

HIT Policy Committee - October 27 & 28, 2009

## Underserved and Medicaid Providers Panel – Dentists

Written testimony provided by:

Thankam Thyvalikakath, BDS, MDS, MS

Titus Schleyer, DMD, PhD

University of Pittsburgh  
School of Dental Medicine  
Center for Dental Informatics  
3501 Terrace Street  
Pittsburgh, PA 15261

email: [titus@pitt.edu](mailto:titus@pitt.edu)

ph: 412-648-8886

1. How will the proposed 2011 and 2013 meaningful-use objectives and measures help your specific area (pediatrics, psychiatrist, nurse practitioner dentists, etc.) demonstrate that they are improving care?

The health outcomes policy priorities that underpin the proposed meaningful-use objectives, such as improving quality, reducing health disparities, engaging patients and families, and improving care coordination, are relevant and appropriate to provision of dental care. As such, their spirit and expression is compatible with and highly supportive of the goals and objectives of the dental profession for oral health outcomes.

However, as currently drafted, the objectives/measures for the 2011-2015 time period are only partially applicable to and feasible in dentistry. For instance, regarding the 2011 objectives, dentists typically generate problem lists for oral health conditions; can contribute to maintaining active medication and medication allergy lists; record primary language, insurance type, gender and other patient-specific variables; obtain vital signs such as blood pressure; and provide access to patient-specific educational resources. However, dentists do **not** typically enter orders, perform medication reconciliation, submit information to immunization registries and provide electronic submissions of reportable lab results to public health agencies.

As currently drafted, the meaningful-use objectives contribute only in a very limited fashion to answering the question whether our dental care system actually improves the oral health of patients, populations and the nation.

2. What are the special considerations when applying meaningful use measures to your specific area or to underserved populations?

Two main considerations should guide the development of meaningful-use measures for dentistry in general: (1) an understanding and appreciation of dental care workflow, and how it is supported by information technology (IT), and (2) the definition of practical, specific objectives and measures focused primarily, but not exclusively, on oral health.

The dental care workflow differs, to a large degree, from the hospital-based, inpatient-oriented workflow which is the obvious focus of the currently proposed objectives and measures. The overwhelming majority of dental care is delivered in small to medium-sized practices (one to five operatories or dental chairs) on an outpatient basis. (Approximately 67% of all dentists in the United States are in solo practice.) General dentists, which make up approximately 65% of the nation's dental practitioners, perform the dominant role in delivering and coordinating a patient's dental care. The high degree of specialization and compartmentalization of workflow common to hospitals and large medical clinics is largely absent in dentistry. Dentists, supported by dental hygienists and assistants, conduct clinical exams, perform diagnostic tests, read radiographs, and plan and execute treatment. Complex diagnostics and procedures are referred to specialists, such as periodontists, endodontists and oral surgeons, who make up 35% of all practitioners.

Approximately 70% of all Americans have at least one dental visit per year. Most of them are seen by their dentist at periodic intervals, typically six months to a year. Most dental patients see their care provider when they don't feel sick, as opposed to medical patients who typically visit their physician in the context of a particular health concern or care episode. This dynamic presents unique chances for monitoring, detecting and assessing various health conditions within the context of the dental visit.

Dentists who are computerized typically use a single computer program, called a practice management system or electronic dental record, to manage part of or all patient data. Occasionally, they employ a separate system to manage clinical images<sup>1</sup>. The division of the IT infrastructure common in hospitals into multiple software applications, such as RADT, CPOE, lab, pathology and imaging systems essentially does not exist in dentistry.

One recommendation resulting from this review would be to focus on clinical information coverage in dentistry, rather than the utilization of separate systems, such as CPOE or lab systems. Figure 1 shows the electronic/paper information coverage of information by general dentists as determined by a recent study<sup>1</sup>. A way of promoting meaningful use of EHRs in dentistry would be to stipulate targets for the storage of clinical information in EHRs.

