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Improvements still needed as physicians continue to transition to EHRs

Electronic health records, also known as electronic medical records, are designed to partially or completely replace paper files. EHR advocates hope these systems improve health care efficiency, safety and patient care. However, amid federal government efforts designed to create incentives for EHR adoption, some physicians hesitate to make the transition because of high costs and concerns about the practical utility of EHRs.

The Certification Commission for Health Information Technology (CCHIT), a federal government contractor, certifies EHR systems.

Other groups are also designated by the federal government to certify health information technology. Certification hinges on functionality, security and interoperability, or the capacity for systems to communicate with one another and with clinical imaging devices.

Some EHRs are designed specifically for ophthalmology or have ophthalmic applications, but none are certified expressly for the specialty. Some EHRs used in ophthalmology are ambulatory systems that generally do not satisfy the unique needs of eye care, according to Flora Lum, MD, American Academy of Ophthalmology policy director for quality of care and knowledge base development and executive director of the Hoskins Center for Quality Eye Care.

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The gaps in the capacity of EHRs to interface with diagnostic and imaging devices are problematic in ophthalmology, given the specialty's heavy reliance on imaging, Dr. Lum said.

"A big value and principle of the Academy is image integration with the records," she said. "Ophthalmology is so visual you really can't afford to go down the hallway or go to another workstation in order to pull up the images and try to integrate them with the history and physical exams. You really need to have it all on one screen."

In July 2010, the Centers for Medicare and Medicaid Services issued criteria for the meaningful use of EHRs. Physicians must meet these objectives to qualify for federal incentive payments of up to \$44,000. The criteria encompass three main components: use of EHRs in a meaningful way, such as electronic prescribing; use of EHRs for the exchange of health information and to improve quality of care; and use of EHRs to submit clinical quality and other measures, according to a CMS news release.

Dr. Lum staffs an AAO committee and work groups devoted to improving EHR functionality in ophthalmology. These groups are striving to devise standards that will help ophthalmologists meet the meaningful use criteria in the future. But first, they need to establish their own criteria that meet ophthalmologists' needs in workflow and patient care, Dr. Lum said.

"[The Meaningful Use criteria] were geared toward primary care," she said. "It's not specifically targeted for ophthalmology. It doesn't make EHRs meaningful or particularly relevant for ophthalmology. We're getting to the meaningful use of EHRs in ophthalmology, beyond Meaningful Use. Meaningful Use as defined by the federal government is kind of a given; all EHRs should achieve this so that their users can be eligible for incentive payments."

Kerry D. Solomon, MD, OSN Refractive Surgery Board Member, said that, amid the meaningful use criteria and incentives, many physicians are under additional pressure to adopt EHRs.

"Docs feel the crunch, and we certainly do in our practice, with stimulus money and potential penalties down the road if you don't go EMR," Dr. Solomon said.

A sense of uncertainty

Sticking points of EHR adoption include communication and data transfer, Dr. Solomon said.

"There's clearly a future [in EHRs], but I don't believe any of the systems in their current form are where they ought to be and where they need to be," he said. "They need to be able to transfer information between devices and between offices more readily. They need to be more user-friendly. It should be quick and easy for anyone to enter information."



Kerry D. Solomon

Physicians are also concerned about costs and the learning curve involved with EHR adoption.

"I think it's the overall expense. It's the unknown hidden costs. It's the fear of what the learning curve is going to be like and how you're going to get through this. Is it going to slow me down? Those are the main things," Dr. Solomon said.

However, Dr. Solomon said that physicians can get ahead of the curve and become comfortable with EHRs.

"My experience in my old practice was that once we got a doc up and running and trained, I think they did fine. A lot of it is our fears of the unknown, but just like everything else, once you catch onto it, you're going to be fine," Dr. Solomon said.

He said that practitioners who are contemplating EHR adoption should seek vendors that offer state-of-the-art technology and are financially healthy.

"All of this is going to change, so you don't want to be locked into an old platform or dead technology," Dr. Solomon said.

