



# Record-keeping in primary care

## *Benefits of an electronic system*

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**M**y first exposure to electronic medical records (EMRs) was as a fourth-year medical student. The year was 1976, and I was doing a family practice elective in a modest-sized community in Nanaimo, BC. One of the striking things about that particular computerized clinic was that it was not the only one in town with EMRs; there was a second clinic just down the road with a different electronic system. Each system had its strengths and weaknesses, but both were relatively functional for the time and clearly were pointing to a bright new future in electronic record-keeping and communications. Since that time, however, use of EMR has moved at a comparatively glacial pace in Canada's health care.

### History

In 1976, the space required for a computer meant that a room had to be dedicated to the noisy monster. Reliability of the technology was questionable; buying the computer was expensive, and it required dedicated staff to maintain it. And the records were either heavily text-based or coded in such a cryptic manner that an expert was required to decipher them. It was debatable whether patient care was improved.

Ten years later an early wave in computer use in Canadian medical offices (primarily for billing and scheduling) peaked in provinces that mandated electronic submission of claims for medical services. A few of the systems included a modest venture into medical records. Initially built on mainframe architecture, the systems quickly became more popular when built for personal computers—a much less expensive alternative.

At the time, many other sectors in society had not moved much further into the use of computers at the front end of service delivery. So health care was level with the rest of society, and we were all on the verge of huge potential change.

In the last decade, the pace of change in use of high-tech electronics for almost every sector of industrialized society has been staggering. Medicine has been at the forefront of much of this change, as we have seen astounding applications of technology in imaging, surgery, and other procedures. In the many specialized fields of medicine it would be unthinkable to practise without technology—to the point that some might not be able to practise at all!

Despite the necessity of technology to practise and patients regularly consulting the Internet for health care information, still some doctors' offices do not have such access.

### Getting connected

Primary care, including emergency departments, remains reliant on paper-based record-keeping, which is often illegible and inaccessible to appropriate care providers when most required. Even those using EMRs are not able to exchange vital information with emergency departments and hospitals, or other medical care providers, even though at least some of this information exists in electronic format. Although hospitals, health authorities, and others speak of an *electronic health record*

(a complete inventory of medical information for every patient), little has been done to connect community providers to such a centralized system.

Physicians themselves have raised many concerns about the use of EMRs, citing concerns about privacy, confidentiality, and costs. Ironically, both privacy and confidentiality would be greater with an electronic system than with a paper system. The last argument about the cost of implementation is more germane. Is it proper to expect physicians to create the infrastructure to support EMRs?

As medicine continues to become more complex, the potential to do both good and harm increases. As members of society receive medical care in a greater variety of settings, it is imperative to ensure that up-to-date information, such as the results of investigations, complete medication lists, and allergies, is available and updated in real time. Without the use of electronic record-keeping and the appropriate exchange of accurate information, there is a substantial risk of harm to patients through errors of both commission and omission.

The cost of quickly developing a comprehensive EMR in primary care and emergency settings will be considerable, but it is affordable. The cost of not doing so will be much greater, as we continue to duplicate investigations and compromise patient safety.

The light was in the room more than 30 years ago. It is time to turn it on!



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