



Choosing the Right EMR System

by Laurence J. Heifetz, M.D.

Physicians are beginning to accept that electronic medical records (EMRs)—also known as clinical patient records (CPRs) or electronic charting tools (ECTs)—are an integral part of their oncology practice. Recently, my practice—Tower Hematology Oncology in Los Angeles, Calif.—implemented an EMR system. The experience was difficult, but ultimately rewarding.

Tower Hematology Oncology is a nine-physician, specialty partnership in private practice. We are very involved in clinical research in addition to our relatively high patient load. Our primary hospital is Cedars-Sinai Medical Center, an 800-bed tertiary care center in close proximity to our medical office building. Recently we expanded our treatment facility and imaging department by moving them to the ground floor of the medical office building, while our offices and examining rooms remained on the sixth floor. Our paper charting system was cumbersome enough in a single site, and the thought of having it work in two locations was unthinkable.

Our old charting methods were just a few of the problems endemic to our paper charts. We had sloppy laboratory report management, hand-written chemotherapy ordering and nursing administration documentation, and obtaining insurance authorizations and writing letters to other caregivers seemed a

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never-ending task. Insurance carriers were constantly demanding updates on patient status. Billing, scheduling, nursing, pharmacy, medical records, and the doctors were continually demanding “the chart.” In addition, we had to deal with inaccurate records of the medications our patients were taking.

AN ELECTRONIC SYSTEM FOR MORE EFFICIENCY

We finally decided to seek out an electronic alternative, and subsequently established some ground rules. We eliminated any vendor who had *the* solution for us or said “paper is bad.” We believe there are no total solutions, just improved degrees of efficiency. We also decided that any system we brought in would have to enhance the current system and not be more stressful.

We viewed the doctor/patient relationship as inviolable. Since we believe that access to information improves the doctor/patient relationship, we wanted to extend that access through the electronic chart. We observed that patients value a physician who shares the information in the chart and even uses the chart as an educational tool.

Deciding where to put the hardware so that it would enhance practice workflow required much thought. By mounting flat screen monitors on the wall in our exam rooms, a keyboard on the desk, and the computer below the desk, we retrofitted each room at minimal cost. Workstations became ubiquitous in the office. Nurses, pharmacists, medical assistants, and schedulers all access the system. We placed a laptop between each two infusion chairs. Charting is now done at the point of care.

We spent much time evaluating oncology-specific EMR vendors.

We were looking for a company that would view itself as our partner, not a vendor, and have a readiness to adapt their system to our needs. The product would have to include an intuitive linkage between the patient diagnosis and the appropriate treatment regimens, have the capacity to imbed clinical alerts into the system, and be able to screen for clinical trial eligibility as it assessed a patient’s disease. The product would have to have flexibility for differences in practice style and include an ongoing vendor support system. In addition, the vendor would have to provide adequate documentation of HIPAA compliance regarding off-site privacy concerns such as patient information being stored in a locked web site. Prior to making our selection, we tested various demonstration systems at a trade show.

After careful review, we selected a technology and information partner to provide a fully functional, oncology-specific EMR (iKnowMed, Berkeley, Calif.). We use it as an application services provider (ASP). Instead of purchasing the program and setting it up on our own internal network, all of our computers are linked to the Internet via a router and a T-1 line. A retail cost of upwards of \$250,000 for an internal client-server system was reduced to just a few hundred dollars a month per physician (plus our T-1 line as an ASP system).

WORKING SMARTER

Our medical assistants and nursing staff have completely accepted the new EMR system. With a few clicks and keystrokes our nurses can chart their nursing notes when they administer chemotherapy. They no longer have to hunt for the chart at the end of the day,

One Size Doesn't Fit All

Electronic medical records systems (EMRs) can eliminate your practice's chart filing problems, eliminate the errors endemic in handwritten prescriptions and chemotherapy orders, and increase the safety of your patients through a variety of quality-of-care features; but they are not all alike. Also, the size of your practice will affect what system (or part of a system) you select.

Consultant Vinson Hudson of the Medical Records Institute in Newton, Mass., sees three distinct EMR markets for outpatient systems.¹

1. Practices with at least 50 physicians can afford to buy "enterprise" or big business EMRs. These systems are implemented piece by piece as the company adjusts to the electronic milieu and can afford them. Outright purchase of an EMR software license costs between \$3,000 and \$10,000 per user, and that's without training or installation (although Internet-based

systems will lower the software start-up costs substantially).

