Clinical Pharmacology & Toxicology Pearl of the Week

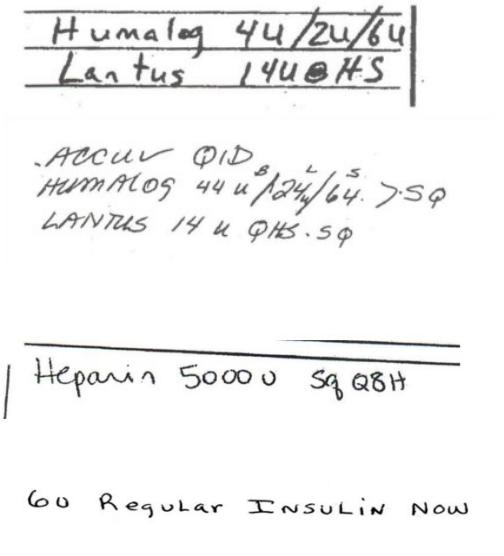
~ "Do Not Use" Abbreviations ~

Case:

A nine-month-old girl had "Morphine .5mg IV" prescribed for post-op pain. It was transcribed by hand to medication administration record as "5 mg" IV. The nurse gave 2 doses, 2 hours apart. 4 hours after the last dose the baby suffered cardiac arrest and died.

Background:

- ✓ Medication errors are one of the largest recognized sources of preventable hospital medical error, and approximately 5% of those errors are due to abbreviation use. Misinterpreted abbreviations can result in omission errors, extra or improper doses, administering the wrong drug, or giving a drug in the wrong manner. In return this can lead to an increase in the length of stay, more diagnostic tests, and changes in drug treatment.



- ✓ Abbreviations, as well as symbols and dose designations, are only helpful when their intended meaning is fully understood by all persons who will be deciphering the information and when there is no potential for misinterpretation.

- ✓ Certain abbreviations appear to be more error-prone, and the resultant errors may lead to serious or even fatal outcomes.

"Do Not Use" Abbreviations List

- ✓ There is a Do Not Use List of Abbreviations, Symbols, and Dose Designations that Alberta Health Services has approved and adapted by ISMP Canada. Accreditation Canada also promotes a "Do Not Use" approach to abbreviations.

- ✓ The elimination of the use of dangerous abbreviations, symbols, and dose designations applies to all medication-related documentation. This includes when handwritten or entered as text into a computer, or on any pre-printed forms or labels related to medication use.

- ✓ Even though the writer may have very clear and legible handwriting, the reader may be unfamiliar with the meaning of the abbreviation, symbol, or dose designation. The abbreviation may also have more than one meaning.

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".

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

References:

1. ISMP Canada Safety Bulletin – Volume 18 • Issue 4 • May 30, 2018
2. Alberta Health Services (AHS) Do Not Use List of Abbreviations, Symbols, and Dose Designations for Medication-Related Documentation policy.

The Calgary Clinical Pharmacology physician consultation service is available Mon-Fri, 8am-5pm. The on-call physician is listed in ROCA. Clinical Pharmacology consultations are also available through Netcare e-referral process and through Calgary Zone Specialist Link. Click HERE for more details.

The Poison and Drug Information Service (PADIS) is available 24/7 for questions related to poisonings. Please call 1-800-332-1414 (AB and NWT) or 1-866-1212 (SK).