Practice Spotlight: Medication Safety Pharmacist

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Patient safety is of paramount importance in health care. Adverse drug-related events constitute a significant proportion of the adverse events experienced by patients who have been admitted to hospital.[1] This health care issue has been the focus of advocacy efforts by organizations such as the Canadian Patient Safety Institute, the Institute for Safe Medication Practices (ISMP), the Institute for Safe Medication Practices Canada (ISMP Canada), and the Canadian Society of Hospital Pharmacists (CSHP). In many of the guidelines and standards set by these organizations, pharmacists play an integral leadership role. Under the guidance of former director of pharmacy Brian Tuttle, the pharmacy management team of Halifax's Capital District Health Authority (CDHA) identified the need for a dedicated pharmacist position to promote and advance safe medication practices in the CDHA's facilities (ranging from small community-based facilities to a large quaternary care teaching hospital with more than 500 beds). In April 2007, the full-time position of medication safety pharmacist was created.

The current medication safety pharmacist at the CDHA, Jennifer Turple, has a broad understanding of the medication-use process, stemming from her prior work experience as a pharmacy technician and as both a dispensary-based and a clinical pharmacist. This experience serves her well in her day-to-day tasks, since safety-related deficiencies in medication practices may be identified at any point in the continuum of the medication-use process, including prescribing, dispensing, and drug administration. Some of the activities that have been undertaken to promote safe medication practices are described below.

As the dedicated medication safety pharmacist, Ms Turple has been heavily involved in the development of a policy for the implementation of medication reconciliation. This has included development of a best possible medication history and admission and discharge forms, a self-learning module for nursing staff, and various other educational tools. As a member of the multidisciplinary Medication Reconciliation Steering Committee, a major component of her role has been to educate the site- and service-specific implementation teams about the medication reconciliation process, through a train-the-trainer model.

Because the position of medication safety pharmacist was created 6 months before an accreditation survey of the CDHA by the Canadian Council on Health Services Accreditation (now known as Accreditation Canada), Ms Turple initially focused on ensuring compliance with accreditation requirements. For example, although all concentrated potassium chloride solutions had already been removed from patient care areas, concentrated potassium phosphate and hypertonic saline continued to be available. Together with the newly formed Pharmacy Medication Safety Committee, the pharmacist evaluated the clinical scenarios in which these products were being prescribed. In collaboration with many other care providers, the medication safety pharmacist undertook the following actions to address this problem:

- developed preprinted order sets for the management of hypophosphatemia, including standardization of dose–volume–solution combinations;
- coordinated in-house stability testing of premixed potassium phosphate solutions; and
- introduced a new dispensing process for potassium phosphate and hypertonic saline products.

These activities led to the successful removal of concentrated potassium phosphate from patient care areas district-wide. Removal of hypertonic saline from patient care areas is in progress.

The medication safety pharmacist is a member of the Nursing Pharmacy Committee, where her role includes sharing information gathered from the literature (e.g., from the publication *Nurse Advise-ERR*[2]) and from in-house medication incidents. This committee makes both proactive and reactive safety-related changes to nursing and pharmacy policies. For example, the High Alert Working Group, born from this committee and co-led by the medication safety pharmacist, has been tasked with the development and implementation of a policy or process for independent double checks before administration of a specified list of drugs (based on ISMP's list of designated high-alert drugs; see http://www.ismp.org/Tools/highalertmedications.pdf).

In collaboration with the Risk Management department, the medication safety pharmacist has reviewed a number of internal medication incidents and investigated deficiencies in the CDHA'S systems and processes that created opportunities for error. From these investigations, the medication safety pharmacist has made recommendations for change and is active in the work required to implement the recommended changes. In a more proactive initiative based on recommendations of both ISMP and ISMP Canada, the medication safety pharmacist coordinated the removal of heparin at a concentration of 10 000 units/mL from most patient care areas in the CDHA. Floor stock was standardized to a select number of heparin products. Also, on the recommendation of CDHA's Drugs and Therapeutics Committee, the medication safety pharmacist, working in conjunction with the Pharmacy Medication Safety Committee, has facilitated the removal from stock of several drugs of concern (as identified by ISMP), including nifedipine capsules and oral meperidine.

An emerging role for the medication safety pharmacist is the assessment of safety features in medical devices such as infusion pumps and patient-controlled analgesia pumps. With a sound knowledge of medication safety issues and in collaboration with biomedical engineering staff, the medication safety pharmacist also participates in device purchasing decisions. Current and future initiatives include staff education related to the use of unapproved or unsafe abbreviations in the health record, development of a comprehensive allergy assessment and documentation policy, and advocacy for implementation of technologies such as automated dispensing cabinets and computerized physician order entry.

The position of medication safety pharmacist offers the opportunity to work with a variety of health care providers and to help prevent harm to patients receiving care within the CDHA. Through participation in the Medication Safety Pharmacy Specialty Network of CSHP, Ms Turple is able to learn from and share experiences with pharmacists practising in similar settings across Canada. Although the position does not allow the incumbent to provide direct patient care, all of the safety initiatives that have been implemented as a result of her activities and influence have improved the safety of direct care provided by others. This reflects the ultimate focus of the medication safety pharmacist: the safety of each individual patient.

References

1. Baker RG, Norton PG, Flintoft V, Blais R, Brown A, Cox J, et al. The Canadian Adverse Events Study: the incidence of adverse events among hospital patients in Canada. *CMAJ* 2004; 170(11):1678-1686.
2. *Nurse Advise-ERR* [newsletter]. Huntingdon Valley (PA): Institute for Safe Medication Practices. Available from: http://www.ismp.org/Newsletters/nursing/default.asp

Acknowledgement

I would like to acknowledge the members of the CDHA Pharmacy Medication Safety Committee and all other care providers in our district who have championed many of the medication safety initiatives that we have implemented.—Jennifer Turple.

The Practice Spotlight series highlights the accomplishments of Canadian pharmacists with unique practices in hospitals and related health care settings. If you have a unique or innovative practice, or you know someone else who should be profiled, please submit your contact information to Mary Ensom, Editor of *CJHP* (cjhpedit@cshp.ca), and one of our Associate Editors will be in touch with you.