**American Medical Informatics Association**
*The professional home for biomedical and health informatics*

April 30, 2009

James Scanlon
Deputy Assistant Secretary
Office of Science and Data Policy, Office of the Assistant Secretary for Planning and Evaluation
DHHS Humphrey Building, Room 442-E 200 Independence Avenue, S.W.
Washington, DC 20201

Reference: National Committee for Vital and Health Statistics (NCVHS) Hearings on "Meaningful Use" of Health Information Technology

Dear Mr. Scanlon:

As the President and CEO of the American Medical Informatics Association (AMIA) and on behalf of AMIA's Board of Directors, I am pleased to submit these comments on behalf of the Association regarding "meaningful use" of Meaningful Use" of Health Information Technology.

AMIA is the professional home for biomedical and health informatics and is dedicated to the development and application of informatics in support of patient care, public health, teaching, research, administration, and related policy. AMIA seeks to enhance health and healthcare use through the transformative use of information and communications technology. AMIA's 4,000 members advance the use of health information and communications technology in clinical care and clinical research, personal health management, public health/population, and translational science with the ultimate objective of improving health. Our members work throughout the health system in various clinical care, research, academic, government, and commercial organizations.

We applaud the Committee's efforts to oversee this important national and public discourse. We are pleased and not surprised that a number of those who will be offering testimony are among AMIA's membership, including two of our board members. AMIA stands ready to work collaboratively with the Department and other organizations to address these complex public policy issues. If I can answer any questions for you, or offer testimony on this subject at any future events, please feel free to contact me at detmer@amia.org or 301 657-1291.

Sincerely,

Don E. Detmer, MD, MA
President and CEO

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**National Committee for Vital and Health Statistics (NCVHS) Hearings on 'Meaningful Use' of Health Information Technology**
**April 28-29, 2009**

## Introduction

While there has been a slow but steady increase in adoption of EHRs by the healthcare community, this increase should now accelerate given the funding being made available for this purpose through the American Recovery and Reinvestment Act (ARRA) of 2009. ARRA offers the nation its most valuable opportunity to date to benefit care delivery and health outcomes. The volume of health data collected and stored in electronic health records (EHRs) will dramatically increase and, as a result, also increase the potential for EHRs to improve clinical care and decision-making and at the same time to advance public health activities such as surveillance, measurement of outcomes and performance, research, and public policy.[1] However, implementing an EHR does not necessarily equate with effectively using the system's available functions nor does adoption necessarily achieve or ensure actual changes in either clinical practice or patient outcomes. The challenge facing us is to implement EHRs to drive predictable improvement in health outcomes within and across multiple settings.

**Premises and Assumptions.** The following premises apply:

- Quality and performance measurement, reporting, and ongoing improvement require the foundation of an interoperable health information system including the use of electronic health records with evidence-based clinical decision support (CDS) systems within learning care systems.
- Only through a sound infrastructure can we improve care across the continuum of providers and care settings. There has been limited diffusion of electronic health record systems with the capacity for widespread performance measurement and improvement. The lack of broader adoption of these systems has been due in part to limited incentives to providers.
- Achieving desirable levels of patient safety and centeredness, care quality, and cost-effectiveness requires consistent, systematic, and comprehensive application of available health-related knowledge using EHRs with clinical decision support (CDS) and a knowledge base that is maintained to assure that CDS capabilities reflect current best practices.
- EHRs are an evolving technology, with good applications currently available but substantial improvements and enhanced interoperability anticipated over time. Thus, the notion of "meaningful use" is itself best viewed as an evolving concept, with today's reasonable expectations more limited that what we are likely to achieve or mandate in five or ten years.

**"Meaningful Use" Should Focus on Process and Care Improvements Over Time.** AMIA subscribes to the principles of the Institute of Medicine (IOM) Quality Chasm Report regarding the aims for quality care, e.g., care that is safe, timely, equitable, efficient, effective, and patient-centered. Value-driven care must focus upon both evidence-based practices and policies that support the needs and wishes of individuals and populations.[2] This requires the development of learning healthcare systems.[3,4,5] Such systems can assure the continuous capacity to improve themselves through teamwork, practicing to the

best standards of the day, keeping the patient at the center of care, reinventing care processes capable of assuring superior outcomes for individuals, and accomplishing these ends through the use of informatics.[6] Achieving "meaningful use" involves multiple activities and, if done right, will also help to address population and public health needs, in addition to the needs of individual patients. For example, meaningful use can help to identify through geo-coding an entire population in terms of healthcare services and needs and not only those who show up for care in an emergency room or clinical/hospital. This requires a learning culture that becomes comfortable with change as a routine part of practice and as a system feature.

