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HIT-PTQ@AHRQ.hhs.gov

Agency for Healthcare Research and Quality

Attention: Rebecca Roper MS, MPH

Program Officer for Health IT and Senior Research Scientist for the Center

540 Gaither Road, Room 6000

Rockville, MD 20850

RE: Response to Request for Information: HIT-Enabled Quality Measurement

Dear Ms. Roper,

On behalf of the American Medical Informatics Association (AMIA), I am pleased to submit these comments in response to the above-referenced request for information (RFI). AMIA thanks the Department of Health and Human Services (the Department) and the Agency for Health Care Research and Quality (AHRQ) for issuing this RFI that seeks broad input on a range of topics. We appreciate AHRQ's ongoing efforts to conceptualize and implement quality measures via health Information Technology (Health IT). In providing input, we first provide general comments and then respond to several of the specific questions posed in the Federal Register.

General Comments on Coordination, Collaboration, and Quality Measurements

The exchange of clinical information through health information technology (health IT) fundamentally alters the nature of health care delivery. It helps to ensure that clinicians have accurate information about their patients' histories, enables real-time communications among care teams, improves the flow of information between providers and patients to enable shared decision-making, and provides standardized information for clinical decision support, research and quality reporting. The convergence of quality measurement with health IT, particularly interoperable electronic health records (EHRs), offers tremendous opportunities to reduce medical errors and improve care quality, but it will require heightened coordination and collaboration among stakeholders, including clinicians, administrators, patients, vendors, and policymakers.

AMIA strongly believes that health information technology can improve quality measurement. As AHRQ notes in its RFI, quality measures that depend on paper review are time consuming and often significantly delayed, making it difficult to correct course in real time. Measures based on administrative data often lack important clinical context – for example, the fact that a laboratory test was performed may be available in administrative data, but the result of that test might only be available in clinical data from the EHR. Further, health IT-facilitated quality measurement has the added advantage

of an inbuilt feedback channel to healthcare providers, often at the point of care, allowing for more actionable quality assessment and measurement, which should lead to better outcomes.

We would like to draw AHRQ's attention to two AMIA reports on use of clinical data. These reports discuss many of the benefits and pitfalls of using data from EHRs for multiple purposes, such as quality measurement, and we believe findings and recommendations are relevant as AHRQ considers these issues. AMIA's reports noted that "complex ethical, political, technical, and social issues surround the use of health data. While not new, these issues play increasingly critical and complex roles given current public and private sector activities not only expanding health data volume, but also improving access to data. Lack of coherent policies and standard "good practices" for use of health data impedes efforts to strengthen the U.S. health care system."^{1 2}

We encourage AHRQ to work with other Federal partners (such as CMS, CDC, FDA, NIST, ONC and VHA) to align and harmonize existing activities and programs, Federal and state rules, regulations and guidelines in order to help reduce barriers to appropriate quality measures data collection and reporting. In particular, the dissemination of lessons learned is critical. We urge AHRQ to consider ways to balance the benefits and value of such data collection with the need to address ongoing challenges and concerns with health IT use and usability. We continue to believe that health IT, when implemented and used appropriately, is a tool that can and will help achieve better health and health care.

A major concern is the need for potential incentives to develop and adopt quality measures, and particularly the incorporation of data collection into existing clinical and administrative workflows. AMIA believes that the inherent complexity of developing quality measures (even those enabled by health IT) may lead to implementation challenges and difficulties because quality measures can be quite difficult "to get right" – there can be a significant gap between creation of proposed measures and related code sets and the actual use. This problem actually could hamper efforts to measure quality or give the implementer a false sense of security that they have the appropriate framework for implementation.

For example, it may be conceptually feasible, with current technology, to measure if every patient receiving a specialized oncology drug (e.g. trastuzumab) received the accompanying diagnostic test, or

¹ Safran C, Bloomrosen M, Hammond WE, Labkoff S, Markel-Fox S, Tang PC, Detmer DE, Expert Panel. Toward a national framework for the secondary use of health data: an American Medical Informatics Association White Paper. J Am Med Inform Assoc. 2007 Jan-Feb;14(1):1-9. Epub 2006 Oct 31.

