the decade-long journey from pay-for-performance experiments to the Accountable Care Organizations established in the Affordable Care Act, and the current call for moving payment from Volume to Value. Dr. Glassman directed

Healthcare quality improvement is in the early stages of measuring and improving quality. Dr. Joshi stressed that in order to drive change and progress, the system must embody a range of basic competencies. Requisite competencies include quality improvement, leadership, and a culture that emphasizes safety. The system must also be transparent in order to drive provider improvement, use teamwork to make culture tangible, and establish dialogue between participants. Further, it should emphasize adoption of innovation, and align payment with quality. He underscored the value of “planning” as essential for quality improvement.

Oral Health Quality Improvement in an Era of Accountability

PAUL GLASSMAN, DDS, MA, MBA, Professor of Dental Practice and Director of Community Health, University of the Pacific, Arthur A. Dugoni School of Dentistry

Failure (including the importance of discharge instructions or smoking cessation counseling).

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MAULIK S. JOSHI, DRPH, President, Health Research & Educational Trust
Senior Vice President of Research, American Hospital Association
attention to the goals of this journey as the Triple Aim\(^4\) put forth by Donald Berwick: improving the experience of care, improving the health of populations, and reducing per capita costs of healthcare.

Dr. Glassman described three drivers of quality improvement in oral health that are essentially the same as those in general health systems. These drivers include:

- **Skyrocketing Costs of Healthcare.** In the last decade oral health expenses doubled in comparison to the rate of inflation; consumers spent more money “out of pocket” on dental care (second only to prescription drugs). At the same time, the amount of dental decay increased. This increased cost comes at a time when consumers have less money to spend. Moreover, U.S. Federal Government spending on oral healthcare has risen significantly. By 2020 the contribution of public spending to total dental care expenditures will triple compared to two decades earlier.

- **A Major Call for Quality in the Healthcare System.** Two reports (also referenced by Dr. Joshi), *To Err is Human* and *Crossing the Quality Chasm*, point to the potential for harm in the healthcare system, and the significant need for greater quality monitoring given the level of unwarranted variability in costs and outcomes. This same phenomenon exists in oral healthcare.

- **Significant Health Disparities.** Profound health and oral health disparities exist among racial and ethnic minorities, low-income populations, people with disabilities, the elderly, and other vulnerable groups, as highlighted over a decade ago by the *Surgeon General’s Report on Oral Health in America* (2000).

These drivers are pushing the healthcare system to make progress on the Triple Aim, not only in general healthcare, but in oral healthcare as well. Although efforts to institute quality improvement systems in oral healthcare lag those in general healthcare, they do exist and are increasing.

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A wide range of innovations are taking place today in programs and systems that impact oral health and overall health. For such innovations to have broad-based impact, **priorities will need to be addressed.**
Developing a Vision for Oral Health Quality Improvement in an Era of Accountability

Dr. Glassman pointed to the work of Robert Berenson, author of the Urban Institute report *Moving Payment from Volume to Value: What Role for Performance Measurement?* and to the book *Redefining Healthcare: Creating Value-Based Competition on Results* by Michael Porter and Elizabeth Olmsted Teisberg. The Porter-Teisberg book indicates “value measured by outcome achieved” is the #1 measure on which to base a system focused on value. In contrast, dental care today depends almost entirely on a volume-based financial reward system.

Much work is under way to develop appropriate measures for oral health, including work by federal agencies, large-group dental practices, the dental benefits industry, professional dental practices, hospital-based dental care, and more. As an example, Dr. Glassman referenced national health measures, such as Healthy People 20205, which now includes one oral health measure among the 26 leading health indicators, grouped into 12 topics. Similarly, although much dental and oral health data is collected and the desire to drive oral health program change is significant, few examples of measures directly tied to performance are in use, and the movement from volume to value is not yet evident in oral health systems.

