Into the Laboratory: HIM Virtual Lab Offers Students EHR Experience

by Chris Dimick

Students often learn about health IT by reading books and looking over someone's shoulder. Now schools can offer hands-on access to IT programs provided over the Internet.

The scavenger hunt had begun.

Scanning the list of items on her worksheet, Lois Hitchcock carefully affixed her thin-rimmed glasses and got to work.

Hitchcock, MHA, RHIA, maneuvered through the electronic health record system, searching for the medical record attributes on her list. The HIM professor at the University of Illinois at Chicago (UIC) glided through the EHR system with ease. After 27 years in the HIM field, Hitchcock knows a thing or two about health records.

Her treasure list contained some of the basic finds an HIM professional would seek when conducting a quality review on medical records. But this exercise wasn't performed in a hospital HIM department; it was done via the Internet in a tech lab.

Hitchcock and other HIM teachers assembled at AHIMA's headquarters during the summer for a training session on a collection of health IT programs offered through the Virtual Lab. They would have to know it well, because in a few months these instructors would be grading their students on the same assignment.

A collection of mainstream EHR and health IT software, the Virtual Lab gives colleges the chance to offer their students hands-on e-HIM training. The software is accessed over the Internet, giving instructors an affordable central place to guide students in their first experience with HIM-related software. School assignments are crafted off the systems, instructing students in real-world uses of health IT.

"Virtual Lab is a wonderful way to expose students to software they won't otherwise see," says Barb Glondys, RHIA, manager of e-learning curriculum and training at AHIMA and Virtual Lab staff member.

The lab launched in 2006, with enrollment increasing 150 percent in its second year. In the last academic year 125 schools used the program, with 275 instructors using the Virtual Lab to teach more than 1,900 students. More growth is expected for the 2008–09 school year.

Taking Education beyond Books

In the past students would learn about EHRs and other HIM electronic systems through books or typically impersonal demonstrations. But the Virtual Lab offers a very convenient and economical way for colleges to provide students personal training on several different health IT and EHR products, says Brenda Wood, RHIT, CCS, CCS-P, senior business analyst for QuadraMed and adjunct professor with Rasmussen College. Wood expressed her support of Virtual Lab while attending the June training session at AHIMA. Rasmussen College plans to start using the Virtual Lab in its classrooms this fall.

"This is a great opportunity for [students] to beef up their resumes and get a great understanding of the HIM experience," Wood says. "When I went to school, we didn't have any type of virtual training. We learned almost everything from a book. So it is a really unique thing."

The Virtual Lab currently offers six applications spanning transcription, coding, and EHR technology.

It is the only way many colleges can offer their students experience with these systems, says Cindy Glewwe, MEd, RHIA, health science curriculum coordinator at Rasmussen College. “We would never be able to purchase all of this software,” she says. “I don’t know why most colleges wouldn’t be open to this; it is millions of dollars in software that you can have access to.”

All maintenance and technical issues are handled by Virtual Lab staff, and since the programs are accessed via the Internet, schools do not need to install large programs that can slow computer response times and claim storage, Glondys says. AHIMA staff host monthly user group meetings to discuss the program and help solve any problems.

Instructors and students access the lab in one of two ways. For class group meetings, teachers schedule access periods ahead of time with Virtual Lab staff. That ensures proper connections with the system. Outside of class, individual students can use the lab anytime from any computer with Internet access.

Many instructors develop their own lesson plans and exercises to use with Virtual Lab applications. The Virtual Lab also offers a library of lessons and exercises for general use. These are posted within the AHIMA Virtual Lab Instructors Community of Practice, which is open to subscribers. Teachers are encouraged to share any exercises they personally develop.

The subscription cost varies based on a school’s size and the package. For the 2007–08 school year, the average school subscription fee was about $3,100. AHIMA and lab software partners subsidize the program about $5,000 per school on average.

At UIC, the HIM department pays $2,750 per year for the Virtual Lab, which covers about 40 HIM students and their instructors. That is a minimal fee for the benefits the program brings to the school’s HIM department, says Karen Patena, MBA, RHIA, UIC’s HIM undergraduate program director.

Offering the hands-on training helps the university meet its HIM program accreditation requirements. “I think what makes this a selling point to our administration is that this includes so many products. It is really a value for the price,” Patena says. “We try and incorporate it into as many classes as we can.”

At UIC, a Firsthand Look at MPI, Encoders, and EHRs

UIC was one of the inaugural schools to subscribe to the Virtual Lab, offering it to students in classes beginning fall semester 2006. This school year Hitchcock will be UIC’s Virtual Lab liaison, taking everything she learned at the June training session and passing it on to HIM department instructors.

Before subscribing to the Virtual Lab, UIC used a combination of textbooks, short product demos, site visits, and a limited number of HIM products it purchased to teach e-HIM. The Virtual Lab offers a step up in students’ HIM education, Patena says.

UIC will use Virtual Lab applications in nine classes this year—two junior and two senior HIM classes in the fall semester and three junior and two senior classes in spring, according to Patena. Juniors use the encoding application to get the basics on coding, and they peek at the innards of an electronic record with the EHR application.

The master patient index is a major topic in UIC’s introductory class “Principles of Health Information Management.” Juniors in that class will use the MPI application to learn how to detect and prevent duplicate patient records. In the past, teaching about duplicate records through a book could be difficult, Hitchcock says. With access to the application, instructors can now clearly show how a duplicate record is created and resolved. For many students, the Virtual Lab’s hands-on experience gives them that spark toward really learning the material, Hitchcock says.

