DRUG SAFETY MONITOR

ADVERSE DRUG REACTION & DRUG INTERACTION ALERTS

A Publication of the KUMC Drug Information Center

druginfo@kumc.edu 913-588-2328

MAY 2003

Safe Prescribing Practices

Medication errors are avoidable when all health care professionals make an effort to think critically about prescribed medications. However, there are procedures that must be implemented to decrease the likelihood that a drug error will occur.

Two overdoses have been reported in the literature because a lower case "L" was the end letter of a drug name and was misread as the number 1. In the first case, an order for 300 mg of Tegretol®(carbamazepine) BID was misinterpreted as 1300 mg BID. The letter "L" at the end of Tegretol® had been written very close to the numerical dose of 300 mg on the patient's transfer order form. In the other case, Amaryl® (glimepiride) was misread as 12 mg instead of 2 mg because there was insufficient space between the last letter in the drug name and the numerical dose.

In an effort to improve the safety of our patients at KU Medical Center, the Medication Safety Subcommittee of the P&T Committee has identified the following prescribing habits as discouraged practices because they do not follow recommendations for safe medication prescribing. Historical evidence supports that certain order writing practices or habits have led to serious consequences.

Discouraged Practice	Example and Error Description	Preferred Practice
☐ **Order used an unapproved abbreviated Drug Name(s)**	MSO_4. *Could be interpreted as Magnesium Sulfate.*	**Morphine**. Please note that abbreviations or shortened drug names are prohibited. Shortened medication names could potentially denote several different medications. Do not abbreviate or shorten drug names, unless the abbreviation is on the approved abbreviation list: http://www.formularyproductions.com/kumc/
☐ **A trailing zero was used**	Lorazepam 1.0 mg. *The trailing zero may be misread as 10mg and result in a 10-fold overdose.*	**Lorazepam 1 mg.** Do not use zeros after a decimal point for doses expressed in whole numbers as they may appear as a 10-fold overdose.
☐ **A leading zero was not used**	Morphine .5 mg. *This may be interpreted as 5 (five) mg and result in a 10-fold overdose.*	**Morphine 0.5 mg.** Always use a zero before a decimal point when the dose is less than 1.
☐ **"µ" used to denote micrograms**	Levothyroxine 100 µg. *This may be interpreted as milligrams.*	**Levothyroxine 100 mcg.** Use 'mcg' or spell out microgram; do not use 'µ'.
☐ **Resume medications**	Orders may be restarted that are duplicative or were not intended.	**Write out each medication.** Please note orders of this type are prohibited by JCAHO.
☐ **Signature difficult to read or is not legible**	*Signature is illegible and may deter prompt notification of prescriber in the event that clarification or verification is necessary*	**Include pager number with signature on order.** Please note that recent revisions to the prescribing process require the inclusion of this information.
☐ **Order was missing an essential element (i.e., strength, route, etc)**	Digoxin 0.125 mg daily.	**Digoxin 0.125 mg PO daily.** A complete order includes: drug name, strength/ dose, route, frequency in addition to date, time, signature and prescriber pager number.
☐ **Order was difficult to read or illegible**	*Legibility issues have resulted in significant delays in therapy, administration of an unintended medication, or dosing error.*	**Please print all orders or use pre-printed order sets if applicable.** Available order sets can be found at http://www.formularyproductions.com/kumc/
☐ **Order was written in cc's**	15 cc Amoxicillin twice daily. *Drug concentrations may differ and cc's could be misread as "U" or "0".*	**15 mL Amoxicillin twice daily**. Please note that all medications should be dosed in their respective units of measure. Please use mL if warranted.
☐ **Order was written using ss**	Regular insulin ss. *May be misinterpreted as 55 or apothecary symbol for one-half.*	**Regular insulin sliding scale.** Do not use 'ss', write out sliding scale.
☐ **Order included apothecary symbols (dram, grain, minim)**	ASA 1gr daily. *May be misinterpreted as 1 gram.*	**ASA 81mg daily.** Use the metric system or write out units rather than use symbols.
☐ **"Units" was not written out**	Regular insulin 5 u. ***The "u" may be interpreted as a 0, 4, 6, or "cc"***	**Regular insulin 5 units**. Always write out units; do not use 'u'. Always write out international units; do not use 'IU'.