**Develop and Implement a Robust Definition and Application of "Meaningful Use."** We are now witnessing profound insights into health and disease through technological advances in biomedicine, research, and healthcare as well as in health information and communications technology (HICT). This is certain to continue as the basis for biomedicine shifts from organs and systems to molecules. Thus, our collective expectations of EHRs (capabilities and functions) today in 2009 and then in 2011 are less stringent than we would expect them to be by 2015. It is accordingly critical to develop and apply a definition of "meaningful use" that is robust and suitable for the period when it is being applied, and then to define evolving criteria to determine/measure meaningful use over time. "Meaningful use" must include those features of EHRs that are needed to assure the achievement of these qualities and capabilities. It is apparent that this is a very high expectation. Today, EHRs will not be able to assure all of the functionalities and outcomes that we know will be feasible in time, but we must proceed from a perspective of high yet realistic expectation at the start to assure that such goals can be achieved over time. Thus, the Secretary should focus attention on additional research and evaluation to assure ongoing refinement of the concept of "meaningful use" including uses relevant to public sector reporting.

**EHR Functionality and Capability**. In short, no EHRs should be developed, implemented, or supported that are incapable of evolving into more robust versions capable of "meaningful use" as defined above. Initial EHR implementations should result in the use of as many functions as are needed to assure immediate value for enhanced care.[7] The required functions to comply with "meaningful use" could be phased in as long as there are mechanisms and processes in place that assure continuing progress and improvement toward the meaningful use identified above. It is necessary to look ahead to the potential impacts of the future evolution of EHRs, advances in technology and communications capabilities, forthcoming biomedical research, and large scale, population-based genomic studies that will generate vast amounts of data. The emerging patient-centered medical or health home is becoming a concrete implementation model for achieving the IOM healthcare vision, and it uses a scaled approach such as we are advocating here. Functions and capabilities for EHRs could include:

- Support for clinical practice
  - Improved patient care through communications and documentation, both within a practice and with other practitioners caring for the same patient
  - Improved office efficiency through process improvements
- Data recording and results reporting
  - Improved data use and re-use capability for making multiple uses of the data that has been entered without requiring re-entry or translation
  - Basic interoperability capabilities, using standards to support exchange of electronic health record (EHR) information between EHR systems from different vendors

  - Cognitively sensitive features for reviewing and sharing results
  - Movement of EHR data into a repository capable of tracking clinical processes and outcomes
- Quality metrics reporting and quality measurement results, helping to assure the effective implementation of best current evidence
  - Measurement of improvements in health outcomes
  - Evaluation of outcomes and revision/improvement of processes
- Create and implement/deliver evidence-based workflow guidelines for decision-support
- Implement workflows that assure high quality and efficient processes
- Implement uniform care processes where applicable and appropriate
- Public health reporting

**Establish Approaches to and Measures of Meaningful Use.** Continued research and evaluation are needed to determine those EHR functions and capabilities that will assure value and benefits and thus, can reliably provide meaningful use.[8] One set of measures could address breadth of use, such as percent of clinicians, percent of beds, and percent of transactions. Another set of measures could address the ways in which EHRs are being demonstrably used to support important aspects of care, e.g., medication safety, patient transitions, quality and process improvement, or public health reporting.

"Meaningful use" is different from "certified (EHR) products." Although we support the concept of EHR product certification, such as the approach undertaken by the Certification Commission for Healthcare Information Technology (CCHIT), we believe that certification is not sufficient as a criterion for "meaningful use." Any EHR used should be certified through a suitable process, but "meaningful use" implies attention to how an EHR is implemented and used for patient care and health promotion. For example, decision support capabilities should not simply be "present" in an implemented EHR but should be tested against an external standard, such as the Leapfrog test, which verifies that specific elements of decision support are in place and in use. Consistent with the National Academies' Report on Computational Technology for Effective Health Care[9], the criteria should focus on clinical endpoints achieved. Future efforts should examine the relationship between, and effectiveness of, key EHR functions and performance on quality measures over time. [10,11,12] Sound approaches must be carefully developed to differentiate "real" meaningful use of EHRs from those that are not. Ongoing research and evaluation must help to strengthen insights into the effectiveness and efficiency of EHRs.

"Meaningful use" measures could include the following types of functions/capabilities:

- Demonstration that electronic prescribing includes checks for specific important drug-drug interactions
- Ability to link with other practices and hospitals
- Ability to connect to an HIE or RHIO
- Ability to support comparative effectiveness studies and research
- Linkage with clinical laboratories for test ordering and results
- Identification of new knowledge that can influence research and patient care

**Summary**

The adoption and meaningful use of EHRs is pivotal to strategies aimed at strengthening the U.S. health system. We urge the Secretary of DHHS to recognize the growing and compelling potential of informatics tools and techniques to contribute to a more robust evidence base about what "works" as we assess the functionality of EHRs and seek to assure their "meaningful use." The potentially transformative power of EHRs rests with the increased availability of data that we can assess in order to enhance clinical and preventive care, knowledge building, and evidence creation. The motivation lies with what the technology can and must do for the nation's health and healthcare—not with the technology itself.

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