

ROUNDTABLE

MAXIMIZING QUALITY FROM IT

The promise of healthcare IT lies in the gulf—the one between what computers can do with speed and precision versus what healthcare can do to properly structure the data. In the end, the idea is that the precision and speed of IT will enable doctors and nurses to make better decisions with robust, real-time data delivered to them by precisely the right tool in the right space. While the government and other players are adding pressure to bridge the gulf, fundamental issues remain. HealthLeaders Media recently convened a panel of IT experts to address these questions.

Panelist Profiles



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Roundtable Highlights

HEALTHLEADERS: *The federal government clearly hopes to use the provisions in the HITECH Act to spread healthcare IT as a quality tool. What are the challenges with the levers they are pulling?*

BARBARA R. PAUL: CMS has moved squarely off of their old paradigm. Ten years ago, CMS was a pass-through bill payer and regulator. In fact, while I was there, leadership looked at quality-related data being collected through the Quality Improvement Organization (QIO) program, and realized that, while quality was improving, the pace was unacceptably slow. So there was a concerted effort internally to figure out what additional levers Medicare could apply to further incent, enable, or stimulate higher quality. Public reporting, pay-for-performance efforts, and even the healthcare reform debate—in which they're talking about changing large aspects of how payment occurs—

JOHN P. KICHAK: They are also pushing standardization through the back-end bill processes to be able to manage quality reporting. But they're also pushing a value proposition through HITECH, which is that they don't want the provider running that extra MRI; they don't want to pay for that extra MRI. And IT is a big part of that.

PAUL: Part of what's going on right now at the hospital level is that, first, there are core measures, which are chart abstracted. Someone, usually a nurse, reviews charts, finds the information and submits it through a process for public reporting of clinical process of care measures. And second, Medicare is also mining billing claims data for complication rates and mortality rates. So, as hospitals, we've got two different data sets populating the measures that are being publicly reported. One of the promises of EHR will be to have all of this information coming out the back side of a clinically robust data collection tool that is in real time. That way, we won't have people running down the hall looking for the doctor to make sure that he or she gave that beta-blocker, and/or we won't have stale claims data creating stale mortality rates and complication rates. I'm hoping that the EHRs can help to bring all that together into something that's much more clinically relevant.

for problems, or if a nomenclature is not precise enough, then you can't run good decision-support rules. That's where we're going to have our problem, is getting enough context around the patient, getting our physicians to enter structured data.

KICHAK: Most of those EHR IT systems ask the physician to enter in a patient's problems, and then the software provides some dictionary definition. Every vendor product has a different data model behind the scenes that they report off of for the decision support. That's where HITECH is trying to force that data to come together, because they're providing the standards. The key still is going to be that these EHRs have to learn "my" problems as a physician—learn what I do and what I assign and what I prescribe.

VAUGHN: My hope would be to leverage our academic institutions, let them build the rules, and then import those rules into various vendor products so that we're not all trapped in a vendor lock where we have to re-create the rules. Yes, we can reinterpret them, but let's let our academic institutions who are doing the research publish what is the standard of care and what makes sense. It doesn't necessarily have to be evidence-based medicine. It also could be the most efficient care from the state of knowledge about this disease process. We need to think two generations ahead as we build out our IT infrastructure and ask how can we leverage this and be very flexible in importing knowledge.

DENNIS MORLEY: Given the conditions and the complexity of the market, we're encouraging the community to establish standards so that we can move forward with well-funded development. In my opinion, the two biggest issues are the incredible complexity of these

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are all part of this quality push. The other two pieces of Medicare's push are the creation and enforcement of IT standards and the support of enabling IT infrastructure. So, Medicare clearly sees the push that's going on right now with IT and with standards as part of a broad application of every lever they can find to incentivize, and stimulate higher-quality care. You're going to see more of this as time goes on.

HEALTHLEADERS: *Do these provisions accelerate the path to concurrent data?*

RICHARD VAUGHN: The problem I see is that most of the electronic healthcare systems that are out there are, at best, version 1.5 clinical decision-support tools. Part of the problem is you can't get enough context around the patient. If you can't get your physicians to put in a coded nomenclature

undertakings and the lack of funding. The average healthcare organization spends less than 2% of its overall revenues on IT. And the kinds of initiatives we're discussing are very, very costly. So unless we achieve some level of standardization, it's going to be challenging for the technology vendor community to further modify current applications to accommodate compliance requirements.

Time for IT

HEALTHLEADERS: *Are the timelines laid out for IT implementation in the American Recovery and Reinvestment Act of 2009 realistic?*

MORLEY: There are different players within the vendor community, each with a unique perspective. Most of the technology providers are currently prepared to enable the capture, warehousing, and transmission of the data in question. The potential delay exists with the modification of applications to meet compliance requirements, followed by a necessarily lengthy implementation process. It's a lot of work to complete by 2011. Given the lack of sufficient funding coupled with the disagreement over standards, I think meeting the 2011 deadline may be difficult for many providers.

