

***HIT Standards Committee - Implementation Workgroup
Hearing on Adoption Experiences – Oct 29, 2009, 9am – 4pm
Panelist Questions for Comments***

PANEL PROCESS

Panelists will be given five (5) minutes each for presentations and the remainder of the time will be spent on Q & A with the Implementation Workgroup of the HIT Standards Committee. You do not need to use PowerPoints. Panelists will be asked to send in written comments no later than noon on October 26th for distribution as read-aheads for the Committee/Workgroup members - email to: Judy Sparrow at Judy.Sparrow@hhs.gov

PANELIST QUESTIONS

(please answer as many or as few of the questions as your experience and/or the time allows)

2. Provider Panel

- What business problem (e.g., clinical issue, health outcomes problem, etc) were you trying to solve with implementing interoperability across organizational boundaries? What standards did you use and why? What were the outcomes you were looking for? Were these outcomes achieved?

Last year, we were given 90 days notice by our existing radiology group that they were dissolving their practice. We had a very short time to issue an RFP and find a solution for our hospital. To make things more complicated, we are the regional referral center for 8 critical access hospitals in the panhandle of Nebraska. Several of these hospitals utilize our radiology services and rely on us to support those teleradiology systems and connections, making this a problem of regional scope..

The most attractive respondent to the RFP was a large, remote radiology group based in Denver, Colorado. In order to make a remote radiology solution feasible, data exchange across systems was vital. We needed to transmit the radiology images from our picture archiving and communication system (PACS) to the new radiology group's PACS so that the images could be interpreted by radiologists 200 miles away. We needed to be able to send an electronic order from our system to theirs and we needed to be able to get the dictated report transmitted back from their proprietary transcription system into several of our systems. Our medical staff has had access to electronic results (radiology, lab, and transcription) for several years so it was crucial to maintain that functionality. Through the use of DICOM image transfer we were able to transmit the images to the radiology group's teleradiology system and we were able to send orders to them and bring transcription results back into our clinical information systems using HL7 messages routed through our interface engine. We had to create several custom interfaces to accomplish our goal but now have results going to our clinical data repository, our EMR, and our PACS. We were also able to continue to provide radiology services and reporting to the outlying communities.

- Were there challenges associated with trying to implement standards between large entities with significant IT capabilities and those that were less well provisioned? What compromises had to be made?

The radiology project listed above was a difficult implementation for us for several reasons. First, we are located in a remote, rural area where fiberoptic connectivity is limited and we are dependent on data transmission over T1 lines. PACS images are inherently large and require significant

bandwidth. We have found it necessary to add T1 connections in several cases since fiber connections tend to be cost prohibitive.

Second, human resources are also very limited in rural areas and we have really had to take a “grow your own” approach to IT expertise. Recruitment into rural areas is challenging and we have had limited success. Finding the talent internally and then investing in the training for our staff has been a moderately successful alternative.

Third, custom interfaces are inherently expensive and as a smaller, community hospital, in a rural area with very little population growth, we have limited financial resources. Historically, we have avoided doing our own programming due to the intense resources required to support that function but we are being forced to undertake new challenges in order to continue to meet the needs of our organization. Critical access hospitals and small physician practices will have even greater challenges in achieving interoperability.

Due to the complexity of this project and our relative inexperience with custom interface programming, the project timeline had to be extended. The radiologists had to make sub-optimal changes to their work processes in order to accommodate temporary work-arounds so that they could begin reading images before we had the interfaces built and working correctly. The less than ideal workflow had the potential to negatively impact patient care and added complexity to an already challenging situation. Since then, the situation has stabilized but we are faced with the need to add another full-time staff member in a very tight budget year to provide redundancy for interface support due to the critical processes that are reliant on this function.

Expansion of fiberoptic networks in rural communities, access to technology resources for small and mid-size providers and improved interoperability between disparate systems would help mitigate our challenges.

- What special considerations should be taken into account for enabling providers in small practices (where adoption has been lowest and IT capabilities may be lacking) to have the interoperability necessary to achieve the meaningful use goals? What is the best way to overcome their specific challenges?

I am currently a board member of the Western Nebraska Health Information Exchange (WNHIE) as well as the Nebraska Health Information Initiative (NeHII,) and one of the first stumbling blocks for small entities that we have seen to interoperability is a lack of electronic systems. Electronic data has to exist before it can be shared. As we are all aware, dedicating the resources just to installing information systems is a significant challenge. For small entities without electronic systems, interoperability is not yet a problem.

