Medication Safety Alerts

This column draws on US and Canadian experience and includes, with permission, material from the ISMP Medication Safety Alert! biweekly bulletin, published by the Institute for Safe Medication Practices (ISMP), Huntingdon Valley, Pennsylvania, USA.

News

ISMP Canada is initiating a study, funded by the Ontario Ministry of Health, to determine the impact of interventions for improvement of medication use systems, in Ontario hospitals. Participating hospitals in this two-year project will be guided through a self-assessment of their medication use systems, utilizing a Canadian version of the ISMP (US) Medication Self-Assessment tool. This measurement tool has been extensively utilized by American hospitals. Each hospital's self-assessment will provide a confidential baseline indicator for specific areas for medication system improvements. Various targeted "system intervention strategies" will be provided by ISMP-Canada to the study group hospitals. This will include provision of Analyze-ERR software (a medication error and near-miss tracking and root cause analysis program); error prevention workshops, and Medication Safety Alert newsletters. Control group hospitals will be eligible to receive similar interventions after the one-year study period. Detailed information is posted on ISMP Canada's web site: www.ismp-canada.org.

ISMP Canada and ISMP (US) have jointly developed the Analyze-ERR software program which has two separate components (i) database for recording and tracking medication errors and (ii) a root cause analysis component. The first component allows users to record and maintain medication error and near miss incidents. NCCMERP (National Coordinating Council for Medication Error Reporting and Prevention) authorized the use of their medication error taxonomy thereby providing a well-accepted, standardized terminology for hospitals. Inherent in the program are various search and reporting functions. The second component prompts hospital staff to consider contributing factors, and to consider performing a root cause analysis on selected events captured. The root cause component expertise was provided be ISMP (US), as determined from many years experience analyzing medication errors. Founded on the principles of a non-punitive approach, the root cause analysis data is dissociated from the event record. The program retains two distinct and separate data bases. Objective facts of the error are separate from the full root cause analysis information entered. The aggregate root cause analysis data will provide the hospital with identified areas of concern, so that improvement efforts can be focused. Hospitals which participated in the three month trial of Analyz-err were helpful in further identifying useful features for the software. For more information on Analyze-ERR, please visit www.ismp-canada.org.

ISMP Canada, Health Canada, CSA International, CSHP and representatives from the pharmaceutical industry met together in March, 2001, in order to work as a collaborative, to identify a mechanism for improved labelling of injectable products in Canada. New

standards have been developed by CSA and discussions are underway to maximize the potential for added safety from the pharmaceutical industry, utilizing the new standards as a reference guide.

Discussion: Incompetence versus Error

Recently, there has been significant media coverage in Ontario focusing on a number of cases of Ontario physicians' malpractice and incompetence. The public appears to seek greater accountability from institutions and practitioners alike, and is asking for disclosure of all complaints registered with the Ontario College of Physicians and Surgeons. A similar call for greater accountability would likely apply to other health care professionals, such as pharmacists and nurses. As we explore this important issue, it is crucial that we understand the difference between incompetence and error.

All healthcare professionals, including pharmacists, are accountable for the service they provide to their patients. A pharmacist must ensure that their individual competency level is meeting the standard set by their College. Measurements and assessments of staff competency need to be implemented in order to identify practitioner competency issues in a timely fashion. Both the regulatory body and the healthcare organizations need to ensure periodic competence and performance assessments.

Pharmacy Colleges across Canada presently have a quality assurance program in place to randomly select members to undergo a comprehensive assessment. It is recommended that such assessment programs be expanded to cover more practitioners, more frequently. There are other mechanisms for identifying performance issues and education opportunities, such as peer review, and aggressive continuing education and training programs, and aggressive continuous quality improvement initiatives. It is also recognized that there will be cases where a practitioner is deemed negligent. Such examples would include: practicing without a license; working while impaired, or performing recognized illegal activities. Such acts should not be viewed as errors, and need to be addressed within performance management systems and potentially, within the legal tort system.

