Reducing medication errors

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Public concern regarding medication errors was heightened by the recent death of infant Trevor Landry from a narcotic overdose in a Toronto-area hospital. This case involved the mistaken administration of morphine instead of meperidine postoperatively. A colleague and I reported a near-fatal medication error during general anesthesia that resulted from the misidentification of look-alike ampoules containing epinephrine and glycopyrrolate. Indeed, the medical literature is replete with anecdotal reports of medication errors that raise disturbing questions. How often do such tragedies occur in Canada? Have the jury’s recommendations from the coroner’s inquest into Trevor Landry’s death been adopted by most Canadian hospitals? Unfortunately, we don’t know the answers to these questions because no mechanism exists in Canada to track medication errors or to develop strategies to prevent their occurrence. One of the jury’s recommendations from the inquest was that “medical professionals become more proactive rather than reactive to prevent drug errors before they occur.”

Two major initiatives aimed at reducing the likelihood of medication errors in Canada are discussed in this article. However, these initiatives will be implemented only if physicians and pharmacists demand improved safeguards to the drug delivery system. If a sense of responsibility is not sufficient motivation, it is sobering to consider the potential legal consequences of causing a medication error. In New Zealand, since 1982 at least 4 health care professionals have been found guilty of manslaughter on charges arising from fatal medication errors. In Canada, Trevor Landry’s death was considered to be a homicide.

Medication errors contribute significantly to patient morbidity and mortality and are associated with a considerable cost to the health care system. One contributing cause is the misidentification of drug ampoules or vials. Confusing, inaccurate or incomplete labels and packaging contributed to 21% (248/1143) of the actual or potential drug errors reported the US Pharmacopeia Practitioners’ Reporting Network (USP PRN) over a 1-year period (Di–ane Cousins, vice-president, USP PRN: personal communication; 1999). To combat the problem of poorly designed drug labels, a new voluntary Canadian standard for the labelling of drug ampoules, vials and prefilled syringes (CAN/CSAZ264.2) was recently published by CSA International. This standard defines the minimum design requirements for the presentation of critical information on the inner label for parenteral drugs. The standard was adapted from previous guidelines developed by the Canadian Society of Hospital Pharmacists and was based on the consensus opinion of a committee of pharmacists, physicians, nurses, engineers and representatives from pharmaceutical manu-

Fig. 1: The label on the left, for a 1-mL ampoule, complies with the CSA International standard. The label on the right complies with current regulations adopted by Health Canada.
This nonprofit organization identifies underlying causal mechanisms and develops strategies to prevent their recurrence. This information is then shared with industry and the appropriate government agencies. Although individual hospitals in Canada currently have reporting programs for adverse drug events, these programs are relatively ineffective because large databases are required to identify rare but recurrent events. The Canadian Society of Hospital Pharmacists has recently established a task force to explore strategies for a national reporting program for medication errors. In addition, David U, a Canadian pharmacist, is working with Michael Cohen, president of ISMP in the United States, to establish ISMP Canada. Physicians who would like to provide input into the development of a national reporting program can contact Bill Leslie, Executive Director, Canadian Society of Hospital Pharmacists, 350–1145 Hunt Club Rd., Ottawa ON K1V 0Y3; bleslie@csfp.ca; or David U, ISMP Canada, 79 Castleridge Dr., Richmond Hill ON L4B 1R8; davidu@netcom.ca.

Medication errors are an inevitable consequence of the human condition; they occur even among the most conscientious medical professionals. If health care professionals do not demand, on behalf of their patients, reasonable safeguards to reduce the likelihood of medication errors, no one else will.

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