

FERTILITY@THE SPEED OF THOUGHT:
The Case for Electronic Medical Records
Richard Grazi MD

I'm no computer geek. For me, computers are like cars. I have a basic idea of how the engine works, and I can sure tell the difference between a ride in a VW and cruising in a Porsche.

When it comes to details, however, I'm lost. I couldn't tell an overhead cam engine from a muffler mount. When that hood needs to be opened, I'd sooner leave that job to the experts. Still, I can make just about any car take me from here to there. I didn't need to become a mechanic to appreciate the virtues of the automobile over the horse and buggy.

It's the same way with computers and me. I'm too busy practicing medicine and running my practice to become a computer whiz. I will never really know what's "under the hood" or, for that matter, how to make my own repairs. Still, I understand very well how to get my computer to take me from here to there, and I'll never go back to the way it was before it came around. Case in point? I haven't handwritten a note in a patient's chart in nearly five years. Nor have my nurses or secretaries. Paper records are, at least in our practice, the equivalent of the horse and buggy!

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This article is about computerized patient charting, an idea whose time has come. In the short space I've been allotted, I will try to share with you how the electronic medical record (EMR) has improved our practice, and Consulting, Cabin John, Maryland). The network also supports some spare PC's that are used exclusively for remote entry. In this way, staff working in any of our satellite offices can log into the network and write all notes as if they were on-site. Every patient has a computer file which contains all of the standard information one would usually find in a paper chart, e.g. demographic data, lab data, doctors' notes, nursing notes, cycle summaries, etc. Paper charts are also kept, but only for organizing notes from previous physicians consulted, if any. These are usually summarized in the computer file in order to minimize the need for chart pulling. Every chart is simultaneously readable on every PC. Chart entries are restricted according to the level of the employee. Generally, the chart reflects a strict division of labor and responsibilities to the patient. On a typical day, for example, the sonographer will enter follicle study results, the lab technician will enter lab results, the physician will enter treatment decisions, and the nurse will enter a note indicating that the patient has been contacted and counseled. Additional personnel, including our program psychologist, OR personnel and medical assistants also make entries to the chart. New employees with no knowledge of computers typically master the system within 3-4 days of training, provided they are conversant with the keyboard and mouse.

One of the most useful aspects of the system is that it allows patient phone calls to be routed through the internal computer network. All patient messages are typed by receptionists directly onto their computer screens and forwarded electronically to the appropriate receiver. Physicians receiving queries can find all pertinent information instantly, log in their responses and then forward them to nurses or other personnel for communication to the patient. This minimizes interruptions in the physician work schedule. All phone contacts with patients become an integral part of the chart, allowing every respondent to know what was previously told to the patient. The system supports consistency in patient management, especially in a multi-physician practice. The ability to access charts from anywhere off-site, including at home and at night, improves the quality of care for patients requiring attention during off-hours.

There is no system that will support every reproductive endocrinology practice, as physicians and practices vary in their individual needs. However, the strengths of using even a basic, first generation system are apparent:

- All patient information is available at the touch of the keyboard
- Charts are simultaneously accessible by multiple users
- Patient information is readily accessible from any location
- Notes written off-site are instantly available on-site
- Chart pulling, faxing, copying and ferrying is eliminated
- Flow of patient information e.g. phone queries and responses is simplified
- Quality and consistency of care are improved

More sophisticated systems will do more important things for the practice. A program that accurately codes diagnoses, procedures and outcomes allows the user to keep accurate statistics. When properly devised and maintained, the database should automatically provide the required statistics for reporting to SART. Beyond that, however, lay even more important data. The program should allow the user to compute statistics not only for

assisted reproduction, but also for every other therapeutic modality employed by the practice. Why focus on IVF patients only, when so many patients conceive in other ways as well?

Much has been written lately of the importance of evidence-based medicine. As a professional society, our goal is to strive not only for effectiveness, but also for efficiency. But few of us are able to account for the techniques we employ and the results we obtain on an ongoing basis. Electronic record keeping allows each individual practice to assess the effectiveness of its techniques. Networked practices can use such data to identify variations between practices; the basis of continued quality improvement. When this information is linked to financial data such as internal cost profiles, cost-effectiveness, or efficiency, can also be gauged. In the current practice environment, where the public has access to statistical outcomes and managed care keeps ratcheting down reimbursements, the only way to thrive is to have an efficient practice. Electronic medical records are the foundation of the efficiently run practice.

Michael Dell, the CEO of Dell computers, has stated that “process innovation is the fundamental source of competitive advantage.” We see this principle all around us, as businesses – especially big businesses – have reinvented their way of doing business. Investment in information systems – averaging 8-10% of revenues - has been the foundation of their success. Physicians, on the other hand, invest less than 1% of revenues on information systems. Nationwide, less than 5% of physician practices are maintained electronically. As a group, we are still trying to get from here to there by whipping horses!

The efficiencies inherent in electronic record keeping speak for themselves. Going forward, however, the main advantages of computerization may lie elsewhere. For further reading, I suggest *Business@The Speed of Thought*. In this book (which I am convinced was not written because the author needed extra money!), Bill Gates describes the ways in which the Internet has changed and will continue to change the nature of successful businesses, particularly in their outreach to consumers. Those who believe that medicine will not be similarly affected do so at their own peril. For the rest of us, it is time to acknowledge that the days of paper-based information systems are over. Adoption and continued improvement of the electronic medical record will be fundamental to our future success. *(END)*

Richard V. Grazi, M.D. is the Director of Reproductive Endocrinology and Infertility at Maimonides Medical Center and Brooklyn IVF.

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