² Bloomrosen M, Detmer D. Advancing the framework: use of health data--a report of a working conference of the American Medical Informatics Association. J Am Med Inform Assoc. 2008 Nov-Dec;15(6):715-22. Epub 2008 Aug 28.

to measure if every surgical patient received antibiotics in the appropriate timeframe before surgery. However, in other instances the technology or workflow to support a proposed measure may not have been implemented yet, or the requisite data required for the measure not captured effectively. Thus, AMIA believes that a major challenge to successful quality measure implementation is user interface design and clinical documentation and data capture workflows. We urge AHRQ to consider the expectation and ramifications of clinicians being asked to complete mandatory checklists (whether automated or not) during each patient visit in order to help contribute data to a measurement entity. Ideally, quality measures and the associated data collection should be generated as a key component of care delivery, clinical data capture, and or clinical documentation.³

AMIA recognizes the importance of determining what quality measures need to be implemented, what are gathered by whom, and by when. Integration of patient-centered measures within EHRs is a core building block for creating a higher quality, more affordable healthcare system, and is necessary to support meaningful use of EHRs. There are at least two aspects to the consideration of quality measures, even those supported or enabled by health IT; --- the need to address the “what” – the content to be measured – and the “how” – the most effective method of gathering data necessary for quality measurement. Achieving health IT enabled quality measures is a complex undertaking. A significant challenge will be the availability of the data and information needed to describe each measure.

Even if clinical records are electronic, if the data are spread across multiple clinical information systems, it is unlikely that the quality measure (or the data needed to compute the measure) are recorded similarly in each one: differences may exist in measurement units, terminology labels, and reference ranges in different systems. These differences require thoughtful interpretation, aggregation and perhaps even extraction from narrative (even if electronic) records. The electronic method of submitting quality measures will not alleviate all of the challenges of data and information acquisition. We encourage AHRQ and others to leverage the lessons learned (such as regional health information exchange, the role of electronic health records in improving quality and reducing costs, and innovations in disease management) from relevant public and private sector initiatives, such as the Beacon communities.^{4 5 6}

³ Caitlin M. Cusack, George Hripsak, Meryl Bloomrosen, Trent Rosenbloom, Charlotte Weaver, Adam Wright, David Vawdrey, Jim Walker, Lena Mamykina. The Future State of Clinical Data Capture and Documentation: A Report from AMIA’s 2011 Policy Meeting. JAMIA. In Process

⁴ Beacon Community Program Lessons Learned. <http://www.healthit.gov/sites/default/files/pdf/fact-sheets/beacon-communities-lessons-learned.pdf>

⁵ Nicole Gray Weiskopf, Chunhua Weng J Am Med Inform Assoc doi:10.1136/amiajnl-2011-000681 Methods and dimensions of electronic health record data quality assessment: enabling reuse for clinical research. <http://jamia.bmj.com/content/early/2012/06/24/amiajnl-2011-000681.abstract>

⁶ Chan KS, Fowles JB, Weiner JP. Review: electronic health records and the reliability and validity of quality measures: a review of the literature. Med Care Res Rev. 2010 Oct;67(5):503-27. Epub 2010 Feb 11. Review.

⁷ Roth CP, Lim YW, Pevnick JM, Asch SM, McGlynn EA. The challenge of measuring quality of care from the electronic health record. Am J Med Qual. 2009 Sep-Oct;24(5):385-94. Epub 2009 May 29.

We encourage AHRQ and other Federal agencies to continue to support research and demonstration projects that develop and assess quality measures based on natural language processing and structured data. Furthermore, we suggest that ongoing development and testing of proposed data standards is critical to the success of health IT enabled quality measurement. We believe that electronic health records (EHR-) EHR-based measures should be easier, less burdensome and less resource intensive to obtain and report, but a range of problems with EHR-based reporting have already emerged.^{9 10}

AMIA has previously called for 1) an enhanced research agenda to guide study into the causes, manifestations, and mitigation of unintended consequences resulting from HIT implementations; (2) creation of a framework to promote sharing of HIT implementation experiences and the development of best practices that minimize unintended consequences; and (3) recognition of the key role of the Federal Government in providing leadership and oversight in analyzing the effects of HIT-related implementations and policies.¹¹ We believe that additional study and evaluation is needed, including the assessment of how EHR-based measurement is actually impacting the clinicians being measured.

