National Committee on Vital and Health Statistics

Observations on "Meaningful Use" of Health Information Technology

Introduction and Purpose

HITECH[1] presents a unique opportunity to support improvements in quality, efficiency, and safety of health care delivery and enhance the health status of the population – through people and organizations making meaningful use of certified EHR technology. However, two critical concepts, "meaningful use" and "certified EHR technology," require precise definition to ensure that the payment incentives[2] contribute to achieving the goals of improving health and transforming health care.

The National Committee on Vital and Health Statistics (NCVHS)[3] held a hearing[4] on April 28-29, 2009 to learn from a broad spectrum of stakeholders their views of "meaningful use." Stakeholders represented patients, and more broadly consumers; providers; the public health community; public and private payers; vendors; and certifying entities. A report[5] on the hearing was delivered May 15, 2009 to the Office of the National Coordinator on Health Information Technology (ONC). Subsequently, the National Coordinator requested NCVHS to reflect on the testimony by supplying observations. This document describes the extent of common vision and directions expressed in (oral and written) testimony, noting where alternatives or options were offered by different stakeholders, and identifying where there may be gaps or areas not fully discussed or commented upon.

NCVHS believes it is critical to always keep sight of the vision for health and health care reformed that is the purpose for adopting and making meaningful use of EHR technology. The following overarching themes provide the context for the more detailed observations that follow:

- The primary goal of HITECH is to improve the care of individuals and the health status of the American population.
- Achievement of the vision of health and health care transformed requires the dedication of people and organizations – all stakeholders – to focus on ensuring patient-centered, coordinated, quality care. Use of EHR technology is a means to that end.
- For adoption and meaningful use of EHR technology to occur, EHRs must have specific functionality known to improve health care and manage population health, as well as have a high degree of usability and capability for supporting quality measure reporting.
- The criteria for meaningful use should focus on achieving the ultimate vision, be clear and simple, measureable through metrics that are easy to report, adaptable to various provider characteristics, auditable, assure privacy and security, and reflective of EHR functionality that makes use easy for all intended users.
- The approach to adoption of meaningful use of certified EHR technology should evolve along a clear roadmap, progressively

[1] American Recovery and Reinvestment Act (ARRA) of 2009, Division A. Title XIII – Health Information Technology and Division B. Title IV – Medicare and Medicaid Health Information Technology; Miscellaneous Medicare Provisions are collectively cited as the Health Information Technology for Economic and Clinical Health (HITECH).

[2] Medicare and Medicaid incentives are provided for adoption and meaningful use of certified EHR technology by eligible professionals and eligible hospitals under the American Recovery and Reinvestment Act (ARRA) of 2009.

[3] See Appendix A for membership of NCVHS

[4] The hearing agenda and testimony supplied electronically are available at: http://www.ncvhs.hhs.gov/090428ag.htm

[5] The NCVHS Report on Meaningful Use is available at: http://www.ncvhs.hhs.gov/090518rpt.pdf

expanding upon requirements from an initial set of functional characteristics to those that support the ultimate vision.

Observations

In general, testifiers expressed considerable commonality in a vision for the future of health and health care. They acknowledged many challenges in the current state of EHR adoption and capacity for health information exchange (HIE) and quality reporting functionality. Testifiers offered varying thoughts on potential trajectories to achieve the goals for healthcare reform through meaningful use of health information technology (HIT). Testifiers found it more challenging to describe specifics relative to attributes for EHR certification and mechanisms for measuring meaningful use.

Common Directions

A common vision, consistent with the HITECH legislation in which the "Secretary shall seek to improve the use of EHRs and health care quality over time by requiring more stringent measures of meaningful use…" was shared by virtually all testifiers. NCVHS observed, however, that the means to achieve the vision expressed by testifiers did include some characteristics not explicitly addressed in the legislation. These are:

1. **A focus on *use*, not technology**. The ability to achieve health and health care transformation requires a focus on how EHR technology can be used in a meaningful way. It is one thing to attest to having acquired a certified product, and it is quite another matter to reflect that the product is being used in its complete and intended manner to achieve quality outcomes, health status improvement, and control in costs. Making the benefits and value of using EHR achievable and evident from the outset will promote their use. There will be a sizeable amount of data to send to the State or Federal body designated to receive and process the measures. The metrics, therefore, need to be designed to make gathering and auditing the requisite meaningful use measures from EHRs easy. Having meaningful use measures that can be readily generated and shared with providers and individuals will demonstrate a benefit of EHR use.

