Setting the Right Expectations for the EHR Standard

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by Donald T. Mon, PhD

The electronic health record (EHR) standard has been receiving widespread attention since the spring of 2003, when the Centers for Medicare and Medicaid Services (CMS) and the Department of Health and Human Services asked the Institute of Medicine for guidance on care delivery functions and Health Level 7 (HL7) to subsequently develop the functional model.

As described in the January 2004 *Journal of AHIMA,* the first draft of the functional model was released for voting in August and rejected in September.[1] Historically, standards rarely pass on the first ballot. So it was not unusual for the EHR standard to be rejected. In fact, it would have been remarkable if it had passed.

Participants filed 223 ballots, nearly triple the number HL7 normally receives for a standard. On top of that, numerous stakeholders weighed in from all sectors of the industry. When a thousand voices have to be heard—as they should for an open standards process—it is extremely difficult to factor in all their issues and get it right the first time.

This article reviews some of the major problems with the first model—not to criticize it, but to explain what the issues were, the level of detail involved, and what had to be done to correct them.

Problems with the First Draft

In retrospect, there was value both in the first model and its rejection. The first model generated an intense discussion on the EHR's purpose and need.

Previous works, dating back to the computer-based patient record concept of the early 1990s, were erudite and extremely useful as high-level guidance. But those efforts could not have foretold how difficult it was to work through the level of detail necessary to build an EHR functional model. You would only know that by going through the process—which is what the first draft helped everyone understand in dramatic fashion. Its rejection caused everyone to think longer and harder about what was truly important about the standard.

The first major problem was the Jekyll/Hyde nature of the functions themselves. The first draft was comprised of more than 1,600 functions and subfunctions. Only about 250 of those were to be voted on; the rest were included for informtional purposes.

With so many functions, the model appeared quite comprehensive. On the other hand, it was simply too difficult to absorb—and, to some, overly complex and duplicative. Moreover, it was not clear which functions were to be voted on and which existed for informational purposes.

In the first draft, four **care settings** were specified: hospital, ambulatory, nursing home, and care in the community. A crucial part of the first model was determining whether each function was essential or desirable for each care setting. The resulting **profiles** were the source of a second major problem.

For instance, many felt the simple word "hospital" encompassed inpatient acute, inpatient psychiatric, and inpatient physical medicine and rehabilitation (PM&R) hospitals. The problem was that a single function in the model could be deemed essential to acute care but desirable to inpatient psychiatric and not applicable to PM&R hospitals. The lack of consensus around the priority of the function within a care setting raised many questions. When similar confusion abounded for a great number of functions, the whole model was called into question.

Improvements in the Second Draft

It was clear to the HL7 EHR Special Interest Group, which developed the EHR model, that the second draft needed to be just as comprehensive but simpler and easier to understand than the first. At press time, the second draft appeared to contain the following improvements:

- The number of functions and subfunctions has been reduced from 1,600 to approximately 200. The model appears to be just as comprehensive, but much, if not all, of the duplication has been eliminated.
- An entire section of the first model dealing with technology infrastructure (e.g., database backup, restoring, archiving) has been eliminated. This helps the functional model achieve one of its goals—stating what functions have to be implemented, not how to implement them through technology.
- The functions are more clearly defined. A short function name, a long function statement, and a paragraph description explain the functions far better than the terse phrases in the first model. Moreover, the real-world examples in the description column help the reader better understand the functions.
- The care setting definitions now have two tiers: a broader care category and discrete examples of care settings under each category. For example, inpatient acute, inpatient psychiatric, and inpatient PM&R are examples of care settings under the hospital category.
- The priority levels have been expanded, from "essential" and "desirable" in the first model, to "essential now," "essential future," "optional," and "not applicable" in the second model. The combined two-tier care category and setting structure and the four priority levels provide greater flexibility.

For example, acute care, psychiatric, and PM&R hospitals can now separately designate the same function with different priority levels without arguing whether the functional model is adequate for the entire category of hospitals. This flexibility allows the model to act as one standard list of functions across all care categories.

Moreover, the "essential future" priority level recognizes that functions are essential to caregivers but perhaps not feasible now because the technology is not available—a subject of much debate in the first model.

Setting the Right Expectations: A Draft Standard for Trial Use

At press time, the second draft of the functional model was expected to be released for voting in March. Those who will be casting a ballot on the second draft will, of course, make their own assessment of the improvements made and vote their conscience. If you vote, please remember that this is officially a **draft standard for trial use** (DSTU), not a fully accredited standard.

HL7's policies and procedures state that a DSTU is an "extraordinary event" intended to help HL7 bodies, such as the EHR Special Interest Group, "provide timely compliance with regulatory or other governmental mandate and/or timely response to industry or market demand." [2]

As a DSTU, the target is to provide a draft that is *good enough to move the initiative forward.* It does not have to be perfect or comprehensive. Once the initiative has been moved forward under draft status, as per HL7 policy, there is a two-year period in which substantial improvements can be made to the draft.

It is expected that at the end of two years the draft should be of sufficient quality that it can then be balloted as a fully accredited standard. Even then, there is still some flexibility. A **revised DSTU** can be filed at the end of the two-year period and another enhancement cycle could conceivably go into effect. Certainly, though, the industry will not want to, and cannot, wait that long for an EHR standard to be approved.

The DSTU offers great flexibility in getting the standard out for vendors to begin testing their products before the fully accredited standard is approved. It will also allow CMS to conduct its long-awaited demonstration projects testing its proposal to provide differential payment to clinicians who use an EHR to improve quality and effectiveness of care.

It is important that the EHR standard progress as quickly as possible, moving the industry closer to reaping its benefits, yet still keeping the opportunity to enhance it over time. The draft standard can help get us there.

Notes

1. Rhodes, Harry, Donald T. Mon, and Michelle Dougherty. “The Drive for an EHR Standard Picks up Speed.” *Journal of AHIMA* 75, no. 1 (2004): 18–22.
2. “Policy 14.00.01 Draft Standard for Trial Use.” Health Level 7 Policy and Procedure Manual. Ann Arbor, MI: HL7, 2003.

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