We also invite AHRQ to work with AMIA and its members to further improve standards for encoding and sharing clinical quality measures, such as Health Quality Measures Format (HQMF) and eMeasures. Such standards would facilitate more consistent and accurate measurement of clinical quality, but they depend on a host of other terminology and data standardization efforts, including efforts to standardize representation and terminology for laboratory results, problems, medications, clinical measurements and other clinical data.

We recognize that there is tremendous pressure throughout the US healthcare system to move rapidly to implement EHR-based measures and reporting, although it appears that insufficient time and effort are being allocated for proper testing and evaluation of measure definitions, measure implementation, electronic data capture, and report creation. The implementation of EHR-based measurements must consider and address the potential unintended consequences, negative impacts, and risks associated with proceeding too quickly. We are concerned that the current state of EHR-based quality measurement may be too immature and untested for immediate use in payment systems. However, we believe that

⁸ Poon EG, Wright A, Simon SR, Jenter CA, Kaushal R, Volk LA, Cleary PD, Singer JA, Tumolo AZ, Bates DW. Relationship between use of electronic health record features and health care quality: results of a statewide survey. *Med Care*. 2010 Mar;48(3):203-9.

⁹ Parsons A, McCullough C, Wang J, Shih S. Validity of electronic health record-derived quality measurement for performance monitoring. *J Am Med Inform Assoc*. 2012 Jul 1;19(4):604-9. Epub 2012 Jan 16.

¹⁰ Gold R, Angier H, Mangione-Smith R, Gallia C, McIntire PJ, Cowburn S, Tillotson C, Devoe JE. Feasibility of Evaluating the CHIPRA Care Quality Measures in Electronic Health Record Data. *Pediatrics*. 2012 Jul;130(1):139-49. Epub 2012 Jun 18. P

¹¹ Bloomrosen M, Starren J, Lorenzi NM, Ash JS, Patel VL, Shortliffe EH. Anticipating and addressing the unintended consequences of health IT and policy: a report from the AMIA 2009 Health Policy Meeting. *J Am Med Inform Assoc*. 2011 Jan-Feb;18(1):82-90.

EHR-based quality measurement could reasonably be used in pay-for-reporting programs while its full risks and benefits are being thoroughly evaluated.

Specific Questions

1. Briefly describe what motivates your interest in clinically-informed quality measures through health information technology. To what extent is your interest informed by a particular role (e.g., provider, payer, government, vendor, quality measure developer, quality improvement organization, standards organization, consumer advocate) in this area?

Our interest in the topic is based on our belief that it is critical to understand and disseminate information about the state of the art so that researchers and clinicians can put their efforts towards solving the most important quality and safety problems. AMIA is the one of the most important communities for the exchange of important ideas relevant to eMeasures, including data standards, natural language processing (NLP), data capture and privacy. Thus, our educational and networking venues are dedicated to achieving these goals and advancing the state of the art.

Part of AMIA's core mission is to help assure that information technology is used to optimally improve care with the least disruption to the clinician's workflow. In fact, health IT quality measurement is one of AMIA's core focus areas. AMIA and its members focus on several critical prerequisites to the successful development of eMeasures including: computable representation (structuring and coding) of clinical data; novel ways of capturing clinical data from patients and providers; creation of computable knowledge (i.e., "knowledge engineering"); health information exchange; and security, privacy, and confidentiality.

AMIA is an unbiased, authoritative source within the informatics community and the healthcare industry. AMIA members – 4,000 informatics professionals – belong to a world-class informatics community where they actively share best practices and research for the advancement of the field. As the voice of the nation's top biomedical and health informatics professionals, AMIA plays a leading role in moving basic research findings from bench to bedside, evaluating interventions across communities, assessing the effects of health innovations on public policy, and advancing the field of informatics.

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 delivery through the transformative use of information and communications technology. AMIA's members advance the use of health information and communications technology in clinical care and clinical research, personal health management, public and population health, 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. AMIA also helps train informatics professionals and developed the standards and curriculum for the American Board of Medical Subspecialties (ABMS) certification of physician informaticians.

2. Whose voices are not being heard or effectively engaged at the crucial intersection of health IT and quality measurement? What non-regulatory approaches could facilitate enhanced engagement of these parties?