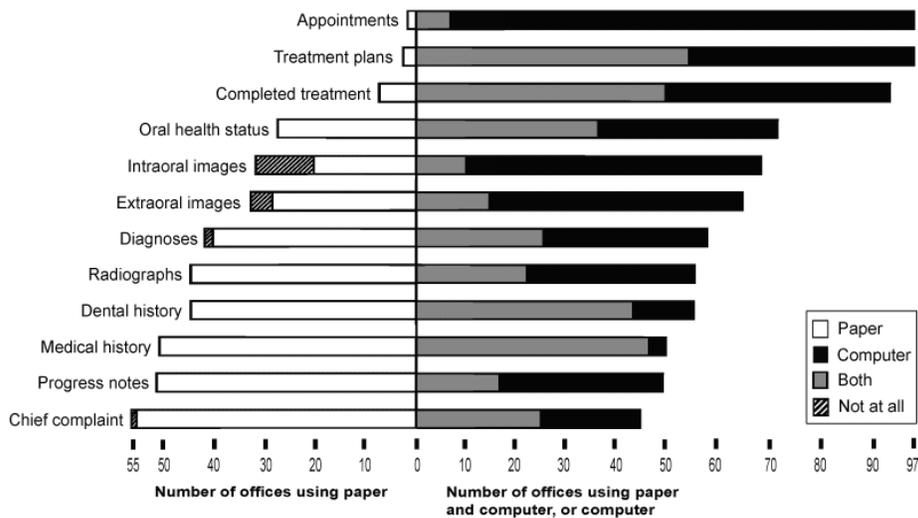


Figure 1: Storage of major clinical information categories on paper/computer, sorted by utilization of computer-based storage in descending order

Process- and infrastructure-oriented aspects of oral health care should be complemented by defining practical, specific objectives and measures focused primarily, but not exclusively, on oral health. As stated above, several of the currently articulated objectives and measures can be applied with little to no modification to dentistry. However, those need to be supplemented by goals that relate specifically to important oral health

<sup>1</sup> Schleyer TK, Thyvalikakath TP, Spallek H, Torres-Urquidy MH, Hernandez P, Yuhaniak J. Clinical computing in general dentistry. J Am Med Inform Assoc 2006;13(3):344-52.

outcomes, such as missing teeth, caries lesions, periodontal disease, oral cancer and others (further described below).

In addition, some health outcomes **MUST** be assessed and measured **ACROSS** healthcare disciplines. For instance, monitoring of blood pressure and tobacco use status/interventions are not the domain of a single healthcare discipline, but a concern for all healthcare providers. Thus, measuring how well those objectives are achieved must take a systems perspective, rather than the traditional discipline-specific perspective. We need to know whether patients have been counseled regarding tobacco use/cessation by their primary care physician, cardiologist, dentist and visiting nurse as a group, not as individual practitioners.

3. What other measures would you propose be considered to assess the meaningful use of EHRs by your specialty, and how would they align with the care goals and objectives the Policy Committee has recommended?

A sample of potential measures that could be considered for assessing meaningful use (in no particular order) in dentistry includes:

- % of pediatric patients who receive caries-preventive interventions, such as fluoride varnish or sealants
- % of patients who are seen at patient-specific recall intervals
- % of high-risk patients screened for oral pre-malignant lesions or oral cancer
- % of patients with improving/stable/deteriorating periodontal disease
- trends for decayed/missing/filled teeth by individuals and population cohorts
- % of medications prescribed that are checked against authoritative medication/allergy list for interactions/contraindications
- % of patient referrals made as a consequence of potential oral-systemic health interactions, such as periodontal disease -> low pre-term birth weight or periodontal disease -> cardiovascular disease
- % of systemic conditions, such as diabetes, cardiovascular disease and hematologic disorders, discovered in the course of dental diagnosis/treatment

This list is by no means inclusive and should be defined by a panel representative of the dental profession. It should be grounded in best available scientific evidence as well as practical feasibility.

