Pittsburgh Regional Healthcare Initiative

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EMR: Setting the stage

Heritage Valley won't wait for high tech to eliminate abbreviations

Heritage Valley Hospital will institute an electronic medical record (EMR) system in 2005. The new system will not accept abbreviations in prescriptions.

But Heritage Valley isn't waiting until 2005 to phase out abbreviations.

Last year, Dr. Russell Jenkins of the Institute for Safe Medication Practices (ISMP) addressed the Sewickley Valley Hospital and the Medical Center, Beaver medical staff, and described instances across the country where confusion over abbreviations in a prescription caused life-threatening complications for patients. Specifically, ISMP has identified 39 abbreviations that pose a high risk of error.

Which abbreviations are "dangerous?"

Apothecary symbols	Stemmed names	cc
AU	"Nitro" drip	x3d
D/C	"Norflox"	BT
Drug names	m g	ss
ARA°A	o.d. or OD	> and <
AZT	TIW or tiw	/ (slash mark)
CPZ	per os	Name letters and dose
DPT	q.d. or QD	numbers run together
HCl	qn	(e.g., Inderal40 mg)
HCT	qhs	Zero after decimal point
HCTZ	q6PM, etc.	(1.0)
MgSO4	q.o.d. or QOD	No zero before decimal
MSO4	sub q	dose (.5 mg)
MTX	SC	
TAC	U or u	
ZnSO4	IU	

Find the complete list of dangerous abbreviations, with explanations and alternative notations at the website of the Institute for Safe Medication Practices (ISMP): ***http://www.ismp.org/msaarticles/dangerous%20abbrev.doc.htm***

Involving the whole team

Heritage Valley's Medical Director, Dr. Dan Brooks, and Pharmacy Manager, Bernard Stoehr, began to assemble a multidisciplinary team to talk about problem abbreviations at their hospital. Through discussions with physicians and pharmacists on the Pharmacy and Therapeutics, Clinical Care, and Executive Committees, along with unit managers from each nursing area, consensus emerged. Initially, ISMP's 39 dangerous abbreviations would be eliminated—on the way toward eliminating *all* dangerous abbreviations.

By starting now to focus on eliminating abbreviations, 1) safety for patients will improve immediately, and 2) implementing the EMR system in 2005 will be much easier.

Making the change

Work began on tools to make the transition easier, such as pre-printed order sets for insulin, using "units" instead of the often confused abbreviation "u." Follow-up observations showed compliance near 100%.

Implementation included comprehensive education for everyone in the prescription chain. Letters went out to over 500 physicians system wide. In addition, posters were placed at the hospital entry points to serve as reminders of the change.

Baseline data were collected, so that future compliance could be measured. Already certain abbreviations are showing big reductions, such as "MSO_4" for "morphine sulfate," "$MgSO_4$" for "magnesium sulfate," and use of "µg" instead of the written "microgram." In addition to abbreviations the baseline data also captured problematic prescribing habits such as the use of trailing zeros, like "0.10," or the omission of leading zeros, like "_.1".

Physicians are beginning to heed the change. If a physician creates an order with a dangerous abbreviation, the protocol now calls for stopping the process, clarifying the order, and if necessary, issuing a personalized reminder letter.

"Everyone wants a process that will allow them to do their job safely and more effectively," says Dr. Brooks. "When it comes to eliminating abbreviations, it takes a team approach to get this job done."

PRHI goal area

PRHI's Medication Safety Administration Regional Working Groups, comprising pharmacists, pharmacy techs and other clinicians from hospitals across the region, are targeting the elimination of dangerous abbreviations this year. The groups are also addressing problems associated with fentanyl patches and PCA pumps.

For more information about PRHI's Medication Safety Administration Regional Working Groups, please contact Stacie Amorose at 412-535-0292, ext. 106.