Using the Electronic Health Record to Enhance Student Learning

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As more medical schools and office practices adopt electronic health records (EHRs), medical students are increasingly learning to conduct and document patient encounters electronically. The EHR offers many advantages over paper records as a clinical teaching tool, yet medical teachers may miss opportunities to use the EHR to enhance student learning. In many medical schools, the family medicine clerkship or an ambulatory rotation in a preceptor’s office may be students’ only chance to learn optimal integration of the EHR in the outpatient setting.

Office-based teachers of family medicine can enhance medical students’ learning using the EHR in the ambulatory setting. This enhanced learning may be done in a time-efficient manner within the context of the ambulatory visit.

Three ways for office-based teachers to use the EHR to optimize students’ learning include (1) enhancing EHR-specific communication skills, (2) Increasing “just in time” learning for students and patients, and (3) improving students’ clinical performance.

Enhancing EHR-specific Doctor-Patient Communication

Students may have heard physicians sharing concerns about the potentially negative impact of the EHR on the doctor-patient relationship. In spite of this, preceptors can teach students to enhance their EHR-specific communication skills by adjusting the room’s geography and by using the doctor-patient-computer triangle (Figure 1). Students should introduce themselves to the patient BEFORE turning to the computer, adjust the screen so that the patient can see it easily, and adjust their chair to maintain good eye contact with the patient. Students should ensure they alert the patient before typing for extended periods (more than 30 seconds). A typical “signposting” cue would be “Excuse me while I spend a minute or so typing in your lab orders for today.”

Students should be encouraged to print labs and flowsheets from the patient’s data.

Increasing “Just in Time” Learning

In the context of patient care, “just in time” learning is defined as learning that occurs about the patient’s current problems in real-time within the context of the visit. To be practical and useful, students must be able to access and assimilate information quickly (less than 5 minutes). To encourage “just in time” learning, teach students to use high-quality sources of pre-sorted evidence, such as ePocrates®, the 5-Minute Clinical Consult®, the Centers for Disease Control (CDC) Web site, DynaMed®, and AHRQ’s Electronic Preventive Services Selector. Students should be discouraged from consulting source literature (eg, Medline or the Cochrane Collaboration) during the brief ambulatory encounter, although they might do so later in...
Figure 1
The Doctor-Patient Electronic Health Record Triangle

Table 1
Web References to Enhance “Just-in-Time” Learning

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their own time. To enhance patient education, students can download and print materials from high-quality sites such as the American Family Physician. A range of such sites may be accessed on portable electronic devices or bookmarked on the office computers for easy reference (Table 1).

Using the EHR to Improve Students’ Clinical Performance

The EHR provides many opportunities to help students improve their clinical documentation and performance. Many EHRs provide history and physical examination templates, which provide a systematic approach to the patient and prompt students to ask pertinent questions and document the answers. Students’ electronic notes are legible, can be easily reviewed by the preceptor, and can be edited in real time in response to feedback. The EHR may also include prompts that can remind students to order pertinent preventive services.

Finally, the EHR may decrease medical error by reminding students about allergies or potential medication interactions.

In summary, using these simple techniques, medical students’ outpatient learning experiences can be enhanced by their preceptor.

Although today’s medical students are technologically savvy, many still struggle to optimize doctor-patient communication while integrating the computer into ambulatory encounters. Teaching these techniques can help students improve their communication skills, enhance their patient education skills, improve their documentation, and potentially reduce their tendency to make medical errors.

Acknowledgments: Funding was received from the University of Texas Academy of Health Science Education grant 2007.
This study was presented at the 2008 Society of Teachers of Family Medicine in Baltimore and the 2008 North American Primary Care Research Group Annual Meeting in Puerto Rico.

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References