It is well recognized and acknowledged that even competent and careful practitioners are fallible and that errors can occur in dynamic interactions between people and organization systems. Root cause analysis data has shown many system-based problems such as lack of communication, high stress level, disruptions and excessive workload are contributing factors to errors. Highly competent, highly experienced staff has been involved in tragic errors as a result of preventable circumstances. In fact, most health care professionals are at risk for being involved in an error, because of the very nature of healthcare work.

Reviewing internal errors and risk for error, as well as, external reports of error and aggregate data will help identify areas for improvement within our complex systems.

Root cause analysis of errors and 'near miss events' will allow a focused approach to strategies for decreased risk for error and increased safety in the medication use systems. Discipline directed at the individual practitioner because an error will not correct the underlying causes of the error. Research bears out that a punitive approach to error will create an environment where errors are hidden, remain invisible and not reported.

It seems reasonable and justifiable for the public to be alerted of negligent practitioners. A mechanism is needed, however, to differentiate practitioners who make an error, from practitioners where competency has proven to be a concern. Simply publicizing all complaints registered against an individual practitioner will not meet the real need of the public. Perhaps it is the College's responsibility to investigate, case by case, all the factors contributing to a complaint registered by a patient. A determination of reasonable and excusable error versus incompetence and negligence needs to be made.

It is gratifying to see that patient safety has finally been brought to the forefront, and that healthcare errors are being scrutinized and debated. We need to be careful not to group error and incompetence together. The two are distinct entities and require separate approaches to resolution and prevention of recurrence.

Included in this publication is an abbreviated 'Table of Dangerous Abbreviations', as described in a recent ISMP Medication Safety Alert! Volume 6, Issue 9, May 2, 2001. For a complete table, please visit www.ismp-canada.org ***)***

SPECIAL ISSSUE - do not use these dangerous abbreviations or dose designations (cont'd)

Abbreviation/ Dose Expression	Intended Meaning	Misinterpretation	Correction
q6PM, etc.	every evening at 6 PM	Misread as every six hours.	Use 6 PM "nightly."
q.o.d. or QOD	every other day	Misinterpreted as "q.d." (daily) or "q.i.d. (four times daily) if the "o" is poorly written.	Use "every other day."
sub q	subcutaneous	The "q" has been mistaken for "every" (e.g., one heparin dose ordered "sub q 2 hours before surgery" misunderstood as every 2 hours before surgery).	Use "subcut." or write "subcutaneous."
SC	subcutaneous	Mistaken for SL (sublingual).	Use "subcut." or write "subcutaneous."
U or u	unit	Read as a zero (0) or a four (4), causing a 10-fold overdose or greater (4U seen as "40" or 4u seen as 44").	"Unit" has no acceptable abbreviation. Use "unit."
IU	international unit	Misread as IV (intravenous).	Use "units."
cc	cubic centimeters	Misread as "U" (units).	Use "mL."
x3d	for three days	Mistaken for "three doses."	Use "for three days."
BT	bedtime	Mistaken as "BID" (twice daily).	Use "hs."
ss	sliding scale (insulin) or ½ (apothecary)	Mistaken for "55."	Spell out "sliding scale." Use "one-half" or use "½."
> and <	greater than and less than	Mistakenly used opposite of intended.	Use "greater than" or "less than."
/ (slash mark)	separates two doses or indicates "per"	Misunderstood as the number 1 ("25 unit/10 units" read as "110" units.	Do not use a slash mark to separate doses. Use "per."
Name letters and dose numbers run together (e.g., Inderal40 mg)	Inderal 40 mg	Misread as Inderal 140 mg.	Always use space between drug name, dose and unit of measure.
Zero after decimal point (1.0)	1 mg	Misread as 10 mg if the decimal point is not seen.	Do not use terminal zeros for doses expressed in whole numbers.
No zero before decimal dose (.5 mg)	0.5 mg	Misread as 5 mg.	Always use zero before a decimal when the dose is less than a whole unit.