Redesigning a Subcutaneous Insulin Double-Check Process

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PROBLEM: Our insulin double-check policy specified that all subcutaneous (SQ) insulin be double-checked for type and dose of insulin. Compliance with this policy was 81% (range 62%-100%).

EVIDENCE: Our interdisciplinary insulin workgroup (IIW) reviewed our insulin medication errors, searched PUBMED and Guidelines.gov, Joint Commission, IHI, and ISMP websites, and queried colleagues about insulin double-check processes.

STRATEGY: The IIW discovered that published recommendations for SQ insulin double-checks were inconsistent; some recommended double-checking only dose and amount of insulin, others did not specify the double-check process. Checking only dose and amount (our institution's policy) does not protect against serious SQ insulin errors such as interchanging the doses of two different types of insulin or administering SQ insulin based on an incorrectly documented glucose level.

PRACTICE CHANGE: The IIW proposed a new double-check process: SQ insulin will be double-checked only when 2 or more types of insulin are ordered for administration at the same time: two RNs verify the order, the type and dose of insulin, and the most recent glucose level. Staff piloted the new process for two weeks on the unit that administers the most insulin.

EVALUATION: RNs recorded the time required for the established and new double check process and provided feedback about the new process.

RESULTS: The new process required an average 3:08 minutes vs 1:22 minutes for the established process. Although the new double check process was longer, fewer double-checks were required since double checks were required only when 2 or more insulins were ordered at the same time. Staff viewed the new process as more thorough and meaningful and more likely to prevent serious medication errors.

RECOMMENDATIONS: The insulin workgroup presented the results of the double-check trial to the Nursing Practice Council which agreed to adopt the new double-check procedure with a second review after 2 months.

BIBLIOGRAPHY:

1. A guide to the safer use of dangerous mediations. High-Alert medication. *Hosp Health Netw.* 2004 Sept; 78(9): 67-73,2.
2. Getting started kit: Prevent harm from high-alert medication. 2007. http://www.ihi.org//nr/rdonlyres/8b2475cd-56c7-4d9b-b359-801f3cc3a8d5/0/highalertmedicationshowtoguide.doc
3. High-alert medications and patient safety. *Sentinel Event Alert. 199;Issue* 11. www.jointcommission.org/SentielEvents/SentinelEventAlert/sea_11.htm
4. www.ismp.org/Newsletters/actuecare/articles/A2Q01Action.asp.
5. Ridge RA. Boosting insulin safety. *Nursing.* 37(2): 14-5, 2007.
6. Cohen MR. Reduce the risks of high-alert drugs. *Nursing*. 37(9): 49-55, 2007