

Grasping the Opportunity to Improve the Safety of Care



COMMENTARY

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ABSTRACT

Clearly a wakeup call for the healthcare industry, the IOM report of 2000 To Err Is Human now appears to have been a sentinel event, at least in the United States (Institute of Medicine 1999). Given that the practice of medicine in the United States is, in many ways, very similar to that in Canada – for example, our physician trainees are educated and evaluated using similar models – it is unfortunate that the IOM report was not also a wakeup call for Canada. Four years have passed, and apparently Canadians have only recently woke up to front-page newspaper headlines that point out that Canadians, like Americans, are being harmed and killed as a result of medical errors.

NOW THAT CANADA has awoken, what is to be done? Dr. Morgan, in his paper “In Pursuit of a Safe Canadian Healthcare System,” lays the groundwork for investments that might lead to a significant reduction in medical errors. He is on the right track, and his ideas should be taken to heart. Recently, the President of the United States and the Secretary of Health

and Human Resources called for widespread adoption of an EHR within the next decade. The United States faces immense challenges on many fronts to achieve this vision; nonetheless, it has begun to move decisively in this area. Canada needs to mobilize quickly, collectively and efficiently to accelerate the adoption of the EHR for all Canadians.

Fortunately, many of the complexities of the US health system do not exist for Canada. Additionally, Canada has distinct advantages over the US that make the likelihood of EHR adoption more probable. These include regionalization and a greater alignment of payers, providers and patients. I would suggest, as an outsider not knowing all the complexities and politics of healthcare in Canada, that if Canada got on with it an EHR for all Canadians could be achieved within the decade.

That said, I will focus my response to Dr. Morgan's paper on providing additional direction for improving patient safety through the reduction of mismedication, a leading cause of medical errors.

To start with, Canada should learn from the United States, where the patient safety movement stands at a crossroads. Will it continue to debate the merits of a focus on errors or a focus on injuries (with no apparent resolution) or will it begin to concentrate on building safer and more reliable processes of care? I would encourage Canada to focus on the latter, and not waste time wondering whether to measure errors or adverse events.

To briefly review, errors are failures in the process of medical management, and they have the potential to harm the patient. Adverse events, in contrast, relate to actual harm. Medical errors and adverse events represent two different categories of events, whose overlap – preventable adverse events – should clearly be the target of process and technology improvement efforts in the field of patient safety. Those efforts must go well beyond “chart reviews” and “sentinel event reporting,” for both have significant limitations. Chart reviews focus on errors that can be deduced by reading history; this is, at the

very least, difficult, since a patient's chart hardly ever tells the full story.

Additionally, research has shown that consistent agreement on identification of an error in care is typically not reproducible either between centres or between trained reviewers. Sentinel event reporting, which goes after the “root cause,” is also not sufficient, because it has no formal way to assess the frequency of the relative contribution of these causes or errors. In addition, these queries tend to focus on sentinel or rare events that do not pertain to the most common types of harm that occur to patients.

A more comprehensive approach is the injury prevention model, which provides a coherent framework for addressing medical injuries, including a systematic sequence of methods to identify medical injuries, study their causes and intervene to reduce their occurrence or severity. An important principle of the injury prevention model is the comprehensive focus on injuries rather than on negligence, which avoids the pitfalls in determining negligence, error or subjective judgments about preventability. In efforts to improve patient safety, the injury prevention model with a focus on injury can provide a useful complement to those approaches that focus on error (McNutt et al. 2002). Indeed, the Australian approach to measuring safety incorporates both approaches (Malpass et al. 1999):

- A voluntary anonymous incident reporting system called AIMS (Australian Incident Management System) in which an incident is defined as “any event or circumstance which could have or did harm anyone or could result in a complaint”

- A separate system called the Quality in Australia Health Care Study (QAHCS), which involves the non-voluntary retrospective analysis of medical records of hospital admissions in which an adverse event is defined as “any event or circumstance caused by healthcare management rather than a disease process that resulted in admission to hospital, prolongation of hospital stay, morbidity at discharge, or death”

Dr. Morgan’s suggestion of establishing a Canadian Patient Safety Board modelled on the Transportation Safety Board is intriguing, and might serve as the needed vehicle to turn the injury prevention model into reality. As Canada tackles medication safety, measuring safety rather than errors will prove to be an essential tool in both understanding the issue and tracking success in solving identified problems. As Canada implements the electronic health record, greater and more complete patient data will become available for analysis, significantly adding to the effectiveness of the injury prevention model.

The implementation of the EHR will allow Canada’s healthcare leaders to learn about its medication safety problems. In addition, it should provide the analytical tools to establish baseline metrics and outcome data. A reduction in actual adverse drug events (ADEs), an indisputable measure of quality, tracked over time is the best way to show meaningful progress and the value of the EHR in the pursuit of patient safety.

In addition, a national EHR implementation should include patient safety surveillance programs with real-time

alerts, which will provide an important layer of redundancy over normal processes of assessing patient status, and speed up response to important new information. Even when other safeguards such as clinical decision support (CDS) tools and computerized physician order entry (CPOE) are in place, real-time surveillance can pick up situations otherwise missed or bypassed, such as a change in patient status. For example, if a patient is discharged home on heparin (a blood thinner), the surveillance system can monitor for a drop in platelet count – a complication that can result in major bleeding and death – and so alert the physicians, pharmacists and nurses in time to intervene. Such surveillance systems, which are commercially available, utilize interoperability standards that make them compatible with most EHR solutions. Table 1 summarizes the complementary roles played by an EHR that provides real-time CPOE with decision support, real-time surveillance and retrospective surveillance, all of which are essential in maximizing patient safety. Additional guidance on how to build an electronic measurement system for medication safety within your EHR can be found in a recent publication by Classen and Metzger (2003).

In conclusion, I believe Dr. Morgan has got it right: Canada stands at a crossroads. Like its neighbour to the south, it has discovered its healthcare system is not nearly as safe as had been assumed. As Dr. Morgan has outlined, either this can be a call for rapid initiatives to improve the safety of care, or it can succumb to the more traditional approach of “This needs more study.”

Canada has great potential to quickly

Table 1: Complementary Roles of CPOE and CDS Compared to Real-Time Surveillance and Retrospective Surveillance

Role of CDS in CPOE	Role of Real-Time Surveillance with Notification	Role of Retrospective Surveillance
Screens for errors in prescribing	Focused on intervention	Focused on detection
Applies various tools to guide orders and checks orders	Screens for problems as they are occurring	Screens for negative outcomes of prescribing
Helps avoid order-related problems	Delivers rules-based alerts based on screening of orders and new patient information	Provides data for investigating potential ADE
Occurs real-time	Can detect problems and speed investigation and response	Provides evidence of progress, and targets for further improvement efforts

Source: Adapted from Kilbridge and Classen (2002).

improve the safety of healthcare for its citizens, perhaps much more so than the United States. The only question is: Will it grasp this opportunity?

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