AMIA believes that several stakeholder communities could be more effectively engaged at the intersection of health IT and quality measurement: the individuals themselves (patients, families, consumers, and/or care givers), care providers, and clinical specialists. We believe that the current and contemplated quality measures are fairly complicated and opaque to most individuals. Unlike consumer ratings for various commercial services and products^{12 13} clinical quality measures have primarily been created by and for subject matter experts (“health industry insiders”) and not for or by individuals themselves.

Quality measures, as noted in AHRQ’s July 2012¹⁴ report, also measure what’s easiest- hence the focus on diabetes, which has several, associated objective process and outcome measures. New measures must be meaningful to patients and other healthcare consumers. Friendly staff and good bedside manner- more qualitative and process-related measures- may not be significant as outcomes, but those inputs may be more meaningful to patients, and more potentially actionable, than a 93% compared to a 96% compliance rate on a particular performance measure. Moreover, there is ample evidence that consumer engagement and shared decision-making lead to better clinical outcomes, but these are rarely measured. Further, it is possible that to the extent that high price is associated with higher quality in the minds of patients, as mentioned in the AHRQ report, it is less a product of successful marketing than a failure of current quality measures to be meaningful to those to whom they should matter most (patients). More widespread deployment and use of health IT presents an opportunity for patients to inform providers and measure developers about what matters most to them. This may be an especially critical consideration with the increased availability and use of personal health records (PHRs) and patient portals.

It appears that several clinical specialists and other healthcare professionals whose performance is being measured may also be less active in quality measurement because of various factors such as the “ease of measurement” bias, slower uptake of health IT, little or no financial incentives to adopt and use health IT, and lower perceived need. There is growing recognition that quality care is achieved by a “care team”, however, all team members’ contributions to quality care may not be fully acknowledged.^{15 16}

¹² <http://www.consumerreports.org/health/home.htm>

¹³ <http://www.jdpower.com/consumer-ratings/index.htm>

¹⁴ Anderson KM, Marsh CA, Flemming AC, Isenstein H, Reynolds J. Quality Measurement Enabled by Health IT: Overview, Possibilities, and Challenges (Prepared by Booz Allen Hamilton, under Contract No. HHS2902009000241.) AHRQ Publication No. 12-0061-EF. Rockville, MD: Agency for Healthcare Research and Quality. July 2012.

¹⁵ Integrative Medicine And Patient-Centered Care
<http://www.iom.edu/~media/Files/Activity%20Files/Quality/IntegrativeMed/Integrative%20Medicine%20and%20Patient%20Centered%20Care.pdf>

For example, the current reimbursement systems and EHR incentive programs are very much primary care-physician-centric and dependent upon physician activities of engagement in care vs. recognizing the contributions of all care team members toward quality and quality measurements in achieving quality outcomes and goals. Nurse practitioners (NPs) that have independent authority to practice without the need for a designated supervising physician are not eligible to participate in the Medicare EHR incentive program. Yet these NPs may be the primary care provider responsible for the patients' outcomes. There is movement in the U.S to allow clinicians to function at the top of their license to achieve the Triple Aim of the National Quality Strategy, but current policy and regulations often do not support the strategy.

In addition, we urge AHRQ to consider greater involvement of: the biomedical and health informatics community, the computer science community and EHR vendors. Informatics researchers, academicians and practitioners are explicitly involved in various aspects of quality measures development, deployment and evaluation. Computer scientists work on novel methods for interactive computing with providers and patients. EHR developers need to be more involved to assure that their products meet stakeholder needs for quality measures and reporting.

3. Some quality measures of interest have been more difficult to generate, such as measures of greater interest to consumers, measures to assess value, specialty-specific measures, measures across care settings (i.e., measures enabled by health information exchange), and measures that take into account variations in risk. Describe the infrastructure that would be needed to ensure development of such measures.

We believe that the basic infrastructure exists to create certain quality measures of interest; current technological capabilities provide the means to collect increasingly diverse data and from disparate sources when standards are used to ensure comparability of the data. We urge AHRQ and other public and private sector partners to engage in discussions and collaborations so that the business and values cases for development of any new measures are clearly articulated. Prioritization of potential real and perceived “measures of interest” should be undertaken, and we suggest that AHRQ consider leveraging current and ongoing efforts regarding patient centered measures. As an example, it is increasingly apparent that effective transitions of care between inpatient and post-acute care settings are critically important to prevent readmissions. However, current inpatient and ambulatory EHRs do not capture measures of care coordination between these systems. Hospitals and health care systems with low readmission rates are actively coordinating transitions of care, but they are doing it manually and usually at significant cost.

