VA Ann Arbor Healthcare System

Lessons Learned #1

Lesson

A major incident occurred when regular insulin instead of heparin flush solution was accidentally given through the arterial line. The most likely contributing factor was the improper mingling and storage of multidose vials on top of the medication cart.

Core Messages

- Separation of medications, particularly multidose vials, reduces the risk of choosing the wrong pharmaceutical agent.
- Minimizing the use of ward stock multidose vials reduces the risk of medication errors
- Double-checks of high risk intravenous medications helps ensure that the correct medication & concentration is infused at the desired rate.

Actions Taken

✓ Eliminated ward stock multidose insulin vials

✓ Initiated patient specific insulin vials that are stored in the patient's medication drawer

✓ Minimized the use of multidose heparin flush vials (only used by physicians on request, usually for priming central lines)

✓ Encouraged use of normal saline for priming central lines

✓ Initiated the use of single dose heparin flush devices (in combination with normal saline flush) for maintaining central, midline and peripherally inserted central catheters (PICCs) that are in intermittent use

✓ Initiated normal saline for maintaining peripheral IVs that are in intermittent use (no heparin to be used)

✓ Developed the Safety Checklist Program in the ICUs

✓ Developed a double check system for high risk IV medications

Follow-up

- No recurrences of error linked to the improper storage of medication vials
- No deaths or cases of permanent morbidity linked to medication errors

Future Directions

Soon the bar code medication administration (BCMA) system will allow us to perform a double check through scanning IV medications

Medical errors are risk associated with the complexity and sophistication of modern medical care. Although it is difficult for medical care institutions to admit that errors are an inherent risk within their organizations, it is crucial that this problem be addressed. In recent years this problem been reported at the national level in a number of media sources. The policy of the VA is to create the safest possible healthcare setting for its patients, which requires minimizing the risk of medical errors. This is done by systematic identification and reporting of errors, followed by detailed investigation, and then design of institutional process/procedural changes that will eliminate or further minimize the occurence of such errors. The "Lessons Learned" from these investigations are intended to provide guidance for others wishing to introduce process changes to improve patient safety.