Looking ahead, Dr. Glassman pointed to future trends likely to materialize and influence oral health, including greater use of electronic health records, rising accountability for cost and quality, increasing use of data systems and measures, a focus on quality domains, expansion of delivery systems into nontraditional settings to reach more people, and increasing pressures to control costs. Pressures to institute accountability for the results of oral healthcare will increase, thereby driving people to examine the effectiveness of oral healthcare delivery systems.

The oral health industry is entering an “era of accountability,” representing an important and exciting time to be wrestling with these issues.

**Translating Vision to Oral Health**

**BURTON EDELSTEIN, DDS, MPH, Professor of Dental Medicine and Health Policy & Management, Columbia University; Founding Chair, Children’s Dental Health Project**

Our charge is to think about connecting the dots between a “vision of quality” and “accountable oral healthcare,” said Dr. Burton Edelstein. The key questions are: “What makes oral healthcare accountable? From whose perspective? What levers or pressure points are available to get there?”

Oral healthcare has been traditionally assessed in dentistry in terms of technical measures, by dental practices in terms of practice performance, and by patients in terms of satisfaction. Accountable care writ large, he says, is accountable at the level of the population and dentistry’s ability to meet its needs. In terms of today’s healthcare concerns, accountable care for a population asks, “Is the population healthy, functional, and satisfied? Are our practices and programs thriving in ways that meet their needs?” Rather than focus on technical performance, these questions require that we look holistically at systems of care including their “inputs” or structures, their “processes” or actions, and their “outcomes” as measured by our impact on the population’s oral health.

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The greatest focus by the profession must be on those risk and salutary factors that are mutable by us and by others with whom we partner. They extend not only to traditional dental treatment but to meaningful engagement of individuals and groups in ways that reach broadly to raise oral health literacy, promote healthful behaviors, leverage public and professional policy, and maximize the use of established prevention science.

What is changeable? “Things do not change...We do,” said Henry David Thoreau. We need to rethink. We need to be the change – and to achieve that with a much more global perspective.

Innovation Is Already a Reality
A wide range of innovations are taking place today in programs and systems that impact oral health and overall health. For such innovations to have broad-based impact, priorities will need to be addressed. In a panel on quality improvement, three oral health leaders – Man Wai Ng, David Gesko, and Robert Compton – provided examples of innovative programs that are influencing the quality of oral healthcare today.

Shifting gears from procedural quality to accountability will involve considering oral health determinants beyond dental care including social, environmental, behavioral, and genetic determinants. It will require us to ask how many of these factors we can influence through our care and how much our care influences overall health outcomes.

To help all achieve good oral health and function as contributors to quality of life, Dr. Edelstein urged that the focus broaden to include:

- All individuals in a population – not only those who become our patients
- Populations and subpopulations that we are part of, influence, or treat
- A broad notion of outcomes that include the “Triple Aim” of better health at lower cost through satisfactory care
- Social and environmental factors that facilitate or impede people’s ability to obtain and maintain oral health.

RALPH FUCCILLO encouraged the gathered leaders to consider a systems framework or lens to make the process of change manageable and less diffuse. Four macrosystems have a role to play: policy, funding, care, and community. “A combination of well-planned major national initiatives and state-based alliances and programs will be needed to effect change for the long term.”
Developing a Vision for Oral Health Quality Improvement in an Era of Accountability

Risk-Based Disease Management of Early Childhood Caries

MAN WAI NG, DDS, MPH, Chief of the Department of Dentistry, Children's Hospital Boston

Even though clinicians are familiar with the evidence concerning early childhood caries, the ability to put learning into action may be difficult for a range of reasons. For example, parents may not be ready for new approaches. Changing how oral health and medical professionals actually practice is not always easy to do.

A 30-month demonstration project in two hospital-based dental clinics with an overwhelming number of underserved children with high caries-risk provides insights into how to implement risk-based disease prevention and management of early childhood caries (ECC) in dental practice. The project aims to test the feasibility of this approach in children younger than age 60 months with ECC and evaluate patient care outcomes for: 1) new cavitation; 2) pain related to untreated caries; and 3) referral to the operating room.

