Computers and Medicine

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Maintaining Patient Confidentiality in an Internet World

Healthcare transactions, including eligibility, claims, referrals and the like, require a flow of information among the constituents of the healthcare industry. Doing that in a way which is compliant with the spirit of the 1996 Health Insurance Portability Accessibility Act (HIPAA) regulations and which strikes a common sense balance between physicians' need to know and the safeguarding of patient confidentiality is an enormous challenge.

For several years, Healthon has focused its expertise on this challenge, and has invested enormous amounts of its capital in creating a platform (we called it the "Healthon Platform") which can serve this need. It was no easy task.

It's difficult because the government has not specified precisely what it means to be "HIPAA compliant." In fact, one might argue that the government is giving conflicting signals. In some sense the government wants its cake and wants to eat it too. It wants the healthcare industry to embrace technology in a big way to cap the rise of healthcare expenditures, which ever so often threaten to get out of hand again. But it also warns that any breach in patient confidentiality will be punished with severe penalties.

It's also difficult because the public is somewhat misinformed and ambivalent about what is at stake here. We all want our cardiac history to be available should we have a myocardial infarction on our next business trip to Fargo. We all want to make sure that new drugs do not interact with current medications. But we find the specter of someone rummaging through our medical history repugnant. Just what is "the need to know"? Just how should access be monitored? Just how much security will the public require that the new Internet applications provide?

Healthon uses authentication mechanisms, such as digital certificates, tightly defined access rights that travel with the data throughout the database and, of course, firewalls. Access rights are role-based and allow a colleague to be "deputized" should he or she be on-call, taking over your duties while you take a moment off, or allowing you to define a healthcare team who will work with a particular patient population.

It requires both concurrent and retrospective monitoring of access to patient information. One of the most powerful tools is to be able to go back and look at the list of everybody who has touched a particular datum. This is a rather simple approach, called audit logging, which has been used for years by the healthcare information technology industry, but is now taken to new heights as the Internet becomes more ubiquitous in healthcare.

Yet, after all this work, and securing every possible aspect of data as it flows to, within and from the Internet, our job is...
not over, nor is the problem completely solved. In fact, technology alone can never guarantee complete security, since most lapses actually occur as a result of employee carelessness, pranksterism or disgruntled employees.

More robust security measures will require the cooperation of every physician, every staff member and affect every physician office in the country. With increased automation will come the need to address those areas of the office where information can be accessed improperly, the old-fashioned way, too easily.

The healthcare industry's transition to the Internet offers great promise for reducing administrative burdens on both providers and patients. The technology to ensure the confidentiality of medical information is available and being deployed. As more physicians and patients become comfortable with the technology, we will see a faster migration to the Internet. And that promises to benefit both physicians and patients and, ultimately, to improve the quality of care.

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Electronic Medical Records
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Does the system allow patient data to be automatically duplicated to another server so that if the primary server crashes, you still have access to your data? Does the system support data backups, i.e. can the data be saved on tapes, CD's, etc.?

Hardware requirements:
Can your existing hardware support the vendor's software or do you have to replace it or purchase additional machines?

COST CONSIDERATIONS
Costs can vary widely ($15,000 to $500,000 and up) and depend largely on the size of the practice and the amount of customization required. The initial costs typically include: cost of the software (typically $2,500 per workstation), installation, training, customization and interface with existing practice management software. Ask for an estimate on how many days the training will take and how much you should expect to spend on customization and interface with existing software. Subsequent costs include yearly support (typically 15 percent of the total software sold initially). Ask if the yearly support fee includes the software upgrades and if it covers site visits by the technical support personnel.

AVAILABILITY OF SUPPORT
How quickly do they respond to your inquiry? How quickly can technical support arrive at your site? There is nothing worse than having a waiting room full of patients and being unable to bring up their records on the computer.

HOW LONG HAS THE COMPANY BEEN IN BUSINESS?
You want an established company who will also be around to support their product years after you have made a substantial investment of time, money, and effort.

Demo: Some vendors send you a CD while others allow you to download the demo from their web site. Some vendors may offer an evaluation period of their software.

Referrals: Ask for referrals in your area, then visit their sites and see the product being used.

After you have narrowed down the list of vendors, ask them to demonstrate the software to you and your staff. Provide each vendor with several typical patient scenarios and then notice how closely the flow of information in the software matches the typical flow of information in your practice—this will give an indication of how much customization will be required.

Selecting an EMR software may take as long as six months. Implementing it may take an additional year. However, a well selected, properly customized and carefully implemented EMR system may prove to be an exceptionally worthwhile investment to help improve practice efficiency.

ADDITIONAL ADVICE
Focus on what the current version of the EMR software can do for you. Vendors like to emphasize how the system will be better six months from now or so. Assume that you will be using the current system for a while. Expect to spend an average of six months looking for the software and one year integrating it into your practice. Your practice efficiency will probably be decreased during the time you are integrating an EMR system.

Dr. Faktorovich is a board certified ophthalmologist, specializing in refractive and corneal surgery. She is a member of the SFMS and is serving on the editorial board of the San Francisco Medicine magazine. Dr. Faktorovich has researched electronic medical record software extensively and is in the process of implementing a system in her practice.