

The Problem



One of the most common but preventable causes of medication errors is the use of ambiguous medical notations. Some abbreviations, symbols, and dose designations are frequently misinterpreted and lead to mistakes that result in patient harm. They can also delay the start of therapy and waste time spent in clarification.

In an effort to promote safe practices, the Institute for Safe Medication Practices (ISMP) and the U.S. Food and Drug Administration recommend that ISMP's list of error-prone abbreviations, symbols, and dose designations be considered whenever medical information is communicated. To access the list and tools that can help you avoid the use of ambiguous medical notations, or for more information on medication errors visit, www.ismp.org/tools/abbreviations and www.fda.gov/cder/drug/MedErrors.

A Short List*

All drug names, dosage units, and directions for use should be written clearly to avoid confusion. Below are a few notations that should NEVER be used. The complete list can be found on the web site referenced above.

Medical Notations

U (unit)

IU (international unit)

QD (daily)

QOD (every other day)

Trailing zero (X.0 mg)

Lack of leading zero (.X mg)

MS

M_{SO4} and Mg_{SO4}

Reason

Mistaken for zero, number four, or cc

Mistaken for IV or number ten

Mistaken for QID

Mistaken for QID and QD

Decimal point is missed

Decimal point is missed

Can mean morphine sulfate or magnesium sulfate

Can be confused for one another

Instead Use

Write "unit"

Write "international unit"

Write "daily"

Write "every other day"

Write X mg

Write 0.X mg

Write out "morphine sulfate" or "magnesium sulfate"

Write out "morphine sulfate" or "magnesium sulfate"

* Comprises the "do not use list" required for the Joint Commission on Accreditation of Healthcare Organizations accreditation.

Examples

Poor prescription writing habits and use of error-prone medical notations can have serious and even potentially fatal consequences. Here are some actual examples:

"Potassium chloride QD" in medication order interpreted as QID. Should be written as "daily."

Intended dose of 4 units in patient history interpreted as 44 units. "U" should be written out as "unit."

of unfractionated heparin (10,000 U subcutaneously twice daily), as compared with 1 of 40 patients who received dalteparin (5000 U subcutaneously twice daily) for the same length of time.²⁸

"U" in prominent professional journal article should be written out as "unit."**

**Error-prone abbreviations should not be used even in printed materials, since they can still be confused, may be copied into handwritten orders, and the practice perpetuates the impression that they are acceptable.