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Electronic Medical Records

2006, Vol. 95, Issue 2

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How to Choose an Electronic Medical Record

by Bob G. Lanier, MD

Most physicians know what they don't want in an Electronic Medical Record (EMR). They don't want to spend \$100,000, they don't want to buy the wrong system, and they don't want to be forced to use a system that just does not work in their office.

Many physicians do not understand the efficiencies that develop over time as one becomes proficient in the use of an EMR. Primarily, the EMR provides help in passing audits, easy and complete billing for services, fast access to paperless records, and a significantly lower cost of maintaining records for 10 years. However it's the improved utilization of your staff (expected in the first six months) that make the most difference to your bottom line. Quality of care improvements shift from the best practices of individuals to the entire staff as everyone begins to see the real benefits of the EMR.

What Is a Good System?

1. **Simple.** Make sure that the physicians and staff members find it easy to learn and use.
2. **Bulletproof.** If everything fails make sure you can still see patients.
3. **Changeable.** Make sure you can easily change the system on a daily basis.
4. **Flexible.** Make sure your EMR can store and retrieve all types of documents, pdf, doc, tif, xml, .xls, jpg, dcm., txt., etc.
5. **Shares data easily.** Make sure that your data is available to be exchanged with other computers via something simple like a jump drive. You will need to provide information electronically to other systems and your patients.

What Needs Careful Scrutiny?

1. **Proprietary systems** that are owned by the seller/vendor, because the vendor controls installation of the improvements and this can result in a tremendous backlog.
2. **Complex systems** that depend upon everything in the chain of technology to work perfectly, because these systems have multiple "single points of failure" where just one problem disables the entire system, sometimes for not just you but all of their customers. Some systems have grown so complex that only a few people understand how they work and can fix or improve them. Also watch for systems that have hidden annual costs for server, database or client licenses, etc.

3. **Closed data structures** are databases used to store your information that you can't see, touch or change. Ideally, in a bad situation you don't want to get permission, have delays or special technical skills to get to your data.

4. **Backups** that you cannot restore yourself. Ideally, you need easy access to your backup data so that if you change systems or the vendor ceases business you can still retrieve and restore your data. If only your vendor can restore your data, preferably you want a contract with a penalty for any delays in restoring your system.

5. **Annual maintenance fees.** Make sure what you are buying is worthwhile and is worth its price. Perhaps you should try and waive the annual maintenance fee if you have very little input in your system improvements.

6. **Penalties for breaking your contract.** How long will you suffer with a system that doesn't work for you or the vendor that is unable and unwilling to fix problems? Consider a rider to your contract signed by you and your vendor that states they will pay for all costs of removing the system.

Personal Experience

A little over eight years ago I invested approximately \$10,000 in a Dragon-based dictation system so that I could electronically manage my medical records. The software cost approximately \$3,000 and over a year's time I invested another \$7,000 in training and upgrades. This improved the quality of my records, but because of the time I had to spend dictating it was again impossible to maintain an adequate flow of records. With Dragon I could produce documents quickly but the repetition of the system became unbearably boring. It also generated a lot of work for the staff because they had to print and send the records out. This electronic record system did not reduce any of my staff responsibilities, nor did it eliminate any of the expense and time required for paper handling.

Subsequently, I hired a physician's assistant and encouraged him to try the Dragon system. It was impossible to get him to use the system because of the extensive training the computer required to recognize his voice with good accuracy. The Dragon system had reduced my expenses for dictation by possibly \$30,000, but because I was spending more time, I really did not recognize the savings that I expected. I was still paying \$30,000 for dictation for my physician's assistant. At this point I felt that another system needed to be installed. I went to national meetings and I began reviewing all the electronic medical records and they were beyond my ability to purchase. They were inflexible and

could not be changed easily and without great expense. Most vendors' contracts had maintenance fees that were equal to 20 or 25 percent of the cost of the system on a yearly basis. This meant that we would be buying our system again every five years. At this point I reviewed my practice and decided that it was time to try and develop an electronic medical record system from scratch.

Initially, the electronic medical record was designed to only save the \$30,000 I was spending for dictation for my physician assistant's notes. Because of the budget to produce and maintain this system, the design had to be simple and that meant that it had to be done without a database and without a server. After a few months we developed a workable system based upon a simple Excel spreadsheet and Microsoft Word (which are common software tools in most physicians offices.) My PA was able to produce much better notes much faster than I could. And the system cost less than \$30,000 to produce.

Next, we started looking at other opportunities to save more money and improve our operations. At that point I did some simple research and established that I could save approximately \$140,000 a year if I could get rid of all the paper in my office. Just the storage of charts alone costs me approximately \$240 a month. If you take the time to follow a single piece of paper through your office you'll see how extremely expensive it is to manage.

Over a two-year period my staff, my consultant and I developed an electronic medical record that is extremely simple, changeable on a daily basis, designed to my specifications and relatively inexpensive. This electronic medical record can be changed and re-designed simply for use in any practice. I am a rheumatologist and it has made my record-keeping and management of charts and paper very simple.

I am able to see a patient in the examining room, collect all the data on Excel, generate a note of my evaluation and send it immediately to the referring physician with attached laboratory test results and x-ray notes. At the same time the same patient information is sent out via fax with no effort from the staff. Lab results are automatically filed in the patient folders and faxed to patients who have signed a HIPAA release from. I can write a prescription and fax it to the patient's preferred pharmacy with the patient's photograph and an electronic signature on the prescription. This works well for local pharmacies and pharmacies that are out of state.

