Rural Wisconsin Health Cooperative

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"Meaningful EHR Use," "Certified EHR," And "Open Source" Recommendations

The American Recovery and Reinvestment Act of 2009 (ARRA) provides for Medicare incentive payments to hospitals that can demonstrate "meaningful use" of "certified EHR technology," including for information exchange and for the submission of clinical quality measures, with definitions of these terms to be finalized by the Secretary of Health and Human Services (HHS). This paper provides a summary of published "Meaningful EHR User" definition recommendations, as well as the Rural Wisconsin Health Cooperative's (RWHC) perspective on the issues. We also address the question of whether open source EHRs are necessarily the right fit for small rural hospitals. RWHC is a cooperative of 35 rural hospitals (including 28 Critical Access Hospitals) that promotes regional collaboration for health and health care services on behalf of rural communities.

Highlights from Other Associations' "Meaningful EHR User" Recommendations:

College of Healthcare Information Management Executives (CHIME):

- Meaningful use must focus on outcomes and not mandate specific functionalities
- Phase in requirements without setting the bar too high, too early, but raise the bar over time
- Given existing obstacles, explore ways to initially exchange information other than through an HIE

The Markle Foundation:

- Primary goals need to be improving healthcare quality, reducing growth in costs, stimulating innovation, and protecting privacy; not the installation of hardware and software alone
- In the first years of implementation, meaningful use definition must optimize achievability for providers and benefits to patients and consumers, and the definition should expand over time
- Processes for certification should embed the capability for hospitals to attain meaningful use, to meet reporting requirements, and comply with security requirements
- Metrics should allow for a broad range of providers to participate
- Consumers, patients, and their families should benefit from HIT through improved and secure access

Healthcare Information and Management Systems Society (HIMSS):

- Recognize CCHIT as the certifying body for EHRs, and include Open Source and Best of Breed systems
- Publish data standards for output of EMR data, so interoperability requirements can be achieved
- Phase in criteria for meaningful use so there is reasonable time to manage the change
  - Phase 1 (2 years commencing 2011)
    - Ancillary department systems (lab, pharmacy, radiology) and a clinical data repository are in use and interfaced to the patient accounting system. Electronic documentation of a variety of clinical information. CPOE and physician documentation are optional.
    - Adoption of a combination of compliance metrics, including core measures, AHRQ quality outcomes and others
    - Hospitals electronically exchange information via scanned/text documents, or XML
  - Phase 2 (2 years commencing 2013)
    - 51% of orders entered electronically by physicians via CPOE. Electronic prescribing beyond the bounds of the hospital to external pharmacies for discharge medications
    - Hospitals electronically exchange info with external entities using HITSP standards

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- Additional QI metrics. Transmissions submitted in standardized, discrete data elements and transactions via the Continuity of Care Document (CCD)

o Phase 3 (2 years commencing 2015)
- 85% of orders entered electronically by physicians via CPOE. Closed-loop medication administration at the point of care. Clinical decision support via evidence based order sets and core measures reminders. Analysis of pharmacokinetic outcomes
- Hospitals electronically exchange information with public health entities and HIEs which are connected at least at the state level
- Additional QI metrics. Components of health information, as specified in the CCD standard, are electronically exchanged as discrete data elements

RWHC's "Meaningful EHR User" Definition Recommendations

1. CCHIT should be at least one of the certifying entities for EHRs, and certification should ensure that the certified product has the capabilities to allow hospitals to attain "Meaningful EHR User" designation:

   - Rural and small hospitals have and will continue to rely on a certifying body to help assure that they have selected a vendor with appropriate capabilities. Since CCHIT establishment, many rural hospitals have selected CCHIT certified vendors with the understanding that such certification will be required to meet future regulations. Whether or not other certification mechanisms are established, the implicit commitment that CCHIT certification is meaningful should be upheld. Rural facilities cannot afford to completely reinvest in software, hardware, installation, and training costs based on shifting conceptions of what makes an appropriate certification body.