   Despite the focus on *use* over technology, most testifiers noted that certification of EHR is still helpful to reduce the risk of providers purchasing products that are incapable of supporting the user in achieving the end state goals of meaningful use. Measuring and monitoring in an efficient and effective manner the implementation of certification criteria that are key to establishing meaningful use must be a major focus. Opportunities for improvement in the certification process, including those that support innovation and different provider characteristics, must also be considered.

2. ***Clear definition* and *predictable roadmap* for phased transition toward the ultimate goal**. Testifiers identified that the definition of meaningful use must be supported by a clear vision of the intended goal. That vision then needs to be translated into a predictable path for both the evolution of the technology and demonstration of meaningful use through quality measures reporting.

   There was strong sentiment for initially enabling adoption of basic EHR technology that would focus on

core functionality to achieve meaningful use. Such initial functionality includes access to problem list, medication history, and laboratory results; the ability to exchange patient summary information (e.g., through the Continuity of Care Document [CCD] standard); basic clinical decision support; registry exchange (for quality reporting and public health/population health), and privacy and security compliance.

However, for ensuring the benefits expected to be achieved by 2014, a clear and timely path is essential for moving progressively to more comprehensive EHR systems with more advanced clinical decision support and registry functionality inherent within the system. Vendors stated they need as much as 18 to 24 months to create and roll out product enhancements and providers often take at least 18 to 24 months to implement new technology. Consequently, expectations for the "end state" and the milestones needed to reach that state should be set early.

Likewise, there is a development lead time for clinical quality measures. Testifiers observed that there was considerable merit in initially identifying a small number of quality measures for reporting that could make a significant difference in achieving the vision for health and healthcare transformation. A roadmap should be established for quality measure reporting where more advanced measures increasingly rely on clinical data from EHRs and ultimately demonstrate quality improvement.

3. **Support for *patient-centric* and *coordinated* care.** Testifiers described that EHRs today need additional functionality to effectively support patient-centered care, care coordination, and population/public health management. For example, bi-directional data exchange and registry functionality are needed to provide feedback to both patients and providers and support coordination of care. At the point of care, such functionality supports chronic disease management and preventative care. Self-populating registries are also needed to manage population/public health and to evaluate and make quality transparent. EHRs today lack the ability to exchange data across the continuum of care – including across public and private sectors of care. NCVHS also observed that testifiers stressed that better health does not necessarily result from more care or technology. Testifiers described a number of elements needed to achieve quality, safety, access, cost, and efficiency improvements. These included payment reform and the need to address policy and regulatory hurdles.

4. **Essential standards exist but leadership and help are needed in their adoption**. Testifiers at this hearing and from previous work of NCVHS have observed that basic data content, format, and communication standards exist today to support much of the desired EHR functionality. There is, however, a need for better harmonization of these standards and for vendors to follow the implementation guides more reliably. It was observed that the U.S. does not have a good track record of HIT adoption. Conformance standards and testing are lacking. Leadership and training are needed to support adoption of EHRs by providers. Put another way, making products ever more comprehensive, complex, and

customizable may defeat the purpose of HITECH. Instead, products need to be standards-based, usable, and enable demonstration of meaningful use.

5. **Privacy and security polices must be an integral part of the definition of meaningful use**. Testifiers agreed that public trust in the adoption and meaningful use of EHR and HIE technology requires clear privacy and security policies. Testifiers observed that today's laws are based on point-to-point transactions and fragmented systems. In order to support the benefits that can be derived from technology's capabilities to "collect data once and use many times", these laws must address the need for transparency and data stewardship. Changes are needed to ensure consistent approaches to privacy, upfront assurance of security, and severe penalties for breaches. Technology and conformance with its use must support strong privacy and security protections, including data integrity, audit capacity, and alerts to data breaches.