¹⁶ Baker DP, Gustafson S, Beaubien J, Salas E, Barach P. Medical Teamwork and Patient Safety: The Evidence-based Relation. Literature Review. AHRQ Publication No. 05-0053, April 2005. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.ahrq.gov/qual/medteam/>

Quality measures today are often designed from the perspective of traditional models of care. We encourage AHRQ to consider focusing future efforts on outcomes measures that are harmonized with the priorities of the National Quality Strategy (such as Making Care Safer, Ensuring Person- and Family-Centered Care, Promoting Effective Communication and Coordination of Care, Promoting the Most Effective Prevention and Treatment of the Leading Causes of Mortality, Working with Communities to Promote Wide Use of Best Practices to Enable Healthy Living, Making Quality Care More Affordable and recent work by the National Committee on Vital and Health Statistics (NCVHS) on person-centered quality measurement.)¹⁷

4. What health IT-enabled quality measures, communication channels, and/or technologies are needed to better engage consumers either as contributors of quality information or as users of quality information?

The National Priorities Partnership (NPP) provides an opportunity for consumers and consumer organizations to have a voice in healthcare IT. National consumer organizations with large memberships like AARP, Consumers Union, Childbirth Connection, LeadingAge, Safe Care Campaign and Communities Joined in Action are examples of organizations participating in the NPP. Consumers, payors, providers, professional organizations and standards setting bodies come together on the NPP, making it an ideal venue for gathering information and gaining consensus on healthcare IT matters.

5. How do we motivate measure developers to create new health IT enabled quality measures (which are distinct from existing measures which were retooled into electronically produced quality measures) that leverage the unique data available through health IT? Please provide examples of where this has been done successfully. What new measures are in the pipeline to leverage data available through health IT?

Another way to motivate measure developers to use health IT might be to encourage better communication between organizations that develop measures and organizations that have expertise in advanced HIT. Measure developers who are aware of the capabilities of healthcare IT can readily develop new measures for automated recording and scoring. An example is the new “Ventilator Associated Event” (VAE) developed by several infectious disease organizations and promoted by the CDC’s National Healthcare Surveillance Network (HNSN). VAE is planned to replace Ventilator Associated Pneumonia (VAP) as a quality measure in January 2013. VAP is a manual assessment requiring interpretation of radiologic diagnoses, among many other criteria. In contrast, the criteria for VAE include ventilator settings, laboratory results and vital signs measurements, all of which are available in EHRs.

In our view, quality measurement would benefit significantly if ways were found to incentivize measure developers to create new, clinically-relevant measures based on the wealth of data already in EHRs. We

¹⁷ www.ncvhs.hhs.gov 120622lt1.pdf

believe that “retooling” old measures is the wrong go-forward approach. AMIA would be pleased to work with AHRQ and NQF to convene a conference on the topic.

6. Describe how quality measurement and “real-time” reporting could inform clinical activity, and the extent to which it could be considered synonymous with clinical decision support.

AMIA cautions that quality measurement is not quality improvement, and health IT features to enhance data capture may be different than those necessary to alter care delivery. Clinical decision support (CDS) may be used as a reminder to capture some data, but that’s different than using CDS to suggest the clinician take a different diagnostic or therapeutic direction. An inference of this question is that “real-time” reporting could not only inform, but influence clinical activity. Reminders at the point-of-care are an effective way to influence the delivery of care. It therefore makes sense that making “real-time” quality reporting at the time of pertinent clinical decision making should influence that decision. As such, presentation of data in this manner could be construed as clinical decision support (CDS).

We believe that the terms clinical decision support and real-time quality measurement are distinct and not interchangeable. Quality measures, by definition, measure outcomes for individual patients or populations- assessing the past. CDS helps providers make decisions for individual patients or populations- for their future health and well being.¹⁸ Although health IT can and does support both processes, we believe these processes need to be treated as distinct because some forms of real-time quality measurement will not be CDS and some forms of CDS will not be real-time quality measurement. For example, when real-time quality measurement is focused on measuring care processes (e.g., wait times in the emergency room, number of discharge summaries signed within 24 hours) instead of patient outcomes (e.g., mortality, number of patients given TPA within 2 hours of stroke onset) then the health IT used to support measurement of the indicators are not forms of CDS.¹⁹

We believe that AHRQ should pursue both real-time quality measurement and clinical decision support strategies. In fact, experience suggests that these two approaches are complementary and, when pursued in parallel, are particularly effective at improving quality.²⁰

7. Among health IT-enabled quality measures you are seeking to generate in a reliable fashion, including the currently proposed Meaningful Use Stage 2 measure set, what types of advances and/or strategies for e-measure generation if pursued, would support more efficient generation of quality measures?

