So Much to Do, So Little Time
To Accomplish the Mandatory Initiatives of ARRA, Healthcare Organizations Will Require Significant and Thoughtful Planning, Prioritization and Execution
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ABSTRACT
The American Recovery and Reinvestment Act of 2009 (ARRA) has set forth legislation for the healthcare community to achieve adoption of electronic health records (EHR), as well as form data standards, health information exchanges (HIE) and compliance with more stringent security and privacy controls under the HITECH Act. While the Office of the National Coordinator for Health Information Technology (ONCHIT) works on the definition of both “meaningful use” and “certification” of information technology systems, providers in particular must move forward with their IT initiatives to achieve the basic requirements for Medicare and Medicaid incentives starting in 2011, and avoid penalties that will reduce reimbursement beginning in 2015. In addition, providers, payors, government and non-government stakeholders will all have to balance the implementation of EHRs, working with HIEs, at the same time that they must upgrade their systems to be in compliance with ICD-10 and HIPAA 5010 code sets. Compliance deadlines for EHRs and HIEs begin in 2011, while ICD-10 diagnosis and procedure code sets compliance is required by October 2013 and HIPAA 5010 transaction sets, with one exception, is required by January 1, 2012. In order to accomplish these strategic and mandatory initiatives successfully and simultaneously, healthcare organizations will require significant and thoughtful planning, prioritization and execution.
• Only 1.5 percent of hospitals in the United States report having EHRs in all departments.

• Studies state that one-third to two-thirds of health information systems implementations fail.

• Implementation by small physician practices (<5-10) has been almost non-existent.

What is different about this point in history is that never before have we, the healthcare community, been asked to absorb so much change in such a short period of time. As we know, the global economy and the state of our country are still in a deep recession, and yet, to accomplish these deadlines, more resources of time, money and human capital are required.

Another important factor not to be diminished is that no organization, large or small, private or public, can endure more change than is feasible, even when resources are abundant. Healthcare providers, in particular, are at a serious disadvantage in that they cannot simply discontinue certain business functions to test and implement systems. There will always be patients to see, emergency rooms to be filled and claims to process.

To meet the requirements of implementing EHRs, developing health information exchanges, and compliance with new code sets such as ICD-10 and HIPAA 5010, these multiple initiatives will require thoughtful strategic planning, prioritization and finely tuned execution of those plans. There are examples of successfully implemented IT systems; unfortunately they are the exception, not the rule. To achieve maximum success with minimal problems and burden on all staff, each project needs to be driven with support from senior leadership, not the IT departments, and should include personnel from all areas of the organization—financial, administrative and most importantly clinical. The more clinicians involved in planning and implementation, the better.

As we have seen in the past, during Y2K and implementation of HIPAA, there is much coordination and communication that also needs to occur. It is not merely a function of investment of time and resources, although that is critical to success, but also the need for process changes, workflow adaptation, and significant change management and communication with all those involved.

Key stakeholders and executive management leaders need to be aware of and prioritize their resources based on their current situation, their desired “future state”, as well as what is reasonable
given each organization’s capacity for change. Project management with clear definitions of roles and responsibilities, timelines and budgets will all play a major role in the successful rollout of EHRs and new data standards over the next several years.

Other factors that need to be considered while planning, selecting, and implementing the “right” systems include the notion that no one system can meet all needs, and one size does not fit all.

**CRITERIA FOR PLANNING, SELECTION AND IMPLEMENTATION OF IT SYSTEMS**

What we can predict, is that there are major indicators and factors that should go into the planning, selection and implementation of healthcare information systems, which will ultimately provide the roadmap toward compliance for these multiple initiatives. The following to consider are geared toward the provider community, but can also apply to payors, HIEs and others.

**Functionality.** The EHR system must meet the needs of the practice or hospital department and the clinicians in order to achieve widespread adoption and use of the system. Too often, the needs of the specialty areas and physicians are not addressed in COTS “commercial off the shelf” systems. Most information systems will require some level of configuration and customization in order to be accepted by the end users, mainly clinicians. In general, items such as specific clinical terminologies and lexicons, clinical guidelines and pathways, standard care treatment plans, and other items for documentation, e-prescribing, coding and reporting will need to be included here.

**Affordability.** As we know, one of the key factors in the decision making process for providers, especially the medium sized and smaller physician practices is related to cost and affordability over the life of the product. Vendors need to understand their markets and adjust for the size and scope of the systems they sell to providers. What is required for a large tertiary hospital is very different than a rural critical access hospital or small physician clinic. The total cost of ownership goes above and beyond the cost of the software licensing and hardware- there are infrastructure costs such as servers, wireless or other Internet provider costs, and ongoing maintenance and support costs to consider. Another issue is the time required for staff to be trained and implement the system, since productivity usually decreases for a period of time while users are learning the system.