Key findings of the demonstration project include:

- **Risk-based disease prevention and management** has the potential to deliver better oral health-care, improve outcomes, and reduce the cost of treatment.
- **Clinicians require support** with tools, incentives to align care delivery systems and practices for oral health maintenance, and reliable measures of outcomes.
- **Patients and families may be willing to adopt approaches** that conceptually make sense and through which they may engage in collaborative, family-centered care.

Principles Directed at Oral Health Quality Improvement

DAVID S. GESKO, DDS, Dental Director and Senior Vice President, HealthPartners

HealthPartners looks at healthcare in ways that sometimes result in the need to upset paradigms. The oral health playing field is not always receptive to change. In striving to improve care it is not uncommon to meet with sentiments of “don’t rock my boat.” Yet dental care is evolving. Expectations for quality change too. Today we focus on the improved health of populations, a greater value proposition, reduced risks, and developing cost-effective results.

The Triple Aim remains at the center of the HealthPartners system, simultaneously optimizing health, experience, and affordability. A set of five practice principles are directed to improve the quality of oral health for patients:

- The delivery of care based on evidence-based care guidelines
- A focus on disease management, disease risk assessment, and risk reduction
- The preservation of hard and soft tissue
- The application of a medical model of care to dentistry, and
- An objective to maintain/improve the overall cost-of-care.

Continued improvement in results for patients will require research and change in such areas as diagnostic codes, metrics of quality, risk assessment, improved oral systemic health outcomes, performance measurement, and the evolution of reimbursement systems.
What is changeable? “Things do not change...We do,” said Henry David Thoreau. We need to *rethink*. We need to *be the change* – and to achieve that with a much more global perspective.

**Designing Programs to Achieve Desired Outcomes**

**ROBERT COMPTON, DDS, Vice President of Quality Management, DentaQuest**

Improving health outcomes is the goal of quality improvement programs. But while measuring outcomes of care is critical, it can be difficult. More readily measured are those processes of care with connections to improved outcomes of care. However, there must be evidence of that linkage between the process of care and the outcome in order for it to be considered a quality of care measure.

There is strong evidence supporting the American Dental Association (ADA) recommendations on placement of dental sealants in at-risk children for first and second molars. The ADA recommends the use of resin-based sealants to reduce the need for restorations. Studies on effectiveness of sealants have indicated a reduction in caries incidence in children and adolescents which ranged from up to 86 percent at one year, to 78.6 percent at two years, and 58.6 percent at four years. In addition, sealants are effective in reducing occlusal caries incidence in permanent first molars of children by 76.3 percent at four years, when reapplied as needed. Caries reduction was 65 percent at nine years with no reapplication during the last five of those years.

A key challenge is changing provider behavior. The existence of clear evidence for preventive measures such as sealants does not mean that providers will use these techniques to the extent they should, based on the evidence. For example, when DentaQuest measured provider performance in using dental sealants on at-risk children, they found significant variability ranging from 0% to over 50% of children receiving sealants at different offices. In response to this, DentaQuest developed the “Preventistry℠” sealant program to help dental offices manage at-risk children in Medicaid programs. DentaQuest identifies enrollees by dental office who will be turning age 6 or 7 in the coming year. It sends a list of these members to their respective dental office and encourages the providers to reach out to these children to get them in for sealants. Then every six months, DentaQuest sends an updated list of the children that actually went to the dentist and whether they received dental sealants. DentaQuest provides similar information for children who are turning 12 or 13 who should be getting sealants for their second molars as well. By supporting dental offices with a roster of eligible children in their care, DentaQuest has seen an increase in the percentage of higher-risk enrollees who receive evidence-based preventive care.
Driving Change Forward

ELIZABETH MERTZ, PhD, MA, Assistant Professor, University of California, San Francisco, Joint appointment: Dept. of Preventive and Restorative Dental Science, School of Dentistry, and Dept. of Social and Behavioral Sciences in the School of Nursing

The quality framework – metrics and processes – is introducing a new currency in the marketplaces of institutional, professional, and economic legitimacy today. Professional autonomy, a key currency for health providers in the past, is moving toward accountability in general healthcare. A key motivator for health professionals is the legitimacy of the profession. One method for encouraging the profession to embrace accountability is to point out the opportunity to maintain legitimacy of the profession through demonstrating that the outcomes of oral healthcare are measured, evaluated, and continuously improved.

