INSTITUTE FOR
Oral Health
IOHWA.ORG

whitepaper

2010 conference

Oral Health in Healthcare Reform

October 28 & 29, 2010

Scottsdale, Arizona

Writer | Designer: Gavin James
gjamesdesign.com

INSTITUTE FOR Oral Health

Table of Contents

Introduction

> *"We can't continue to provide more expensive medical and dental care. We have to be able to provide less expensive and more effective dental care. Really that's about delivery system reform; it's not about payment or insurance reform."*
>
> –Dr. Michael Helgeson

This year's landmark healthcare reform signals positive change, but it also spotlights glaring weaknesses in our nation's healthcare system. Millions of Americans have no access to affordable quality dental care, and the dental profession lacks the workforce, training, and technology to effectively support the rapid growth in high-risk populations such as children, aging adults, and people with diabetes. So what happens next?

For the past four years, Institute for Oral Health (IOH) has focused on raising awareness about oral health concerns for these key populations, exploring progressive solutions to help advance dental care access, treatment, and delivery. In 2010, IOH addressed the theme of "**Oral Health in Healthcare Reform**," with an in-depth look at what's needed in healthcare reform and everyday dental practice to better support underserved populations. Additionally, we explored strategies for integration between dental and medical through collaborative practice models and information technology advancements that help drive evidence-based standards and treatment protocols to support more successful outcomes in both oral health and overall patient health.

The October 2010 Institute for Oral Health Conference in Scottsdale, Arizona provided many valuable insights and promising solutions to advance oral health. With nationally recognized leaders in healthcare reform and top authorities in clinical practice, dental education, health benefits and health record technologies, this year's event highlighted a number of critical considerations, such as:

- Expanding the role of dentistry – From the economic challenges of supporting the expansion of Medicaid programs to provide care for 32 million more people, to the exciting new provisions that will promote prevention and early caries detection in millions of children, the Affordable Care Act provides many opportunities for dentistry to play a bigger role in the healthcare system.
- Addressing workforce challenges – As reform introduces new levels of need in the dental workforce, our system continues to battle with a lack of providers well trained to meet the unique needs of underserved populations such as aging adults and people with disabilities. In particular, with the wave of "boomers" reaching retirement age, our nation is facing an urgent need for more geriatric dentists. On a positive note, the reform bill includes provisions for numerous educational grants that could support better training for new and existing dental providers on special needs care.
- Increasing effectiveness with collaborative care models – The overwhelming consensus on healthcare reform is that both medical and dental will need to develop ways to deliver quality care at a lower cost. Several progressive delivery models were highlighted that focus on team-based care that brings together medical, dental and other caregivers with community partners to make access easier, reduce costs, increase efficiencies, and improve health outcomes for people who need care the most.
- Advancing quality using electronic health records – While electronic medical records have been in place for decades, emerging technology advancements are creating a place for dental to support

better integration with medicine. These tools provide opportunities for the critical data collection that drives quality measurements, performance analysis, and the development of evidence-based best practices.

- Improving health outcomes for diabetics – As increasing evidence supports the connection between periodontal disease and diabetes, dentists need to actively participate in helping diabetic patients control and manage both diseases. Calls to action include proactive risk assessments and dental provider education on diabetes, as well as close collaboration with physicians to partner on strategic treatment plans and early detection.

Looking Ahead to 2011

Oral Health and Prevention: Rebranding the Profession

October 27 & 28, 2011

Chicago, Illinois ~ Sofitel Hotel Water Tower

In 2011, the Institute for Oral Health will focus on prevention. We will collaborate with experts in focus groups and participate in national events to learn the latest in preventive strategies for improving health. 2011 will be an exciting year – stay tuned and please join us in Chicago!

About the Institute for Oral Health

The Institute for Oral Health is dedicated to improving oral health in America by bridging the gap between research and everyday dental practice. Serving as a central resource for education and collaboration, IOH brings together nationally recognized experts to focus on important themes of concern in oral health care today, and works to promote innovation and adoption of progressive treatment guidelines, dental plans, and delivery methods.

Join the Conversation

IOH encourages everyone to get involved and share their insights and feedback about important oral health topics and healthcare reform:

IOH Web: IOHWA.ORG

Become a fan on Facebook

Follow us on Twitter (twitter.com/IOHWA)

Keynote Speakers

Senator William H. Frist, MD

18th Majority Leader, U.S. Senate, 2003-2007; U.S. Senator from Tennessee, 1995-2007; Heart-Lung Transplant Surgeon

Health Reform: An Insider's Perspective on the Challenges & Goals Ahead

Opening the 2010 Institute for Oral Health Conference was keynote speaker, U.S. Senator and transplant surgeon Dr. William Frist, who offered an inside look at how healthcare reform was passed this year and its impact on healthcare delivery –particularly oral health-- over the next five years. A strong advocate of oral health as an integral part of overall health and well being, Dr. Frist drew upon his experiences as a surgeon familiar with oral health as a determining factor in transplant success and as a doctor actively treating HIV patients around the world who commonly have oral lesions.

The Big Picture of Healthcare Reform

Dr. Frist began by highlighting what the reform bill, officially known as the Affordable Care Act (ACA), does to coverage. Currently, about half of our nation's population, 150 million people, have coverage through employer-sponsored plans; 14 million are supported by individual plans; 45 million have Medicaid coverage, and 43 million have Medicare –that still leaves over 50 million people uninsured.

"The reform bill does not radically change the healthcare system. In fact, this bill did not have enough reforms in it to solve the fundamental problems of cost."

–Dr. William Frist

Basically, the ACA takes 32-40 million of the uninsured and by 2020 integrates them into the healthcare system: 16 million people will gain Medicaid support, and another 16-24 million will gain coverage through state-run exchanges. However, Medicaid is already significantly stressed, and state-run exchanges have yet to prove their viability due to the pressure on tax payers. Thus, workforce issues and added costs to provide care for these 40 million new patients has yet to be adequately addressed. Along with shifts up and down in private coverage, overall the ACA will fall far short of the "universal coverage" touted by politicians. Dr Frist claims that by the year 2020, there will likely still be about 23 million Americans with no health insurance.

One incentive that has risen from ACA is health insurance market reforms, which have a questionable future as many states are contending the constitutional fairness – i.e., does the government have the right to require people to buy health insurance? And force them to pay a tax penalty if they refuse? It is a hotly contested issue that Dr. Frist notes will go to the Supreme Court before we see a final resolution.

The Burden Behind Medicaid

Today, Medicaid focuses primarily on population segments such as children, single parents, and elders in long term care –with state-funded programs. However, as this structure left millions of

low-income Americans with no hope of getting coverage, the ACA sought to expand Medicaid with federal funding in 2014 to cover "*all individuals with incomes up to 133% of the federal poverty level ($14,400 for an individual in 2009), which picks up 16 million people.*"

With 100% of this additional coverage paid by federal funds for 2014-2016, the ACA won tentative buy-in from state legislators, who will only need to kick in 10% of the coverage funding by 2020. A critical concern, however, is that this funding covers none of the infrastructure and administrative costs to support this additional wave of patients. In fact, Dr. Frist notes that "state governors are petrified because of the economy; they're facing a $155 billion deficit over the next three years –and that's before this burden of healthcare reform."

Implementing this change will be a slow process, one which may become stalled out as state governors find their hands tied in a no-win situation trying to manage the financial implications. For example, to create the infrastructure of workforce and systems to handle millions of additional Medicaid patients, they may need to cut back on education funding, which is already suffering beyond reasonable limits for our nation's children, and further cuts may meet with considerable pushback.

> *"The states are in the worst condition they've been in at any time in the last 45 years in terms of doing the three things they need to do: security, education, and healthcare."*
>
> *–Dr. William Frist*

The states face a monumental workload to implement the reforms by 2014, from establishing pre-existing condition plans and enforcing insurance market changes to coordinating grants, programs, and systems to support Medicaid, CHIP, and Exchange enrollment and renewal. Dr. Frist pointed out that many of the state legislators who lobbied hard to pass the reform bill are no longer in office –34 new state governors will inherit this challenge.

The Impact of Recession on Coverage

As Dr. Frist sees it, our current economic recession means that the timing of the ACA bill was bad. Americans are worried most about simply having a job, being able to buy food and pay their mortgage –affording health insurance may seem like a distant luxury. From 2008 to 2009 alone we saw overwhelming increases in unemployment rates across the country, and an increase of five million people among the uninsured. By 2020 when many of the reforms begin, the projected debt held by the public is expected to comprise about 120% of the nation's GDP, a measure of the country's economic output. (GAO Long-Term Fiscal Outlook, January 2010) Furthermore, all the increases in federal spending are driven by Medicare and Medicaid, systems that are still considerably broken in terms of both public need and economic viability.

When considering the impending growth in public debt, Dr. Frist offered this perspective: Never before in the history of the United States has our economic situation been so dire –except during World War II. The difference then, however, was that "*we owed the money to ourselves, and eventually the country grew stronger in revenues and we paid ourselves back*." The problem today is that the debt is not owned by us, but by powerful nations outside of the U.S.– predominantly China. From a business perspective, this puts us in an extremely dangerous position. Our country has borrowed money at 10-20% interest rates. With the flat growth in our economy, if we had to start repaying that loan, as a business we would implode.

How the Economy Drives the 2010 Election

According to Dr. Frist, the current economic crisis —particularly concerns about job security— are now 100% responsible for driving the decisions of the voting public. As is typical, an "anti-incumbent mood" has taken hold as people need to blame the current administration for the

economic downturn and slow progress, forgetting that in large part, the democratic leadership inherited colossal challenges when they took office. In fact, it is rather like what states face in implementing Medicaid reforms –it is a blessing and a curse, where the burdens may outweigh the benefits.

While public sentiment is leaning heavily towards the republicans, the issue is not so much about one party or the other; it's about the public needing change from the bleak status quo. Republican leaders may have no power to fix anything more quickly, but for many people they represent a chance for something better than what they face now. Ironically, the very same mindset that voted the democrats back into power in 2008.

Economic hardship has fueled a hearty enthusiasm for republicans and is blamed for severe drops in President Obama's approval rating. When they took to the polls in early November, Dr. Frist claimed people were essentially voting on three things:

- Ideology – The current administration has invested in extending the reach and power of government in health, energy, education, finance, and industrial policy, shifting our political paradigm toward the liberal left. While these changes may have long term benefits, they are out of alignment with where many people are focused –their most prevalent need is *jobs*.
- Effectiveness – With a weak economy and "sky high" unemployment, the public undoubtedly questions the effectiveness of our current government.
- Competence – In terms of managing economic issues, the current administration has fallen far short of expectations. They have failed to write a budget, pass any Appropriations bills, and have developed no tax bill for January 1, 2011. "*Right now you have no idea what your taxes will be next year. When you're a struggling business with employees and the government isn't giving you any indication of what your taxes will be, that is not a competent for a legislative body*."

Progressive Solutions for Skyrocketing Costs

According to Dr. Frist, the ACA reform bill is focused mainly on coverage and does little to support the cost of providing healthcare opportunities for more Americans. Moreover, while greater transparency and informatics will significantly improve the healthcare system, the real "hope" of the ACA is built on the growth of newly emerging "Accountable Care Organizations" (ACO's). A national voluntary model introduced as one of Medicare's pilot programs in the reform bill, ACO's are provider groups that accept responsibility for the cost and quality of care delivered to a specific population of patients cared for by the groups' clinicians. While it is a progressive, much-needed model, it has been slow to gain traction; yet ACO's may be able to deliver what the reform bill is missing: "*the hope of patient-centered, integrated, evidence-based, metrics-driven healthcare that gets rid of overuse and underuse to make sure the healthcare dollar goes as far as possible*."

Dr. Frist encouraged oral health providers to proactively seek out involvement in ACO's as an important means to advance integration of medical and dental care. It is an opportunity to advocate the model for "*seamless, patient-centered, total wellness and preventive care*" by including oral health as a key player in overall healthcare.

Additionally, he highlighted the "accelerating trend" toward consumerism in healthcare and how it is influencing the behaviors of providers and hospitals. As an example, compared to ten years ago which saw more patient-doctor consultations, the public now turns to the Internet as their primary source of health information, before turning to their family or doctors. This investment in online research provides an important call to action to doctors and dentists to go "*where the action is*." Dr. Frist emphasized that because patients are tracking their health more continuously

(than episodically) "*from a marketing standpoint, you've got to communicate with your patients, you've got to market with them, you've got to be there for them*."

ACA and Oral Health

As the Affordable Care Act includes nearly two dozen dental provisions, oral health is gaining increasing recognition as an integral part of overall health. Dr. Frist provided a big picture view with highlights about the following key arenas.

Coverage and prevention

- Among the dental disease prevention initiatives the most noteworthy include: school sealant programs will be implemented across all states and territories; research grants will be available to improve prevention and management of early childhood caries; and the bill requires the development of a 5-year, evidence-based public education campaign to promote oral health.
- Additionally, the ACA requires dental coverage to be part of the "essential benefits" for children under age 21, as part of an effort toward providing affordable oral health care for every child. In particular, Exchange insurance plans will provide stand-alone dental benefits packages and be barred from charging out-of-pocket for preventive care.

