EDITORIAL

Mistakes Killing Patients!

Linda MacKeigan

So went the headline of a story, published on August 23, 2001, in the *National Post*. The story announced a study sponsored by the Canadian Institutes of Health Research and the Canadian Institute for Health Information, designed to ascertain the percentage of deaths caused by medical error.[1] The study is only one of several current initiatives directed at learning more about medical error in Canada. What has prompted this increased interest in medical error?

In November 1999, the Institute of Medicine of the National Academy of Science in the United States released a landmark report entitled *To Err is Human: Building a Safer Health System*.[2] What the report had to say about the prevalence of medical error and its impact on mortality rate and health care costs in the United States generated action by President Clinton, the US Congress, and the Joint Commission on Accreditation of Healthcare Organizations, among others.[3] The concern for medical error was echoed in the United Kingdom, where the National Health Service issued a report in 2000 and the *BMJ* dedicated most of a recent issue to a series of papers on medical error.[4] Then in 2001 the Institute of Medicine released a second report, *The Quality Chasm: A New Health System for the 21st Century*.[5] An error prevention movement in health care was in full swing!

Why was all of this news? Hospitals have had incident reporting systems for eons, it seems. However, now medical error was being defined in much broader terms: "the failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim".[2] Thus, error encompassed not just failure to execute (e.g., misadministration of a drug) or failure to prevent an accident such as a fall, but also inappropriate care plans (e.g., drug therapy). Second, after a decade or more of research there was strong evidence (mostly from hospitals) of the magnitude of the problem, which was significant enough to be considered a major health policy issue and not just an institutional concern. Third, medication error was now being viewed from a systems perspective. In other words, faulty systems (not individual health care practitioners) are the cause of errors. From this perspective, errors can be prevented only by redesign of systems, whether they be knowledge dissemination systems, information systems, communications systems, or others.[6,7]

Why should hospital pharmacists sit up and take notice? There are lots of reasons:

- The most common type of medical error involves medication.[6]
- US studies have shown that adverse drug events affect 2% to 7% of hospital patients and that these patients stay in hospital on average 8 to 12 days longer than patients who have not experienced an adverse drug event.[8]
- Anywhere from 28% to 95% of adverse drug events can be prevented (i.e., represent medication errors).[8]

Is medical error a problem in Canada? Very few studies have been done;[3] however, there is no reason to believe that errors are any less likely to occur here than in Australia or the United States, where most of the research has been done. So if we do have a problem with medical error in Canada, what is being done about it? More particularly, what is the pharmacy profession doing about medication error? One major initiative has been the founding of the Institute for Safe Medication Practices Canada (ISMP Canada), spearheaded by David U, pharmacy manager at the Centre for Addiction and Mental Health in Toronto, Ontario, and supported by Michael Cohen and the ISMP in the United States. ISMP Canada advocates for research, policy, and action to reduce medication errors (www.ismp-canada.org). It is

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currently testing tools to aid in the control of medication error: a self-assessment of medication-use systems and computer software for tracking medication errors and performing causal analysis.[9] ISMP Canada has a regular column, "Medication Safety Alerts", in *CJHP* (see page 52 in this issue).

CSHP has been active as well. In the fall of 2000, it jointly sponsored an invitational workshop with Health Canada on medication error. A multiorganization coalition was subsequently formed to develop a voluntary reporting program, which will be implemented by Health Canada. Bonnie Salsman is CSHP's representative in this endeavour. Bonnie is also representing CSHP on the Royal College of Physicians and Surgeons of Canada Steering Committee on Patient Safety and Medical Error. On the research side, an Error Management Unit was recently established by University of Toronto researchers at Sunnybrook and Women's College Health Sciences Centre. A member of the pharmacy department is participating in that group.

These efforts represent a good start, but are they enough? The Institute of Medicine report[2] recommended a 4-part plan for reducing errors in health care:

1. Provide leadership and a research focus on patient safety through the establishment of a centre for patient safety.
2. Develop reporting mechanisms for learning about and from errors — a nationwide program that requires reporting of the most serious errors and voluntary, confidential reporting systems to focus on errors that do not result in patient harm (called "near misses").
3. Establish safety-related performance standards that are explicit and known by everyone who provides health care or uses it. These should apply to health care organizations (including licensing and accrediting bodies), health care professionals, and drugs and medical devices. Professional societies should pursue activities to highlight patient safety through their conferences, journals, and collaboration with other societies and groups.
4. Ensure that health care organizations implement safety improvements from within by creating a culture of safety through leadership, job redesign, promotion of team functioning, systems design, and creation of a learning environment that uses continuous feedback.

How does Canada measure up against this plan in the realm of medication error? And have hospital pharmacists been front and centre in the movement?

1. At least one research centre has been established (with pharmacy participation), and a major national study of medical error is under way.
2. A national reporting program for medication error is being planned, with input from both CSHP and the Canadian Pharmacists Association. Voluntary incident reporting systems exist within most, if not all, accredited hospitals; however, many acknowledge that reporting could be more vigorous.
3. It is not apparent that the Canadian Council on Health Services Accreditation or the various pharmacy licensing bodies (members of the National Association of Pharmacy Regulatory Authorities) are paying attention to medication error. The CSHP has published the "Medication Safety Alerts" column in its journal since 1999. However, medication error has not received much attention at CSHP meetings since Michael Cohen did a presentation at the Professional Practice Conference in 2000.
4. ISMP Canada will soon make available to hospitals tools that will enable them to learn about the safety of their medication systems. Some hospitals have implemented interdisciplinary safe medication practice committees.[10]

So a start has been made, but there is much yet to be done. The challenge is as much cultural as it is technical.[4] A culture of safe medication use must be developed and maintained within our hospitals. This culture will value learning and teamwork and will be nonpunitive. It will require system-level thinking,[4] something that may not come naturally to many of us.

Are we killing patients through unsafe medication systems? We truly don't know, and we won't know until we search for the data. Rigorous controlled studies will tell us much. However, to determine the situation in our own institutions, we must invigorate our incident reporting systems, not by exhorting staff to report errors but by dealing with the barriers to reporting. And it doesn't stop there. The information gathered in the reports must be used to improve the system. The reports must be analyzed to uncover root causes and identify patterns, and then action must be taken to redesign systems to eliminate the root causes. Both analytical and creative thinking will be required. The experience is bound to be enlightening for all involved!

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