



Health IT Policy Committee's Workgroups on Certification/Adoption and Implementation

July 23, 2013

TESTIMONY OF THE AMERICAN MEDICAL ASSOCIATION

Implementation and Usability of Certified Electronic Health Records

The American Medical Association (AMA) appreciates the opportunity to comment on usability issues associated with electronic health record (EHR) implementation, and ways the certification process can better address these issues in the future.

Aligning EHR Technology with Patient Care

Even before EHRs, the medical record has evolved into a complex repository of data required to serve a variety of purposes, including clinical quality measurements, billing, economic audits, compliance and medico-legal processes, patient communication, and others in addition to its historical role as a clinician's medical notes. EHRs have dramatically impacted this evolution as their technology holds out the alluring prospect of collecting, manipulating, analyzing, and sharing health data with a speed, sophistication, and scale previously unattainable.

For many clinicians, however, current EHR technology has created for them a conflict of priorities between caring for the human patients physically before them versus attending to the digital avatars of those patients residing in an EHR. An expanding data entry process consumes more and more effort from doctors and nurses who are then left with insufficient time to engage with and attend to the actual patient. Many of the current certified products degrade physician efficiency and interfere fundamentally with the doctor-patient relationship – and this has effects on the quality of health care and can also impact patient safety.

As an assistive and enabling technology, EHRs should be flexible enough to adapt to and ease the clinician work process, and to free the physician and practice staff to focus on the needs of the patient. With many present generation EHRs, front line physicians, nurses, and others, too often feel that they are at the service of a computer rather than the computer serving them.

Use of Structured Data

For many types of information, properly formatted structured data is of enormous value and greatly aids clinical care. Not all clinical data, though, lends itself to structured documentation.

For instance, lab values, medications, and allergies are generally universally identifiable and lend themselves to predefined lists. The ability to sort, search, graph and otherwise manipulate these types of data can be very helpful.

In contrast, the history of present illness and medical decision-making portions of the clinical record impart clarity and nuance to the patient's narrative that is lost when physicians are compelled to force complex and subtle stories, analysis, and synthetic thinking into inflexible structured data templates. Systems that force the documentation of these types of clinical information via drop-down lists and check boxes can be distracting to the physician and disruptive to vital clinical thinking and storytelling. The addition of dropdown menus, templates, and macros, when used in excess, can undermine the value of the information; standardizing away the very heterogeneity that makes each patient encounter unique and provides the detail necessary to guide direct medical care.

Therefore, we recommend a Stage 3 certification requirement that structured and non-structured data can be executed in the same patient record, allowing physicians to choose the method that better suits their clinical workflow. Physicians should have the ability to use their discretion on what clinical data lends itself to structured documentation while also taking into consideration the needs for secondary uses of data.

Data Display

The display of superfluous metadata within an EHR contributes to information overload, clutters valuable screen real estate, and provides little or no value. In many EHRs, reviewing a patient's medication history is more akin to working within a spreadsheet than a medical record. Displays containing both active and discontinued medications with all associated metadata (e.g., date started, date stopped, clinician who last updated the data, etc...) add to the excessive details physicians must wade through when working within an EHR. Given the volume of data physicians review, this is not trivial and directly contributes to mental distraction and fatigue.

Using this example, in general, only current active medication lists should be presented. Historical medications should not be displayed unless requested and inconsequential items such as IV saline flushes should not appear on medication lists. Additionally, confusing and excessive detail should be removed from drug lists. Examples include:

- Medications should appear a single time in a list, not numerous times listing all available concentrations, bottle sizes, and other confusing details. The prescriber should be able to pick the medication, dose, and route without all these excessively long and cluttered lists.
- Consult notes and patient summary notes should contain text summary information with most of the cluttering detail of physical examination notes, daily medication administration information, superfluous metadata, and other similarly unnecessary information typically removed unless actively queried.
- Diagnosis lists should be collapsed into high-level presentations without all the subtype data displayed. For example, Hypertension is sufficient without listing numerous different subtypes (essential, uncontrolled, established, etc...) that only serves to clutter the list and make it difficult to read.