Workforce development

- The ACA includes provisions to expand education of dental professionals among underserved populations, particularly rural communities where access to care has consistently been a problem.
- It establishes a 5-year, $4 million, 15-site demonstration program to "train or employ" alternative dental health care providers such as those in progressive delivery models like the Community Collaborative Practice discussed by Dr. Michael Helgeson at this conference.
- It promotes public health workforce education, including funding for scholarships and loan repayment programs for dental students and grants to dental schools.
- It provides for 3-year, $500,000 grants to establish new primary care residency programs, which include dental programs, another nod of recognition to the growing awareness on the impact of oral health.

Payments and infrastructure

- The ACA requires the Medicaid and CHIP Payment and Access Commission to report to Congress on payments to dental professionals.
- The bill places a "high priority" on reviewing oral health care workforce capacity by establishing a National Health Care Workforce Commission.
- It provides for increased support and grants for "safety net" dental programs in school and community-based health centers. Both Presidents Bush and Obama doubled the number of these community centers to promote efficient, locally run access to care for many people who would otherwise fall outside the system.
- ACA will also help drive dental health improvements by requiring the Center for Disease Control to form cooperative agreements with state-run dental public health programs through leadership development, oral health data collection, delivery system improvements, and science-based population-level programs.

The 3 Certainties

In addition to these highlights, Dr. Frist noted the "three certainties" that dental professionals can count on with the ACA bill:

1. Reimbursement will fall: With the greater pressures of national debt, Medicare, Medicaid, entitlements, and overall healthcare costs, dental providers will need to cut costs.

2. Quality will be rewarded: The overall "center of gravity" and momentum is focused on quality, which needs to be measured in terms of outcomes based on dollars and time invested, so it will be essential to develop metrics.

3. Care must be integrated: The future of healthcare is a model like Accountable Care Organizations to create collaboration and cohesion across numerous providers --medical, dental, and other caregivers—to optimize each patient's overall health.

The road to healthcare reform is a long one, and we are really only at the beginning. But that means there is still significant opportunity for change, and it starts with understanding where we are and where we need to be. Dr. Frist provided a valuable "baseline of the fundamentals" to help healthcare professionals, particularly, dental care providers, understand the best ways to actively participate in creating an integrated system dedicated to patient-centered, whole health wellness.

Burton Edelstein, DDS, MPH
Professor, Dentistry and Health Policy & Management, Columbia University Medical Center; Founder and Chair, Children's Dental Health Project

Oral Health Provisions in Healthcare Reform: A "Systems Fix" Approach"

The "Affordable Care Act" contains 127 references to dentistry and oral health that together comprise an organized "systems approach" to improving the nation's oral health. Yet the bill is primarily focused on providing insurance coverage for the tens of millions who are currently uninsured. In this year's Institute for Oral Health conference, Dr. Burton Edelstein provided an overview of the oral health provisions in healthcare reform and how they may (and may not) impact the future of dentistry.

Influencing Policy Through the CDHP

As founder and president of the Children's Dental Health Project (CDHP) based in Washington, D.C., Dr. Edelstein has for years been a key player in advancing oral health policies to benefit children. He began his presentation with some background on the CDHP and how they help influence federal policymaking.

The CDHP is a collaborative group that brings together an educator, public health administrator, attorney, business consultant, lobbyist, and experts in public policy to cover the diverse perspectives needed to address the legislative process. Their mission is to achieve oral health for children, specifically through innovative policy solutions that both reduce disease and improve access to quality care.

Despite the many challenges of trying to influence public policy, the CDHP has found that the payoffs are enormous in terms of effectuating change for millions of children. Their work typically centers on governmental action through working with legislators, regulators and agencies; and programmatic action through the National Oral Health Policy Center and other oral health alliances as well as providing technical assistance to states through a cooperative agreement with the Center for Disease Control (CDC). The CDHP facilitates their efforts with a range of tools from research and analysis, partnerships and coalitions, to messaging campaigns through the web, presentations, briefings, and other avenues for disseminating information.

> *"The value of the public policy approach is that the lever is huge. It's very difficult to pry that lever loose and move it, but when you can move it, you have an effect on millions and millions of children."*
>
> *–Dr. Burton Edelstein*

The "Five Buckets" of Focus

To organize their efforts in a way that "makes sense to policymakers", CDHP focuses on "five buckets" to help them communicate their initiatives in clearly defined categories. Simply put, the buckets include:

1. Prevention –how to prevent disease and treat what we cannot prevent
2. Coverage & Financing – who pays for treatment
3. Workforce – who provides treatment
4. Safety Net – where treatment takes place
5. Surveillance – evaluation to understand what we have and need

As an example, in targeting prevention and health promotion, CDHP has honed in on three key domains where prevention has an impact: at the community level through greater awareness; at the family level through healthier prevention behaviors; and at the child level through effective disease management. To help drive change for these domains, CDHP has focused on how to influence policy to ensure more effective coverage, workforce, and delivery systems. In fact, these areas of focus for prevention have been a foundational part of the oral health provisions in the Affordable Care Act.

What's in ACA for Dental

We have heard plenty of talk that the reform bill is only about coverage, and while essentially this is true, it incorporates many important elements from the CDHP's "five buckets" in order to "make coverage meaningful:"

Prevention

- Public Education Campaign, a five-year evidence-based program designed to focus on early childhood tooth decay, prevention, and oral health in pregnant women and other risk groups. Dr. Edelstein noted that whether it comes to fruition will depend on appropriations.
- School-based sealant program for all states, which is supported and promoted by the Center for Disease Control (CDC).

> *"Of children who go into the OR for oral surgery, about 60% get new cavities within two years. What other surgical procedure would we subject children to that has that kind of a failure rate? What hospital would tolerate failure rates at that level?"*
>
> *–Dr. Burton Edelstein*

- Dental caries management grants to demonstrate effectiveness of research-based caries management, with an emphasis on treating the disease, beyond simply treating the results of the disease.

Coverage & Financing

- A pediatric dental benefit must be included as part of healthcare coverage in Essential Benefit Plans and "Exchanges". To understand the scope of what "dental benefits" really means, we can look at how CHIP defined it: "Coverage of dental services necessary to prevent disease and promote oral health, restore oral structures to health and function, and treat emergency conditions." This is a fairly comprehensive definition that would satisfy most dental care providers. Unfortunately, the ACA definition is woefully vague, citing only "Pediatric services, including oral and vision care," which has prompted regulators to examine it more closely. In terms of preventive health services, the ACA's definition is more distinct and basically supports recognized pediatric standards for care.
- Dental coverage can be offered by a medical plan or a stand-alone dental plan.
- Medicare Advantage Plans will be required to use rebates to pay for dental and other services.
- Children's Health Insurance Program (CHIP), which expires in 2016, will be revisited to explore extending benefits. If the program is discontinued, ACA provisions cite that children must be able to receive the same quality of care through Exchanges as they can access through CHIP.
- Income-based subsidies must be made available for purchase of insurance in the state Exchanges.
- MACPAC (Medicaid and CHIP Payment and Access Commission) which is charged with making policy recommendations to Congress on issues of access and payment including with regard to dental services. Originally authorized under the CHIP legislation and expanded under ACA, this commission is required to include a dental professional (a role now filled by Dr. Edelstein).

Workforce – Provisions for Dental Training

A common theme at this year's Institute for Oral Health conference has been one of the challenging workforce constraints that will need to be addressed in order to put reform provisions into action. In short, it is not realistic to expect the current available workforce to be able to handle the needs of all the new patients funneling into the healthcare system.

Fortunately, in developing the reform bill, Congress made strides to start addressing the problem by revisiting the "Title VII" health profession act and rolling it into the Affordable Care Act. In this case, the Title VII act supports primary care dental training for general, pediatric, and public health dentistry, and in the ACA, for the first time ever, dental got its own funding line item, and annual funding was doubled from $15M to $30M per year. Additionally, provisions were expanded to allow the funding to be used for pre- or post-doctoral training, continuing education, curriculum development, dental hygiene education, and stronger faculty support.

Workforce – Provisions for Alternative Providers

A lesser provision than Title VII, the Alternative Dental Care Provider Demonstration Grants are authorized for training, employing, and evaluating alternative providers such as expanded dental hygienists, dental therapists, dental hygienist-therapists, community dental health coordinators, and others. The grants program is authorized (although as yet unfunded) to begin in 2012 and to extend for five years. Compared with Title VII which supports all states with $30 million per year, these five year grants will target only 15 sites and will work with $4 million per site (or $12 million per year).

Workforce – National Commissions & Other Provisions

ACA also provides for a National Healthcare Workforce Commission to support national, state, and local workforce policymaking –with the dental workforce as a high priority area. Their charter is to coordinate workforce issues across agencies, evaluate workforce training, and facilitate coordination across levels of government. Additional workforce provisions provide grants to support workforce training in public health and primary care and dental residency programs, as well as expanding graduate medical education to include dental instruction.

Delivery Systems & Infrastructure

One major overhaul resulting from the Affordable Care Act is the added support of $11 billion for Federally Qualified Health Centers, which includes expansions of dental programs. Additionally, ACA provides for grants that include dental services for school-based health centers. As a nod toward addressing care delivery for special needs populations, there is also a provision that establishes accessibility standards for medical and dental equipment used in treating persons with disabilities.

Naturally, these care delivery systems can only advance with infrastructure support. As such a CDC-supported program, managed by the Children's Dental Health Project, has been expanded to help state dental authorities with leadership development, data collection, analysis of risk factors, program guidance, delivery system improvements, and science-based population-level prevention programs.

Surveillance – Measuring Progress

The future of dental provisions in healthcare reform really lies in our ability to make the political case for dental care, and that means data to document that prevention and programmatic interventions translate into improved patient outcomes and lower overall costs. A number of federal assessment surveys were strengthened or expanded to evaluate American's oral health and the performance of dental care:

- PRAMS (Pregnancy Risk Assessment Monitoring System) – Tracks the health status of pregnant women and services they use. Oral health questions in this survey were optional until ACA made them mandatory.
- NHANES (National Health and Nutrition Examination Survey) – For years this nationwide health status examination has monitored oral health at the "tooth level," which allows detailed surveillance of American's oral health. Plans to weaken the survey to "person-level" surveillance were reversed by ACA.
- MEPS (Medical Expenditure Panel Survey) – This survey looks at dental expenditures and coverage, but until now its findings have never been validated by a "look-back" study as has been the case for medical coverage and visits. The ACA has now authorized a "look-back" study for dental measures in MEPS.
- NOHSS (National Oral Health Surveillance System) – This CDC-managed, state-level reporting of multiple oral health issues is expanded under ACA to include all states.

The Big Picture

In summarizing how dental care is represented in the Affordable Care Act, it is clearly focused on coverage – yet offers many opportunities for improvements in prevention, workforce, delivery systems, infrastructure, and quality measurement that can help drive real progress in oral health, at least for children. The reform effort is promising in its hearty support of oral health as an integral part of oral health; however, the federal policies apply almost exclusively to children, leaving a vast population of underserved adults without improvements in access to care.

How Might ACA Impact the Future of Dentistry?

A burning question in oral healthcare reform is the real impact on dentistry near and long-term. A considerable amount of the ACA's future relies on results of the 2010 elections, in particular, as a sweep of new state governors will face the monumental challenge of managing state resources to roll out all the new and expanded coverage programs. Additionally, state legislators need to create the legislation to develop and implement Exchanges, and are working with insurance regulators on refining model legislation. Federal regulators and courts are likewise working feverishly to clarify definitions down to the letter to help ensure ACA provisions can be carried out as intended. Yet another consideration is the public's perception and response as changes emerge, and currently the jury is still out. With such a beehive of activity, it is too soon to tell how things will play out.

Anticipating the Future

Nevertheless, Dr. Edelstein sought to provide a "crystal ball" look into anticipating the future from a variety of perspectives:

- Child coverage – As the Essential Benefit in Qualified Health Plans will now include a dental benefit for children and enhanced processes for enrolling children, we will likely see greater numbers of children covered and better take-up of Medicaid and CHIP. As the new ACA dental benefit will be defined by the Department of Health and Human Services, we can expect that over time that benefit definition will become standardized many employers of all sizes.
- Child benefit – Operationalization of the pediatric dental benefit is still under development. As noted earlier, a number of organizations have a stake in the definition including Congress, federal Agencies, insurers, and dental providers. It may be left to the state Exchanges to define as they deem appropriate. Stand-alone plans are appropriately weighing in on what they think the benefit ought to be, while child advocates "*are looking for a comprehensive, robust benefit that looks like*

what kids have in commercial coverage." An additional consideration is how Exchanges, stand-alone plans, and others interpret and implement consumer protections for the child benefit.

- Adult coverage – For low-income adults, 2014 will see at least 16 million new people enter the Medicaid system and at least 16 million obtain private insurance coverage through the State Exchanges. Most new Medicaid beneficiaries will healthy low-income men as low-income women and children and disabled adults are already extensively covered by the program. Questions remain as to how states will manage adult Medicaid coverage because this benefit, for adults, is provided as a state "option." Thus, states that elect to offer adult dental coverage could cover many more adults. Alternatively, as a cost savings measure, states could reduce or eliminate adults dental coverage in Medicaid. States could also choose to expand safety net programs through FQHC expansions. Another hot issue is the potential impact of ACA on adult coverage in the private dental market in out-years of ACA implementation.