Depending on the size of the practice or hospital, some vendors will work out deals depending on the number of user licenses (per provider), or perhaps charge a flat fee per month, as examples. During this current climate of huge demand and relatively short supply, vendors seem to be more willing than ever to work out financial arrangements with providers than in the past. It is also crucial for customers to negotiate contracts with the vendor so they get the maximum value for their investment, as well as understand all the terms and conditions, and what type of service level agreements (SLA) are included in the costs. These SLAs should spell out specifically what level of support and maintenance is included in the base price and what charges, if any, will be incurred for additional services, implementation assistance, or support.

**Usability or ease of use.** Physicians and hospital staff are already burdened with high patient volumes, significant administrative overhead, billing staff or outsourced vendors, dealing with insurance companies and maintaining a high quality and safe delivery of healthcare services to their consumers throughout the continuum of care. Any information systems they invest in should be well suited for their clinical service line, type of practice and environment. For example, it does not do an oncologist much good if all the clinical documentation templates included in the “base application” are related to internal medicine. While the system may offer functions to many clinicians, it

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also may leave certain specialty groups without the functionality that they require. If too many customizations are required in order to make the system work for each user, you diminish the value of the investment by having to increase resource load on the implementation timeline. Whatever system is being chosen and implemented should have relevant terminology, guidelines, templates, and documentation tools that meet the needs of the clinicians and staff. The application should be easy to use in the sense that the screens are intuitive, aesthetically pleasing to the eye, and have a robust workflow engine that can automate processes that are time intensive in the current environment. Ideally, these systems should also be configurable to the degree that is easy to maintain but is appropriate for the different users so that what a nurse or technician sees on their screen is different than the view that a physician sees, as an example.

**Scalability and integration.** Providers should aim not to simply implement a digital version of their paper charts. EHR systems today have complex workflow engines and clinical decision support tools that can be utilized to handle large volumes of patient data in ways that would never be possible in the paper world. Research and public health is a perfect example of why the government is strongly endorsing and funding incentives for electronic health records. If patient data is truly integrated or at least can be exchanged between disparate systems, then the benefits of the system are more than quantitative. Any EHRs that are selected should meet the requirements of the current environment but also have scalability for the future. As growth occurs, so should the system be able to handle modifications and increases in usage, data volume, and storage capacity. Another issue with integration is related to any existing practice management or billing systems are already in place. Clinical systems need to integrate with financial systems in order to collect proper documentation to support charge capture, coding, and hence, reimbursement from payors.

**Data standards and data exchange.** As with any EHR, but
especially for smaller practices who do not have the funding to change systems every few years, it is highly important that whatever system they choose to implement be ready to handle and work within the "standards" that are being used in the industry. Unfortunately, there is not only one standard being used in our current healthcare system which is why the ARRA legislation mandates standards. While these are being defined, we can assume that commonly accepted data standards such as HL7 (clinical messaging), ICD and CPT (coding), DICOM (imaging) and X12N (insurance claims) will be among the many standards that information systems will need to use. As with any technology changes, there are also process and training issues to consider. The migration from ICD-9 to ICD-10 codes will be one of the most challenging tasks for providers along with the adoption of EHRs, simply because the code sets are so much larger and complex than the current codes. As far as the exchange of data is concerned, there are many information system vendors that can map data fields from one system to another and send data via bi-directional interfaces into a warehouse for use in information exchange. The difficulty in supporting HIEs typically has more to do with stakeholder involvement, governance structures, funding and sustainability. While there may be some value in having an EHR that is common to multiple providers within a given region, it is not necessary for the exchange of data as long as commonly accepted standards are used and each entity in the exchange is willing to share their back-end database structures with each other or their vendor of choice.

**Broadband/Internet access and connectivity issues.** Many of the systems available at an affordable price to small physician practices are on an ASP (Application Service Provider) model, and require access to the internet to gain access to the application since it will not sit locally on computers or servers. This includes access to systems from remote locations through physician portals as well. It is important that organizations have broadband or other internet access through their service provider that is fast, reliable, and can handle large volumes of data. Physicians don’t have time to wait for slow response times. In light of the fact that even today many parts of the country have limited connectivity to the internet and broadband, this is a hurdle that needs to be addressed before information systems should be selected and implemented. Some older facilities may also have issues with wireless due to older building materials and barriers for the wireless frequencies. In these cases, it is wise to have a technician assess the environment and determine how best to move forward with wireless plans.

