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Medication Sentinel Events in Wisconsin

Two avoidable medication events, leading to unfortunate patient deaths, recently occurred in Wisconsin hospitals. This memo describes these events and describes some practices for providers to consider in order to prevent such incidents from occurring in their facilities.

Case #1: This case involves a medication being given via the wrong route. A pregnant woman was admitted to the hospital for induction of labor. This hospital uses a bar code medication administration system. The system involves scanning the patient's wrist band bar code and the medication bar code to ensure that the medication being considered for administration has been ordered for the patient.

An intravenous antibiotic was ordered to be given to this patient prior to delivery. In preparation for the induction of labor, the patient was provided with information on the use of an epidural anesthetic. As part of the epidural education, a bag containing the epidural medication was obtained from the automated medication storage device to show to the patient. Both the antibiotic and the epidural bags were at the patient's bedside. During the medication administration process, the epidural bag was confused with the bag containing the antibiotic, and instead of the antibiotic, the epidural anesthetic was administered intravenously. The bar code system was not used. Unfortunately, the patient expired.

Considerations: This case serves to highlight some system practices that may prevent similar occurrences. One possible practice is the use of warning labels or packaging to alert staff that a

medication is not for IV administration. In this case, warning labels were in place on the epidural bag indicating “Epidural Use Only,” but the warning was not heeded. Accordingly, facilities should analyze and confirm that staff recognize and adhere to the warning labels being used in the facility.

Another practice to consider is the creation of an epidural training kit that contains materials to educate patients about epidurals without having to use the actual drug from the automated medication storage device. Additionally, medical and pharmacy staff should conduct an evaluation of medications contained in automated medication storage devices to determine whether access overrides should be allowed for epidural preparations. These are just a few of the practices that can be adopted to prevent errors of this type.

Last, but not least, bar code systems and other interventions that facilities have adopted to prevent medical errors require regular monitoring and staff training to ensure that system protocols are followed and are effective.

Case #2: This case involves the errant intrathecal administration of a “not for intrathecal use” contrast medium. The improper administration of the contrast medium occurred in radiology and led to the patient’s death.

Mix-ups involving IV and intrathecal contrast media have been previously reported, leading the Food and Drug Administration to issue warnings, including required label changes by the contrast media manufacturers. Other organizations, such as the Institute for Safe Medication Practices, have also addressed this issue.

Considerations: This case serves as a reminder that contrast media are medications for which pharmacy has oversight responsibility. Pharmacy must be involved in the ordering, storage, and administration policies related to contrast media. Education of staff, including radiology staff, regarding administration of contrast media is important. System considerations include separating different types of contrast media, using warning labels for the route of administration, and developing double-check systems for all preparations intended for intrathecal administration. The following link provides some other recommendations for contrast media.

<http://www.ismp.org/Newsletters/acutecare/articles/20031127.asp?ptr=y>

The Department of Health and Family Services urges all facilities to undertake a complete analysis of their medication systems. This memo outlines some considerations related to system evaluation and improvement. Another factor to consider is that all medication systems involve people at some point, and this means that facilities need to examine the human components of their systems. That may mean promoting a culture of continuous quality improvement, including evaluations of clinical care processes. Systems are an important part of the care process, but the ability of staff to function safely within those systems, should not be overlooked.