Multiple Options

As NCVHS reviewed testimony, it observed that testifiers offered multiple options for some of the approaches to defining meaningful use of EHR technology. These include:

6. **Recommendations for phases were varied**. While there was strong support for phasing adoption and meaningful use, a wide range of recommendations were cited for where to begin and for the timeline. For example, some testifiers recommended initiating incentives for use of scanned images and Level 1 or 2 of the Continuity of Care Document (CCD) standard for patient summary information; while others emphasized the importance of having structured data to support the definition of "qualified EHR" as described in HITECH.[6] Some testifiers suggested that the criteria for incentives be staged such that all components of qualified EHR may not need to be met in 2011. Others called for an approach where qualified EHRs must incorporate all components by 2011, but provider participation in their use is implemented in a defined pathway.

7. **One size does not fit all**. Some testifiers suggested that basic functionality and reporting requirements standardized across all settings can facilitate improvements in care and will streamline the reporting and feedback process. The majority of testifiers, however, believed there were significant differences between ambulatory care and hospital use of HIT, among specialties, and across sizes of organizations – reflecting the need for separate pathways to qualify for incentives.

8. **Registry versus registry functionality.** Both "registry" and "registry functionality" were referenced by testifiers, in some cases synonymously. A registry is typically a database managed by a separate organization to which providers submit data. Some registries do not supply data directly back to the provider (e.g.,

[6] HITECH defines qualified EHR as "an electronic record of health-related information on an individual that includes patient demographic and clinical health information, such as medical history and problem lists; and has the capacity to provide clinical decision support; to support physician order entry; to capture and query information relevant to health care quality; and to exchange electronic health information with, and integrate such information from other sources."

communicable disease registry where public service announcements may be the only response). Some registries may supply the capability only to view data (e.g., an immunization registry for school verification). Other registries enable queries to be pulled from the database (e.g., diabetes registry for patient follow up). Registry *functionality* generally refers to the ability for the EHR's database to collect necessary data in structured form and to process it into real time reminders about chronic care or preventative services and to generate recall lists. Testifiers noted that HIEs may be in the best position to supply a registry service; but EHRs also need greater registry functionality.

9. **Current claims-based reporting versus other means of reporting.** While testifiers acknowledged that more value could be leveraged from claims data by supplementing them with clinical data, it was also recognized that more robust reporting of clinical quality measures being promoted by the National Quality Forum (NQF) would be needed to achieve the ultimate goal of health and health care transformed. In addition, while *reporting* quality measures is obviously the first step in demonstrating meaningful use of EHR technology, there ultimately must be a demonstration of quality *improvement*.

Gaps in Testimony

NCVHS observed a strong sense of testifiers' desire to push forward with improvements and to look to HIT to serve an important role in transforming health and health care. However, NCVHS observed some gaps in specifics. These include:

10. **Definition of exchange.** There needs to be clarification in defining what constitutes "exchange" as one of the qualifications for EHR technology. Testifiers described that there is often not even the ability for disparate systems *within* an organization to communicate easily with one another. Some testifiers observed that independent providers using the same product cannot interoperate automatically. Although many reserve use of the term HIE to reflect participation in a formal organization that supports exchange across disparate entities and products, there are significant variations in availability of HIE organizations to providers and in what exchanges these organizations facilitate. Some focus on payer/provider exchange of eligibility, claims, and other financial and administrative information; some focus on e-prescribing; and others offer a network with a master person index and record locator service for sharing clinical data. What constitutes meaningful exchange must be defined, including exchange where there is no formal HIE organization and extending to a nationwide health information network (NHIN). In addition, the distinctions among being able to only view reports or data, retrieve reports or documents, pull data from the HIE for incorporation into a provider's EHR, or have data pushed to a provider's EHR are important to clarify. Likewise, the patient's ability to access, update, provide consent to share, and operate on data, are important aspects of meaningful use.