4. What are other EHR adoption barriers unrelated to the definition of meaningful use, that affect providers like you? What solutions would you recommend to address those issues? What would your role as a provider be in this solution?

Multiple barriers unrelated to the definition of meaningful use for HIT adoption in dentistry exist. Several of those have been articulated in a letter from Dr. Richard

Valacovic, Executive Director of the American Dental Education Association, to Dr. David Blumenthal dated 6/26/2009 (attached). The adoption barriers identified in that communication include:

- lack of support for HIT implementation in the HITECH Act for dental schools and their clinics
- non-applicability of Medicare-based EHR initiatives for dentists, since Medicare covers virtually no oral health care services
- difficulty of achieving the 30% Medicaid population requirement for Medicaid EHR initiatives by dental schools and their clinics
- absence of certification standards for dental EHRs

Additional barriers that impede EHR adoption within the dental care system include:

1. Non-applicability of the HITECH Act to the vast majority of dental practitioners in the United States: Dental schools and Federally Qualified Health Centers (FHQCs) are often the providers of last resort for the underserved covered by Medicaid. Most dental practitioners do not provide care for Medicaid patients. Thus, the provisions of the HITECH Act are structured in a way to make most dental practitioners, who provide most of the dental care in the US, ineligible for EHR incentives.
2. Dearth of standards for patient information: At present, the only standard for patient information widely used in dentistry is the Current Dental Terminology, a controlled vocabulary for dental treatment procedures maintained by the American Dental Association. No other generally accepted dental vocabulary, for instance for diagnoses, findings and test results, exists.
3. Varying information coverage by electronic dental records: As a recent study found<sup>2</sup>, electronic dental records vary considerable with respect to the patient information they accommodate. Such variation makes the application of general process and outcomes measures difficult.

Given the fact that the provisions of the HITECH Act are fixed, the potential for recommendations to address the larger issue of EHR adoption in dental care and the subsequent improvement of oral health in the nation are limited. Within the framework of the HITECH Act and the given timeframe, three recommendations appear to make sense:

1. Develop meaningful-use measures compatible with and complementary to the current framework to support the assessment and monitoring of important oral health outcomes;
2. Pursue the development of a certification process and certification of one or more dental EHR products;
3. Work with relevant stakeholders to determine how dental schools and FHQCs can meet eligibility criteria for EHR incentives within the HITECH Act.

---

<sup>2</sup> Schleyer T, Spallek H, Hernandez P. A qualitative investigation of the content of dental paper-based and computer-based patient record formats. J Am Med Inform Assoc 2007;14(4):515-26.

**Acknowledgments**

The authors acknowledge the contribution of several organizations and individuals in the preparation of this testimony, including Chris Fox and Michael Kalutkiewicz (American Association of Dental Research), Rick Valacovic and Jack Bresch (American Dental Education Association), Elsbeth Kalenderian (Harvard University), and Tanja Bekhuis and Humberto Torres-Urquidy (Center for Dental Informatics).



June 26, 2009

Dr. David Blumenthal  
National Coordinator for Health Information Technology  
200 Independence Ave., S.W.  
Suite 729D  
Washington, DC 20201  
Submitted electronically to: [MeaningfulUse@hhs.gov](mailto:MeaningfulUse@hhs.gov)

Re: "Meaningful Use," Comments on June 16, 2009, Draft Definition

Dear Dr. Blumenthal:

I am writing to express the concerns of the American Dental Education Association (ADEA)<sup>1</sup> and its members with regard to the draft Meaningful Use Matrix being considered by the HIT Policy Committee and the HIT Standards Committee.