A Solution to Disappearing Site Visits

It is becoming more and more difficult for colleges to find healthcare organizations willing to take on HIM students for affiliations and internships. Facilities report they are too busy or short-staffed to host students. Even scheduling facility site visits, where students can see EHR systems demonstrated firsthand, is becoming difficult, says Mary Bowman, MPA, RHIA,

adjunct instructor at DeVry University. Bowman trained on the Virtual Lab in June as her organization prepared to implement the program, a move she says will decrease the need for EHR site visits.

Even when a student is invited in, most organizations don't offer them hands-on access to their EHR systems, Patena says. Their interaction with the record is mainly done over the shoulder of an HIM professional.

That is why the Virtual Lab offers such a benefit, Bowman says. The lab's systems are the same or similar to those used in real-world facilities, and students can have complete access without the fear of disturbing real medical records.

The lab lets them see, touch, and interact with health IT systems before they go out on their first affiliations, an edge that many HIM students lack, Hitchcock says. "It gives them knowledge of the system prior to actually getting to a facility and seeing it," she says. Previously, she says, students would have read about a system and seen screen prints, but few would have had experience using it.

As it becomes increasingly difficult for colleges to place students for affiliations, the Virtual Lab could supplement site visits by offering a similar experience online, Hitchcock says. In some cases, the Virtual Lab is the only hands-on experience students get with EHR products prior to graduation.

Real Software Offers a "Feel for the Profession"

It was a huge help to first work with applications offered in the Virtual Lab before visiting a real HIM department, says Shamim Patel, a senior HIM student at UIC. Patel used the MPI and encoding applications in three different classes during her junior year. The experience in the lab translated well when Patel showed up for her 16-week technical affiliation in the HIM department of Advocate Illinois Masonic Medical Center, based in Chicago, IL.

"When I started my technical affiliation at Advocate, I kind of already had a feel for the electronic systems," she says. The EHR system Patel used in the Virtual Lab is a modified version of the system used by Advocate. But since her access to Advocate's EHR was limited, Patel says she's glad she had the chance to further explore the system through the Virtual Lab. She learned more about the EHR there than she did actually on-site.

Her experience with the lab applications throughout her college career will be assets when Patel graduates and enters the work force, she says. On her first day of work, she feels she won't be lost when it comes to EHR and coding systems. Seeing is understanding when it comes to HIM, Patel says. Her education wouldn't have come across as clearly if delivered solely from an HIM book.

The Virtual Lab "really went hand in hand with our class work, because we were learning about abstracting, coding, all these different types of processes," she says. "It really gives us a feel for the profession and the EHR itself."

It's not just the students who prefer hands-on learning. It is much easier for an instructor to teach about applications such as databases in the lab than trying to relay the information through a book, according to Laura Michelsen, RHIT, assistant HIM professor at Joliet Junior College. Her college will implement the Virtual Lab in the fall.

"When I try and teach databases [from a book], you can just see it in their eyes they don't get it," Michelsen says. "But when you can show them what you are talking about, then they will say, 'Now I understand.'"

The same goes for teaching about duplicate patient medical records. By using the MPI application, teachers can let students detect and correct duplicate records in software that holds 50,000 patient records. That's where they truly learn the ins and outs of managing patient identity, Glondys says.

Future Growth

At two years old, the lab is still developing, working out some kinks and adding features.

UIC staff say they sometimes experience connection problems due to the university's extensive firewall protections, which are intended to protect against the download of viruses. Some teachers have requested that lab staff add more records to the EHR

applications, which would create richer searches and queries. Virtual Lab staff are aware of the issues and are working to resolve them, says Sandra Kersten, RHIA, MPH, AHIMA's Virtual Lab director.

Currently, all of the Virtual Lab offerings are standalone applications. This does not mimic the healthcare facility environment, where, for example, the MPI application would link to the EHR. Interfaces between some applications may be forthcoming as the lab develops, Kersten says.

These connections, as well as any future new applications, will be based on school requests, HIM curriculum requirements, the evolving work force skills required for HIM staff, the technical requirements needed to support each application, and budget implications. Any decision to add to or change the lab is made by an advisory committee, a group of AHIMA volunteers assembled to determine priorities and strategies for ongoing Virtual Lab development.

Topics that are being considered for future software additions include clinical decision support tools, revenue cycle management, and financial decision support tools.

Because not all healthcare facilities use electronic systems, HIM departments in colleges like UIC still must teach HIM paper practices. But the "wave of the future" is EHRs, Hitchcock says, lending even more importance to educational programs like the Virtual Lab that prepare their students for electronic HIM practice. While the lab demonstrates cutting-edge HIM technology, it also represents the future bread and butter of HIM careers.

"This takes students beyond just seeing it, which is what they would probably do on their practicum experience," Patena says. "They can actually go in and get some hands-on use, which is certainly invaluable for them to understand how these things work."

For more information on the Virtual Lab, visit http://campus.ahima.org/vlab.

For the academic year beginning fall 2008, the lab offers the following applications:

- QuadraMed MPI Suite: SmartID and SmartMerge
- QuadraMed Quantim encoding application
- ATHENS EHR (adapted for academic use from Cerner PowerChart)
- Dictaphone Voice Technologies
- McKesson Horizon Patient Folder
- HealthPort EDMS

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