While customized views are available in some systems, achieving the usability goals of effectiveness, efficiency, and satisfaction have been neglected. **Stage 3 certification requirements should robustly incorporate practicing clinician input to require that EHRs present data in a view and manner that provides current and relevant information while eliminating clutter.**

Time to Perform Routine Activities

The time physicians spend ordering prescriptions, labs, and diagnostics varies dramatically across EHRs. In most instances, however, these routine actions take significantly longer than previously done using traditional methods. Commonly performed functions, such as ordering medications, can require multiple keystrokes and mouse clicks – turning a formerly quick physician action into a lengthy and cumbersome process often previously facilitated by support staff. Additionally, routine order sets done through computerized physician order entry (CPOE) now stipulate that physicians document details already widely known and adopted through their health care organization. For example, whereas a two-letter abbreviation “SL” (i.e. saline lock) has long been sufficient for a physician to order an intravenous catheter to be placed by a nurse for a patient, some EHRs now require the physician to select from a myriad of unnecessary details and options. This level of detail is unnecessary in most situations and adds time and waste to the practice of medicine. **Stage 3 certification requirements should address user interaction issues on routine CPOE activities and require limits on the amount of time required to perform common orders.**

Measures Alignment with Physician Workflow

The requirements in the Meaningful Use (MU) program stipulate a myriad of measures and objectives that physicians must fully meet in order to receive incentives and avoid reimbursement penalties. EHRs are predominantly engineered to capture MU data and often

require additional steps outside the physicians' workflow – shifting focus away from patient care. Rural physicians who transfer care of their patients to a specialist are further limited by whether the specialist can accept electronic patient summaries. Finding an electronic “match” could perversely require a referring physician to select a specialist based on her EHR rather than her clinical skill, require a patient to travel long distances to see a specialist, or simply not be possible. In addition, regardless of their specialty, patient population, geography, or practice size, with limited exceptions, physicians are required to collect the same exact data on each and every patient even if a measure is not relevant to the patient's visit, service, or is rarely used for clinical practice. **Stage 3 MU requirements should align measures in a way that does not require physicians to perform additional actions either due to limiting factors or that are outside their patient mix. One method of alleviating this burden today is to reduce the MU requirement that physicians meet 100 percent of the measures to a more reasonable 75 percent.**

Design of Key EHR Functionalities

While we recognize that it would be difficult to field usability criteria for the entire EHR, EHRs should meet certain functional requirements enforced in the certification process. Standardizing a set of common elements will lessen the training burden on users and will lead toward an enhanced user interaction in critical, patient-safety sensitive functions. Having a universal search within an EHR, for example, could provide a natural and consistent way for the physician to interact with the EHR while maintaining the doctor-patient dialog. **Key aspects like ordering, charting, HPI review, and alerts must incorporate end-user input in their design and also be subjected to time-tests to ensure functions can be performed simply and efficiently without excess actions that waste time and resources.**

Transparency in design and certification

On the one hand, the AMA is very pleased to see physician adoption of EHRs increasing. Physicians are prolific users of technology who quickly embrace and deploy for their patients all sorts of new patient monitoring devices, diagnostic imaging equipment, advanced surgical tools, and innovative medications. EHR technology is notably different in that an incentive program was needed to overcome cost barriers and to compel use of tools still at an immature stage of development. Many EHRs physicians use today are clunky, confusing, and complex. Physicians have no problems navigating and using an iPad and surgeons operate sophisticated DaVinci robots for minimally invasive surgery, but most physicians continue to experience significant challenges using their EHR. iPads are, in fact, a terrific example where user-centered design (UCD) has been employed and has resulted in an excellent product, as evidenced by widespread voluntary uptake.

In addition to the issues just described around physician use of EHRs and the impact on workflow, physicians are challenged by the lack of a well-informed purchasing process. There is a dearth of trusted information they can use to make informed purchasing decisions. Physicians seeking to purchase EHRs commonly rely on vendor demonstrations, often lasting less than two hours, as the basis of their decision process. There is growing evidence that physicians are increasingly dissatisfied with their EHRs. Recently, the Black Book Market Research firm released new EHR data that found that 88 percent of industry experts concluded that “vendors will falter because they pushed usability issues to the back burner in order to capitalize on the incentives spoils of meaningful use achievement.” The American EHR Survey also found continued escalation in physician dissatisfaction with their EHRs. In fact, between 2010 to 2012, the percentage of doctors who would not recommend their EHR to a colleague increased from 24% to 39%, and approximately a third of all surveyed said they were “very dissatisfied” with their EHR and that it is becoming more difficult to return to pre-EHR productivity levels.