   - CCHIT has so far struck a balance between large-hospital focused vendors and small-hospital focused vendors, with 4 of the 9 inpatient certified vendors commonly used by CAHs and other small hospitals

   - To the extent that CCHIT certification standards do not force the vendors to provide capabilities that allow hospitals to attain "Meaningful EHR User" status, such standards should be added, and CCHIT should drive increasingly higher levels of capability in coordination with "Meaningful EHR User" definition phases, including for decision support, interoperability, reporting, and security. This concept is consistent with CCHIT's current mission.

2. The information exchange requirement should be attainable by hospitals that are in states that do not have health information exchanges, and the cost and complexity of meeting the requirement should not be overly burdensome for small rural hospitals, which generally do not have any integration or interface expertise in house. Consistent with HIMSS recommendations, standards for output and input of EMR data, along with implementation guides, should be developed. Continuity of Care Document (CCD) exchange may be a good focus for this requirement. Vendor capability to produce the CCD should be driven through the CCHIT certification process.

3. Quality reporting metrics should be designed to maintain existing data submission efforts and to add those metrics that are relevant to quality and patient safety. Vendor capability to automatically capture and report on relevant statistics should be driven through the CCHIT certification process; but it should be understood that certain data, such as scanned documents or the data captured in physician dictations, will not be machine readable, so automated data capture and reporting will be initially limited. Automated quality submission statistics should be designed with a clear understanding of what will be machine readable after hospitals meet reasonable capability requirements of "meaningful use." (See Section 5). The collection of non-machine readable relevant data should continue through the current abstraction and upload process.

4. The primary goals of achieving meaningful use should be improvements in quality and efficiency; however, it should be understood that sometimes quality comes at a higher cost, especially in smaller facilities where there

is a lower and sometimes negative return on investment for clinical systems. While we agree that the installation of hardware and software alone is not the primary goal of achieving meaningful use, the migration from paper-based systems to digital systems that allow for decision support and better data collection is in our opinion a required step toward improved quality, as well as for healthcare reform. The critical issue here is to provide enough time for hospitals to phase in certified electronic systems so the hospitals' existing workflow, quality, and efficiency challenges are mitigated as a result of the implementations.

5. Meaningful use capabilities should be clearly defined and phased in over time so they are reasonably attainable and so hospitals can appropriately address vendor selection, preparation, and the workflow and quality challenges discussed above. It should be understood that "critical access hospitals" (CAHs) and, separately, "rural" hospitals have a median adoption score of 1.1 on the HIMSS EMR adoption model, whereas "general medical surgical" hospitals have a median adoption score of 2.3. Given this, it seems likely to us that if the meaningful use capability thresholds are the same for CAHs and other small rural hospitals as they are for larger hospitals, far fewer small rural hospitals will attain meaningful use and qualify for incentive benefits.

   This will likely exasperate the existing EHR adoption disparity between large and small hospitals. Also, if small rural hospitals are held to the same threshold standards, it is likely that they will have less time to devote to the workflow and quality aspects and will therefore have a higher rate of failed implementations. To address these issues, we recommend that "meaningful use" thresholds for CAHs and all other small rural hospitals be defined separately from thresholds for hospitals with more than 100 beds. **Using the HIMSS phasing recommendation as a template, we recommend the following thresholds for CAHs and all other small rural hospitals with fewer than 100 beds:**