Another issue to be considered is the use of home-grown or very small systems that have been installed in smaller entities. Often, these systems lack the sophistication to accomplish data sharing. Some of these systems lack the capability to send or receive HL7 messages much less have interface engines to route the information appropriately. Even if the systems could support the exchange of data, as stated above, these entities do not have access to the resources to support that level of technology.

Last, access to the large capital outlays that are required to install HIT is a limitation that most small entities are facing. Financing challenges add to the complexity of installing information systems in small settings. Relaxation of Stark and Anti-kickback laws have helped but in our case, we are struggling to meet our own organization's needs so subsidizing EMR installation in our independent

physician practices is daunting. Creative ways to finance the up-front expenses is an important consideration for small and mid-sized providers.

- Did implementing interoperability between organizations help you achieve your goals, or did it inhibit progress toward achieving your goals? What role did the standards play and what was the rate of adoption and the impact on overall costs?

Implementing interoperability between our organization and others has reliably helped us achieve our goals. HL7, DICOM, and other interface standards have helped simplify data sharing. However, enough variation still exists in the format required by each system that programming changes are often necessary to accomplish the end goal. As stated above, interface programming is expensive and requires IT expertise to support. Smaller entities will be forced to either develop the talent in house, increasing salary and education expense or out-source the function, incurring expense for contracted services. Also, when attempting interoperability between foreign systems, many times there are vendor costs on both sides of the interface to get the messages moving smoothly between systems. This adds cost and complexity to an already difficult task. Last, many vendors are reluctant to support data sharing with competitors and either refuse to support "foreign" interfaces or make them enormously expensive.

Another significant consideration for interoperability are standards for privacy, confidentiality and security. There are obviously the federal standards to which we are all held but the individual state laws increase the complexity of data sharing. NeHII has experienced this challenge while developing privacy and security policies and procedures for the state-wide health information exchange (HIE). Data sharing across state lines will be an even bigger hurdle as the number and complexity of privacy and confidentiality laws grows with the addition of each state. Nation-wide standardization of privacy, security and confidentiality regulations is imperative if we are going to be successful in our HIT goals.

- What is an example of your greatest success and your most frustrating issue from the implementation? What would you have done differently based on this experience if you knew what you know now?

Our greatest success with implementation of interoperability is that we were able to install the connections to our remote radiology group that we needed without impacting patient care. The most frustrating issue is the short timeline that we had and the inability to have time to thoroughly plan, develop and test the interfaces that we installed. We had some bumps in the implementations that could have been mitigated with a longer implementation timeframe. Unfortunately, I'm not sure we could have avoided the problems that we encountered due to the short timeframe. However, we gained experience with data sharing that will certainly make things easier for future projects.

- What advice would you give to help others mitigate problems or accelerate adoption of interoperable health information technology in order to improve health care quality and cost-effectiveness?

One of my mentors once told me that implementation is 80% processes and people and 20% technology. There is no such thing as perfect software so it is essential to look at current processes/workflow, assess and anticipate how the technology is going to change that process/workflow, and then work to put new processes/workflow in place to accommodate that software. This type of analysis provides great opportunities for process improvement and can be the catalyst for change.

Another vital piece to successful adoption is effective change management. End-user involvement, education and support both during the implementation and after go-live, are keys to successful implementations. Preparing users for the impact of a new system is difficult. Healthcare providers, especially physicians, are extremely busy people who have huge responsibilities, so implementation of electronic systems inevitably impacts efficiency of patient care. Planning for and mitigating these impacts is vital to adoption.

Last, data sharing is extremely complex and patient input into the process is important. NeHII has a Consumer Advisory Council that provides feedback to guide the Board in decision making. It takes an enormous amount of planning and thought to make the system user friendly for the providers that are accessing the data while ensuring privacy and security of the data. NeHII made the decision to have patients opt-out of the exchange if they were uncomfortable with their data being shared state-wide. The provider or hospital then restricts that data from being displayed to other providers. The challenge of training registration staff at the front lines on how to communicate with patients to ensure that patients understand the implications of opting out of the health information exchange is important. Registration staff can influence the patient's decision based on how the option is presented. Making sure staff understand the importance of sharing data is a key component to the success of the HIE.