Medication Safety Bulletin

January 2010 Volume 8, Number 1

KINGSTON GENERAL HOSPITAL

CANCER CENTRE OF SOUTHEASTERN ONTARIO AT KINGSTON GENERAL HOSPITAL

Hotel Dieu HOSPITAL

Inside this issue of the Bulletin:

DO NOT USE Dangerous Abbreviations, Symbols and Dose Designations

In order to reduce risk for medication errors and address compliance with Accreditation Canada's Required Organization Practice (ROP), listed in the Managing Medications standards, to identify and implement a list of abbreviations, symbols, and dose designations that are not to be used in the Hospitals**, HDH and KGH have adopted the Canadian Institute for Safe Medication Practices (ISMP Canada) "Do Not Use List" inclusive of all abbreviations, symbols and dose designations that are not to be used in medication related documentation**.
The list includes the abbreviations **U**, **IU**, **QD**, **OD**, **OS**, **OU**, **D/C**, **cc** and **µg**, symbols **@**, **>** and **<** and dose designations: **10.0** mg (trailing zero) and **.1** mg (lack of leading zero).

Administrative policies "Patient Care Orders" (KGH 11-040/ HDH 4010) and "Inter-Professional Documentation Minimum Standards" (KGH 09-040/HDH 10020) have been revised to support the adoption of the list of abbreviations, symbols and dose designations that are not to be used in the organization when writing medication orders.

Currently, Hospital preprinted forms related to medication-use do not include any abbreviations, symbols, and dose designations identified on the "Do Not Use List". Dangerous dose designations are not used on pharmacy-generated labels and forms. Pharmacy information system labelling options will be upgraded to eliminate dangerous symbols and abbreviations of drug names completely.

Compliance for all medication-related documentation when hand written or entered into a computer as free text is now required. Staff will be educated about the list at orientation and when changes are made to the list. KGH and HDH will audit compliance with the "Do Not Use List" and will implement process changes based on identified issues.

An audit of 2,300 handwritten medication orders was conducted in November 2009 at KGH to determine the status of compliance with the "Do Not Use List". The most common abbreviation used in handwritten medication orders was OD (or QD or QOD) written instead of the word "daily" comprising 17% of the orders, followed by the abbreviation µ and µg in 4% of the orders.
Abbreviations cc and symbol @ were found in less than 1% of the medication orders.

"The Hospitals have adopted the Canadian Institute for Safe Medication Practices (ISMP Canada) "Do Not Use List" inclusive of all abbreviations, symbols and dose designations that are not to be used in medication related documentation"

The poster below lists all abbreviations, symbols and dose designations that are no longer acceptable when writing medication orders at both HDH and KGH.

To assist prescribers, this poster has been posted in the charting areas of all patient care units at both HDH and KGH.

KINGSTON GENERAL HOSPITAL

The Religious Hospitallers of Saint Joseph of the Hotel Dieu of Kingston

Do Not Use

Dangerous Abbreviations, Symbols and Dose Designations

The abbreviations, symbols, and dose designations found in this table have been reported as being frequently misinterpreted and involved in harmful medication errors. They should NEVER be used when communicating medication information.

Abbreviation	Intended Meaning	Problem	Correction
U	unit	Mistaken for "0" (zero), "4" (four), or cc.	Use "unit".
IU	international unit	Mistaken for "IV" (intravenous) or "10" (ten).	Use "unit".
Abbreviations for drug names		Misinterpreted because of similar abbreviations for multiple drugs; e.g., MS, MSO_4 (morphine sulphate), $MgSO_4$ (magnesium sulphate) may be confused for one another.	Do not abbreviate drug names.
QD QOD	Every day Every other day	QD and QOD have been mistaken for each other, or as 'qid'. The Q has also been misinterpreted as "2" (two).	Use "daily" and "every other day".
OD	Every day	Mistaken for "right eye" (OD = oculus dexter).	Use "daily".
OS, OD, OU	Left eye, right eye, both eyes	May be confused with one another.	Use "left eye", "right eye" or "both eyes".
D/C	Discharge	Interpreted as "discontinue whatever medications follow" (typically discharge medications).	Use "discharge".
cc	cubic centimetre	Mistaken for "u" (units).	Use "mL" or "millilitre".
µg	microgram	Mistaken for "mg" (milligram) resulting in one thousand-fold overdose.	Use "mcg".
Symbol	**Intended Meaning**	**Potential Problem**	**Correction**
@	at	Mistaken for "2" (two) or "5" (five).	Use "at".
> <	Greater than Less than	Mistaken for "7"(seven) or the letter "L". Confused with each other.	Use "greater than"/"more than" or "less than"/"lower than".
Dose Designation	**Intended Meaning**	**Potential Problem**	**Correction**
Trailing zero	*X*.0 mg	Decimal point is overlooked resulting in 10-fold dose error.	Never use a zero by itself after a decimal point. Use "***X* mg**".
Lack of leading zero	.*X* mg	Decimal point is overlooked resulting in 10-fold dose error.	Always use a zero before a decimal point. Use "**0.*X* mg**".

ISMP Canada July 2006

Adapted from ISMP's List of *Error-Prone Abbreviations, Symbols,* and *Dose Designations 2006*

Report actual and potential medication errors to ISMP Canada via the web at https://www.ismp-canada.org/err_report.htm or by calling 1-866-54-ISMPC. ISMP Canada guarantees confidentiality of information received and respects the reporter's wishes as to the level of detail included in publications.

ismp CANADA
Institute for Safe Medication Practices Canada
Institut pour l'utilisation sécuritaire des médicaments du Canada

Don't be a borrower or lender

The phrase, "*Neither a borrower nor a lender be,"* originated from Shakespeare's famous play, *Hamlet* (1603), during which Lord Polonius gives this advice to his son who is heading back to school. While our world is different today, when it comes to medication safety, Shakespeare's advice is timeless; medications should never be borrowed from or lent to others.