   - Phase 1 (2 years commencing 2011)
     - Ancillary department systems (lab, pharmacy, radiology) and a clinical data repository are in use and interfaced to the patient accounting system.
     - A starter set of relevant core measures and other patient safety indicators to become incentivized rather than optional (as they currently are for CAHs). Since most data will still be paper based, continue QI data submissions through the current abstraction and upload process, but allow for automated reporting for the data that is available in machine readable form.
     - Information exchange that is attainable without the need for significant increase in integration and interface expertise in house
   - Phase 2 (2 years commencing 2013)
     - Electronic documentation of a variety of clinical information (allergies, care plans, vital signs, flow sheets, inputs and outputs, medication lists, etc.), such as through an electronic nurse documentation system. CPOE and physician documentation are optional.
     - Expansion of relevant core measures and other patient safety indicators. Incentivized participation in staff and patient perception tools (such as H-CAHPS), which are currently optional for CAHs. With nurse documentation implemented, expand automation of reporting from the EHR.
     - Information exchange that is attainable without the need for significant increase in integration and interface expertise in house
   - Phase 3 (2 years commencing 2015): Important to note that CAH benefit payments phase out after 2015, so this phase is as much to avoid penalties as to gain incentive payments. Prospective Payment System (PPS) hospitals that are meaningful users starting in 2013 will be receiving incentive payments through 2016.
     - EMAR and clinical decision support via evidence based order sets and core measures reminders, with CPOE and physician documentation still optional.

- Demonstration and reporting of quality improvements relating to the selected indicators, and expansion of indicators to achieve additional patient safety goals.
- Information exchange that is attainable without the need for significant increase in integration and interface expertise in house

By phasing in reasonable and achievable requirements, we believe that five years from now it will be possible to look back and see significant improvement relating to both EHR adoption and quality for the vast majority of small rural hospitals. If standards are set unreasonably high, without accounting for the current EHR adoption disparity between large and small hospitals, we believe the result will be that a minority of small rural hospitals will achieve the "meaningful use" standards and earn their incentives, while the majority of small rural hospitals will effectively be left behind in the HIT revolution that ARRA represents.

RWHC's "Certified EHR Cost" Definition Recommendations

Unlike PPS hospitals, CAHs get their bonus reimbursement based on what they spend on "Certified EHR." We have not seen many weigh in on this definition, no doubt largely because bonuses for PPS hospitals do not depend on what they spend or the category of their expenditure.

We believe that for the CAH bonus (which is an expanded and immediately depreciable Medicare Share reimbursement for undepreciated and new certified EHR expenditures made by meaningful users between 2011 and 2014) to have much value, the definition of "Certified EHR Cost" should include software, implementation, hardware (server, desktop, laptops, tablets, carts for nurse documentation, etc.), infrastructure (such as networking equipment, including wireless), training, and other costs associated with building a successful, secure, and available EHR environment.

We also believe that the cost for PACS and other systems that are clearly part of the EHR and lead down the road to a paperless environment, should apply to the incentive bonus, even if they are not required for "meaningful use." This will allow early adopter CAHs to innovate (beyond what is reasonable for most CAHs) and to get some benefit from the CAH incentive, just as PPS hospital early adopters will benefit through their incentive structure.

Our concern is that most of the categories of EHR cost identified above do not and likely will not have "certification" programs. **Our recommendation therefore is that the concept "Certified EHR Cost" should be interpreted to mean "costs associated with developing a fully functional EHR environment that uses certified vendors in all those categories of cost where certification programs exist."**

RWHC's Position Regarding "Open Source" Solutions for Rural Hospitals

We recommend a careful and deliberate approach to address the open source issue. Many advocates of open source (specifically OpenVista) are claiming that it is the right solution for small rural hospitals, primarily because it is assumed that OpenVista is a lower cost solution than commercial vendor solutions and because it has worked well at the VA. It is difficult to test these assumptions, since as far as we know OpenVista has never been fully implemented in an independent critical access hospital environment. Concerns regarding OpenVista in small hospitals include: (1) it was developed for a large hospital VA environment; how will that translate to the small independent hospital environment? (2) integrated financial applications are not available with OpenVista, as they are with commercial vendors; (3) the cost of installation and support may not scale to the very small CAH environment; (4) small hospitals do not have programmers that can take advantage of the open source nature of OpenVista; and (5) OpenVista is not CCHIT certified, even as four small hospital-focused commercial vendors are. Before significant dollars are spent to create a federal OpenVista offering, we recommend that the questions embedded in these concerns be answered through a thorough case study in which the costs, challenges, and benefits of OpenVista (in an independent CAH environment) are documented and compared to the costs, challenges and benefits of CCHIT certified small hospital-focused commercial vendor products.

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