- Reducing disease burden – With provisions for evidence-based "dental caries disease management", we will hopefully see advances in evidence-based care. Additionally, provisions for early intervention may drive dental plans to promote early intervention, risk-based care, and targeted oral health education and may also prompt pediatricians to take a more proactive role in oral exams in babies and recommend dental visits by age one. Furthermore, the authorized oral health public education campaign and school based sealant program expanions could serve to advance public awareness and increase demand for dental services. In terms of community development, proposed grants could also help drive improvements in water fluoridation.

- Dental workforce – With more educational grants, we will hopefully see greater skill levels for complex procedures to treat the most complex patients; more interdisciplinary training for better integration between medical and dental; new "mid-level providers" which may impact practice business models and pave the way for improved access for underserved populations; more pediatric and public health dentists; and better-trained faculty.

- Dental delivery – As more children will have private and public dental insurance, it could influence the scope of care in private practices and roles for mid-level clinicians. New school-based dental services may be integrated with the sealant programs to extend the reach of dental care in underserved communities, and the FQHC expansion could drive growth in safety net capacity.

- State infrastructure – Hopefully the expansion of "state oral health competencies" will help create more effective collaborations between public and private entities in arenas such as stronger public health leadership, and local data generation and quality measurements. Additionally, initiatives to enhance national dental care surveillance will hopefully result in "*new and more reliable data for Congress and state agencies and create a new power center for oral health policymaking*."

Values Expressed by ACA for Dental Provisions

The CDHP's five primary themes in healthcare provide a helpful framework for understanding what the reform bill includes, and pull it all together in what Dr. Edelstein calls a "systems fix." He closed his discussion by noting that the dental provisions in the ACA reflect the "underlying values and policies" that have long been advanced by the dental profession. He noted that translating the many dental provisions into action holds strong promise to improve oral health across America.

These values include:

- Proving the case with evidence – Evidence-based care and quality measurement will be a primary factor determining dental policy changes over time, but as Dr. Edelstein noted, "*we can't do clinical effectiveness research with what's available now. The new initiatives help push the dental industry in the right direction*."
- Supporting healthy children – As we move toward universal coverage for children with benefits focused on prevention, we help promote a better quality of life for kids that will be reflected in their learning and growing, and set a good example for families as a whole. Supporting prevention and good oral health early on is a powerful long-term strategy for reducing healthcare costs as it helps set a healthy trajectory for tomorrow's adults.
- Advancing the role of dentists – The reform bill's initiatives to expand the dental workforce also help to advance recognition of dentists as a more primary care physician-type role in overall healthcare. Dr. Edelstein emphasized that dentists are now often "*the person most responsible for the most complex care in the most complex patients, and have the skill set, knowledge set, and capacity to provide the services for those who need it most*."
- Integrating medical and dental – ACA sets the stage for greater collaboration between various healthcare disciplines. In particular, it creates opportunities for early caries detection and intervention in partnership with physicians, and potential new care delivery models that bring together a range of expertise to provide more patient-centered, cost-effective care.
- Increasing support for the underserved – With the children's dental provisions in reform, we are seeing a strong intention to improve overall health for a large underserved population, which could in turn raise awareness for the many other underserved segments, including millions of low-income adults, the elderly, and special needs patients. Additionally, the ACA reinforces this support by increasing public health and safety net capacities that can help drive improvements across whole communities.
- Improving training for the workforce – The many dental education grants in the ACA reflects the growing awareness to not only increase the workforce but expand capacity and cost-effectiveness through new dental roles and skill sets. In this way, we can build a dental workforce that is better prepared to meet the needs of underserved populations and those with complex care issues.
- Increasing accountability through surveillance – In addition to promoting policy changes with evidence-based data, the reform initiatives around evaluating performance and patient outcomes ("*what we're doing, how well we're doing it, what's working and what isn't*") help ensure the dental workforce is accountable for providing the most appropriate and effective care. Greater accountability is good for patients and practice economics; it can help incent changes in provider behavior and practice models that increase efficiencies and cost-effectiveness.

> "*This is a very special list. The bill in one way or another pushes every one of those values in the direction of doing better as a profession, doing better as an industry. Working together, we can make sure that as all this unfolds, we get the best we can for the American public.*"

Shelly Gehshan, MPP

Director, Pew Children's Dental Campaign, Pew Center on the States, The Pew Charitable Trusts

Making Coverage Matter: Keeping the Promise of the Affordable Care Act

This year's healthcare reform bill, the Affordable Care Act, will provide dental coverage for an estimated 5.3 million more children –and while coverage is a necessary first step, it raises a vital question: Are we ready to provide access? At the 2010 Institute for Oral Health national conference, Shelly Gehshan brought her expertise as a foundation executive, child advocate, and analyst ---who has worked with state policymakers for 20 years—to address the challenges and opportunities we face in the new healthcare landscape.

A Look into the Pew Children's Dental Campaign

To introduce her perspective, Ms. Gehshan highlighted that the key mission of the Pew Center on the States is to bring a fact-based, non-partisan approach to help the states work more efficiently and effectively through smart investments and prudent government policies to build long-term financial stability. It is a critical agenda as it translates to our everyday, real-world experience --from public safety, quality education for children, and accessible healthcare, to available jobs and a strong business economy. "*Our quality of life depends on states getting it right.*"

With help from over 100 policy experts, researchers, journalists and campaign strategists, Pew's success lies in being an independent partner whose only agenda is to strengthen the business of running a state so it effectively supports the people living there. "*Our willingness to be candid and even critical about the problems states face and follow where the facts lead, helps us identify and advance solutions that work.*"

Toward that end, the Pew Children's Dental Campaign is focusing hard on what the facts say about healthcare reform and our ability to make it a reality. In particular, to meet the promise of supporting dental care for millions more children by 2014, all states will be facing considerable challenges. To begin addressing the problems, this Pew organization identified three key policy areas to help direct efforts for the greatest potential gain, including:

> *"The mission of the Pew Children's Dental Campaign is to strive for cost-effective policies that will mean millions more children get the basic dental care they need to grow, learn and lead healthy lives."*
>
> *–Shelly Gehshan*

- Prevention – National campaigns to educate the public on oral health education and prevention, as well as campaigns to local and state policymakers and community partners on the need for water fluoridation.
- Funding for care – While the Pew Children's Dental Campaign group originally intended to work on raising Medicaid dental reimbursement rates, the current recession made it untenable to push states already stretched to their limits. Instead, the group shifted their focus to federal campaigns advocating for dental provisions in the healthcare reform bill. In follow-up, they are now working on appropriations for the oral health provisions that made it into the Affordable Care Act (ACA).
- Dental workforce – While dentistry won a victory in the oral health provisions of the ACA, the current workforce is inadequate to address care for over five million more children coming into

the dental care system. The Pew group is researching the economics of new delivery models, has workforce initiatives underway in a number of states, and is advocating for appropriations that support building both the workforce and the infrastructure necessary to support the added patient load by 2014. Additionally, the Pew Children's Dental Campaign website provides a valuable report to help states identify their needs in terms of infrastructure and access needs, to find the most effective, realistic solutions to put in place.

To access the full report and/or state-based fact sheets, visit the Pew Children's Dental Campaign website . > pewcenteronthestates.org

The Challenge: Why Do We Need Workforce Solutions?

As our nation's population grows, the problem grows –nearly one-third of Americans have no access to quality, affordable healthcare. When we consider oral health, that means over 85 million people may be suffering from untreated disease that was largely preventable. Ms. Gehshan emphasized that we need to look at this as a "system problem," not only because an estimated 49 million Americans live in areas with little access to dental providers, but because our system is designed mainly for middle class people with insurance who live in urban areas. For the remainder of the country, the system is failing them.

With the Affordable Care Act, an estimated 5.3 million more children will take advantage of dental coverage by 2014, and the dental workforce will need to be ready. A particular challenge is that ACA's oral health provisions focus mainly on Medicaid, and currently there are few private practice dentists participating in the program, and a high shortage of dentists to serve low-income people and in rural areas. In fact, research shows that "safety net" dental care only reaches about 10% or 7-8 million people of the 83 million who are lacking access.

Further complicating the problem is the fact that current trends show that the numbers of retiring dentists exceeds the number of new dental graduates, which means that soon we will have the lowest practitioner-to-population ratio that we have seen in over 100 years (T. Beazoglou, H. Bailit, LJ Brown. J Am Dent Assoc, Vol 131, No 12, 1693-1698).

"To correct the national shortage of dental practitioners, we need over 6,600 to 9,000 new providers. That's more than two fully graduated classes from all the dental schools in the country."

–Shelly Gehshan

Barriers to Care for the Underserved

When considering care for underserved populations, it is important to note some fundamental factors basic to accessing care that many of us take for granted. For low-income populations, issues such as transportation, physical mobility, flexibility of work hours, and more can often make accessing care difficult or impossible. For example:

- No support for basic access – Simply getting to a dentist's office can be a challenge when people lack transportation or cannot afford to take time off from work. Interacting with dental staff may be uncomfortable for those with low health literacy or language barriers.
- Non-flexible hours – Very few dentists offer evening, weekend, or walk-in appointments, so it can be difficult for families to find time to seek care for themselves or their children.
- Few community health resources – To improve the caries crisis in children, oral health support needs to access the kids, not the other way around. Dental care services or even prevention information are rarely available in schools and child care centers, yet that is where the people go every day.

- Limited support for special needs –Patients with disabilities and special needs are increasingly slipping through the cracks as very few dentists have the specialized training or practice infrastructure to support caring for the unique needs of these patients.

Investigating Opportunities: Workforce Research

From a policy perspective, the Pew Children's Dental Campaign works to identify evidence-based data that can be used to drive changes. In examining dental care workforce issues, they researched various care delivery models and how they can benefit the dental care system, including:

- Applying collaborative practice models to dentistry – In partnership with the University of California, San Francisco Center for the Health Professions, research has been underway to address how medical collaborative practice might be applied to dental care delivery. In particular, they are exploring how collaborations really need to work between partners that operate independently – such as integrating efforts from dentists, schools, and community centers in rural areas. Or even collaborative practice within a single large organization or public health entity.

- Increasing dental providers at FQHCs – To look at how to strengthen the dental workforce in Federally Qualified Health Centers (FQHCs) around the country, a research team at the University of Connecticut Health Center is investigating the impact –on both productivity and economics-- of bringing in new dental care providers. Ms. Gehshan noted that, generally, the FQHCs have been less receptive to new providers, concerned with the economic viability. Thus, the research team is exploring financial models that factor in training and organizational changes that may come with integrating new providers, as well as the effects on FQHC payments and Medicaid reimbursements.

- Hiring new dental providers in private practices – As a further track on the workforce initiative, Pew partnered with business consultants at Scott & Company to look at the potential economic impact of hiring new providers into individual and group dental practices. Researchers were particularly interested in noting how the workforce additions might increase profitability as well as improving access for Medicaid patients. To gauge economics realistically, they examined practices in states where Medicaid payments are at the national average and those where reimbursement rates are "abysmally low." Furthermore, they focused on dental roles such as hygienists and dental therapists who perform many of the Medicaid-related services. Their findings showed that, in most cases, the dental practices saw increases in both productivity and pre-tax profits, and adding supporting dental staff allowed them to devote up to 20% more time to Medicaid patients.

  "If you don't see Medicaid patients now, the surprising findings are that you can make more money by hiring new providers and seeing Medicaid patients, than if you continue with your traditional business model."

  –Shelly Gehshan

  To help private practicing dentists around the nation determine if additional hiring would benefit them, Pew has developed an Excel-based tool in which dentists can insert their own data to assess the potential gains to their practice. The report and tool are available on the Pew Children's Dental Campaign website, along with webinars to help providers understand how to use the tool. Visit pewcenteronthestates.org/ittakesateam.

Policy Implications of Increasing the Dental Workforce

In reflecting on this research, particularly the study centered on hiring new providers, Ms. Gehshan noted that it supports the Pew's fundamental agenda of addressing "*how do we get more low-income people served, how do we get them into the healthcare system, and how do we do a good job with them*." However, the research is only the beginning. To make a real difference for American families,

we will need to see changes across dental providers, dental education, and state Medicaid policy makers. For example:

- Training programs for integrating new staff – Dental schools or continuing education systems need to train clinicians on how to work with new providers. In Pew's research, existing practices expressed discomfort with accommodating new staff, perhaps concerned that a learning curve would hinder productivity and profitability. But as this challenge is far outweighed by the potential gains across multiple dental practices nationwide, it is a worthwhile investment to create mentoring programs to help practitioners ease the transition with new staff.
- Higher Medicaid payment rates – Although this change is unlikely in the current economic climate, healthcare advocates are pressing strongly for Medicaid reimbursement rates above cost of providing the care.
- Access-enabling services for low-income families – Common barriers to care such as lack of transportation or childcare, and inflexible appointment hours often keep Medicaid families from making and keeping dental appointments. State Medicaid programs need to support services that help make it easier for families to take advantage of the health and dental care available to them.
- Better reimbursement for new providers – State leaders and Medicaid administrators need to ensure that strong and reliable reimbursement policies are in place so that newly hired providers can be paid for services rendered. As incentive for dental clinics to hire additional hygienists and therapists to serve Medicaid patients, dentists need to be able to count on reimbursement for Medicaid-eligible services performed by their new team members.

