

5/26/03

The Missing Module in the Electronic Health Record: HIM Workflow, Part II

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Leslie: Last month we discussed workflow management systems in the electronic health record (EHR). We noted that workflow management systems are not part of many EHRs but are a critical component required to achieve the full benefits of an EHR.

Patty: It is a fact, Leslie, that many vendors do not provide workflow management in the manner that the Workflow Management Coalition has laid out. This group, as we discussed last month, is the standard setting organization for vendors implementing workflow management systems within their technology products.

Leslie: Vendors will need to develop EHRs that are flexible enough to adapt to a caregiver's workflow as well as support operational processes outside of the clinical setting such as the health information management (HIM) department. The standards set forth by the coalition help in that endeavor.

Patty: One of the biggest barriers to caregiver acceptance of the EHR is the lack of flexible clinical workflow. When implementing components of an EHR, it is important to understand the workflow capabilities—does it include routing, coordinating tasks within and between departments, coordinating tasks between caregivers or just simply screen flows. And how flexible is the workflow? Can it be changed based on profiles and rules created by users?

Leslie: The annual CPR Systems Review, which appeared in the April 2003 ADVANCE for Health Information Executives, paints a great vision related to workflow. The authors state "workflow management will provide the right clinical data/information/knowledge for the right patient, to the right caregiver, in the right place, on the right device, at the right time."

Patty: Workflow management (WFM) systems are powerful tools that facilitate processes that cannot usually be performed in a manual environment. The use of workflow in the clinical setting will result in more efficient use of caregiver's time and information that is organized and accessible to those involved in the patient's care from the nurse to the pharmacist and in between.

Leslie: And with implementation of WFM to automate HIM functions, a greater return on investment can be achieved. Imagine being able to perform analysis and record completion tasks completely online. Let's talk about what this scenario might look like.

Patty: The record analysts in the HIM department views text (dictated reports, orders, online notes) and/or scanned documents online and analyze for deficiencies. Documents with deficiencies are marked and then routed electronically to the physicians for completion.

Leslie: Then physicians log onto the EHR and are presented with options to review recent abnormal lab

results, sign verbal orders, order new tests or work their incomplete/deficient records work list. Once they select their incomplete/deficient records work list, they can sort by document type or another sort and either sign records, enter notes or dictate. As documents are completed, the status is automatically updated in the HIM record completion module.

Patty: HIM professionals often think that this kind of workflow is best accomplished in an imaging system, but I would argue that non-imaging based EHR systems should have this capability also.

Leslie: Can you clarify what you mean by that? I am not sure I understand.

Patty: Imaging does not necessarily need to be a prerequisite for workflow. In the Veterans Health Administration (VHA) for example, imaging is an augment to their computerized patient record system (CPRS). The HIM department has a goal of keeping imaging to a minimum so that physicians are encouraged to enter notes directly into the CPRS. Workflow management systems at the VHA are not driven by workflow management routines within an imaging system, but within their CPRS instead. Imaging is just a component; not the EHR. Does that make sense?

Leslie: Let me see if I can recap what you are saying. Workflow can be designed, implemented and used effectively without having to implement a total imaging solution. One can augment their workflow system within their EHR with imaging.

Patty: Right. The significance of this is that if you are in an organization that has several components of the EHR such as nursing documentation, computerized physician order entry, a CDR and online clinical documentation such as progress notes, consultations, etc., HIM professionals can work with information technology (IT) to develop workflow systems required for HIM to fulfill analysis and record completion requirements. All of this can be accomplished without the use of imaging systems.

Leslie: Is this being done today?

Patty: Not fully, of course, because there are few vendors that have workflow systems for clinical processes let alone HIM. But we are seeing some examples of workflow within and outside of the EHR that are not solely based on an imaging solution—the VHA being one organization setting that example. Going back to our record completion example, let's talk about integrating, through interfaces, dictation, transcription and e-signatures.

Leslie: Good example, as there are many HIM departments that are accomplishing some online record completion using interfaces and workflow to support the completion of key required documents such as H&Ps, operative reports, consultations and discharge summaries.