¹⁸ CDS Collaborative <https://sites.google.com/site/cdsforpiimperativespublic/home>

¹⁹ Greg Maynard, Jason Stein Designing and implementing effective venous thromboembolism prevention protocols: lessons from collaborative efforts J Thromb Thrombolysis. 2010 February; 29(2): 159–166. Published online 2009 November 10.

²⁰ MacLean CD, Littenberg B, Gagnon M, Reardon M, Turner PD, Jordan C. The Vermont Diabetes Information System (VDIS): study design and subject recruitment for a cluster randomized trial of a decision support system in a regional sample of primary care practices. Clin Trials. 2004;1(6):532-44.

The utilization of industry standards-based terminologies and data definitions are fundamental in the dispersal of patient level data within a multifaceted healthcare system. This strategy enables measure stewards to author e-measures that align quality reporting across care settings. The utilization of these elemental building blocks is vital in the electronic capture of clinical data that has the potential to improve the overall quality of patient care.

It appears that quality measures will be developed and promulgated to enable snapshots in time for a population, but not necessarily for linear observations of individuals over time. For example, one way to create a measure would enable following a set of blood pressure (BP) measurements over multiple offices over a period of time (weeks, months or years) for an individual patient. Whether it is BP or glucose or diabetic eye exams, quality will ultimately be determined by the care that we provide to individual patients over time.

Previous studies^{21 22 23} have demonstrated that the exclusive use of payment and billing data for clinical efforts is questionable at best. As we move to be able to access data (granular, directly observed) directly from the EHR, we urge AHRQ to include measures that will enable quality assessment for individual patients over time and across different care settings. AMIA encourages AHRQ and other Federal agencies to promote EHR-based quality measurement and reporting using standardized measures that can be routinely collected during care delivery processes. In addition, AMIA suggests that further study of patient-reported quality measures deserves additional research and attention as a potential complement to measures derived from care delivery organizations and providers. AMIA also suggests that Federal efforts promote the aggregation and reuse of standardized electronic clinical information for multiple purposes, including clinical decision support, quality improvement feedback to clinicians and care teams, clinical outcomes research, and population health surveillance and planning.²⁴
²⁵

8. Many EHR, HIE, and other health IT vendors are developing software code to support measures. Tools such as the Measure Authoring Tool (MAT) were created to improve efficiencies in the process of creating and implementing eMeasures. What additional approaches might be used to enable consistent, accurate, and efficient quality measurement when using health IT?

²¹ Eckerson, Wayne W. (2002). "Data Quality and the Bottom Line". TDWI
<http://download.101com.com/pub/tdwi/Files/DQReport.pdf>

²² English, Larry P. (1999). Improving Data Warehouse and Business Information Quality. New York: Wiley Computer Publishing.

²³ Dixon, B. E., McGowan, J. J., & Grannis, S. J. (2011). Electronic laboratory data quality and the value of a health information exchange to support public health reporting processes. AMIA Annual Symposium proceedings, 2011, 322-30

²⁴ Chassin MR and Loeb, JM. The Ongoing Quality Improvement Journey: Next Stop, High Reliability. Health Affairs, 2011, 30(4), 559-568.

²⁵ Roski J and McClellan M. Measuring Health Care Performance Now, Not Tomorrow: Essential Steps to Support Effective Health Reform. Health Affairs, 2011, 30(4), 682-689.

