



## Safe Medication Practices

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# Need to eliminate dangerous abbreviations in medication orders

By Julie Greenall

**L**atin and Greek were the languages of early medicine and a great deal of the medical terminology used today is derived from these roots. A "medical shorthand" of abbreviations and symbols for Latin and Greek terms has developed over many centuries. For example, "q.d.", abbreviated from the Latin "quaque die", meaning "every day", is commonly used in prescription directions for daily administration of medications. The Greek "Δ" is used to indicate "change". The origin of the "@" symbol is uncertain but it may have been derived from the Greek "ana", meaning "at the rate of", which reflects its current meaning. In addition, some terms such as "units" and "international units" have simply been shortened to "U" and "IU".

This shorthand is part of the training of physicians, pharmacists, nurses and other health-care professionals and is commonly used in all types of health-care communications. As practitioners have become more aware of safety concerns in health-care environments, the common use of these abbreviations and symbols, as well as certain ways of designating medication dosages, has come under scrutiny.

The Institute for Safe Medication Practices Canada (ISMP Canada) has received reports of medication errors resulting from misinterpretation

of abbreviations, symbols and dose designations. A recent bulletin FROM ISMP Canada described three such examples:

In the first example, the abbreviated "u" for units in an order reading "6U Regular Insulin Now" was misinterpreted as a "0" (zero), leading to the administration of 60 units of regular (short-acting) insulin.

In the second example, the "@" symbol in a label instruction reading "RUN @5ML/H" was misinterpreted as a "2", leading to administration of a medication at 25 mL/hr instead of the intended 5 mL/hr.

The third example involved abbreviation of a drug name, "morph" for "morphine" and was found to be one of the contributing factors in an event where hydromorphone was given instead of morphine, leading to a fatality. Abbreviated drug names increase the likelihood of confusion between drug names that look and sound alike.

Many health-care organizations have developed lists of "approved" abbreviations for documentation in the health care record. Including in the policy a list of abbreviations that should not be used will increase the effectiveness in preventing errors due to misinterpretation.

ISMP Canada, the Canadian Patient Safety Institute and the Canadian Council on Health Services Accreditation will be working together to heighten

awareness of the need to eliminate the use of dangerous abbreviations, symbols and dose designations in the Canadian health care environment. Several American initiatives have recently been undertaken. The Joint Commission on Accreditation of Health Care Organizations (JCAHO) requires hospitals to adhere to a "Do Not Use" list. ISMP (US) has embarked on a joint campaign with the US Food and Drug Administration directed at educating health care professionals, medical students, medical writers, the pharmaceutical industry and FDA staff.

ISMP Canada has proposed a "Do Not Use" list of thirteen dangerous abbreviations, symbols and dose designations for communication of information about medications by Canadian health care providers. This list has been adapted from a list developed by ISMP (US), with consideration of medication errors that have been reported to ISMP Canada. Other abbreviations have been reported to cause errors, but those selected for inclusion in the Canadian list are known to have caused harm. Readers are encouraged to download and share a copy of a printable poster, that includes the intended meaning and identified problems, from the ISMP Canada website at: <http://www.ismp-canada.org/download/ISMPCanadaListOfDangerousAbbreviations.pdf>.

While it is human nature to

try to make our work as efficient as possible, the use of dangerous abbreviations can have serious consequences. Elimination of known dangerous abbreviations, symbols and dose designations from communications related to medications is a concrete action to

reduce risk of error and will require efforts by all health care practitioners.

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