Implementing high-leverage strategies to improve the safety of medication systems

By Marg Colquhoun

The Ontario Medication Safety Support Service (MSSS), a joint initiative of the Institute for Safe Medication Practices Canada, the Ontario Ministry of Health and Long-Term Care (MOHLTC) and the Ontario Hospital Association (OHA) is Canada’s first province-wide medication safety support service for health-care organizations. This initiative reflects the commitment of the Ontario MOHLTC to assist Ontario hospitals in safely managing the use of high-alert medications (those with greater potential to cause serious harm to patients if used in error).

The first MSSS project was designed to assist Ontario hospitals in implementing strategies and safeguards to prevent patient injury due to errors with potassium chloride (KCl). In 2003, the number of Ontario hospitals storing concentrated KCl in patient care areas decreased from 62% to 26%. An independent national survey (the 2003/04 annual hospital pharmacy report; www.hospitalreport.c a/HPCC/content/2004_Report/2 003_04_full.pdf) later identified Ontario as the Canadian province with the highest success rate in restricting the storage of concentrated KCl in hospitals.

Given the success of the first MSSS project, the support service has now initiated a second project to address injury due to inadvertent mishaps with narcotics. The following factors were among those that prompted a focus on narcotics:

• In a survey conducted by ISMP Canada in July 2003, narcotics were identified as a top concern by staff at Ontario hospitals.

• Of 32 medication error-related deaths investigated between 1999 and 2003 by the Office of the Chief Coroner of Ontario, 44% involved narcotic medications.

• An in-depth event analysis of a fatal narcotic error in 2004 identified system weaknesses common to many hospitals.

Narcotics have a high potential for causing adverse events: they are potentially lethal, commonly prescribed, widely available as floor stock, and frequently similar in packaging and labelling.

Purposes of the Ontario Narcotic Medication Safety Support Service Project

The aims of the second MSSS project are to determine the extent to which best practices and system safeguards for narcotic distribution and administration are in place in Ontario hospitals, to identify opportunities for system improvements and to assist hospitals to make those improvements.

In the initial phase of the project, 75% of Ontario hospitals completed a survey specific to narcotic system safeguards and the results indicated opportunities to implement known safety strategies to reduce risk with the use of narcotics.

Recommendations for improving patient safety related to narcotics were developed in collaboration with Ontario hospitals and built on bedrock human factors principles:

• Remove from patient care areas selected products with the potential to cause serious harm.

• Simplify systems - reduce steps and interfaces.

• Standardize processes and procedures.

• Use of checklists

The MSSS process in Ontario includes workshops, telemedicine presentations, meetings with professional colleges of nursing, pharmacy and physicians, distribution of recommendations to CEOs, work with a human factors engineer to develop appropriate tools, and dissemination of resources, including many that have been developed within Ontario hospitals, to assist practitioners in making changes. In addition, a resource binder is being sent to each Ontario hospital, which includes recommendations and rationale for immediate and long-term changes in the following areas:

1. Culture and communication
2. Storage and standardization
3. Independent double-check
4. Patient-controlled analgesia and epidural analgesia

The experience in implementing system changes is available to other provinces through workshops and various resources and tools.

For further information on the Ontario Narcotic Medication Safety Support Service Project, please visit http://www.ismp-canada.org/NarcInit.htm, or email us at info@ismp-cana da.org.

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