Practitioners can be tempted to borrow a "missing medication" (a dose that should have been available) or the first dose of a new medication from another patient's bin, a discharged patient's unused medications, or another patient care unit. Borrowing medications as a workaround to speed the process of administering medications due to inherent or excessive wait times associated with the pharmacy dispensing process increases the risk of a medication error.

Regardless of the medication dispensing system used (traditional multi-day fill, profiled automated dispensing cabinets (ADCs) or unit dose dispensing) the practice of borrowing medications is common, surveys have found that almost half of the nurses routinely borrow medications when doses for their patients appeared to be missing.

Most pharmacies have a system of checks before medications are dispensed. All medication orders are reviewed by a pharmacist prior to dispensing, computer software helps screen the order for appropriateness and safety, and pharmacy technicians prepare the medications and check them against the order before they are dispensed. However, this safety system is bypassed when doses are borrowed from other patients or obtained from an ADC.

Thus, when medications are borrowed, the nurse is placed in a vulnerable position as there are no independent double checks to capture errors before they reach the patient.

"With borrowed medications, the nurse is placed in a vulnerable position where there is no adequate checks to capture errors before they reach the patient."

ISMP (US) SAFE PRACTICE RECOMMENDATIONS:

1) Remedy the reasons for borrowing

Learn why practitioners may borrow medications from unauthorized sources. If turnaround time for dispensing medications is perceived to be an issue, set up measures to identify the problem, address vulnerabilities in a collaborative manner, and gain consensus among nurses, pharmacists, physicians, and hospital leadership regarding acceptable time frames for drug delivery or order review.

2) Decrease staff tolerance

Ensure nurses and physicians understand the risks and consequences of borrowing medications, and ensure pharmacists understand the risks and consequences of delayed order review and dispensing of medications.

Encourage reporting of conditions that contribute to delayed order review and dispensing. Use this information to improve the medication-use system.

3) Identify reasons for missing medications

Missing doses could be related to system problems. Hospitals should conduct a review to identify the reasons why medications are missing.

4) Eliminate unauthorized access to drugs

Discourage the accumulation of discontinued or unused medications in patient care units. Provide a secure container or ADC compartment for staff to place medications from discharged or expired patients as well as other discontinued or unused medications. Conduct frequent pharmacy rounds to collect these medications (including refrigerated items).

At KGH, Pharmacy Services and the Process Excellence Team have conducted reviews to identify the reasons for missing medications in the patient care areas and are in the process of piloting a floor pharmacy technician model while investigating the feasibility of automated dispensing cabinets for medication delivery on the patient care units.

Our current projects

- Do Not Use list communication
- Medication Reconciliation Implementation in Medicine Program

The Medication Safety Bulletin is published quarterly by the Medication Safety Working Group.
It can be accessed from the Pharmacy page of the KGH Intranet at

http://intranet.kgh.on.ca/default.aspx?page=141

Questions, comments, and suggestions for future issues are welcomed.
Send them to: Vero Briggs or Bob Connelly, MSB editors @ briggsv@kgh.kari.net or connellr@kgh.kari.net

Disclosure of Adverse Events

HDH/KGH "Disclosure of Adverse Events" policy was recently revised in response to recommendations from Accreditation Canada to HDH and KGH to provide guidance in "close call/near miss" situations or when an event reaches the patient but does not result in harm (e.g., extra dose of medication that does not result in harm).

Disclosure which is often confused with the act of reporting is done out of respect for patients who have a right to know what happened to them, whereas reporting is done for the purpose of system improvement with reports made to Risk Management, the Medication Safety Working Group and the Patient Safety Steering Committee.

The purpose of this policy is to provide a clear and consistent process for disclosure and to support staff throughout the disclosure process. More information on disclosure of adverse events including medication errors and near misses and adverse drug reactions can be found on the hospitals intranet at:

http://intranet.hdh.net/webpage.cfm?site_id=1&org_id=1&morg_id=0&gsec_id=4951&item_id=4951

What's new in the ISMP Bulletins

ISMP-Medication Safety Alert! (October to December 2009)

- Serious adverse drug event reports (Volume 14, Issue 20)
- Oral syringes (Vol. 14, Issue 21)
- Order scanning systems (Volume 14, Issue 22)
- Borrowing medications (Volume 14, Issue 23)
- Chemotherapy mixing error (Volume 14, Issue 24)
- Double-checks of critical work (Volume 14, Issue 25)

ISMP Nurse Advise-ERR (October to December 2009)
(available at http://www.ismp.org/Newsletters/nursing/default.asp)

- Beware of basal opioid infusions with PCA therapy (Volume 7, Issue 10)
- Risks of hypotonic saline solutions in children (Volume 7, Issue 11)
- Shared MDIs and cross-contamination (Volume 7, Issue 12)

ISMP Canada Safety Bulletin (October to December 2009)
(available at http://www.ismp-canada.org/ISMPCSafetyBulletins.htm)

- Hospital-Acquired Hyponatremia: 2 Reports of Pediatric Deaths (Volume 9, Issue 7)
- WHO Provides Guidance to Incident Reporting Programs (Vol. 9, Issue 8)
- Engaging Consumers in Medication Incident Reporting (Vol. 9, Issue 9)
- Incidents Involving Fentanyl Transdermal Patches (Vol. 9, Issue 10)

Questions? Comments? Please contact any of the Medication Safety Working Group members at MedicationSafetyWorkingGroup@kgh.kari.net.