

CANADIAN Healthcare Technology

The strength of an EMR is proportional to the sum of its interfaces

BY DR. ALAN BROOKSTONE

As a family physician, I deal with a multitude of hospital-based and external healthcare providers and agencies. As a result, I manually interface with many different individuals to deliver comprehensive care.

Most of the healthcare information is communicated daily by telephone, fax or through a flood of paper. The contact points in the interactions represent the interfaces that would need to be duplicated in a virtual world, if it were possible to function in a truly paperless environment.

In comparison to some communities, my interface needs are relatively simple. The community in which I practice has one hospital, one private laboratory group and one community-based radiology group. This differs from large cities, which might have a significantly greater number of hospitals and community services.

Even in my relatively uncomplicated environment, I need many interfaces and they have to function 100 percent of the time, seven days a week. As an example, I need interfaces to the private and hospital labs, diagnostic imaging services in the hospital and the community, hospital medical records department to receive patient progress reports, discharge summaries and specialty consult letters.

I also need interfaces to community health services, Pharmanet, community pharmacies, mental health services and home care.

The majority of paper that enters my office comes from specialist physicians to whom I refer my patients, so I need interfaces to every specialist office in the community and to a limited number of specialists outside of my community. The point that I am making is that even in my

community, the interface needs are extremely diverse and complex.

If it were possible to provide an EMR solution that incorporated all of the necessary interfaces, I believe that barriers to entry for physicians would be extremely low.

Currently, EMR vendors offer a limited set of interfaces, usually with community and some hospital labs and to a lesser degree with hospital information systems.

As a result, physicians with EMR systems are still forced to live in a primarily paper-driven environment and, wherever possible, must develop solutions to enter externally generated information into the EMR.

Some of this information is scanned as image files, other data is manually inputted, and some practices use OCR scanners in order to enter text directly into the EMR so that it is searchable.

I have two digital interfaces that I use extensively. The first is a direct interface to PathNET, the BC lab collaborative service that aggregates private lab test results.

At set intervals during the day, lab data is seamlessly downloaded from PathNET into my EMR system. Not only is this faster than receiving the reports manually, but the data allows me to immediately graph up to three indices simultaneously in order to elicit trends.

I have found this to be very useful as a disease monitoring instrument and as a patient education tool. The other interface that I depend upon is the prescribing interface to pharmacies. Using a built in prescribing tool, I am able to prescribe medications directly to the pharmacies in the community.

Each prescription is identified with a unique numeric identifier. As part of the prescribing process, potential interactions between drugs are checked and once saved, the cumulative prescription is faxed directly to the pharmacy.

This allows for a 'one write' process within the EMR. I have used the direct prescribing capability with the approval of the BC College of Pharmacists for the past six months and it has worked very smoothly.

Some of the most useful features of the EMR system are those that are not immediately obvious. I find the tight integration between the scheduling module and the EMR to be critical. If I receive an abnormal result, I can immediately switch to the schedule and determine whether the patient is booked for a return visit or have demographic information at my fingertips if I need to contact the patient directly. In addition, having an integrated list of specialists allows me to save time if I need to refer a patient or contact one of my colleagues.

Each EMR system will have strengths and weaknesses, but over time all systems will improve as the deployment becomes more extensive and the feedback from end-users becomes more solution focused.

However, ultimately the strength of the EMR is directly proportional to the number of electronic interfaces that exist. Just as financial data seems to flow seamlessly between banks, vendors and consumers, it will be equally important that an equivalent flow of information take place in healthcare.



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