PAUL: It does provide a good push to move faster than we would have. That in itself is good, but it is an awfully aggressive timeline.



Dennis Morley
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VAUGHN: There's been a big concern about the vendors being able to scale. That's going to be very interesting to watch, to see if they can deliver the same level of service and competence and special relationships with their clients. And the support side is another issue. Physicians, as we all know, expect that if they have a problem that you already figured it out and you're standing at their elbow before they can ask for help.

KICHAK: We don't have the trained IT staff we need available. We've put everything overseas. So now we've got to bring it back to have the people to be able to implement it. So we're looking at a tremendous culture shift, because for so many years, we all were trying to cut costs, so we farmed out everything.

HEALTHLEADERS: *The meaningful use directives call for 10% of orders to be entered in 2011. Is that bar too high or too low?*

KICHAK: My own personal feeling is I was a bit taken aback that they relaxed the meaningful use guidelines back to 10% of CPOE. I definitely think that we need to be moving toward CPOE. It's the foundation inpatient system from which everything else happens. I was hoping more in the neighborhood of about a third, to try to get more adoption, because it is the hardest application to get physician usage on because it's very labor intensive. As we implemented the CPOE, we almost added two hours to the day of a physician, and that was eight years ago. Over time, we have been able to now save them about 30 minutes, but it took us a long period of time to accomplish that and now we're going to expect everybody else to do that in 18 months to two years.

MORLEY: The complex part of the equation isn't the functionality of the technology—it's the time needed to validate a technology's ability to support the hospital's work-

flow and patient safety requirements. One of our large hospital customers is deploying a palm-reading device for patient identification, and it's taken them two years to validate that the technology complies with patient care demands. That gives you an idea of how long it takes before a hospital can legitimize a technology investment and confirm that it won't compromise patient care.

"The first thing that's needed to build a database from a pure technical standpoint is to have a data model. Data models for healthcare exist in plethora. If you've seen one, you've seen one."

KICHAK: Everything we've talked about has a play in the 10%, and that's why I think we should have put the bar a little bit higher, even if we failed.

VAUGHN: Voluntary CPOE models don't work. It takes forever to move from 10%, and then all you'll do is you'll move to 30%, and you'll stay at 30% until it becomes mandatory. We told our physician leaders that we believe this needs to be mandatory or we're going to get no benefits. You're going to get no efficiencies because you've got half your chart on paper. Our med execs all agreed, they passed it, and now when we go live, we go live mandatory.

Mining the data channels

HEALTHLEADERS: *What are the challenges in how healthcare IT organizes and structures the data being collected?*

PAUL: Right now, the desire for publicly reported quality measures has

moved ahead of our ability to efficiently capture the data, which are still largely abstracted and gathered by hand. Consumer and patient advocates rightly want to see quality-related information from our hospitals and doctors, so they've been driving this ahead of the ability of the system to collect the data. We have a chance right now with the push toward electronic health records. If we could sync that back up so that the EHR that is implemented is one that can actually populate those measures by design, then physicians could start pulling out quality-related information and improving in real time. That data misalignment now makes doctors and hospitals just crazy.

VAUGHN: There's not enough structured documentation to describe a complex clinical scenario with five or six problems and a crashing patient. There are five or six fields that are critical but the majority of it is going to be some artistic description of subtleties that tells a story that we all want to be able to exchange because we're human beings. So you've got to find a balance between a tool that does not require me to log in two different ways or to do two different activities, but allows me to do structure and nonstructure in the same encounter, at the same time, with tools that are seamless. Nobody's there yet.

MORLEY: Any discussion of structured data is primarily organization-dependent. But the implications of that dialogue affect the vendor community. For example, a typical vendor may have 2,000 customers in the U.S. Helping develop those unique capacities to support that individual organization is a significant demand. So the sooner the standards get resolved, the quicker the vendor community will be able to support its customers' initiatives.

HEALTHLEADERS: *What are some steps that hospitals can work on now to improve gathering the right data at the right time?*

PAUL: Linking directly with monitors and equipment in the hospital, such as biomedical equipment like blood pressure cuffs and cardiac monitors.

MORLEY: Our business is high-velocity, but the area in which we are observing the fastest growth, and therefore providing the greatest support, is information technology infrastructure. We are also heavily involved in the entire point-of-care experience, which includes a variety of information technologies that can aid providers in their quality improvement initiatives.

VAUGHN: What's going to be interesting is if we're looking at safety, it's going to take more than just that one side of technology like the smart pump. It also is going to look at how we're packaging our pharmaceuticals, so that you can't plug something into the pump unless it's exactly what you are telling the pump it is.