The draft highlights ADEA's greatest concern with the HITECH Act; that is, for all practical purposes providers of oral health care services and their patients are completely overlooked with respect to the funding, implementation, and operation of the nation's HIT infrastructure. The Objectives and Measures in the Matrix are inapplicable to these providers and the services they furnish. Furthermore, nothing in the Meaningful Use Workgroup's comments accompanying the Matrix, or any HHS or ONC comments we are aware of, sheds any light on how "meaningful use" might be defined or measured with respect to oral health care providers or their services. In fact, to date there is complete silence regarding how oral health care providers, academic dental institutions and their clinics, and dental patients will participate in and benefit from the nationwide HIT infrastructure that the HITECH Act is designed to create.

The lack of any meaningful focus on oral health care in the HITECH Act also is evidenced by the fact that the Act provides no incentives or financial support for EHR implementation by U.S. dental schools or their clinics. Without such incentives or other financial support, many dental schools and their clinics will be forced to delay, and perhaps forego completely, implementation

<sup>1</sup> ADEA represents all 58 dental schools in the United States, in addition to more than 700 dental residency training programs, nearly 600 allied dental programs, and the more than 12,000 faculty who educate and train the approximately 50,000 students and residents attending these institutions. It is at these academic dental institutions that future practitioners and researchers gain their knowledge, where the majority of dental research is conducted, and where significant dental care is provided. ADEA member institutions serve as dental homes for a broad array of racially and ethnically diverse patients, many of whom are uninsured, underinsured, or rely on public programs such as Medicaid and the Children's Health Insurance Program.

The mission of the American Dental Education Association is to lead individuals and institutions of the dental education community to address contemporary issues influencing education, research, and the delivery of oral health care for the improvement of the health of the public.

2009-10 BOARD OF DIRECTORS

Ronald J. Hunt, D.D.S., M.S. President	Charles N. Bertolami, D.D.S., D.Med.Sc. Immediate Past President	Sandra C. Andrieu, Ph.D. President-elect	Diane C. Hoelscher, D.D.S., M.S. Vice President for Faculties	Barbara Nordquist Vice President for the Corporate Council	Lily T. Garcia, D.D.S., M.S., FA.C.P. Vice President for Sections	Todd E. Thierer, D.D.S., M.P.H. Vice President for Hospitals and Advanced Education Programs	Maria C. Cordero, D.M.D. Vice President for Students, Residents, and Fellows	Susan J. Crim, M.Ed., Ph.D. Vice President for Allied Dental Program Directors	John N. Williams, D.M.D., M.B.A. Vice President for Deans	Richard W. Valachovic, D.M.D., M.P.H. Executive Director
--	---	--	--	--	--	---	--	--	--	--

of EHR technology for the foreseeable future. That result would undermine achievement of the HITECH Act's goals, particularly in the following ways:

1. If the nation's dental schools and their clinics cannot implement EHR technology contemporaneously with the rest of the nation's health care system, the historic gap of care coordination between patients' oral health care providers and their other health care providers will become far more difficult to bridge. Conversely, if use of EHR technology becomes the norm in the nation's dental schools and their clinics, upcoming generations of oral health care providers will learn that use of such technology to coordinate care with their patients' other health care providers is not simply helpful but actually essential to the provision of the highest quality of care. As you know, a core goal of the HITECH Act is to improve care coordination, and bridging the historic care coordination gap between oral health care services and other health care services is critical to achieving that goal.
2. Delays in EHR implementation by the nation's dental schools and their clinics will have a disproportionately adverse impact on indigent patients, because dental schools and their clinics typically are the safety net providers of oral health care in their communities. As you know, indigent patients tend to be at higher risk for all health care issues, including oral health care, so coordination of care for these patients is especially critical. Many of the HITECH Act's goals focus on improving the quality of care for indigent patients and eliminating health care service disparities for such patients. If U.S. dental schools and their clinics are not active participants in the nation's HIT infrastructure, it is difficult to see how those goals could be achieved with respect to oral health care for indigent patients.

