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Safety Checks and Five Rights of Medication Administration

URL: <https://www.jove.com/science-education/10235>

Overview

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According to the 1999 Institution of Medicine (IOM) report titled *To Err is Human: Building a Safer Health System*, medication errors are significant contributors to avoidable patient deaths in the hospital environment. Therefore, to maintain patient safety and to avoid medication errors, it is important that every nurse adheres to at least five "rights" of safe medication administration. These five "rights" refer to the right patient, right medication, right medication dose, right time of administration, and right route of administration. The nurse should check for these five "rights" at three different checkpoints points in the medication administration process: 1) while comparing the Medication Administration Record (MAR) when withdrawing medications, 2) while comparing the MAR to acquired medications, and 3) while comparing the MAR to both the medication and patient identifiers at the bedside. This video will demonstrate the acquisition component of medication administration, which consists of performing the five "rights" during the first, second, and third checkpoints.

Prior to acquiring medications from a medication dispensing system (MDS), the nurse must consider whether the medication is appropriate, given the patient's medical conditions, medication allergies, and current clinical status and when previous doses of the medication were administered. In addition, certain medications may need preparation prior to administration and prior to the second medication safety check. There are different electronic MAR software, including hardcopy MARs, as well as different types of MDS. The general steps for each system are the same, and although this video illustrates the steps performed using one of these software tools, the safety checks highlighted in this section are universally applicable.

Procedure

1. General medication administration considerations (review in the room, with the patient; see medication preparation and administration videos).

1. Wash hands with soap and warm water, and apply vigorous friction for at least 20 s. Hand sanitizers may be used if the hands are not visibly soiled.

2. Go to the medication preparation area (this is may be in a secured room or in a secured portion of the nurses' station) and complete the first safety check using the five "rights" of medication administration.

1. At the medication administration computer, log into the patient's electronic health record, pull up the MAR, and determine the medications to administer (e.g., acetaminophen 800 mg every 6 hours prn).
2. Log into the MDS with your user name and password
3. Select your patient from the list of patients provided by the MDS.
4. Verify the patient's name from the MDS with the patient information provided on the electronic MAR from the computer. At this point, the "Right Patient" step has been completed for the first safety check.
5. On the screen in the MDS, select the patient medication administration list by choosing the "remove meds" button on the right.
6. From that list, select the medication you would like to administer and select the green "OK" button.
7. Select the "remove now" button. Stand back and look for the drawer or door with the green flashing light to open. Some drawers are programmed to open automatically, while others will flash a green light and will need to be opened manually.
8. Once open, select the appropriate bin and remove the medication. Some systems will have flashing lights to indicate the appropriate bin, while others may indicate the bin number on the screen.
9. Remove the medication from the medication drawer. Hold the medication package next to the computer MAR and compare the medication name with the medication listed on the MAR. At this point, the "Right Medication" step is complete.
10. Holding the medication package next to the computer, compare the medication dose (amount and units) listed on the label with the dose (amount and units) listed on the electronic MAR on the computer screen. At this point the "Right Dose" step is complete. For some items listed on the MAR, you may need to remove more than one medication package to achieve the correct dose.
11. Holding the medication package next to the computer, compare the medication route listed on the medication package label with the route listed on the MAR. At this point, the "Right Route" step is complete. Some medication routes may not be listed on the label, and you must determine the appropriateness of the form provided for the administration route (i.e., a tablet indicates oral administration).
12. On the computer screen, review the electronic MAR and identify the time for the specific medication to be administered. Compare the time to the time on the clock in the secured medication administration preparation room. At this point, the "Right Time" step is complete. Medications may safely be given up to 30 min prior to or 30 min following the identified medication time, unless otherwise specified by institutional policy.
13. Close the drawer or door in the MDS and hit the "exit" button to log out of the MDS.

3. In the medication preparation area, prepare the medication according to best practice and procedures. Refer to videos for preparing and administering different types of medications and medication routes.

4. In the medication preparation area, complete the second safety check using the five "rights" of medication administration.

1. Hold the labeled medication next to the computer screen. Compare the patient name on the pharmacy label with the patient in the electronic MAR on the computer screen. At this point the "Right Patient" step has been completed for the second safety check.
2. Hold the labeled medication next to the computer screen. Compare the medication name on the label of the syringe to the medication name provided on the MAR in the electronic health record (*i.e.*, on the computer screen). At this point, the "Right Medication" has been completed for your second safety check.
3. Hold the labeled medication next to the computer screen. Compare the medication dose listed on the preparation label with the dose listed on the electronic MAR. At this point, the "Right Dose" step of the second safety check is complete.
4. Hold the labeled medication next to the computer screen. Confirm that the medication administration route listed on the electronic MAR is listed as the route intended (*i.e.*, oral, gastric tube, subcutaneous injection, intramuscular injection, rectal, intravenous, or topical). At this point, the "Right Route" step of the second safety check is complete.
5. Review the time listed for the medication in the electronic MAR to confirm that it is the right time for the administration of the medication. Compare the administration time in the MAR with the clock at the medication preparation area. At this point, the "Right Time" step is complete.

5. In the patient's room, complete the third and final medication safety check, adhering to the five "rights" of medication administration.

1. Verify that the patient is wearing the correct name band by asking him/her to state his/her name and birthdate. Compare this information with what is provided on the name band.
2. At the bedside computer, log into the electronic health record, open the patient's chart, and open the patient's MAR.
3. Confirm that you have the correct patient by comparing the patient's name and medical record number on the wrist identification band with the patient's name and medical record number on the electronic MAR on the computer screen. At this point, the "Right Patient" step has been completed for the third safety check.
4. Hold the labeled medication next to the computer screen. Compare the medication name on the label of the medication to the medication name provided on the MAR in the electronic health record (on the computer screen). At this point, the "Right Medication" step of the third safety check is complete.
5. Hold the labeled medication next to the computer screen. Compare the medication dose listed on the medication label with the dose listed on the electronic MAR. At this point, the "Right Dose" step of the third safety check is complete.
6. Review the electronic MAR to confirm that the medication administration route listed on the electronic MAR is the intended route for administration. At this point, the "Right Route" step of the third safety check is complete.
7. Review the time listed for oral medication administration in the MAR to confirm that it is the right time for the administration of the medication. Compare the administration time in the MAR with the clock in the patient's room. At this point, the "Right Time" step is complete for the third safety check.

6. Administration and documentation of medication will be highlighted in further videos.

Applications and Summary

Acquiring medication from a medication dispensing device and administering it involves using the five "rights" of medication safety at 3 different safety checkpoints. The first safety check that includes the five "rights" occurs after acquiring the MAR and entering the medication dispensing device. The second safety check occurs after the medication has been removed and prepared according to best practices and facility protocols. At each safety checkpoint, the medication is verified with the patient's electronic MAR, confirming the right patient, right medication, right dose, right route, and right time. The third and final safety check is completed at the patient bedside, prior to medication administration.

A common mistake in the medication administration process is neglecting to perform the second check after the medication has been removed from the medication dispensing device and prepared for administration. This step is critical because it will help the nurse to ensure that the proper doses have been prepared. Some medications provided by the pharmacy are at a dose that are below or above what has been prescribed. It is the nurse's responsibility to ensure that the correct dose has been prepared for the correct medication administration route and using best practices.

References

1. Institute of Medicine. *To Err is Human: Building a Safer Healthcare System*. Academic Press. Washington, DC. (2000).