Overall, despite the tremendous challenges ahead in healthcare reform, we also have exciting new opportunities to make a difference in our nation's oral health. The Affordable Care Act can make it possible to bring care to millions of people –especially children-- who historically have been forgotten by the system. The ACA is a major call to action for collaboration across providers, policymakers, educators, and community resources to make oral health reform a reality.

> "*From individual dentists to dental association executives, people agree this change will happen. Our challenge is to shape it--to do it right, to do it so that it actually helps the people who are left outside the system, and to keep that first and foremost in our minds. We don't need turf wars or hysterical fears, and this is not 'the end of dentistry as we know it'. We need to ramp up our efforts to ensure that for all these millions of children, we really do make coverage matter*."

Featured Speakers

Joel Berg, DDS, MS

Professor, Chair, Department of Pediatric Dentistry, University of Washington; Director of Dentistry at Seattle Children's Hospital

Efficient Care and Training in Pediatric Dentistry in an Academic Health Center

To provide the most cost-effective dental care for a large population of children, efficiencies need to be brought into practice at every level. At the 2010 Institute for Oral Health conference, Dr. Joel Berg discussed the development of the innovative Center for Pediatric Dentistry in Seattle, Washington, which opened in September 2010. With an integrated plan of construction design and patient flow, all focused toward efficiency, The Center was developed to bring the highest level care to thousands of patients in an academic health center environment.

Dr. Berg also discussed how The Center for Pediatric Dentistry has used technology to increase efficiencies, and introduced their plans for future technology. He emphasized that best practices developed within the The Center can be distributed to programs and clinics elsewhere to provide more efficient quality outcomes for children across the globe.

Caries as a Medical Disease

Dr. Berg began by highlighting the urgency of advancing dental care for children, both in our nation and around the world. He emphasized that one of the greatest challenges dentistry has yet to overcome is that, in terms of caries, dentists typically treat the results of the disease rather than the disease itself. We need a paradigm shift in how we look at caries so our approach is proactive and preventive, rather than reactive with the "drill and fill" approach that has been going on since the beginning of dentistry hundreds, even thousands of years ago.

> *"Caries is not just a nuisance, it's a crisis. We have an endless backlog of kids who need to be treated under general anesthesia. We can't drill our way out of this problem. We have to figure out the cause of the problem and treat that."*
>
> *–Dr. Joel Berg*

Around the world, from emerging powers like China and underdeveloped villages of Peru, changes in diet and lack of access to preventive dental care are causing a rising crisis in childhood caries. However, even more noteworthy is that the problem is worse here at home where quality dental care is often readily accessible. In large part, Dr. Berg believes, it is because the common attitude is that cavities are simply a "nuisance" to be dealt with after they arise. But often they are a precursor to very severe oral health complications that are extremely painful for children and very costly for families and the healthcare system. If instead we view caries as a disease, we could invest in closely tracking the process of how caries develops and progresses over time, and thus, better support patients and predict the trajectory of their oral health.

Dr. Berg noted that much of the problem could be avoided by seeing children earlier to set the stage for better oral health. With alarming frequency, children who at age one had perfectly healthy teeth have a "devastating caries problem" by age two or three. Pediatric dentists are now looking toward innovations in caries detection tools:

"*We need to focus on caries risk assessments to identify early on who is at risk and why; have more aggressive interventions at an early age, test those inventions, and have feedback with these technologies to assess the reduction in risk to improve the outcome in those children.*"

The good news is that the problems of oral health are gaining visibility. In 2008, the American Academy of Pediatrics cited oral health as one of the top three most neglected needs in children's healthcare, stating, "*dental caries is the most common chronic disease affecting children in the United States.*"

"$60 billion a year is drilling and filling. That's 60% of all of dentistry. Very little of that is preventing and managing caries, most of it is surgical aspects. There's a real opportunity to shift that, and that's what we've set out to do."

–Dr. Joel Berg

Effective Collaboration to Solve the Problem

To make a substantial difference in the early childhood caries crisis, Dr. Berg and his colleagues sparked an initiative to bring together medical and dental for delivering the most efficient and cost-effective system of care, while delivering an optimal experience that addresses the many needs of children and parents before, during, and after a typical dental visit. Their vision, The Center for Pediatric Dentistry, was planned and developed leveraging Seattle's numerous pediatricians invested in oral health, in partnership with the University of Washington School of Dentistry and Seattle Children's Hospital, as well as a $5 million grant from Washington Dental Service and their Foundation.

Also an academic health center, The Center for Pediatric Dentistry (CDP), works to train and mentor pediatric dentists and clinicians on both progressive treatment and prevention education strategies, to promote healthier behaviors across entire families. To keep their agenda on track, The Center aligns their efforts with a core mission and vision:

- Mission – To improve oral health of infants and toddlers through research, education, service delivery, and public policy.
- Vision – To be recognized throughout the world as the leader in early childhood oral health, and as a result of our work, dramatically mitigate the unmet need in the management of childhood caries.

"We plan to see over 40,000 children a year, yet that's only a tiny dent in the problem. Through our research, our systems, our efficiencies—we hope to get everyone thinking about how we can care for more children in all venues around the country and around the world."

–Dr. Joel Berg

Bringing the Vision to Life

As part of the initiative to develop an innovative academic health center for pediatric care to better serve the community, Dr. Berg envisions The Center as a "living lab", a virtual community that brings together stakeholders from dental services, research, education, fundraising development, and public policy –with cross-collaboration to promote the greatest efficiency and effectiveness for both patients and providers.

As The Center's collective team recognizes they may find answers to the problem outside the dental system, they integrate mindshare and expertise from multiple disciplines. Dr. Berg offered an excellent example, highlighting an opportune meeting with an engineer who invented an endoscopic camera that can be swallowed to deliver high-resolution images of the esophagus, stomach, and more. After discussing the camera's potential for detecting early caries lesions, the inventor applied for and received a grant to enable The Center for Pediatric Dentistry to investigate this camera as a potential solution for dentistry.

The new academic health facility, located in Seattle, Washington, is one of the largest of its kind in the country, supporting 29 patient chairs, three operating rooms, a wing for faculty dental practice, and extensive office space for administration, staff, and other support functions. Additionally, they have engaged ergonomic specialists to help them identify the most effective care setting to accommodate the challenges of young patients, and provide a comfortable place for the parents to be present nearby.

The Center also strives to be the best educational environment for integrated training for not only future dentists but also other healthcare providers including general pediatricians to increase their competence in assessing caries risk in babies and toddlers. In those early years, pediatricians typically see children more often than a dentist does, yet as children grow older, they tend to see the dentist more often than a pediatrician. As such, through collaborative knowledge sharing, together medical and dental providers can promote better health outcomes in children.

Providing Optimal Efficiencies for Families

The Center for Pediatric Dentistry has focused on "every touch-point with a patient to make it the most efficient system possible." Their strategies for optimizing the parent and patient experience include:

- Enhanced new patient registration – To generate interest and motivate dental visits, The Center will send a "Welcome Information Packet" that includes directions for how to get to the new facility, what to expect, a newsletter, and even other activities of interest at the nearby waterfront park.
- Convenient visit reminders - To remind parents about visits and facilitate quicker check-in, The Center calls two days in advance and advises the parent on what to bring, etc.
- Personalized greeting & check-in assistance – Trained dental student volunteers greet families and help them with check in, introduce the facility and escort them right up to chair-side.
- Self check-in kiosks – The Center will soon offer self-check-in kiosks for returning patients. Additionally, The Center's website will enable families to register as subscribers to allow The Center to track patient dental needs and important information.
- Scheduling system for patient chairs - To reduce waiting-room time, The Center uses an efficient scheduling system to triage patients based on recall visits, restorative treatment, special needs, and so on.
- Paging system for families - To best support both families and providers, a paging system will alert families when the dental clinician is ready for them, and keep them informed if they need to go outside while they wait.
- Social worker support – To meet a spectrum of childhood and parenting needs that may create barriers to getting care, The Center partners with social workers to provide support or necessary interventions.
- Children's play and education areas – To create fun diversions for kids waiting on appointments, The Center plans on offering a play area with videos, books, reading instruction, and computer access.

Maximizing Efficiencies for Providers

Along with their primary goal to make the patient family experience fun, engaging, and comfortable, The Center for Pediatric Dentistry is also highly focused on optimizing efficiencies to make the

provider experience more effective as well. In developing the center, they focused on implementing technologies and systems that would support both near and long-term needs, being scalable enough to accommodate technology advancements down the line. As a new, carefully planned facility, The Center benefits from a state-of-the-art infrastructure to increase the efficiency and immediacy of everything related to dental treatment, such as over-the-patient monitors that can both entertain children during procedures and through sophisticated networking, deliver instant access of digital radiology to any chairside.

Additional efficiency solutions for providers and the facility include:

- Electronic Health Record (EHR) – The Center is aiming to leverage technological advancements as much as possible, including electronic health records that provide improved treatment planning, and effective tracking of dental data to measure services, outcomes, and performance.
- Standardized instrument sets – Organized based on the type of dental appointment, instruments "cassettes" will be barcoded and entered into a patient's EHR. Additionally, to keep inventory manageable and affordable, they will maintain a core set of instruments that work best for the majority of cases, with a centralized system for sterilizing and barcoding, and a system for automatic ordering and tracking vendors.
- Interconnectivity for all equipment – To streamline efforts in managing a diverse array of electronic equipment, The Center is employing a universally consistent system (currently USB) to enable all components to easily connect in the same simple way to their computers.
- Just-in-time consumables management – The Center includes a well organized storage and delivery system to reduce on-hand consumable items, ensuring no costs are wasted with aged or expired goods, and more space is available for active patient care needs.
- Paging system for providers - To optimize communications across all staff, The Center will be implementing the most efficient paging system available to enable more fluid communication across team members in different locations and allow for more immediate notification of any instrument or urgent needs.

Proving the Value with Quality Measurements

While creating an environment optimized for patient experience and efficient care is an admirable agenda, the highest value comes when The Center can provide evidence that they are in fact improving patient outcomes. From those quality and performance measures, they can define evidence-based best practices, which can be implemented by other organizations as well.

The Center for Pediatric Dentistry is engaging experts to help them develop monitors to measure technical excellence, improved patient outcomes, and reduction in oral diseases.

> "*We're looking to experts to criticize what we're doing, challenge us to collect that data, develop the best measures for outcomes that we can define, and measure them in every child. We can then enroll kids in different methods of treatment to see what works and what doesn't.*"

Additionally, no assessment of quality care would be complete without factoring in patient satisfaction. As well as patient surveys, The Center is proactively building customer experience service excellence into their training programs for all staff.

Extending the Vision with Community Outreach

Like many heavily populated areas throughout the U.S., the greater Seattle region has many thousands of underserved children who need dental care. And while The Center is striving to support as many families as possible with high quality, cost-effective services, they have a finite capacity. But they do not let that limitation stop their higher goal of improving early childhood oral health. The Center engages in numerous outreach efforts with community centers, private practices, and others to promote the importance of oral health and caries prevention. Dr. Berg emphasized that the dental profession needs to strongly market the message to encourage families to bring children to the dentist in their earliest years to help identify, treat, and prevent disease before greater problems arise.

Outreach needs innovation as well. Dr. Berg noted that people often take notice and remember messaging heard on the radio or TV far more than reminders from their healthcare provider. As such, the dental profession needs to be inventive in reaching consumers, engage today's families in ways that tap into their everyday lives and that speak in a voice they understand. Tomorrow's outreach involves collaboration across industries —from oral health practitioners to dental product providers to media outlets— as a critical measure to get families thinking about making oral health a top priority for their children.

"As part of better medical management of caries, we need better ways to reach consumers. We want our 'brand' to be: You can be cavity free– go to the dentist at age one—prevent the disease for life."

–Dr. Joel Berg

Douglas Berkey, DDS, MPH, MS
Professor, University of Colorado School of Dental Medicine; Dental Director, Total Longterm Care of Colorado

Enhancing Oral Health for Vulnerable Elderly Through Innovative Models of Care

Oral health providers are facing an unprecedented challenge: increasing numbers of vulnerable older adults who have complex oral problems impacting their systemic health and quality of life. At the 2010 Institute for Oral Health Conference, Dr. Doug Berkey, a nationally recognized leader in geriatric dentistry, discussed medical and dental interrelationships that significantly affect the "at-risk" elderly and emphasized the need for collaboration between oral health, general health and social service professionals to facilitate better patient-centered care. He also identified several key policy factors that address this important challenge, and described PACE (Program of All-Inclusive Care for the Elderly), an innovative and comprehensive model of interdisciplinary healthcare delivery and payment endorsed by the Institute of Medicine.

Dr. Berkey began by highlighting what today's dental practice is looking at in terms of the rising wave of "aging boomers." Over the next 20 years, dentists can expect to see double the population of seniors in their practice, as well as a rapidly growing number of adults aged 85 and over as longevity rates increase and people are keeping their teeth longer.

"The fastest growing segment of our population is the oldest old (aged 85+). These are the people who present the greatest risks, the greatest challenges, and potentially the greatest rewards. We need to be thinking about how we can engage these individuals, take care of their needs, and promote the best health outcomes."

– Dr. Doug Berkey

In order to support this older population, Dr. Berkey stressed how we need to address key concerns such as the high impact of unmet oral health needs in the elderly, as well as workforce training challenges that influence care delivery. As a progressive solution, he detailed how the PACE program has successfully enabled integrated, patient-centered care along with innovative dental education.

