EMRs are here to stay, but ...

My letter concerns some issues raised by the letter of Dr Thomas Hall.[1] I am a family physician in Queen Charlotte on Haida Gwaii, BC, on the extreme opposite coast from Dr Hall, where I have worked under an alternate payment program for the past 15 years of my 27-year professional career.

While I share many of Dr Hall's concerns about the loss of physician-patient interaction with electronic medical records (EMRs), I am less inclined to think that we will be successful or even want to be successful at stopping their development. Nonetheless, I think it crucial that we influence the development of these information systems, as I believe they have a dramatic effect on how we work, and our enjoyment of that work.

Barring world-scale calamities, EMRs are here to stay owing to the determination, investment, and momentum of the bureaucracies of government and medical colleges and associations that promoted them. Substantial potential advantages, outside of the uncertain effect on outcomes, include the ability to easily retrieve patient medical information; accessibility for patients to their own information; the portability, transferability, and storage of vast amounts of information; and the ability to research this information for practice management or scientific purposes.

The lack of outcome evidence might be partly explicable by the fact that this technology is still in its infancy in terms of what it will one day be capable of. Currently, most EMRs are only used as data holding and billing devices, with little attention to using them for deeper analysis of the data.

So what is my beef with EMRs? I see substantial flaws in their design and implementation that have serious effects on the quality and quantity of sustainable care that one can give. To varying degrees, EMR designers, like old pre-Windows computer program designers, have failed to understand the ergonomics of different styles of computer use. These small flaws in minute-to-minute use of the program prevent intuitive use and lead to time-consuming activity, duplication, and an increase in dissatisfaction with the work flow. This affects patient interaction time and quality, the quality of information entered ("garbage in, garbage out"), and the cost of entering that information (scribes,[2] speech recognition systems, time). In some below-average systems, persistent doubts about reliability in reporting information lead to more time spent double-checking everything by necessity or by choice.

Implementation of EMRs has also been a challenge.[3,4] Implementation falls into 2 categories: hardware support and software support. Software support needs to go beyond a lesson, a thick pamphlet of what key combinations to punch, and intricate wall maps of where all the information is to go. Do implementation teams seriously think we read, easily access, or remember these things? Unfortunately, too many implementation teams think that is all they need to provide. They fail to realize—especially in rural or remote communities, where clerical staff can be almost computer illiterate—that long-term on-site support is needed to develop understanding and proper use of the EMR. Funding agencies fail to realize that extra staff members are needed for implementation, especially for rural areas. Hardware support over large networks can be a nightmare of recurrent time-consuming obstacles to one's work flow. Telephone and Web support have not worked in our 4 years of using an EMR. Training local providers to be "champions" and "super users" has not worked either—they do not have the capability to solve the persistent complex problems we encounter.

Organizational support has also been lacking. Too many have simply believed their information technology experts can handle things, and that the problems will quickly sort themselves out as the users get used to the systems. In so doing they often fail to listen to the end users when they repeatedly note their inability to maintain service quality and quantity levels, and their inability to retain staff. Funding agencies fail to provide adequate long-term support to the implementation teams and medical offices.

To progress and realize the true potential of EMRs we have to find a voice and insist that EMR designers actually listen to the lessons of computer ergonomics, that implementation teams provide on-site, "at-the-elbow"[5] support for the long term, and that funding agencies be prepared to support these things and the extra costs associated with them.

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Acknowledgment
I work mostly with the Applied Informatics for Health Society MOIS (Medical Office Information System) and the Cerner PowerChart, both implemented by the Northern Health Authority.

Competing interests
None declared

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Horses and buggies have some advantages over cars, but no one is turning back

Dr Hall argues that support for recording health care visits using electronic medical records (EMRs) should be stopped.[1] The evidence that helped convince him of this was apparently in a POEM (Patient-Oriented Evidence that Matters) that related to EMRs, as well as having a patient transfer to his practice from a clinician who made poor eye contact, presumably because that clinician used a computer to record encounters.

Electronic medical records are here to stay as part of an evolving, larger electronic societal ecosystem. Indeed, it is almost surprising that it has taken much of Canada so long to have EMR penetration in primary care. That EMRs are "excessively expensive, very time consuming, and complicated to set up and maintain"[1] are realities for many physicians. Yet, the benefits of using electronic charting far outweigh these challenges. Examples of modern-day conveniences we would not want to give up that once produced these kinds of challenges include cell phones and ATMs. We agree that the present generation of EMRs is a simple transposition of paper charts to an electronic format and that EMR-based clinical decision support remains immature.[2] Additionally, there are other aspects of health information technology (IT) that are similarly immature, such as appropriate connectivity with other data sources (hospitals, pharmacies, home care, patients). Perhaps with maturity, and when taken together, these systems can assist in improving health and health care outcomes. Putting clinical intelligence in EMRs has the potential to support family physicians' decisions in patient care. It also has the potential to enhance interprofessional collaborative work such as clinical task sharing and information continuity.

We do not yet have much capacity to add data in ways that are computable and usable for discovery. Electronic medical records have also not been programmed so that the data they contain can be easily searched and used to answer important questions posed by clinicians and other members of the health care system. We do not have Google searches to look for answers in our EMRs; however, until 1998, the Internet did not have Google either, and nobody thought the Internet was useless or that it should have been abandoned.

There are numerous conflicting articles on whether the EMR has a positive effect on the physician's office[3]; however, the benefits are beginning to emerge. The benefits of EMRs extend to many areas of practice including improvement of legibility in paper records, improved record completeness, enhanced organization, decreased documentation time, increased communication between patients and physicians, and improvement in quality of care.[4] But what about head-to-head comparisons with paper records for diseases common to family practice? A randomized controlled trial