We are learning that “re-tooling” of manual paper-based measures is not easy and often does not easily accommodate measures in an electronic format and technology supported environment. Measure developers increasingly understand the need to develop measures that are “meaningful” and support care delivery models of the future (e.g. accountable care, value based reimbursement, etc.) That said, measure developers need to intensify collaboration with vendors and providers for not only re-tooling of existing measures but for de novo measures as well. Funding for measure developers to develop de novo eMeasures must also be a high priority. Further, readily accessible and standards-based means to disseminate eMeasures, or even to support measurement as a cloud-based service should be developed similar to the work underway in this regard for CDS in the CDS Consortium’s Knowledge Portal.²⁶

We also suggest that AHRQ and other Federal agencies use their influence and regulatory authority to standardize the eMeasures that health care providers and organizations are expected to produce. All too often, different payers and regulatory bodies demand differing sets of quality measures, or the same quality measures but with different scoring criteria. We believe that this cacophony of measures often adds to cost and frustration, but not to quality or safety.

We urge AHRQ to work with ONC and other Federal partners to help develop and promulgate national technical standards for quality reporting, much like those currently used in clinical care (HL7) or clinical trials (CDISC), along with the development of a national infrastructure to accept the data used for measure reporting. AHRQ can also serve as a neutral convener for EHR and other health IT vendors (as it already does for guidelines) to encourage cooperation and adoption of standards, or provide the technical infrastructure to “translate” data from those reporting quality measures into a standardized format. Industries thrive on standards, particularly because they provide confidence in those investing in building the related resources, and this is a pre-competitive issue since all healthcare institutions have an interest in quality reporting.

AMIA is concerned that the promise of health IT to improve care quality will be unfilled until real-time clinical data entry by accountable providers into electronic systems becomes the industry standard and is adopted by the majority of clinical practitioners and health systems. This will also require development and adoption of a new generation of EHRs that incorporate a core group of standardized quality measures. AMIA members include some of the nation’s earliest designers and implementers of EHRs and early clinical adopters of EHRs, leading outcomes researchers, and health IT policy developers whose collaborative efforts can demonstrate best practices in moving to a new standard of care quality based on real-time information.

We applaud efforts to facilitate the eMeasures creation process using tools such as MAT. For health IT-enabled quality measurement to be consistent, accurate, and efficient, however, the underlying clinical

²⁶ CDS Consortium (funded by AHRQ) <http://www.partners.org/cird/cdsc>

data used to calculate quality indicators must be complete, timely, and accurate. We believe that the industry must strive for both harmonization and parsimony of measures; thus AHRQ and its Federal partners should strive to minimize the number of measures to those that make a difference in quality and don't over measure and to perform field testing.

AHRQ is in a unique position to inform and support the development and study of novel approaches for identifying, classifying, and improving data quality issues affecting health IT systems that directly and indirectly affect quality measurement. AHRQ should consider investments in research and tools that address the practical challenges associated with the quality of data captured and exchanged by health IT systems. Many public and private health care stakeholders would be interested in approaches that would lead to improvements in the consistency and accuracy of the data underlying quality indicators.

We suggest that AHRQ consider various approaches for improving the consistency, accuracy, and efficiency of quality measurement using health IT-enabled clinical data. One option is to consider implementation of a central, open resource that defines the specific quality measure and its calculation.

We are aware of at least two AHRQ approaches for publicly available resources that support improvements in quality: the National Guideline Clearinghouse²⁷ and the Clinical Decision Support Consortium²⁸. These online resources clearly define recommended best practices and the criteria for triggering an alert to encourage a best clinical practice, respectively. A similar approach could be taken with respect to health IT-enabled quality measurement. AHRQ could create shared resources that would define the calculation of numerators, denominators, and the metadata associated with quality indicators. The resource could be as simple as hosting e-measure content created by the various groups working to create open, standard definitions of quality measurement, or the resource could be more complex involving a cloud-based engine that would support remote calculation of quality measures using health IT system data. Ideally, this activity could be pursued as part of the National Quality Measures Clearinghouse, which already contains specifications for quality measures. The new work would significantly expand and enhance the specificity, structure, and feasibility of such measures.

11. What are the most effective means by which to educate providers on the importance of health IT-enabled quality measurement and how clinical information is used to support health IT-enabled quality measurement and reporting? How can providers be better engaged in the health IT-enabled quality measurement process?

We believe that additional efforts are needed to address providers' concerns, to alleviate confusion and to increase their awareness and trust of ongoing Federal initiatives. Terms and terminologies should be better explained. The use of terms across Federal agency programs should be harmonized and clarified

²⁷ National Guideline Clearinghouse: <http://guideline.gov/>

²⁸ CDS Consortium (funded by AHRQ) <http://www.partners.org/cird/cdsc>

where needed (for example, meaningful use (of health IT) may include submitting Clinical Quality Measures (CQMs) and some pay for performance programs include performance measures).