Purchasing EHRs until providers get the “right fit” – utilizing a rip-and-replace method – wastes time and taxpayer money. The AMA has learned of alarming reports that EHRs have passed certification no matter how long it takes to perform a given function; even when the system fails and needs to be rebooted. We’ve also learned of vendors shopping different Authorized Testing and Certification Bodies (ATCB), meaning, they failed to certify at one ATCB but were able to get certified by another. We appreciate that the vendor community has come together and developed a voluntary Code of Conduct for EHR developers to follow. However, while some members of the industry have voluntarily accepted the EHR Association’s (EHRA) Code of Conduct, no federal levers are in place to ensure vendors will comply with these principles. Several of the EHRA’s Code of Conduct highlight pertinent industry-wide policies, including patient safety, interoperability, and data portability, that if were required, would help protect physicians and their patients. The AMA is also pleased that ONC recently published a patient safety plan and plans to incorporate more safety protections into future certification criteria. We look forward to working collaboratively to address issues involving patient safety and the use of EHRs.

ONC is in a unique position as the regulatory agency that oversees certified EHRs to improve the certification process. We are pleased that ONC elected to include in the Version 2014 certification some initial steps towards addressing usability by requiring vendors to apply UCD to eight focus areas. While this is a step in the right direction, we believe it falls short of what is needed to ensure patient safety is adequately addressed and that physicians are purchasing systems that perform in a manner that increases practice efficiencies and meets their particular practice workflow and care needs. We disagree with ONC’s assertion in the Version 2014 final rule that, “[w]hile valid and reliable usability measurements exist, including those specified in NISTIR 7804 “Technical Evaluation, Testing and Validation of the Usability of Electronic

Health Records,” we expressed that it would be inappropriate for ONC to seek to measure EHR technology in this way.”

To the contrary, we believe that it is incumbent upon ONC to include more robust usability criteria in the certification process. The incentive program has certainly spurred aggressive EHR uptake but has done so through an artificial and non-traditional marketplace. As a consumer, the physician’s choice of products is limited not only by those EHRs that are certified but also by the constraint that all of these products are driven by federal criteria. The AMA made several detailed recommendations for improving Version 2014 certification in our [Stage 2 comment letter](#), which were not adopted, but still hold true, and we recommend ONC consider them for the next version.

Due to time limitations, we would like offer some ideas for changes that, if made today, would improve the current certification process. We recommend ONC:

- **Recommend to vendors that they not include gag clauses (that prohibit providers from sharing software problems or concerns with anyone but the vendor) in their contracts with physicians and that they post online which vendors require these terms.**
- **Recommend to vendors that they provide contractual, pre-defined specifications on data migration fees and good faith plans on maintaining certification requirements. An online list of vendors who charge data migration fees should be posted.**
- **Require vendors to report to ONC when a product has failed certification with one ONC ATCB and to make this information publicly available online.**
- **ONC should urge vendors to include independent (vs. vendor employed) physicians and other end users during the development and testing process, take into account different training levels and appropriate specialist designation, and to disclose their process for incorporating end users in design and acceptance testing. ONC should make available online information that indicates whether the vendor uses independent vs. employed physicians.**
- **Post all vendor test reports online.**
- **Work with CMS to obtain data on physician satisfaction of their EHRs which could be done through existing OMB-approved data collection vehicles such as the attestation process and the Medicare Provider Satisfaction Survey.**
- **Disseminate survey results on usability experiences based on practice size, specialty type, and geographic location and incorporate this feedback into future certification processes.**

The AMA appreciates the opportunity to share these thoughts and recommendations with the Health IT Policy Committee's Adoption / Certification and Implementation Workgroups and looks forward to staying engaged on these important issues.