The Impact of Unmet Oral Health Needs in the Elderly

In aging populations, neglected oral health raises increasing challenges as it creates functional problems, mild to severe discomfort, and breeds infections that can worsen other systemic health conditions.

- Poor functional status = malnutrition – In the 1960's, nearly 60% of adults over age 65 had dentures, compared with today, which has dropped to below 30 percent. "*That's good news and bad news*", said Dr. Berkey; it introduces a host of new concerns, such as determining a patient's functional status and how it may be impacting their overall health. A current recognized benchmark in patients 65 years and older is that they need to retain at least 20 teeth in order to maintain sufficient chewing function for necessary nutritional intake (British National Diet and Nutrition Survey). Studies show that many older adults are prone to malnourishment, and poor dental function is a big contributor. 50% of older adults typically eat less than the recommended daily allowance for protein, and many are highly deficient in key vitamins and minerals. Furthermore, malnutrition often accounts for an increased risk of mortality, three times higher risk of infection, and significantly longer hospital stays.

- Untreated root caries, periodontal disease, and oral cancer – Oral health problems are prevalent in many older adults. A national study showed that over 45% of men over 85 years had untreated coronal or root caries (NHANES III, 1988-94), and that nearly one quarter of 75 year olds and older may have moderate to severe periodontal disease (NHANES, 1999-2004). New data has recently emerged to suggest those numbers may have been underestimated by as much as 50%. Additionally, a new Massachusetts study conducted in 2010 cited that 60% of elders in nursing homes had untreated decay, with nearly 30% of them exhibiting major problems and up to 5% needing urgent care. Furthermore, oral cancer rates are rising, now considered as common as leukemia, killing one American every hour. Detected late, as it often is in older adults, the estimated survival rate is only 22%.

- Unreported oral health problems – As adults age, they may be less able to feel the effects of caries or dental abscesses, so they may not complain about a problem until it grows very severe. Additionally, seniors often suffer from xerostemia (dry mouth) or burning mouth syndrome, caused by medications and other systemic health issues, which can impact oral health and general well-being.

> *"In terms of prevention vs. costs, studies show that improved oral health saves greater than $4 billion in treatment costs."*
>
> *– Dr. Doug Berkey*

- Systemic health complications – An increasing amount of data is surfacing linking inflammation as a key player in the oral-systemic connection. Oral infections are linked with numerous diseases such as diabetes, heart disease, pneumonia, and various cancers. Additionally, new studies identify how severe periodontal disease can reduce life expectancy and increase cognitive impairment in older adults. Conversely, an array of other domestic and international studies are showing that tooth retention is linked to increased longevity. For example, a Multicenter Scandinavian study cited that a higher number of teeth was a "significant predictor" of lower mortality rates in women. Furthermore, research is emerging to validate that "improved oral hygiene and frequent professional oral healthcare reduces the progression or occurrence of respiratory disease in high-risk elderly adults" (EBD 2007:8.4).

- Compromised quality of life – An additional concern in neglected dental needs is the importance of oral health in terms of the social aspect, the aesthetics that affect one's self esteem and comfort in relating to others. Dr. Berkey admits this notion is hard to quantify, yet it is integral to quality of life and thus, a key consideration for dental providers. While cosmetic dentistry has made a big business catering to younger populations, vulnerable older adults have the same fundamental need: to feel comfortable and confident in smiling and interacting with others as part of enjoying life.

Workforce Training Challenges in Geriatric Dentistry

As both an educator and clinician in geriatric dentistry, Dr. Berkey noted that future-of-dentistry reports (from the Institute of Medicine, ADA, Surgeon General, and so on) have confirmed that "*the dental workforce is not adequately prepared to meet the current and future health needs of older adults*." The Institute of Medicine's recommended strategy to build the necessary workforce includes three key action items:

1. Enhance geriatric competence of the ENTIRE workforce – Standardize pre- and postdoc curriculum with geriatric training and include clinical experiences and mentoring on caring for older adults beyond dentistry to include medical challenges, oral-systemic considerations, psychosocial concerns, and issues around access and affordability of care.

2. Increase recruitment and retention of geriatric specialists – Increase the number of postdoctoral geriatric training programs; include geriatrics as core curriculum for all general dentistry postdoctoral training programs; and provide integrated team training to promote collaboration with other elder care givers.

3. Improve care delivery – Develop innovative delivery models that address the unique needs of aging adults and expand the traditional scope of elder care, such as "coordinated, interdisciplinary team care to manage multiple medical, dental, and social needs." Effective models include collaboration between all caregivers, preventive home visits, proactive rehabilitation, and caregiver education and support, and more (IOM, 2008).

PACE: A Viable Model for Care Delivery and Education

A hot theme in healthcare reform is one of Accountable Care Organizations (ACO's), which under the ACA bill can contract with Medicare to provide care. ACO's are promoted as "a mechanism to increase and sustain care quality, better manage chronic conditions, and control expenditures." To achieve this lofty goal, a July 2010 Commonwealth Fund/Modern Healthcare Opinion Leaders Survey found that "integrated delivery systems" and ACO's were believed to be the most highly effective at delivering on the reform promise. PACE, the Program of All-Inclusive Care for the Elderly, is one such model.

How PACE Compares with Current Long-Term Care

The PACE program is a national system of long-term care that provides community based managed care for the frail elderly. This model seeks to address some key problems with the current long-term care system, for example:

- Centralized vs. fragmented resources – Our current long-term system fragments resources across many providers and locations, making care more complex and costly, and less accessible for elders and their families. Communication is often poor between the various sites, which hinders the ability to support good patient health. With PACE, the integrated, community-based collaborative teams focus on providing a cohesive and comprehensive experience for seniors to access care and support for basic daily living.

- Home care vs. institutions – Long-term care typically does not support the common desire for aging adults to remain in the comfort of their own home and community. While PACE does offer nursing home and hospital care, the program focuses on providing outpatient care and home care to support seniors with healthcare needs while retaining their independence. In fact, despite a high level of care needs, over 90% of PACE participants are able to continue living in their community.

"As we age, our goal is to age at home, and be able to access services so we can maintain our presence within the community. And yet most resources for long-term care are related to institutional care."

– Dr. Doug Berkey

- Proactive care vs. reaction to acute events – Most often, acute events trigger access to long-term care, and as patients enter the system with severe needs requiring costly procedures, there exists no incentives for providers to control costs or utilization. PACE holds a proactive approach to promote early detection and prevention, along with basic home support services to enable older adults to stay in their home as long as possible. The model builds collaboration across numerous caregivers and social services to support more cost-effective, patient-centered care.

How PACE Makes a Difference

Designed to support the low-income, frail elderly and their families, the PACE model is "*grounded in the belief that the community is the best setting to maintain the well-being of older adults with chronic care needs*." PACE organizes and delivers a range of services for acute and long-term integrated managed care in participant homes, community settings, and in/out patient facilities. The program supports everything from primary, specialty and home medical and dental care, to social services, transportation, meals and support resources.

As an example, "*a PACE van might pick up an elder patient and take them to the PACE Day Center for breakfast, a clinic visit, a therapy session, or just for visiting with other participants. Or, PACE might schedule a Home Care visit to administer medications and make a home-cooked meal while they are there*." The program strives to offer any services and supplies necessary to help participants enjoy better health while remaining in their home.

The PACE model allows for more innovative care because it is not constrained by the fee-for-service payment model. Rather, services can be provided as they are needed, based on support from federal grants in connection with Medicare and Medicaid. In fact, some dental care and other services not covered by Medicare or Medicaid are built into the PACE model to help ensure better overall patient health, such as optometry, hearing aids, podiatry, prosthetics, and medical supplies. The system is capitated with a per-member, per-month payment structure and is designed to remove barriers to access by supporting patients with a lifetime enrollment that has no limits to the amount or duration of care, as well as no co-payments or deductibles.

At Denver, Colorado's Total Longterm Care (TLC) facility where Dr. Berkey is Dental Director, they incorporate the PACE model to provide a "rich setting to teach, treat, and replicate" progressive, cost-effective services for seniors with challenging care needs. Total Longterm Care is now the largest PACE provider in the United States. Until 2008, there was only one facility in the greater Denver metro area; Total Longterm Care now operates five PACE centers in the region, and last year they provided 17,500 home care visits.

> *"PACE studies cite "greater adult health care, fewer hospitalizations, fewer nursing home admissions, better functional status, better health, greater survival, greater satisfaction with overall care, and better quality of life."*
>
> *– David C. Grabowski (2005)*

How PACE Maps to Healthcare Reform Principles

The collaborative PACE model of care delivery is a positive step forward toward the promise of improving oral health and overall health –particularly for America's underserved populations. Following are a few examples of how this type of integrated care delivery model maps to the ideals of healthcare reform as highlighted by the American Dental Education Association (ADEA) in 2008:

- Increased availability of oral healthcare – The ADEA acknowledged oral health as "*a fundamental human need*" integral to general health, and that successful reform must promote dental public health, prevention, and public advocacy through "*new, integrated models of oral healthcare*."
- Needs of vulnerable populations have top priority – ADEA emphasized that our healthcare system needs to "*improve access to care by reducing barriers experienced by low-income families, medically compromised individuals, and persons with special healthcare needs*." They called for "care model that expand roles for allied dental professionals and other health professionals to address the complex needs of some patients."

- Prevention as the foundation for good health – ADEA promoted oral health prevention strategies to stem escalating costs and cited that "*most dental diseases are preventable, and early dental treatment is cost effective… preventive approaches have saved more than $4 billion per year in treatment costs*."
- Focus on quality and not administration – Another reform principle is to reduce the administrative burden of excessive costs that are unrelated to health outcomes and create new payment incentives for delivering quality care that improves overall health. Reducing overhead costs opens the door for "*reinvesting in the training of a 21st century healthcare workforce*."

Joseph V. Errante, DDS
CEO, HealthDrive

The Oral Health and Overall Health Connection and the Potential Future of Dental Benefits

As a practicing dentist, and long-time entrepreneur building highly successful group practices as well as working in dental insurance and benefits organizations, Dr. Joseph Errante brought a payer's perspective to the oral health in healthcare reform discussion at the 2010 Institute for Oral Health conference. Dr. Errante outlined a powerful case study originally developed in 2005 when he worked with Blue Cross Blue Shield of Massachusetts, which promotes the value proposition for a "Total Health Solution" that combines coverage and care for oral health and overall health. He discussed updated results of the program, and highlighted how healthcare reform may impact the focus on the integration of oral health and overall health, and the implications for how dental insurance may be viewed by the marketplace in the future.

To put things in perspective, Dr. Errante noted that as early as 1891, articles emerged with topics such as "*The Human Mouth as the Focus of Infection*." Now over 100 years later, with all the technological and scientific advancements we enjoy in dentistry and medical care, we "*seem to have lost our way*" with respect to honoring the connection between oral health and systemic health. We work in isolated silos, we treat in isolated silos --but the body is one tightly integrated system, and care delivery needs to reflect that in order to effectively support a cohesive picture of health.

Total Health Solution – Getting Started with Data

In developing the Total Health Solution proposed by Blue Cross Blue Shield of Massachusetts (BCBSMA), the goal of Dr. Errante's team was to determine whether BCBSMA could "*improve medical outcomes through strategies that integrate oral health and overall health*." As a foundation, they first collected scientific data and claims research that demonstrated the high risk health impacts associated with periodontal disease and chronic systemic diseases such as diabetes and coronary artery disease. In the process, they discovered notable cost savings for members with these conditions who sought dental treatment. For example:

- Diabetes - 2003 claims data showed that across a population of almost 15,000 diabetic members, those who received dental prophylaxis and/or periodontal treatment had $144 per month lower medical costs than members who did not seek treatment. 2008 data showed a $811 per member per year difference in costs.

75% of adults over age 35 will be affected by periodontal disease.

- Coronary Artery Disease (CAD) – 2003 claims data showed that members with heart disease who received dental cleanings or periodontal treatment had $238 per month lower medical costs than those with no dental treatment. 2008 data showed a $5,853 per member per year difference in costs. Worth noting is that the number of members with CAD doubled by 2008 as many severe diabetics developed heart disease.

Proving the Value Proposition

An integral step in developing the Total Health Solution was to present a compelling value proposition for BCBSMA to create integrated health plans. Understanding that at the end of the day it is largely about costs, Dr. Errante's team focused on the business perspective that the solution could "*provide long term value to employers by leveraging analysis of combined medical and dental claims data to create individualized plans that include strategies focusing on education and outreach to improve the health and productivity of employees*." The solution was based on a four-prong approach:

1. Integrate medical and dental – The solution leveraged data from medical and dental claims and personal health assessments to identify at-risk populations, and then provide integrated disease management to improve patient health and reduce costs.

2. Employ cost-smart strategies – By tracking high-risk members with conditions impacted by poor oral health such as diabetes, the solution developed evidence-based strategies for allocating resources to the people who could benefit most from dental care. As an example, BCBSMA offered at-risk members dental benefits tailored to their condition such as 100% coverage with no deductible and no annual maximum for non-surgical periodontal treatment. These enhanced plans represented a significant step forward in removing cost barriers, and indeed encouraged members to seek regular dental care. 53% of diabetic members and 55% of members with coronary artery disease took advantage of the enhanced benefits, which resulted in consistent cost savings, particularly with early intervention for periodontal disease.