I have both local and remote backup systems. My backups are stored in a small hard drive that is external to the computer and is backed up every day in my office and at my home. All of my data is in standard Microsoft Office documents or Adobe Acrobat files or other image files all viewable on nearly any computer. This is important because most database systems store your data on their database. You can't just get your notes out of the database. You have to have special programs and you have to have access to the database. I don't think it's smart to trust a third party to have all my

records off site or in a format that I can't easily access.

Unlike most systems, my EMR can survive a local area network (LAN) failure, a wide area network (WAN) failure, and a modem failure and because there is no database or server, I don't have to worry about a server crashing or database corruption. If for some reason a designated computer fails, another computer can easily pick up the daily chores. We do have a wireless system in the office so that everyone can communicate easily, but if that fails we can operate using small, portable USB jump drives.

It is very important to know that nearly any IT technician can maintain this program. Because of its simplicity, I used a high school student to do the majority of the early form development and maintenance. I am free to hire any visual basic programmer to improve or maintain the system. This means that I don't have to wait on a vendor to decide if my new idea is worthy of being included in the next release. I am in control of the changes.

The system interfaces with Medical Manager today and can easily be made to interface with nearly any billing system. We are working on an automatic interface to Quickbooks that will allow us to have a parallel accounting system to Medical Manager. We expect to be able to track all our financial information with a minimal amount of data entry.

Communication with other computer systems is very important. Make sure that any EMR you consider can easily send information to any other system. My EMR accomplishes this by keeping all documents in very standard formats. The DOQIT program under CMS has certified only two EMR's and my system was the second one certified.

The basic program is for sale with the initial software cost of approximately \$10,000. Hardware cost can be determined depending upon your existing hardware and the changes to the software that each practice will desire. This is relatively easily determined before any purchase decision is made.

The system is simple enough to be changed or re-designed for any type of practice. All that is needed to get started is your current paper documents from which Excel and Word templates are created. In most cases all the initial programming that you need can be done in about two weeks.

With other EMR systems training costs occur anytime there is a change in your staff or a change in the software. Because my system is Microsoft Office, most new staff members already know how to do most things. Very little training is required.

It is important to get an estimate of your cost for this transition from paper records to EMRs. Look at all the costs, not just the initial purchase costs, but training, customization, maintenance, support and license fees for software that you have to purchase annually. Remember, nearly any system with a database will have annual Server License fees, Client fees, and Database License Fees. Make sure you get an itemized list of these fees from each vendor you consider.

In Summary

I chose a Windows-based file system over a server-based system with a proprietary database, or a web-based system which has both a proprietary database and which also required a full time Internet connection. My reasoning was that I found it uncomplicated. I was familiar with the Windows interface and it required little effort to enter my existing data and was simple to operate the system. If one laptop crashes, my other computers still work. I don't fear failure of an Internet connection source, a modem or a server, power surges or other possible single points of failure that might prevent my patient care. I can incorporate all document types, I can update jump drives with any needed medical information. I can share information instantly with other systems. I can store my own data in a flexible and open format. I have no maintenance contract and I can make changes in my system or can even change vendors at any time. Last but certainly not least, I do not need a highly trained technical staff to operate or maintain our system.

Being an owner of XLEMR, I have made sure that we produced a system that works for physicians. Please consider evaluating the XLEMR and call me on my cell at 770-846-2627 or visit our Web site at www.XLEMR.com.

Bob G. Lanier, MD, a longtime MAG member, is a practicing rheumatologist, past president of MAG and member of the Gwinnett/Forsyth County Medical Society.

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Imagine an EMR that is so **SIMPLE TO USE** that training is almost not necessary, it's MS Office.
Imagine an EMR that is so **INEXPENSIVE** (\$10k/pp) to purchase and operate that there is no annual contract.
Imagine an EMR that is so **CONFIGURABLE** that a high school student can improve and maintain it.
Imagine an EMR that interfaces **ANY BILLING SYSTEM** without the usual delays and contracts.
Imagine an EMR that interfaces **QUEST LABS** and automatically sends lab results to patients.
Imagine an EMR that can easily satisfy the **UNIQUE NEEDS OF EACH PHYSICIAN** in the practice.
Imagine an EMR that is so **BULLET PROOF** it survives POWER, LAN, WAN, and SERVER failures.

XLEMR is new, very new and it's very likely that you are not aware of our new approach to Electronic Medical Records. We integrated the standard MS Office tools to provide a low cost, custom EMR for every practice. We are also one of only two EMRs certified by the US Government's DOQIT program. Your role in choosing an EMR requires you to have extensive knowledge of all the solution options available, consider trying out the XLEMR. Just click "Download" on the www.XLEMR.com Web site to download the DEMO version on to your Windows 2000 or later PC with Microsoft Office 2000 or later.

For more information, call Tripp Weeks at 678-361-4464 or e-mail Tripp.Weeks@XLEMR.com.

XLEMR • 2445 Alexander Lake Drive SW • Marietta, GA 30064-7502 • 678-361-4464 (c)
866-208-4308 (toll free) • 678-623-3217 (fax) • Tripp.Weeks@XLEMR.com