11. **How to define implementation requirements of certification criteria to ensure meaningful use and usability.** Under the current certification process, EHR systems

are evaluated against detailed certification criteria to determine that specific functional capabilities are met. Although present certification criteria do not include all capabilities for ensuring the goal of health and health care improvement through meaningful use, studies have found that not all capabilities that exist and are key to establishing meaningful use are actually activated or used after implementation. While not providing specificity, testifiers suggested that a selected group of functional capabilities would need to be identified and expected to be implemented upon adoption (including those for registry functionality, clinical decision support, quality measurement, security and privacy, and health information exchange).

12. **How to measure use of clinical decision support.** The definition of a qualified EHR includes "capacity to provide clinical decision support." Testifiers observed that "capacity to provide" is different than "being implemented," which is also different than "being meaningfully used" on a consistent basis. To ensure meaningful outcomes, the right clinical decision support used in the right manner is required. While there is an opportunity for a pathway for clinical decision support, implementing an incentive program that includes use of clinical decision support requires explicit definition of the pathway, metrics for reporting, and specific goals that are expected to be achieved.

13. **Focus of testimony on eligible professionals rather than on eligible hospitals.** A large portion of the discussion at the hearing and in subsequent written testimony was focused on use of EHR technology by physicians and other eligible professionals. Very little attention was focused directly on hospital capacity, and how hospital quality reporting "using certified EHR technology" would be achieved. In hospitals today, core quality reporting measures are largely abstracted manually from paper and even from electronic systems. Better understanding of hospital EHR capacity is needed to ensure hospitals also are eligible for the incentives. In addition, recent studies have suggested that hospitals' adoption of the type of functionality described for "qualified EHR" may be less than physician offices' adoption of the same functionality.

14. **Capacity for Personal Health Record (PHR) use in underserved populations.** There was strong emphasis in testimony for patient-centered care and care coordination, with the need for patient information to be accessible and shared by patients through PHRs. However, availability and usability of PHRs for the underserved also must be addressed.

15. **Specific means for quality measures and quality improvement reporting.** There appeared to be consensus among testifiers to focus quality reporting initially on a small number of key measures. However, there was not consensus on whether there should be multiple options or only one option for reporting quality measures. There was also lack of specificity on which measures may be key, which measures might next be important, and how to measure and report quality improvement, especially as quality improvement measurement may depend on exchange of information across the

continuum of care and on patient reporting, perhaps through a PHR.

16. **Specific means to measure compliance with privacy and security**. Ensuring that privacy and security are an inherent part of the definition of meaningful use of EHR technology was emphasized by testifiers. However, there was not guidance on how compliance with privacy and security requirements – especially when new requirements under HITECH with respect to EHR are included – could be measured, particularly for health information exchange.

17. **Specific means to measure reporting functionality**. The importance of exchanging information for both traditional public health reporting, as well as quality measurement, was emphasized by testifiers; however, specifics on how the definition of meaningful use can contribute to public health's responsibility for assuring accountability of the health care system and improving population health were lacking.

Summary

In summary, NCVHS observes strong agreement among those providing testimony that a phased approach is needed to achieve adoption and meaningful use of certified EHR technology. While different strategies to such a phased approach are possible, the focus must be on the ultimate vision for quality outcomes, health status improvement, and control in costs.

At the same time, there need to be clear and predictable milestones for realistic goals within that vision, for what constitutes certified EHR technology, and for actually achieving meaningful use. This is especially true as providers and hospitals are starting from so many different points with respect to their existing EHR and exchange capabilities. Metrics used in assessing meaningful use need to be easy for providers to report, easy to process into feedback for providers and consumers, adaptable to different provider environments, and auditable. EHR technology must support interoperability for care coordination; population/public health management; and accurate quality measurement, reporting, and improvement – all the while being easy to use.

Different options were proposed for moving from basic to comprehensive EHR and HIE functionality. There is a need to accommodate eligible professionals and eligible hospitals, different specialty types, and different populations, including the underserved. The certification process must ensure flexibility and innovation, and must focus on critical capabilities for meaningful use for each set of intended users. The role of structured data in support of the definition of qualified EHR and quality measure reporting must be defined. HITECH's clarity of purpose must now be matched with clarity in mechanics.

Appendix A

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