3. Influence behavior changes – To help influence healthier behaviors in plan members, particularly those with diabetes and heart disease, the program focused heavily on education through outreach efforts such as personalized letters and phone campaigns to emphasize the importance of oral health and prevention as part of their disease management program. BCBSMSA cited a 37% behavior change in at-risk members after outreach, which Dr. Errante noted fortuitously coincided with a wave of media attention on diabetes. "*While many diabetics had an awareness that they needed to take better care of their oral health, they needed that extra little kick in the pants to do it. And it worked*."

4. Improve health and productivity –Ultimately, the solution helped lower the lifetime cost of care, and improve health and quality of life in plan members. From a business perspective, the value proposition was clear: healthier employees means higher productivity and attendance at work. Companies purchasing the enhanced plans could think of it as an investment to help them recruit and retain the strongest employees, along with an opportunity to reduce overall healthcare costs.

An additional win with the Total Health Solution was the positive feedback from providers across the dental and medical community. It offered a revenue enhancer for providers, but more importantly, high risk patients received valuable preventive services and early interventions that helped reduce complications associated with chronic systemic conditions.

Possible Future of Dental Benefits

With an eye on healthcare reform, Dr. Errante suggested that we can expect to see changes in how oral health is addressed and managed as part of overall health, particularly in terms of healthcare benefits. For example:

- Integration of oral health into medical plans – Oral health advocates have had a strong voice in healthcare reform and won some advances for better integration between medical and dental. For addressing epidemic diseases such as diabetes, we may eventually see the treatment of oral

infection and inflammation become a standard part of medical plans and chronic disease management programs. Supporting dental benefits would then focus on surgical repair of teeth such fillings, crowns, and implants.

- Dental pay-for-performance rewards for medical conditions – For managing high-risk patients with chronic diseases impacted by oral health, we will see an increasing role for dental professionals in the overall provider "care circle". As an example, dentists and hygienists might earn P4P rewards for participating in patient education that promotes better management of blood glucose levels in diabetics (HbA1c).
- Consumer demand will drive changes in the benefits industry – Our current system has been very focused on employers as the key purchasers of benefits plans, with incentives aligned mainly to business needs. However, with healthcare reform we will likely see a trend toward consumer purchasing of health plans, which means that insurance companies will need to rethink and restructure benefits to better meet the needs of consumer lifestyles over time.

> "*Yes, there are challenges to these changes, but we need to break through the barriers and just do it. We're at a crossroads where if we don't do these changes, they'll be done TO us --with the government deciding how this should work. As a profession, we need to move forward to make these changes ourselves to ensure we deliver the greatest value for those with the greatest need*."

Michael Helgeson, DDS
Co-Founder and CEO of Apple Tree Dental

Oral Healthcare Reform: Older Adults and People with Special Needs

Providing oral health services to the rapidly growing population of older adults will require new systems of care delivery. A promising new model called "Community Collaborative Practice" extends the reach of dental practices and clinics by incorporating new dental team member roles and using new technologies to deliver dental care where older people and people with disabilities live, work, go to school or receive other health and social services. A leader in geriatric and special needs dentistry, Dr. Michael Helgeson shared how successful new models can be incorporated into state and federal health reform efforts.

As co-founder of Apple Tree Dental (now celebrating their 25th anniversary), Dr. Helgeson has helped develop and evolve the Community Collaborative Practice model to bring dental care to underserved populations at over 100 locations across the state of Minnesota. In his presentation, he also illustrated how their state-of-the-art mobile dental offices make it possible to deliver cost-effective, high quality care onsite at assisted living and nursing home facilities to improve oral health in vulnerable seniors.

The Impact of Medicaid Cuts on Oral Health

In today's healthcare system, aging adults and people with disabilities are poorly supported in terms of access and affordable coverage for oral health care --yet even basic oral hygiene maintenance can be a vital component in improving overall patient health and longevity. Much of the reform bill's oral health provisions focus on providing access to care for children, which is indeed valuable and needed. However, Dr. Helgeson noted that an "unintended side effect" of the reform transition has been substantial cuts in adult Medicaid coverage, which are severely impacting the disabled and those in long term care around the country.

> *"Deep cuts in Medicaid mean no coverage for people who are every bit as vulnerable and dependent as children. While reform is strengthening access for children, we've neglected that same kind of inspirational leadership to maintain coverage for our most vulnerable adults."*
>
> *– Dr. Michael Helgeson*

To illustrate his point, Dr. Helgeson showed a video developed by the Minnesota Dental Association, which was shared with legislators in early 2010 as a call to action to help many "safety net" dental clinics across the state whose patients rely on Medicaid to pay for services. The video highlights some of the severe challenges resulting from lack of access to dental care, from both the provider and patient perspectives. It is a powerful and poignant look at how profoundly oral health impacts lives. [You can view this video on the Institute for Oral Health website at IOHWA.ORG]

However, progress is being made. In May 2010, with support from the American Dental Association's National Elder Care Advisory Committee the Special Care Dentistry Act (HR5364) was introduced in the House of Representatives. This bill requires states to provide oral health services to people with disabilities and frail older adults under their Medicaid programs. Dr. Helgeson pointed out that it is a positive step forward towards ending "*discrimination against the disabled and the elderly in oral health care benefits. In medicine there's no parallel to abandoning people by age in terms of their right to have healthcare coverage, so this takes a step in that direction for oral health*."

As we look at the impact of healthcare reform on oral health and the dental profession, it is important to recognize that the Affordable Care Act (ACA) basically focuses on insurance reform. But we also need more cost-effective ways to provide care, which means delivery system reform. As such, Dr. Helgeson honed his discussion on ways to "*deliver dental care at a lower cost, and drive down wasteful healthcare spending by spending money on appropriate oral health care at the right time.*"

As further emphasis, he highlighted the fact that if we look at the severe health conditions related to uncontrolled, unmanaged infections in the mouth and the systemic complications they cause, the cost of providing comprehensive dental benefits for all the "aged, blind, and disabled" is ***less than one percent*** of what's being spent on the treatment of those conditions under Medicare and Medicaid. CConsider that any medical savings beyond that one percent actually drives down the runaway costs of healthcare.

"We can't continue to provide more expensive medical and dental care. We have to be able to provide less expensive and more effective dental care. Really that's about delivery system reform; it's not about payment or insurance reform."

– Dr. Michael Helgeson

Another progressive development was the ADA-sponsored National Coalition Consensus Conference in November 2010 in Washington, D.C. The goal of the conference was "*to establish a broad and sustainable coalition of stakeholders who are committed to improving oral health in vulnerable older adults and persons with disabilities*." The coalition seeks to bring dentistry into collaboration with medicine, long term care, and patient advocacy groups to develop an effective, integrated coalition to improve dental care access, coverage, and delivery for special needs populations. This effort is building on the model of pediatric dentistry coalitions such as Dr. Joel Berg detailed at this conference, which have been highly successful in strengthening dental benefits and programs for children.

Improving policy in Minnesota

In Minnesota where Dr. Helgeson practices, a number of policy initiatives are underway to help special needs populations, defined as "the aged, blind and disabled," including:

- Limited Adult Benefits set to cover the most needed services that deliver the best outcomes, while reducing Medicaid spending.
- Alternative funding sources for dental services for patients in long-term care.
- Critical Access Dental Providers program to provide a "safety net" network of dental clinics in underserved areas to deliver care to special needs patients.
- Dental Services Advisory Council of clinical, educational, and administrative experts to advise Medicaid regarding the critical access dental provider program and on the effectiveness of dental services and best practices in care delivery.
- Dental Therapist and Advanced Dental Therapist programs to increase workforce capacity for special needs populations in underserved areas.

Achieving Progress with Team-Centered Care Delivery

With the goal of delivering care at a lower cost and with greater effectiveness, Dr. Helgeson highlighted the successful team-centered model used by the Mayo Clinic for over 100 years. Their strength and success lies, essentially, in their philosophy that "*the patient's interest is the only interest to be considered*." With their successes in mind, we need to look at policy goals for

healthcare and align our efforts to achieve the greatest good. This sentiment is echoed by the Institute of Medicine, which cited that, "*Access to care is the timely use of personal health services to achieve the best possible health outcomes*" —to which Dr. Helgeson added that, "*In dental care, that means not having dental problems or dental infections; it's not losing teeth; it's being able to maintain oral functions*."

As a strong believer in integrated, team-centered healthcare, Dr. Helgeson collaborated on Minnesota's Oral Healthcare Solutions Project some years ago to help develop new delivery system for oral healthcare. The initiative brought together a wide range of planning partners from professional dental organizations; special needs dentistry and safety net community clinics; dental education programs, Head Start and community action programs; health plans, public health and patient advocacy groups; state agencies and others. Together, this collaborative group worked to develop a new Oral Healthcare System featuring team-based Community Collaborative Practice. This new model extends the reach of traditional dental services beyond private practices and safety net clinics into the community where people "live, work, go to school, or receive other health and social services."

Community Collaborative Practice – How It Works

Community Collaborative Practice is a three-way collaboration between:

1. A dental practice (which may be a private office or safety net clinic)
2. A community partner such as a school, Head Start clinic, or nursing home, and an
3. Onsite oral health team, which works as a bridge for the other two partners

This model delivers interdisciplinary special care in collaboration with physicians, nurses, teachers, and social service providers in patient settings around the community –and does so by leveraging financial resources from the whole community.

Over 80 million Americans are considered "dentally underserved," people who cannot access dental care due to lack of affordable care, coverage, or available providers in their area. Furthermore, in special needs populations, patients often only think of going to the dentist when they have a problem, and they may have mobility or behavioral issues that make traveling to a dental office difficult or impossible. The goal of Community Collaborative Practice is to reach people while they are still healthy and keep them well with regular oral healthcare. He added that, ideally, the two-visits-per-year model should not really apply; we should provide tailored recall frequencies as needed to reach people before problems arise and keep them healthy, which in turn helps drive down costs when they do have problems.

As a model example of Community Collaborative Practice, Dr. Helgeson's own Apple Tree Dental in Minnesota has created a sustainable system for special needs adults and children. In 2009, they performed over 60,000 dental visits and screenings. 2010 marks their 25 year anniversary, and by the end of this year they will have delivered over 700,000 visits.

"Community Collaborative Practice is proactive delivery vs. passive access –delivering early education and prevention to high-risk populations before problems arise."

– Dr. Michael Helgeson

To deliver dental community-based care, Apple Tree contracts with each site using an "Oral Health Services Agreement" that clarifies needs and expectations, team roles, spaces used, records management, regulatory requirements, liability issues, and so on. A Dental Director leads the team and helps patients maintain relationships with their dentists and ensures there are oral health programs for all patients served by the community organization –children, adults, and elders. The team incorporates many new dental roles such as collaborative practice hygienists, dental therapists, and tele-dentists, who work together to increase the overall capacity to deliver dental care.

Community Collaborative Practice – Keys to Success

In reflecting on Apple Tree Dental's success, Dr. Helgeson noted, "*the value of dental care we provide has increased to about $12 million per year. As of 2010, the total value of dental care we've delivered will exceed $100 million. This was started by just four people who came together to create a group non-profit dental practice, inspired by the Mayo Clinic model.*"

He highlighted some key components that drive success in the Community Collaborative Practice model:

- Nonprofit organizational structure – As a non-profit, all the team members are aligned with and accountable to a common mission, which in Apple Tree's case is to "improve the oral health of people with special access needs who face barriers to care." This focus on mission helps alleviate much of the reactive, cost-centric thinking that sometimes occurs in traditional practices and promotes a more proactive, patient-centered perspective that ultimate helps support better healthcare delivery.
- Teams with essential areas of expertise – The team model goes beyond dental providers to build the infrastructure needed for community care delivery. Experts in geriatric, pediatric, and special care dentistry partner with experts in fundraising and nonprofit development, education, and public policy.
- Hub-and-spoke model – At the center of the new delivery system is the central clinic and operations center. From the center, year round services are delivered onsite at multiple community locations. This model optimizes the staffing and clinic resources needed to address complex patient needs.

"This model is an extension of the more old fashioned bricks and mortar dental home concept. It's more practical for patients who are highly mobile, and it's a way of maintaining ongoing quality of care."

– Dr. Michael Helgeson

- "Virtual dental home" – The Community Collaborative Practice model creates a central resource for oral health and provides "*a continuous source of dental services that provides care focused on patients and families, staffed by an interdisciplinary team linked together using tele-health technologies*."
- Advanced mobile dental offices – Apple Tree Dental is a "nationally recognized pioneer in mobile dentistry" and uses large trucks to transport compact, comprehensive mobile dental offices to more than 100 community locations across Minnesota. From nursing homes to Head Start centers to schools, this mobile delivery alternative costs only about one-third as much as medical transportation, staff time, and family time required to transport special needs patients to traditional dental offices.

- Proactive on-site care – A major cost-saving benefit of onsite care delivery at community locations is the ability to reach people where they live, work, and receive other services, and promote early education and prevention –before problems arise. Additionally, onsite care allows for collaboration between dental clinicians and other professionals at the site who are already well trained in working with people with special needs, such as nurses, social workers, and teachers. This teamwork provides a more comfortable experience for the patients and makes it quicker, easier, and more cost-effective for dental clinicians to deliver services.