AMIA recommends that AHRQ work with various provider associations and clinical specialty societies to engage them as much as possible in developing the use and business cases to support on the importance of health IT-enabled quality measurement and how clinical information is used to support health IT-enabled quality measurement and reporting. Further we encourage the use of pilot and phased-in data collection and reporting programs that allow providers and clinicians to test their ability to report clinical quality measures. There must be “buy-in” from the start and throughout the process.

Clinicians and other healthcare professionals must trust that the quality measures they are asked to collect and/or report are valid, the process is reliable, and the evaluation is fair. We are concerned that there may still be insufficient evidence to trust current efforts. Widespread education and training will likely help but not necessarily totally overcome these challenges.

Further, AMIA believes that clinicians respond best to quality measures when they feel that the measures are likely to improve the quality of care they provide rather than just to comply with bureaucratic mandates – as such, AHRQ should engage strongly with clinicians and their representatives to ensure that proposed quality measurement approaches are relevant to clinical practice.

14. What tools, systems, and/or strategies has your organization been using to aggregate information from various EHRs and other health IT for use in quality measurement? What strategies is your organization pursuing to move toward greater automation in quality measurement?

AMIA believes that no matter how automated these measures become, they will always rely on the efforts of clinicians to enter specific data into specific locations within the EHR. We are concerned that EHR-based quality measures may reflect the ability of the provider/practice to enter data rather than the ability of the provider/practice to deliver the prescribed care or to meet the desired quality measure.

One of our members noted that the Regenstrief Institute has utilized several tools and systems to support the Quality Health First (QHF) initiative, supported by payers in the State of Indiana. The QHF project used clinical data aggregated across several health IT systems, commercial and homegrown, to calculate quality indicators for primary care and specialty physicians in the Indianapolis region. The project was supported by the use of standards such as SNOMED, LOINC, CPT, and ICD9; however aggregation across multiple systems was not easy. A team involving data analysts, engineers, data mappers (or translators), and informaticians was necessary to define processes for collating, cleaning, and linking the data prior to quality indicator calculation. The work has demonstrated the potential for health IT system data to be leveraged for more automated measurement of quality using a combination of clinical and administrative data. However, their experience has also shown that this work remains challenging even when using a clinical data warehouse and available data and information standards. We encourage AHRQ to explore additional research and development of tools and solutions for increased automation of quality measurement.

15. Please describe scalable programs, demonstrations, or solutions (domestic or internationally) that show material progress toward quality measurement enabled by health IT.

Again, one of our members noted that in over 70 communities in Indiana, more than 2,000 physicians are using the Quality Health First (QHF) Program (<http://ihie.com/Solutions/quality-health-first-program.php>) to help them identify, prevent and manage diabetes, heart disease, breast cancer, asthma, and other conditions. QHF leverages electronic clinical data for 1 million patients from a wide variety of health IT systems. The program provides intuitive reports to physicians and practices to inform both care delivery processes and action plans for individual patients. The program shows material progress toward quality measurement enabled by health IT. The Indiana Health Information Exchange which manages the program is actively working to expand and scale it to serve greater numbers of patients and providers. We recognize the Indiana is not necessarily representative of all programs; however we urge AHRQ and others to derive lessons learned from Indiana and other demonstrations.

Other AMIA members have used a variety of tools, including analytics platforms supplied by their EHR vendors, external clinical data warehouses (both self-developed and vendor provided), third-party reporting systems (such as for Premiere and UHC) and general purpose analytics tools. Any of these approaches can be successful. However, all of these approaches depend on the quality of the underlying clinical data, making accurate real-time clinical data capture documentation all the more important.

Concluding Comments

As a source of informed, unbiased opinions on policy issues relating to the national health information infrastructure, uses and protection of clinical and personal health information, and public health considerations, AMIA appreciates the opportunity to submit these comments. Again, we thank the Department for issuing this request for information. Please feel free to contact me or Meryl Bloomrosen, AMIA's Vice President for Public Policy at Meryl@amia.org, at any time for further discussion of the issues raised here.

Sincerely,



Kevin Fickenscher, MD

President /CEO