Basic adaptability of EHRs

EHRs will not gain wide acceptance until they become ubiquitous, similar to laptop computers and cellular phones, John A. Hovanesian, MD, OSN Cornea/External Disease Board Member, said.

"Technology reaches its pinnacle when it becomes invisible," he said. "Your air bag is a perfect example. There's nothing to think about, but it works perfectly when you need it. We don't have anything that's invisible. We're highly aware of our use of it when we're using it."

Current EHR technology can hinder physician-patient communication, Dr. Hovanesian said.

"Using an EMR system changes fundamentally the way a physician works," he said. "The first way is that, when we're interacting with a patient in an exam room, we don't get to look at that patient if we're the ones operating the EMR and inputting data. The alternative, which is far better for the patient interaction, is to have a scribe or a person in the room who is making sure that everything is recorded in the system. This is what we do in my office."

In addition, individual physicians have their own requirements and routines, which many EHRs do not accommodate, Dr. Hovanesian said.

"There are subtle things that each physician wants to be individualized," he said. "That's OK. That's good, of course, because we take different notes on paper."



John A. Hovanesian

Experiences with EHR platforms

Current EHRs are Web-based or run on software loaded onto local servers, Dr. Solomon said.

"The Web-based systems have an appeal in that the overall cost is going to be less," Dr. Solomon said. "I think there's a big future there. There are several Web-based systems coming along in ophthalmology. I think they will continue to advance down the line."

Some systems involve scanning and are less expensive than server- or Web-based platforms. It is not as easy to access detailed information on such systems, but they have a shallow learning curve for physicians and staff, he said.

Dr. Solomon said that his former practice used the Medflow EHR, a software server-based platform with an eye care module. The Medflow system connected multiple office locations but had a few quirks, he said.



Ophthalmology practices have unique needs regarding data exchange in electronic health records, according to Flora Lum, MD.

Image: Brooke Bryand Photography

"Part of it may have been its interfaces with the practice management system and part of it was just the nature of EMR. It slows you down a little bit," Dr. Solomon said. He advocated the employment of scribes to input data into EHRs.

Dr. Hovanesian said that his practice uses the NextGen EHR, one of the most popular platforms currently in use. The NextGen's ophthalmology templates are adequate but need to be customized to be used effectively, he said.

"For example, for a patient undergoing surgery, there's a whole collection of information that we use to select a lens implant and then information that we need from their records while we're in the operating room," Dr. Hovanesian said. "I don't need to know their past social history or whether they smoked cigarettes. But I do need to know what their past few refractions have been, what other ocular conditions they have, what targeting we're doing for refraction with the implant and what the nature of the discussion was in our counseling session about their surgery."

Laurie K. Brown, COMT, COE, OSA, OCS, practice administrator for Drs. Fine, Packer and Hoffman, LLC, said that her practice uses the GE Centricity 9.5 EHR for practice management and clinical functions. The platform's intuitive and user-friendly software is amenable to customization based on the unique needs of the individual practice, she said.

"What we noticed with other vendors is that it takes a very highly trained person to do those types of changes," Ms. Brown said. "The GE system is very logical and it uses a user-friendly type of software, so that we now have at least two people in our group who can make form changes and customizations for us."



Laurie K. Brown

Seamless interface with all ophthalmic testing devices would be a major enhancement, Ms. Brown said.

"I think interfacing is really it. That's the only real big hole," she said. "We found workarounds to be able to be as efficient as possible, such as printing to PDFs and importing to the EHR. But once all our equipment is truly talking to the EMR, our data entry will be further reduced in complexity. This will make us even more accurate because there are always going to be typos as long as you're entering data."

Efforts of AAO groups

The AAO's Medical Information Technology Committee laid out special requirements for EHR use in eye care in a report published in *Ophthalmology*.

"As we highlighted in the paper, obviously [general ambulatory EHRs] weren't designed for ophthalmology," Dr. Lum said. "We're so different and unique from primary care."

In its report, the committee listed essential and desirable features in clinical documentation, ophthalmic vital signs, laboratory studies, medical and surgical management, and ophthalmic measurement and imaging devices.