It is possible a dental school could receive some financial support for EHR implementation through assignments of EHR incentives from qualifying dentists practicing at the dental school or its clinic. That, of course, would require HHS to adopt a "meaningful use" definition with Objectives and Measures that are applicable to, and achievable by, dentists working in dental schools or their clinics. However, even if such a "meaningful use" definition existed today, the practical reality is that most dentists practicing at dental schools or their clinics will not be able to qualify for any EHR incentives for the following reasons:

- No Medicare EHR incentives for dentists. The HITECH Act Medicare EHR incentives for eligible professionals are based on a professional's annual Medicare charges. Since Medicare covers virtually no oral health care services, dentists typically have no Medicare charges, and thus they cannot qualify for any Medicare EHR incentives.
- The 30% Medicaid population requirement for Medicaid EHR incentives is not achievable for most dentists working in dental schools or their clinics. As mentioned above, the nation's dental schools and their clinics typically are the safety net providers of oral health care in the communities they serve, and as a result they furnish oral health care services for a very large percentage of the Medicaid and indigent patients in their communities. Notwithstanding that fact, virtually no dentist working in a dental school or its clinic has a patient population that is at least 30% Medicaid and indigent patients, because every dental school and its clinics must serve a large population of non-Medicaid and non-indigent patients to generate revenue needed to offset a portion of the substantial annual shortfall between tuition revenues and school operating and capital costs. Thus, even if a dental school and its clinics furnished the vast majority of all oral health care services required by Medicaid and indigent patients in the school's

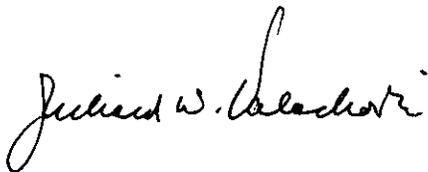
community, it is unlikely that any of the school's dentists would satisfy the 30% Medicaid population requirement to qualify for Medicaid EHR incentives.

- EHR certification standards are likely to delay, and possibly eliminate, EHR incentives to dentists. There is a serious possibility that certification for dental EHRs will take longer than certification of other EHRs **because no dental EHR available today has been certified as interoperable under current interoperability standards.** Thus, even for the few dentists who may be able to meet the 30% Medicaid population requirement and other Medicaid EHR incentives requirements, delays in certification of dental EHRs will reduce the amount of time dentists have to qualify for Medicaid EHR incentives. Given the significant time typically necessary to implement EHR technology, any delays in the certification of dental EHRs could preclude any dentist from qualifying as a "meaningful user of certified EHR technology" in time to obtain any Medicaid EHR incentives.

Based on the foregoing, it is likely that few dentists will qualify for any EHR incentives under the HITECH Act. As a result, most dental schools and their clinics will receive little, if any, financial support for EHR implementation based on assignments of EHR incentives from qualifying dentists. That fact is further evidence of why ADEA and its members believe your office must act now to ensure that oral health care providers, academic dental institutions and their clinics, and dental patients are not excluded from participating in and benefiting from the national HIT infrastructure contemplated by the HITECH Act. ADEA is convinced that the issues and concerns identified in this letter can be addressed, and we want to work with you to accomplish that objective as quickly as possible.

The American Dental Education Association has submitted a written request, through its counsel, for a meeting with you to discuss these matters. A representative of ADEA will contact your office shortly regarding that meeting. If you have any questions regarding this letter, please contact Jack Bresch, Associate Executive Director and Director of the ADEA Center for Public Policy and Advocacy, at 202-289-7201 or at [breschj@adea.org](mailto:breschj@adea.org).

Sincerely,

A handwritten signature in black ink, reading "Richard W. Valachovic". The signature is written in a cursive style with a large, looped initial 'R'.

Richard W. Valachovic, D.M.D., M.P.H.  
Executive Director

cc: Deans of U.S. Dental Schools  
ADEA Board of Directors  
ADEA Legislative Advisory Committee