Dr. Helgeson emphasized that when analyzing the economics of healthcare, Community Collaborative Practice offers a significantly more cost-effective way to deliver dental care. To provide equivalent services in a traditional dental model is not financially sustainable, but the non-profit model provides a total cost of care that is only about half the cost of traditional approaches. Additional cost benefits include:

- Proactive care delivery reduces overall dental costs as well as downstream medical costs treating systemic conditions like diabetes that are exacerbated by uncontrolled mouth infections.
- On-site care delivery costs only about one-third as much as the expense of medical transportation for special needs patients, additional staff time to accommodate mobility or behavioral issues, and family time away from work.

"The key is that we need more hands helping, we need more ways to deliver care, and we have to deliver care at a lower cost. It's really the only way out for our society."

– Dr. Michael Helgeson

- Collaboration with partners such as teachers and social workers at community sites helps patients become more receptive to oral health education and also creates positive peer pressures that trigger behavior changes that lead to better oral health and lower dental care costs.

Overall, the Community Collaborative Practice model makes it possible to achieve the mission of improving oral health –beyond simply providing dental care—for a large population in need, without discriminating based on age, health, or economic status. Along those lines, Dr. Helgeson highlighted how state reimbursement models need to be significantly revised to align with the best interests of patients:

> "*In our state's reimbursement model, dentists get paid twice as much to do a checkup for a child as they do for a medically complex adult --even though it may take as much time or more to simply read the chart of a medically complex patient as to perform two or three procedures on a child. The fee-for-service model is about as misaligned from patient-centered care as it can be. You need a nonprofit organization that can realign financial incentives to ensure that individual dentists and hygienists can do the right thing for each patient.*"

To learn more, please visit appletreedental.org

Terry G. O'Toole, DDS
Director of Dental Healthcare Analysis, VA Office of Dentistry

The Role of Dental Electronic Health Records in Improving Performance

Healthcare reform hinges on dental providers having easy access to a patient's medical, social, and administrative information. With a comprehensive picture, providers can deliver appropriate interventions that improve care and decrease costs. As a lead for the development of VA's integrated dental electronic health record system, Dr. Terry O'Toole shared his experience in how information technology can successfully improve organizational and individual performance to help improve population health.

What is an Electronic Health Record (EHR)?

To frame his discussion, Dr. O'Toole introduced that EHRs typically fall into three categories that support providers, patients, and the performance data that bridges the two. The real power comes from bringing these systems together. The three categories include:

- Provider-facing – These systems enable providers to track patient care on a daily basis. At the VA, their tools include the Computerized Patient Record System (CPRS) and the dental specific adjunct application, Dental Record Manager Plus (DRM Plus). Together they provide numerous functions for managing patient data as well as clinical decision support, such as reminders for care invention as providers are treating their patients.
- Patient facing – We are seeing an increasing call for web-based portals where patients can access information related to their own care. My HealthEVet, the VA's patient portal now serves over a million users and offers tools for managing health and refilling medications online. In addition, the portal has now integrated secure messaging for confidential online communications between providers and patients.
- Analytics system – In the case of the VA, the Dental Reporting and Analytics System allows clinicians, dental managers, and executive leadership to review performance information for over 200 sites nationally where dental care is provided. Be it from a national level to a provider-specific level, this system affords valuable insights into how to improve performance and better allocate resources.

> *"It's important to integrate the data reporting system into a larger information portal because if it is not readily available and ubiquitous, the data doesn't get looked at."*
> *– Dr. Terry O'Toole*

What EHRs Mean for Healthcare Reform

One of the promising initiatives related to reform is the Health Information Technology for Economic and Clinical Health (HITECH) Act, which hopes to improve care delivery through advanced technologies. Extensive information on the use of EHRs to improve healthcare can be found on the website of the Office of the National Coordinator for Health Information Technology. (Visit healthit.hhs.gov)

A key consideration for certified EHRs is that of "meaningful use" to validate and promote their adoption. This process will be closely tied to performance measures, a primary lever for making the business case for EHRs. Additionally, a few examples of meaningful use include:

- "E-prescribing" - As providers enter orders for labs and medications online into intelligent systems, the likelihood of pharmacy errors or delays arising from confusion over hand-written prescriptions are reduced.

- Online information sharing - The more effectively we can exchange patient data, the more likely we will be to reduce costs of repeated tests and duplicated procedures, all leading to better, more coordinated care for patients.

- Centralized quality measures – Certified EHRs enable us to aggregate quality metrics to examine population health trends as well as improve organizational performance to reduce costs, increase efficiencies, and support better patient outcomes.

Technology-related reform provisions really come down to four primary issues:

- Adoption – We face a considerable challenge in getting providers to adopt EHRs, largely due to the significant costs associated with implementing them. The reform bill does provide for incentive payments for adopting EHRs, which may help drive progress across organizations that support Medicare and Medicaid patients.

- Certification – A lynchpin issue for the incentive payments is that EHRs must be "certified" to ensure they meet specific criteria about what they should do. However, currently there are no certified electronic dental records and requirements for dental certification are still under debate. If oral health care oral health care providers are using a certified medical electronic record, they may be eligible for the incentive payments. Certification might include criteria such as whether the system can generate real time notifications on drug-to-drug interactions; maintain a current problem list; and the ability to receive and display electronic laboratory test results.

- Interoperability – This aspect looks at how we can make systems "talk to each other" to allow for the sharing of information. At a fundamental level, EHRs must create and store standardized data, often for both patient care and business purposes, across various venues of care. The National Health Information Network has implemented standards that allow disparate systems to connect for the purpose of secure data exchange on a national level. Indeed some of the resistance to adoption is that many providers have their own ways of doing things and want to keep it that way; but Dr. O'Toole noted that "*interoperability doesn't mean we will have to do everything the same.*" Reducing variations in care results in improved efficiency, accuracy, and productivity, and is good for business and patients. Integrated tools can enable features such as one-click access for patients to download a current, complete medical record for their own reference or to bring to a provider visit.

- Performance – Creating quality metrics for dentistry is a growing issue and a critical factor in driving policy changes. A key in promoting EHRs is demonstrating how they can be used to properly measure and improve performance –in patient outcomes, provider behaviors, and cost-effective productivity. At the end of the day, that's the value proposition. Efforts are underway to expand the clinical measures influencing the Medicaid EHR incentive program to include metrics for dental care and oral health, long-term care, pediatrics, and more. Performance metrics will become increasingly important as our healthcare system evolves toward performance-driven payment models.

"Getting in on the ground floor is critical -- through organized dentistry and other venues— to get the message heard that oral healthcare is an essential part of both overall healthcare reform and the medical records initiative in order to improve oral health."

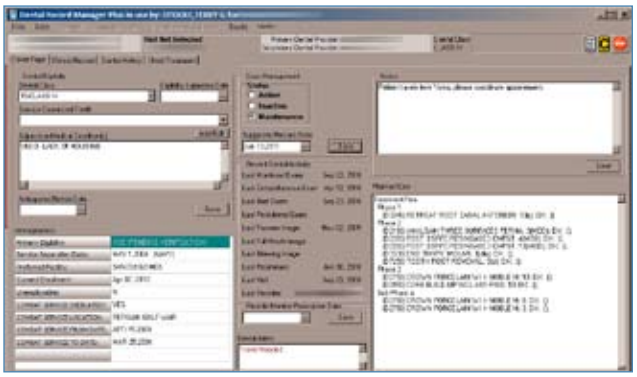
– Dr. Terry O'Toole

The Evolution of VA's Medical-Dental EHR

For more than 20 years, the VA has been advancing its medical EHR, seeing great success in integrating their facilities nationwide to improve medical care delivery for millions of veterans. In April 2010, the VA's sophisticated IT system was applauded in a study by the public health journal Health Affairs, which noted, "*benefits have exceeded the costs, proving that implementation of secure, efficient systems of electronic records is a good idea for our citizens… with savings of more than $7 billion… in areas that improve quality, safety, and patient satisfaction*."

Over the past decade, Dr. O'Toole has been instrumental in advancing VA's development of a dental EHR, known as Dental Record Manager Plus (DRM), which is fully integrated with the medical EHR. DRM provides an effective way for oral health care providers to consistently track a patient's dental diagnostic information and treatment, while also accessing the patient's medical record for more informed decision making. Similarly, physicians can review dental records for consideration of how a patient's oral health may be impacting their systemic and mental health. Not only does the electronic system help improve the quality of patient care, it reduces the risk of duplicated tests, incorrect coding, and clerical errors or miscommunications resulting from hand-written charts and prescriptions.

For easier provider adoption, the dental EHR interface layout is similar to the medical EHR. DRM Plus delivers an at-a-glance view of key patient indicators such as dental eligibility, recent dental activity and care plans, medical conditions, and any relevant personal information. As not all veterans are eligible for VA dental care, it is important for providers to easily determine the scope of services they can provide for any specific patient.



Particularly important for driving improvements in oral health, the integration of medical and dental data offers a unique opportunity for medical and dental practitioners to participate together in the early detection of disease and promote preventive strategies that can help reduce healthcare costs and improve patient outcomes.

Particularly important for driving improvements in oral health, the integration of medical and dental data offers a unique opportunity for practitioners on both sides to participate in early detection of disease and promote preventive strategies that can help reduce healthcare costs and improve patient outcomes.

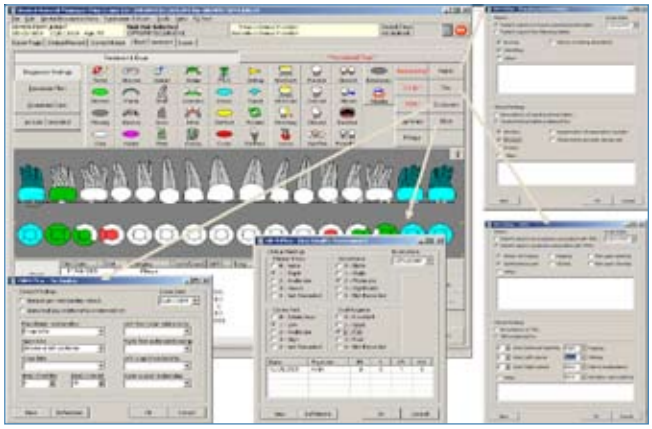
> "*Any provider using the system can see key details for both medical and dental conditions that may influence their approach to treatment. For example, a cardiothoracic surgeon can see their patient has as dental condition that might impact the surgery they intended to do and know to first consult the dentist. It has fundamentally changed the way people practice. There is great power in that.*"

The History of Dental Record Manager Plus

Dental Record Manager Plus (DRM) was specifically designed to be accessed only from within the main medical EHR. DRM was not intended to replace the medical record, but rather strengthen it with important dental-specific details to support oral health. It captures a wide range of dental specific information such as tooth-related diagnostic findings, dental treatment plans, and patient progress notes.

Since its inception in 2002, the DRM system has continued to evolve with more sophisticated capabilities, while refining the interface to be easy and intuitive for providers.

- 2002 – In its earliest stages, Dental Record Manager simply eliminated recordkeeping redundancies. Previously, medical and dental records were maintained in two distinct and disparate systems. Most importantly, DRM enabled dental progress notes to be integrated alongside similar medical information for a more comprehensive picture of what was happening with each patient.
- 2004 – As the tool evolved, the next release was named Dental Record Manager Plus, and included graphical dental charting capabilities and a more robust data collection system for enhanced reporting of dental-specific information.
- 2007 & 2008 - DRM Plus advanced to include workload allocation to balance staffing efforts; improved clinical decision support; cross-checking of procedure codes to avoid inconsistencies; more flexible, detailed reporting; and improved graphical representations to ensure accurate data tracking for safer patient care.
- 2009 – By 2009, DRM also included proactive reminder alerts to ensure appropriate interventions are done in a timely manner to support performance improvement. And, to deliver the most current information on a daily basis, the system now supports near real-time updates from databases networking VA facilities across the country.
- 2010-11– The latest advancements include "intelligent exam templating" to help drive efficiencies and reduce variation in data capture for high-frequency procedures such as exams. Consistent recording of diagnostic details for each patient and procedure is critical for measuring and analyzing outcomes. For example, (as shown here) screens make it easy for providers to record information such as oral health risk assessment and standardized historical information as part of their normal workflow. This standardized information is more effective than simple textual notes as it enables providers to track a patient over time in a consistent manner.



Dr. O'Toole offered these highlights to assist those who are considering developing, purchasing, or using an EHR system to understand some key elements to be mindful of, particularly if they expect to use the EHR system and the data it collects to enhance performance through measurable metrics. Additionally, he pointed out that years of successful growth are attributable to getting the administrative, technical and clinical people all involved, side by side, in the development of an EHR.

Using Metrics to Improve Organizational Performance

Oral health is a critical component of a patients overall health. As the number of dentally eligible patients and demand for dental services is increasing, VA Dentistry has enhanced their efforts to develop metrics that prove the value of oral healthcare and the need for budgetary investment in dental resources. To measure performance, they initiated three dental monitors:

- Comprehensive Oral Evaluation for Eligible Veterans required that any patient eligible for lifelong dental care through the VA was seen for an evaluation at least once every two years. The VA set a threshold of 75%, which has been successfully met but remains challenging as the demand for dental services is rising.
- Care for the Medically Compelling Dental Patient defines minimum requirements for necessary dental care in patients with extenuating medical conditions, ensuring these patients needs were accommodated at all dental sites. While not all sites have been able to meet their targets due to structural differences, the variation in access to care for this patient segment has decreased significantly.
- Fluoride Treatment for Patients at High Risk for Dental Caries to counter the caries risk brought on by xerostomia in many patients on multiple medications. This monitor helps ensure high risk patients get appropriate and timely fluoride interventions.