2. Smaller practices (down to about 15 physicians) can purchase modular systems that replace only parts of their existing medical records. For example, if your physicians are still attached to paper records, buy a system that scans paper visit notes into the EMR as computer-formatted pictures. The software will tag each picture with a limited list of searchable, structured data fields (i.e., patient name, date of birth, account number), and a high-speed T1 data line will allow access to each patient's computerized record, including the patient's lab reports and prescriptions. It's an affordable first step.

3. Groups of fewer than 15 physicians may choose to buy whole EMR systems plus an application service provider (ASP), either through direct software purchase or on a lease basis via the Internet. Smaller groups, depending on the size of their checkbooks, can usually afford a whole system because they have fewer users.

According to Hudson, developing an information technology plan is

crucial to finding the right system and ending up with a successful, integrated EMR rather than a hodge-podge of uncoordinated (and expensive) electronic devices.

C. Peter Waagemann, another medical informatics specialist at the Medical Records Institute, agrees but thinks components should only be purchased based on the benefits they can provide today. Diagnose "the greatest point of pain in your practice," said Waagemann, and treat that first.

Hudson and Waagemann both believe that the most important reason to seek an EMR system is to take advantage of its safety features such as pathways at the point-of-care and drug reaction prompts.

While partial systems lack some of the safety features a full EMR offers, the Institute of Medicine in its report "Crossing the Quality Chasm" reassured the medical community that "a fully electronic medical record...is not needed to achieve many, if not most, of the benefits of automated clinical data." ■

¹Conn J. Lite bytes. *Modern Physician*. July 2001:27.

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find their handwritten notes, and construct proper nursing notes on paper. This saves an average of 80 minutes per nurse per day.

The physician can select the chemotherapy regimen from a library of options. The dosing is automatically calculated based on patient parameters in the electronic chart, and then adjusted and

approved by the physician. Only after the physician approves the regimen can it be accessed by the pharmacy staff who prepare the drugs or the nursing staff who administer the therapy. The entire treatment plan is available and displayed online.

The vast majority of our patients like the system and say they feel more secure now that they are get-

ting state-of-the-art care. They like the fact that the office is designed with adequate fail-safes to prevent information in the chart from "falling through the cracks." Other benefits they value include the fact that the system can:

- keep medication and allergy lists current
- display the entire medical record

Why This EMR System?

At the California Cancer Medical Center in West Covina, Calif., we have a simple electronic medical records (EMR) system. When we evaluated systems for our practice, we had several key questions to answer.

1. What is the cost to the practice?
2. What is the purpose: to interface with nurses' orders and billing, or just to provide complete documentation for our doctors, insurance company review, and communication to referring physicians?
3. How much time will the physician need to learn this EMR system?
4. How much extra time will the physician need to complete the EMR records versus conventional handwritten records?
5. Will the EMR system anger staff working with this system?

We were concerned about the privacy of these records, so in our center we chose to have each patient's record kept on a separate disk rather than on the hard drive. No one has access to the medical record through the hard drive itself.

As administrators and physicians look at selecting the best EMR system for their oncology practice, each individual should ask the same questions we did.

Although an expensive system that interfaces well is most ideal, finding enough funds for the purchase and enough time to learn to operate the system may be difficult. Nonetheless, the opportunity to coordinate work among administrators, physicians, medical assistants, and nurses brings a clear direction and more effective leadership to the practice and is a worthwhile investment in time. ■

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online to the physician on call
■ eliminate handwriting errors on prescriptions to outside pharmacies since all prescriptions are printed from the EMR system.

Patients observe us entering all elements of an office visit—from assessment to planning to follow-up. They routinely spin around in their chairs to help

the staff make a chart entry.

The physicians, on the other hand have taken some time to feel comfortable with the new system. Their reactions have ranged from, "This is making me a better doc. I love it!" to less enthusiastic comments. We have discovered that, as time progresses, our ability to use the system has steadily improved.

We are working smarter now. ■

EMR System Vendors

A Resource List

iKnowMed

1608 Fourth St., Third Floor
Berkeley, CA 94710
Phone: 510-558-4500
Fax: 510-525-3640
E-mail: info@iknowmed.com
Web site: www.iknowmed.com

The *iKnowChart* online electronic chart captures clinical information and enables users to access research protocols, decision-support features (including alerts to problems with dosing, drug interactions and even coding discrepancies), and the *iKnowChart* Reporting Center, which provides clinical and administrative reports and best practice analyses, all at the point of care.

IMPAC Medical Systems, Inc.