Patty: This involves the dictation and transcription systems interacting with the record completion module without human intervention other than to enter the initial dictation deficiency. From there, the physician is notified of the need to dictate when they log onto the EHR. Once the physician dictates, the transcribed report will be presented to the physician for editing and signature. Once signed, the deficiency would fall off the record completion module and the report would now be complete and stored in a clinical data repository, the EHR or a transcribed report repository. Quality assurance (QA) of transcribed reports can also be included in the automated workflow. Where the documents are stored is dependent on the organization's methods for online access and storage and where the organization is related to the transition to the EHR.

Leslie: So completing certain document types using workflow rules helps to automate aspects of record completion workflow. This requires HIM professionals to communicate this vision to IT and the HIM vendors

so that the technologies can work together to automate processes.

Patty: It can sometimes get confusing because many things we might put into practice today are transitional steps. But these are great bridges to the EHR, and in some cases will become the way of work now and into the future. What other types of HIM workflow should we discuss?

Leslie: Release of information (ROI) is another area that benefits greatly from workflow management systems. In an imaging environment, this is perhaps more easily performed because all documents, scanned or imported, are included and stored in one technology platform. This makes it easier to print a record and integrate an ROI tracking and invoicing module.

Patty: The ROI functions in imaging systems are a real plus. The ROI module within the imaging system drives the printing and tracking of ROI and manages the invoicing processes. Most ROI companies have implemented some form of imaging solution to deliver their services. This is because of the automated workflow capabilities and the ability to manage this function with greater efficiency than in the manual world.

Leslie: Automating all or part of the ROI function using EHR components is not so easy unless these components are integrated. For example, you don't want to go to the lab system to print reports, then to the radiology system, nursing system, etc. But even in this scenario, there are bridges that can be built to position HIM to take advantage of whatever workflow automation might be made available.

Patty: Ideally, you want to be able to print a document set or all documents with a few clicks of the mouse. It takes creativity and talking with IT and HIM vendors to figure out how to build in automated workflow routines between EHR components. Because we know the requirements for ROI very well, sharing these requirements with IT professionals who understand how all the applications within your environment "hang" together is the first step. The workflow designed in the beginning may not be ideal but if it is superior to the manual workflow then it is worth implementing as a transitional step toward e-HIM.

Leslie: Let's talk about one of my favorite workflow topics—coding. Coding workflow in remote coding systems is making an impact on our industry.

Patty: You and I have been talking about remote coding and the types of workflow included in these systems. We've discussed topics ranging from the creation of coding work lists to routing records to supervisors for their review and enabling supervisors and coders to review the record online together while in separate locations.

Leslie: Remote coding is slowly coming to fruition but what is also happening is the creation of centralized coding units within health care systems. This centralization is virtual with coders accessing technology from anywhere on or off campus to code records for several hospitals within a health system.

Patty: Coding from an imaging system is easier than coding from components of an EHR. However, if that EHR is integrated or somewhat integrated, coding can occur online just as easily as it does in imaging systems. Take the VHA example again. The VA Puget Sound has been coding from the online record for some time now and they are doing so without imaging workflow.

Leslie: That's what's great about coding workflow. There are so many options! You can purchase a remote coding product, using your own imaging system if you have one, or identify ways to code all or some patient types within the current functionality of the organization's EHR.

Patty: Coding workflow is built into remote coding products and imaging systems. It is not typically built into a text based EHR. But again, spelling out the workflow requirements begins the journey to automate manual processes.

Leslie: What other types of HIM functions benefit from workflow?

Patty: Besides record completion, which includes e-signatures, and ROI and coding, other HIM functions primed for automated workflow include transcription workflow, registry workflow (cancer, trauma, birth, death), retrieval of records, and master patient index workflow.

Leslie: That is a lot of HIM workflow to consider for inclusion in the EHR.

Patty: It presents wonderful opportunities for HIM professionals to streamline processes by routing work to multiple groups at the same time such as coding and record completion for example.

Leslie: The important message for our readers about workflow is that you can begin designing workflow for inclusion in the EHR by leveraging whatever technology you might have. You don't have to wait for everything to be online. You can implement automated workflow for parts of the HIM process as the EHR is forming in your organization.

Patty: That's it Leslie. And it's one of the important transition steps towards e-HIM. It may get a little messy having some portions of HIM workflow automated and others not, but the journey toward e-HIM must begin now even if it can't be perfect.

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