Dr. Mertz talked about how to transform systems and drive change. She suggested considering three frameworks as useful for understanding how to effect change: economics, organizations, and professions.

• **Health Policy and Economics**: Incentive-based assumptions include economics (payments, prices) and regulation (policy).

• **Organizations and Institutions**: Organizations are open systems that exist in an institutional environment; healthcare organizations exist in a highly institutionalized environment. This environment expects certain things from these institutions and, in turn, provides them with “legitimacy.” Why do we know what a dental practice looks like? It is not because economically that is the only way to do it. Rather it is a social norm that makes providers and patients feel comfortable.

• **Professions in Healthcare**: Professions have played a key role in building and maintaining institutions. Above all, legitimacy (or a generalized perception of appropriateness) guides behavior. Keep in mind, however, that professions can also be change agents.

Dr. Mertz defined the current dental organizational archetype as an analytic site from which to examine tensions between the current organization of dental care and the environment in an “era of accountability,” as proposed by Paul Glassman. Tensions exist between the private market and access issues for much of the public, between the separate organization of dental care and new integrated models being designed, between peer evaluation in dentistry and the push for public accountability, and between the traditional fee for service payment and new value-based purchasing models. She concluded by identifying strategic areas for moving forward with an agenda for quality improvement: 1) metrics, 2) processes, 3) leadership and 4) alignment. While approaches within the dental industry are necessary, it is the innovations that integrate oral health into bigger change movements that may yield the greatest return.

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**ON THE FIRST DAY OF THE MEETING** following each presentation, the 80 participants had an opportunity to share ideas about the five topic areas presented in the conference. Though some of these issues continue to be overwhelming to tackle because of significant barriers, the face-to-face discussions on the first day of the meeting emphasized opportunities to facilitate change and progress.
A smaller group of leaders reconvened for a second day,
including: Meg Booth, Robert Compton, Mark Doherty, Ralph Fuccillo, David Gesko, Paul Glassman, Robert Isman, Elizabeth Mertz, Maysa Namakian, Man Wai Ng, David Preble, Jesley Ruff, Brian Souza, Alice Warner-Melhorn, and Al Yee. Their objective was to identify and discuss the key areas that flowed from the presentations and small-group conversations of the first day.
SECOND-DAY DISCUSSIONS

Meeting Analysis & Themes
Through continued discussion, the smaller group identified broad themes from the first day discussions. For example, there is an opportunity for professionals engaged in the oral health community to move away from the disparate relationships of the past and to evolve as a community of oral health and health professionals working together. This movement holds strong potential for achieving success together. A growing understanding of the critical nature of oral health is accelerating this opportunity. At the same time, a shared (and expanding) focus on quality has begun to include not only the quality of the provider/patient interface, but also the quality of systems. The Affordable Care Act (ACA) and other general health activities may help drive accountability in oral health.

The smaller group found the “themes” suggest a range of potential directions to consider, such as:

MEASUREMENT
• What must be improved and how do we measure improvement? Guidelines relative to basic quality measures and behaviors are needed, as are systems to collect and use that data.

PREVENTION AND VALUE-BASED CARE
• A focus on prevention. Rather than focus only on the technical quality of care, focus work on ensuring that the care provided helps prevent and manage chronic oral diseases.
• Value-based care. Value-based care, with a focus on managing disease over time, can contribute to outcomes that reduce disease and contain costs.

INTERDISCIPLINARY APPROACH
• Interprofessional activity is needed. Public health, medical, and dental interests need to work together to identify and act on appropriate roles for each profession.
• Health is “interdependent.” Concerns exist about health, not just oral health. Major change could come through social, economic, and political systems.