Dr. O'Toole highlighted various components that played a role in the development of the Fluoride monitor. The team needed to provide an evidence base to validate the intervention; provide estimated budgetary impact; provide communication tools to gain buy in from providers and inform executive leadership; and support for the ongoing reporting and educational activities to ensure a successful implementation of the initiative.

Raising Awareness and Delivering Results

To keep everyone informed on their progress and promote adoption of the dental monitors, Dr. O'Toole's group developed the Dental Reporting and Analytics System (DRAS), an important component of their overall medical-dental EHR platform. The DRAS integrates a data warehouse of dental care transactions from the past 10 years and provides business intelligence reporting, which helps measure performance and determine where to best direct efforts.

Some highlights of the data analytics system include:

- Easy access to performance data through a user-friendly SharePoint portal to promote the visibility of important data. Authorized users can view the dental monitors' progress, as well as trending data such as provider performance frequency screenings, clinical access wait times and more.
- Dental Performance Scorecard that allows dental directors to track how well their facility is performing compared to others in the VA health services network. The transparency of this data helps to motivate better performance, which translates to better patient care.
- Visually compelling reports help increase the impact of data through visual charts and graphs. As an example, Dr. O'Toole noted that dentists understand that a patient with comprehensive benefits will consume more resources, and likely cost more to manage, than a patient with limited benefits. Visualizations that illustrate usage vs. costs can be very powerful in convincing policymakers and budget controllers about the resources needed to provide oral healthcare.

Lessons Learned in Developing the Dental EHR

One of the most important parts of any major initiative is to track and evaluate what is learned along the way to shape future efforts and provide valuable insights to other organizations that have similar goals. Dr. O'Toole discussed a few key challenges his group encountered as they worked to develop and evolve both the dental EHR and their dental data analytics tools.

A few lessons learned include:

- Ensure accurate diagnosis coding for procedures – Although the medical-dental EHR required a diagnosis and procedure code for every patient encounter, the burden was on providers to code appropriately, which was new for dental providers who historically were not required to provide this level of detail. To improve the ease and accuracy of data entry for providers, the technology team implemented a context sensitive list of diagnosis codes for each of 800 or so dental CDT and medical CPT codes to allow providers to choose the appropriate diagnosis code related to any given procedure.
- Recognize performance data is skewed by patients not seeking care – While focused on provider performance, they grew to recognize that often low numbers on dental scorecards were not simply the fault of clinicians but that many patients were indifferent or lacked the knowledge to proactively seek regular dental care. Recognizing this reality helped drive efforts to promote oral health education and the personal patient benefits of preventive oral health care.

Looking Ahead to Advance EHR Technology

To continue driving improvements in organizational performance means driving improvements in the tools that makes it possible. As Dr. O'Toole's team looks to the future, they are focused on ways to further validate their metrics and intervention recommendations to strengthen the business case for oral health improvements on both a policy and practice level.

Their team also plan to assess the impact organizational infrastructure has on patient and provider satisfaction, using the dental analytics systems to report what is working well and replicate the best practices. Additionally, plans to include an oral health risk assessment tool in the patient-facing portal (My HealtheVet) are underway to allow patients to provide information on their perceived oral health. Tools such as this support the VA's goal to "*put more healthcare information into the patient's hands so they can make the best decisions and make it easier for providers to do what they need to do*."

"To improve performance, you need to get buy-in from leadership and providers to confirm you are measuring the right things, but it's also important to identify from providers what you don't need to do anymore if it's not adding value for patients."

– Dr. Terry O'Toole

Maria Emanuel Ryan, DDS, PhD

Professor of Oral Biology and Pathology, Associate Dean for Strategic Planning and External Affairs, Stony Brook University School of Dental Medicine; Medical Staff, Stony Brook University Medical Center

To Head Off Disease Start at the Top: An Educator/Clinician/Researcher Perspective on the Need to Better Address Oral Health in People with Diabetes

Clinicians are faced with making treatment decisions for millions of people with diabetes every day, prevention is key and improved treatment strategies are essential to better manage this chronic disease. Successful medical management of people with diabetes requires optimal oral health. At the 2010 Institute for Oral Health conference, Dr. Maria Ryan highlighted the impact of poor oral health on people with pre-diabetes and diabetes, and discussed clinical, epidemiologic and scientific evidence, including periodontal intervention studies, that support a bi-directional relationship. Additionally, Dr. Ryan presented clinical strategies key to successful dental management for patients with diabetes.

With the growth of the Internet and widespread dissemination of media, the public has the opportunity to stay more informed than ever about health issues. Yet as long as medical and dental needs are addressed in separate silos in both patient experience and health benefits, there remains a common misconception that the mouth is separate from the body, that oral health concerns are disconnected from any other bodily concerns. Collectively, the dental profession –from providers and researchers to payers and patient advocates such as the Institute for Oral Health—needs to change that perception.

The Impact of Periodontal Disease

Toward that end, Dr Ryan introduced valuable perspectives to help "*raise the bar that currently exists for the management and diagnosis of periodontal infection and inflammation*." She cited that periodontal disease, a chronic and progressive condition, is the most common inflammatory disease known to man. And while there is no cure, it is treatable and largely preventable.

> *"Periodontal disease is now considered the most common chronic inflammatory condition in the world. Because it is linked to systemic health, the treatment of this disease should never be considered an option."*
>
> *– Dr. Maria Ryan*

Periodontal disease (or "periodontitis") is often under treated because many people never recognize they have a problem as inflammation at the gum line may be barely noticeable and is often painless. However, if the disease goes untreated it raises the opportunity for the bacteria and associated pro-inflammatory mediators to enter the bloodstream, increasing the risk for a variety of serious diseases throughout the body.

Additionally, periodontal disease is often under diagnosed; the Center for Disease Control (CDC) estimates that earlier projections on the number of cases nationwide may be off by as much as 50%. This prevalence may be due largely to the nature of the disease itself: it is initiated by bacteria that on their own do not cause the disease, but react in concert with risk factors that make a person susceptible, such as genetics, diabetes, obesity, smoking, medications,

> *"It's critical to assess risk factors because they determine the rate of progression, the severity of the disease, and the patient's response to therapies."*
>
> *– Dr. Maria Ryan*

immune disorders, stress, and more. While poor oral hygiene plays a part, dental clinicians need to invest more time in risk assessment to identify other factors that will undoubtedly influence treatment and management of the disease.the portal has now integrated secure messaging for confidential online communications between providers and patients.

Most specifically with diabetes, the body can be overburdened with bacteria and inflammation. High levels of glucose can be detected in oral fluids of poorly controlled patients, which makes these patients highly susceptible to periodontal disease and caries. As a result, the many risk factors that might influence the onset of periodontitis become more directly arenas of risk management to not only help to control periodontitis but can also help in the control of diabetes.

As a further concern, C-Reactive Protein (CRP) levels are generally higher in people with poorly controlled diabetes and untreated periodontal disease. This "acute-phase plasma protein" is produced by the liver in response to inflammatory conditions, and levels increase when bacteria and cytokines are elevated –a common response to both periodontal disease and diabetes. Studies show that high CRP levels increase the risk for cardiovascular disease and "*may be a stronger predictor for heart attacks than cholesterol.*" This is particularly important to address in people with diabetes who have an increased risk for mortlaity from cardiovascular disease and stroke.

Advancing Dental Practice for Better Management of Periodontitis

As an inflammatory condition, periodontal disease can increase the likelihood for the development of long term complications of diabetes such as cardiovascular disease and kidney disease. To more effectively manage overall health in these high-risk patients, dental providers may need to implement new strategies for identifying and treating periodontal disease, such as:

- Perform risk assessments and design treatment plans with dental interventions and preventive solutions geared to help improve overall health and minimize complications in systemic conditions.
- Specialize therapies based on risk assessment to determine when to treat aggressively vs. proceed with caution. Dentists might eliminate bacterial infection with strategies such as Triclosan toothpaste and antiseptic rinse, topical antimicrobials and systemic antimicrobials, or more aggressive therapies for mechanical removal of infectious agents and surgical reduction of periodontal pockets. Providers can also consider drugs that help modulate the "host response" such as the sub-antimicrobial dose of doxycycline known as Periostat® to drive down the cytokines that prompt the liver produce CRP. In fact, a 2004 study showed that after six months of Periostat administration, acute coronary syndrome patients exhibited a significant reduction in CRP levels.
- Educate patients to reduce risk through healthier behaviors such as daily brushing and flossing, smoking cessation, better diabetic control, improved nutrition and weight loss, stress reduction, and more.
- Interact more with physicians so that each provider fully understands the scope and severity of a patient's oral and systemic conditions, and actively participate in helping minimize and control progression and complications.

"There's no magic bullet. You have to think about how to best manage each patient. It takes time and it takes knowing the patient's risks to ensure you make the right decisions."
– Dr. Maria Ryan

Advancing Dental Practice for Better Management of Periodontitis

When we look at the meteoric rise of diabetes in the U.S., it becomes mission critical for dental providers to anticipate diabetic and pre-diabetic patients in their practice, and be prepared for how to help them better control the disease and reduce the risk of periodontal disease. Even in pre-diabetic individuals, "*acute infections may induce a temporary state of diabetes requiring short-term insulin therapy*" largely due to the fact that inflammation creates a greater degree of insulin resistance.

Well documented in medical literature are studies spotlighting the connection between inflammation and diabetes. Dr. Ryan cited one study that tracked 1,047 non-diabetic subjects over five years, noting that inflammation marked by high levels of CRP was associated with insulin sensitivity and the development of type 2 diabetes. Furthermore, substantial evidence exists linking periodontal disease and diabetes, especially in people with poorly-controlled diabetes who have an increased susceptibility to oral disease. Dr. Ryan participated in a study where she was able to directly "*correlate the level of periodontal disease with the level of insulin resistance. The more attachment loss patients had, the more insulin resistant they were."* Additional studies including those highlighted by Endocrine Today have cited periodontal disease as a common cause of Type 2 diabetes, stating, *"the risk of developing diabetes is twice as likely in people with varying degrees of periodontitis*."

A Look at the Epidemic

Diabetes is rapidly becoming "*the epidemic of our time*", according to the CDC, with over 285 million people affected worldwide –projected to jump to nearly half a billion people by 2030. In America alone, we have 23.6 million children and adults with diabetes and 57 million more with pre-diabetes. In fact, compared with 10 years ago, the incidence of diabetes in children has increased "10 fold", prompting a change from the term "adult onset diabetes" given the alarming trends.

One of the biggest culprits is poor nutrition and the rise in obesity, with over 60% of the U.S. population overweight or obese. The chronic inflammation in overweight individuals increases insulin resistance, which drives the onset of diabetes –similar to the impact of periodontal disease. While people rarely die of diabetes itself, they often die sooner due to related complications such as heart attacks, stroke, and kidney failure.

Primarily, diabetes is controlled by tracking glucose levels in the blood (HbA1c which is a measure of control over the past 2-3 months), and typically, "*the higher the A1c, the more rapid the progression of disease*."

How Dentists Can Contribute to Better Health in Diabetics

Given the prevalence of diabetes, nearly all dental providers can expect to see a number of people with diabetes. Dental clinicians can play an important role in helping patients control the disease, and have the opportunity to help identify people with pre-diabetes and undiagnosed diabetes based on oral health symptoms and risk assessment by employing strategies such as:

- Learn classic signs and symptoms of diabetes such as increased infections, fatigue, numbness in extremities, blurred vision, urinating often, constant thirst, and more.
- Perform risk assessments with particular focus on adults over age 45 looking at factors such as family history of diabetes, hypertension, history of impaired glucose intolerance, and racial descent (as diabetes is most common in African American and Hispanic populations).

- Track gestational diabetes, which often occurs in the third trimester of pregnancy and typically disappears after delivery. However, 30-50% of women with gestational diabetes develop type 2 diabetes within 10 years.
- Monitor oral symptoms commonly associated with diabetes such as periodontitis, caries, xerostomia (dry mouth), candidiasis, burning of the mouth, and enlarged parotid glands.
- Report concerns to physicians to alert them about oral health risks and any incidence of periodontal disease in their patients with diabetes, and partner with them to develop strategies for better control and management of both diseases.
- Recommend risk reduction strategies to patients such as healthy diet and weight loss, avoiding tobacco and alcohol, reducing stress, and of course, maintaining daily oral health care and frequent checkups. For people with diabetes who may be taking insulin and may have hypoglycemic episodes that they address with gluco-tabs, recommend that they brush or rinse after each tablet to help wash away the infusion of sugar in the mouth that can cause caries.

An additional strategy recommended to Dr. Ryan by some physicians introduces a different perspective from the typical focus on evidence-based care. "**Judgment-based practice**" is a model frequently used in medicine in which practitioners combine clinical scientific principles with their own collective experience and uses "*procedures and therapies that have been shown to be effective, pose no risk, and may prove beneficial*." While this approach relies less on data-driven protocols, it is often effective in leveraging best practices and provider expertise to improve the health of the patient. It is clear that infection and inflammation needs to be addressed promptly in people with diabetes. We need to utilize all of the tools available to us to ensure that oral infection and inflammation are controlled in this high risk patient population.