**Physical limitations.** All providers should make sure that the systems (and hardware necessary) fit within the physical locations of the organization, and are properly ventilated and cooled. For servers, this means having a data storage "closet". For other hardware either in central locations (such as nursing stations) or at the point-of-care (using workstations, mobile carts, or tablets), these choices should be included in the implementation planning phase. For example, if exam rooms are tight, it might be a good idea to have laptops or tablets rather than putting a PC workstation in each room.

**Security and privacy.** In the HITECH Act, there is specific language that relates to the formation of increased security and privacy policies that must be in place before any exchange of data is allowable under the law. As always, if any state has more stringent guidelines than the federal rules, they will supersede the federal regulations. The HIPAA regulations created in 1996 set a federal mandate for certain measures and policies and procedures, but the HITECH Act has even more stringent rules that will apply to all covered entities as well as their business associates. “The regulations, developed by OCR, require health care providers and other HIPAA covered entities to promptly notify affected individuals of a breach, as well as the HHS Secretary and the media in cases where a breach affects more than 50 individuals. Breaches affecting fewer than 500 individuals will be reported to the HHS Secretary on an annual basis. The regulations also require business associates of covered entities to notify the covered entity of breaches at or by the business associate.”

Healthcare organizations are not prepared to do this today—many systems either do not have the audit capability in place or the policies and procedures to be able to detect breaches of patient data until after such breach becomes a problem. In the future, there will be even higher criminal and civil penalties enforced by OCR for any organization and/or person who violate these rules.

**Training.** Too often, not enough time and attention is paid towards training individuals with EHR systems, and especially in an organization where all of the physicians and staff may go “live” on the system at the same time. Each provider needs to feel comfortable using the system according to his or her level of computer skills and understanding of the application itself. Training should be built into the schedule for implementation, as well as post go-live support. Until the users are comfortable with the system on a day to day basis, continual training and guidance should be included. The lack of training can not only derail a project, but also cause productivity losses and low adoption rates of any EHR system. With proper training, maximum adoption rates rises.

**DATA MIGRATION REQUIREMENTS**

New projects such as the mandatory migration to ICD-10 CM and PCS coding for hospitals is a major shift of both process and technology and needs to be included in any implementation plan to ensure that the backend database is structured to accommodate both ICD-9 and ICD-10 codes. “In the final ICD-10 rule, HHS noted that a majority of commenters supported an ICD-10 compliance date of Oct. 1, 2014. These commenters and others who advocated a delayed deadline expressed serious concerns about the industry’s ability to implement ICD-10 and HIPAA 5010 in the proposed rule’s timeframes. HHS also noted that the National Committee on Vital and Health Statistics, an HHS advisory firm, previously recommended a two-year gap between ICD-10 and HIPAA 5010 compliance dates. HHS further noted that a smaller number of commenters and organizations had compelling reasons for supporting the proposed ICD-10 compliance date of Oct. 1, 2011.” Now that the final rule has been published in the Federal Register, the new compliance dates will overlap with the HIPAA 5010.
transaction code sets compliance deadlines as well as deadlines for EHR Medicare incentives.

'Certification' and 'meaningful use'. As a result of the focus on the use of "certified" systems in order to be eligible for ARRA incentives, the health IT industry has already been told that the Certification Commission for Health Information Technology (CCHIT) will be one of the certifying bodies (if there are others in the future remains to be seen). Even before ARRA, all federal systems had to be CCHIT-certified, so most providers have already been selecting and implementing systems that are CCHIT certified. Revised criteria will not come out all at once, so everyone must keep current with any updates for certification that may come out in the future. Conversely, if a product has not met CCHIT certification or has not planned for certification, these systems should be avoided or evaluated very carefully and with caution. It is expected that most vendors will seek CCHIT or other "certification" in order to meet the criteria for ARRA.

CONCLUSION

As the healthcare industry moves towards the adoption of EHRs, HIEs, and compliance with ICD-10 and HIPAA 5010 code sets, healthcare executives will need to rely on methodologies and available tools for strategic planning, prioritization, and implementation of systems. Now is the time to drive momentum and reinforce to all that waiting is not an option- meeting these requirements will take years to achieve, and must be given the highest priorities. As we have stated before, never has the healthcare industry been tasked with so much to do in so little time. JHIM

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REFERENCES