CHANGE LEVERS
• A systems change lens. There is an understanding that isolated actions in one system will have limited results and yield unintended consequences in other systems. A successful strategy must look across systems that impact oral health.
• The role of change levers. Levers to drive change – consumers, regulators, and efforts to control costs – have had a significant impact in medicine but not yet in oral health.

REIMBURSEMENT SYSTEMS THAT INFLUENCE CHANGE
• Make changes in provider reimbursement to support quality improvement activities. The current reimbursement system does not align with desired provider and patient behavior. Reimbursement reform is needed to align behavior with activities likely to improve population oral health.
TEACHING AND LEARNING

- **Emphasize chronic disease management.** Dental schools will need to refocus the curriculum on disease management rather than just fixing problems after they occur. Efforts are also needed to increase health literacy in the general public.

CRITICAL ROLE OF PHILANTHROPY

- **Philanthropic investments are invaluable** in expediting early development and progress, which ultimately should lead to greater public involvement and support of many kinds.

RECOMMENDATIONS

A list of recommendations was developed based on feedback from the first-day discussions. These are grouped here by theme, with the underlying goal of moving toward a “vision and roadmap for oral health quality improvement.”

DEVELOP A NATIONAL PLAN

Form a Leadership Task Force of individuals from multiple disciplines to chart a 10-year roadmap to achieve oral health equity for all people in the United States.

- Bring together leaders from across disciplines to work together on the Task Force.
- Chart a national vision and multi-year action plan to build oral health quality for all people. Define needed steps to realize the desired future by “2023.” Develop a vision for the ideal future state and describe necessary milestones to achieve that vision.
- Identify potential/multiple sources of funding (public and philanthropic). Seek funding support to develop methods to align provider activities with prevention and disease management.
- Develop strategies to build greater accountability in the oral health delivery system. Involve the public in understanding, expecting, and measuring “oral health quality” – considering whether coalitions can be helpful to this education process.

SUPPORT DEVELOPMENT AND STANDARDIZATION OF ORAL HEALTH MEASURES

- Build on current efforts to develop dental quality measures that facilitate comparison of results across measurement systems.
- Develop methods to foster aggregation of data and comparison of results across delivery systems, providers, and payors.
Promote development of interoperable electronic record systems and standardized diagnostic codes.

- Currently, three major diagnostic code systems are in various forms of development and use (Snow-Dent, ICD-10, and EZ-Code). A single diagnostic code system used by all providers and payers is essential to success.
- Develop and advocate for strategies to include dental record systems in incentive programs to spread the use of interoperable electronic health records.

**SUPPORT DEVELOPMENT OF QUALITY MEASUREMENT SYSTEMS TIED TO OUTCOMES-BASED REIMBURSEMENT SYSTEMS**

Develop strategies to reconfigure the provider reimbursement systems to support value-based activities as measured by oral health outcomes.

Envision what a future reimbursement system may look like – where dentists, payers, and individuals and families can see themselves.

- Recognizing the need for significant cultural change, develop strategies that will educate multiple stakeholder groups about the need to embrace change in reimbursement and delivery systems.
- Examine ways to reallocate resources to support oral health outcomes and to incorporate quality measures and processes.
- Develop, test, and implement payment methodologies that provide incentives for effective prevention and disease management over surgical interventions.

**DEVELOP EDUCATIONAL INITIATIVES TO SUPPORT CHANGE IN DELIVERY AND REIMBURSEMENT SYSTEMS**

Educate state policymakers.

- Identify approaches/opportunities to educate policymakers about the potential to improve the oral health of the population and lower costs for doing so by developing and using quality improvement systems based on oral health outcomes and reimbursement systems that move payment from volume to value.

Integrate “quality improvement” into oral health education.

- Consider opportunities to integrate “quality improvement” into oral health education.

Engage the public in strengthening oral health quality and prevention.

- Develop strategies to educate the public to understand and use quality measurement information.