The group's recommendations addressed how EHRs should support documentation in and transitions between the office and the operating room; capture, track and display vital signs of the eye such as visual acuity; and incorporate tools for color drawing.

"[A] piece that we think is essential is association of the operating room and exam data because we do the procedures but it's all kind of inter-related. You may have a different system. You may even have a different setting that you do your surgery. You need to get that integrated into your regular patient record," Dr. Lum said.

The AAO sponsors two working groups: one for Digital Imaging and Communications in Medicine (DICOM) standards for eye care and one for Integrating the Healthcare Enterprise (IHE), allowing different devices to exchange information using standards such as DICOM and HL7, a key component of interoperability. Another AAO group has developed Systematized Nomenclature of Medicine (SNOMED) terms for eye care. SNOMED standards are included in stage 1 meaningful use criteria, Dr. Lum said.

"SNOMED is one of the terminologies that you have to use for diagnoses, procedures, problem lists," she said. "So, it is already stipulated in meaningful use."

The work groups ceased efforts to design CCHIT certification criteria for ophthalmic EHRs when the federal government created its own certification criteria for meaningful use and maintained their energies to developing the DICOM and IHE specifications for interoperability, Dr. Lum said.

E-prescribing, billing and coding

In 2007, CCHIT added electronic prescribing capability as a requirement for ambulatory EMR certification.

"I love e-prescribing," Dr. Hovanesian said. "If I'm prescribing a drug for a patient, I can just ask which pharmacy they go to and when they say it's the CVS on Main Street, in about 2 seconds my scribe can send it. It's sent, it's there, there's no question what we wanted them to get. There's no discussion about whether the fax arrived or not. It's done. That's a beautiful thing."

A highly desired goal of EHR functions is the ability to handle complex coding functions quickly and efficiently, Ms. Brown said.

Most EHRs, she said, have a built-in "coding wizard" that aligns documentation and billing.

"These systems can help you to pick a code when you're just talking about elements of a history and elements of an eye exam," she said. "But it's not good at picking the level based on the medical decision making because that still takes our physicians having input. It also cannot judge what was appropriately done for the visit. So, that's sort of a holy grail, to try to figure out how systems can help us further in making sure we're meeting coding requirements and coding correctly."

Medical practices in the U.S. use diagnosis and procedure codes developed by the American Medical Association. However, major changes are on the horizon that will upgrade International Classification of Diseases Ninth Revision (ICD-9) to ICD-10. Those changes will encourage practices to use electronic databases, Ms. Brown said.

“It’s going from something like 17,000 codes to 155,000,” she said. “So, people without EHRs are really going to struggle with that because you need to have an electronic database so you’re able to sort through the coding data and get the right code. That’s part of the huge push for everyone to get to EHR.”

The change will also make billing more efficient, Ms. Brown said.

“For instance, now we get some denials when a patient had cataract surgery in one eye and then they have a totally unrelated visit regarding the other eye,” she said. “We’ll bill, and a payer [cannot] see that it’s two different eyes by the code alone. So, there’s a lot of billing work in trying to add the correct modifiers and make things clear to the payers. With ICD-10, the location or eye is part of the code, so we should have less appealing going on. All of that administrative work will be reduced as EHRs and electronic systems get more streamlined, once the tremendous work of the getting used to the ICD-10 changeover is complete. ... Meaningful use is all a part of that.” – *by Matt Hasson*

POINT / COUNTER

Should ophthalmologists jump on the EHR bandwagon now or wait until ophthalmic standards for EHRs are completed?

Lindstrom's Perspective

One practice's reluctant adoption of EMRs

References:

- Centers for Medicare and Medicaid Services EHR Incentive Programs Overview. <http://www.cms.gov/EHRIncentivePrograms>.
 - Certification Commission for Health Information Technology. <http://www.cchit.org>.
 - Chiang MF, Boland MV, Brewer A, et al; American Academy of Ophthalmology Medical Information Technology Committee. Special requirements for electronic health record systems in ophthalmology. *Ophthalmology*. 2011;118(8):1681-1687.
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