100 West Evelyn Ave.
Mountain View, CA 94041
Phone: 650-623-8800
Toll Free: 888-464-6722
Fax: 650-988-1834
Web site: www.impact.com

eCHART documents patient information throughout the medical assessment and chemotherapy administration process to help control cost and improve the quality of patient care. *eCHART* also puts the radiation therapy chart "online" throughout the department. *PhAST Note*, IMPAC's new Physician Assisted Structured Template Note, is designed to help the user document patient encounters and generates a suggested E&M code based on the user's document content.

Infor®Med

Medical Information Systems

Warner Center
21550 Oxnard St., Third Floor
PMB 3007
Woodland Hills, CA 91367
Phone: 800-985-6016
Fax: 818-593-5456
E-mail: praxis@infor-med.com
Web site: www.infor-med.com

PRAXIS, from Infor*Med Corp., is an electronic medical record system that stores patient chart notes, X-rays, lab reports, vital statistics, and medications. *PRAXIS* technology recalls words, phrases, sentences, paragraphs, even entire cases from the user's charts; and helps build new cases based on the user's earlier charting. *PRAXIS* generates a HFCA-compliant super bill.

Physician Micro Systems, Inc.

2033 6th Ave.
Seattle, WA 98121
Phone: 800-770-7674
Fax: 206-441-8915
E-mail: info@pmsi.com
Web site: www.pmsi.com

Patient Records provides a complete patient chart electronically and offers full integration with billing. Procedures and diagnoses entered in a progress note or on the electronic encounter form are automatically entered into the patient's account, eliminating paper Super Bills or Fee Sheets. *Practice Partner* allows the information contained in transcribed notes to populate the entire patient chart. With *Patient Records*, the practitioner writes a prescription once, prints it out (or sends electronically to the pharmacy), and the practitioner's note and medication list are automatically updated.

Encounter Care Solutions, Inc.

115 Atrium Way, Suite 200
Columbia, SC 29223
Phone: 1-800-660-1348
Fax: 803-865-1031
E-mail:
gphilips@foxmeadows.com
Web site: www.encountercare.com

Encounter Pro® is an electronic medical record that uses touch screen technology for rapid data entry. It also features a workflow mechanism that automatically times and tracks patients as the system navigates the clinician through a patient's encounter. Charges are automatically coded and carried over into one out of 10 interfaced billing systems.

Epic Systems Corporation

5301 Tokay Blvd.
Madison, WI 53711-1027
Phone: 608-271-9000
Fax: 608-271-7237
E-mail: info@epicsystems.com
Web site: www.epicsystems.com

The *EpicCare Ambulatory Clinical Systems* makes a searchable electronic chart available to users throughout an organization, utilizing security controls to protect patient confidentiality. The application includes integration with the *Dragon NaturallySpeaking*® speech recognition system, encounter and history documentation, order entry and communications, results review, medications management, CMS E&M code calculation, preventive care reminders, analysis tools for HEDIS and outcome reporting, and support for multimedia in the patient's chart.

OPTX

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Denver, CO 80202
Phone: 1-303-623-7700
Fax: 1-303-623-7900
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mpatzer@healthierpractices.com
Web site:
www.healthierpractices.com

OptxTools allows management of patient treatment using an electronic patient record, order entry, physician orders, automatic progress note generation, results reporting, scheduling, billing review, and decision support. *OptxTools* also permits development of protocols, treatment plans, guidelines, and/or drug regimens in electronic format for distribution to the treatment team.

OptxTools allows for its use in clinical trials, including the development of the protocol, management of the patient, and the analysis and reporting of outcomes.

ProVox Technologies

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www.TalkNotes.com

TalkNotes is a voice-recognition documentation solution designed specifically for medical practices, including oncology. *TalkNotes* interfaces with the practice's current billing system and eliminates transcription using a state-of-the-art direct voice-to-text method of documentation. The results are automatically stored in a locked, customized medical chart that conforms to today's medical/legal documentation requirements.

A⁴ Health Systems®

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HEALTHMATICS EMR™ is a Windows-based EMR system designed for the ambulatory setting. It includes daily schedule and action items management, complete access to patient charts—from office, home, or remote locations—and electronic and voice messaging. It links to major reference labs and integrates results directly into the patient chart. Electronic prescription management support tracks prescriptions and refill frequency with *HEALTHMATICS Refill Manager*.

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Cerner's Enterprisewide Systems facilitate the sharing of information across the entire continuum of care. *The PowerChart*® *Electronic Medical Record System* is a family of products designed to create an enterprisewide, multifacility, multi-entity, and longitudinal electronic medical record. *PowerChart* is the enterprise clinician's desktop solution for viewing, ordering and documenting the electronic medical record. *PowerChart* is also the foundation for a multitude of Cerner point-of-care solutions.