Spending on infrastructure

HEALTHLEADERS: *Why is healthcare so far behind in data warehousing?*

KICHAK: Healthcare has never spent the money in IT. Its spend rate has always been at 2%. So we put in that 2% in operational systems—get the lab system, get the pharmacy system, the nursing, the CPOE, et cetera. Only recently with key clinical systems being up and running are we starting to get a little funding to do the decision support from a datawarehousing standpoint. There are two types of decision support. There's the one that all of us are interested in, which is clinical decision support, but there's also decision support coming off of a data warehouse that helps you build the next treatment patterns or it looks at your ordering patterns.

MORLEY: The effectiveness of data warehousing tools is dependent on two things. One is the data that providers accumulate and two is the data they're trying to extract. If providers have a clear understanding of the data they need, then these tools can be an asset. We're not aware of many organizations that are using data warehousing to support outbound needs like clinical deci-



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sion support. They may, however, use it internally to satisfy unique intelligence needs, specifically for discrete financial and clinical data.

KICHAK: Go to any MBA textbook and try to find a data model on healthcare. The first thing that's needed to build a database from a pure technical standpoint is to have a data model. Data models for healthcare exist in plethora. If you've seen one, you've seen one.

PAUL: I'm curious what your recommendation would be to community hospitals out there in the country that don't have EHRs. Should they buy an EHR now or later?

MORLEY: We're supporting the information technology needs of both hospitals' and physicians' EHR/EMR initiatives. Regardless of the setting, the collaboration between clinicians and the IT staff is critical. The sooner you start, the better off you'll be, because it often requires a minimum of 12 to 18 months to define the requirements, secure the

necessary collaboration of all stakeholders, allocate the necessary budgeting, and develop an effective implementation plan with reasonable timelines. So my vote would be sooner is better.

VAUGHN: It's always hard with technology. It's a cold lake. You can dip your toe in but eventually you're going to have to jump in the water. There's a degree of brinksmanship here too. We've seen the stare-down between physicians and CMS annually. It just makes me wonder, if we're not getting implementation right, if they look at 2011 and they say, we've only achieved 5% or 10% or 20%, is there going to be a lot of pressure to back off? Because there will be a strong lobby saying look, it was unrealistic.

HEALTHLEADERS: *Is the innovation pressure there to really make these IT tools be the effective clinical support tools that they need to be?*

VAUGHN: It's a very good question because it comes as part of the overall EHR package. So have they applied as much attention as they should to

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an integrated, one-page view that is incredibly popular. Now the problem is how to scale that down, because now we're looking at seven days of data on a 19-inch screen. It's like yesterday physicians were complaining that the screen wasn't big enough and there wasn't enough information on it. Now they want me to shrink it down to a little four-inch square for their handhelds.

MORLEY: From a vendor perspective, the primary challenge is one of the factors you mentioned—securing caregiver adoption. Generally speaking, the currently available technologies have the ability and flexibility to support these requirements. The more relevant question is whether we as an industry will be able to secure the necessary caregiver buy-in to effectively utilize available technologies.

HEALTHLEADERS: *We see healthcare IT as it exists now, but we also have an opportunity now to deconstruct and rebuild. I'm curious, if outside of the constraints, what might some of those ideals be and are there ways to bring those into the discussion?*

KICHAK: To me, it's always been evolution, not revolution. We have to see and use tools before we can change them. Once you get more people educated about what EHRs are and how they work, what data they contain, what they can and cannot do, then I think you'll get the ability to go around the country and have good

discussions. Hopefully, the vendors could bring that knowledge base back together to take what physicians want to see and what they don't, and blend that with the next generation of ergonomic tools, with touch screens, with discrete data capture, so that you've got the best function, the best model, with the best technology.

PAUL: EHRs are maturing and the Web is evolving and maturing; to the extent that we can marry some of the functionality that we are getting used to on the Internet with the functionality that the EHR pioneers have been working on, that's where you finally get something that can aggregate the data in a way that works for your work flow, your priorities, and your patient population.

VAUGHN: Part of the problem is that healthcare is just such a moving target. EHR is going to have to follow and evolve with everything else in healthcare. A doctor coming out of medical school in the future should be able to understand statistics, should be able to use pretest probability, should be able to chew up any data that you throw at them and throw it back and say this is what it means and this is how I ought to use it to manage my patients.

MORLEY: The government has an opportunity to engage and invest in the healthcare community in a constructive way by helping to establish effective standards with reasonable timelines which will accelerate effective decision-making. We need to prioritize our goals, put the standardizations in place and aggressively move forward. The debates can go on forever, but I think that with effective government leadership, well-defined standards, extensive caregiver adoption, and a receptive technology community, together we'll be able to better assist the industry's transformation. 

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these areas? Probably not. One of the steps that you were talking about is creating an integrated informational display of data for rounding. In the old days, you had to go look for nursing orders, you had to go look to the medication administration record, and you had to go look in lab. So we provide



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