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Preparing and Administering Oral Tablet and Liquid Medications

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Preparing and Administering Oral Tablet and Liquid Medications

Overview

Oral medications are the most preferred route by patients and one of the most commonly used routes of medication administration by providers. Most oral preparations are taken by mouth, swallowed with fluid, and absorbed via gastro-intestinal tract. Oral medications are available in solid forms, such as tablets, capsules, caplets, enteric-coated tablets) and liquids forms, which include syrups, elixirs, spirits and suspensions. Most oral medications have slower onset of action and in the case of liquid and swallowed oral medications may also have a more prolonged effect. The enteric-coated tablets are covered with material that prevents dissolution and absorption until the tablet reaches the small intestine. Additional oral medication routes (not shown in this video) include sublingual administration, when the preparation is placed under the tongue to dissolve, and buccal administration which involves placing the medication in the cheek area between the gums and mucus membranes to dissolve.

When preparing and administering oral tablet and liquid medications the nurse must consider if the medication is appropriate given the patient's medical conditions, medication allergies, current clinical status, and when previous doses of the medication have been administered. The patients with altered gastrointestinal function (vomiting, nausea) should not be given oral medications, since they wouldn't be able to retain them. Oral medications are contraindicated in the patients that are unconscious, uncooperative, or unable to swallow due to a medical problem. Medication administration also requires the nurse to be knowledgeable about the medication purpose, adverse effects, and patient preferences. This demonstration will present how to prepare and administer oral medications in both tablet and liquid forms (most common) including the five rights and finally medication documentation.

Procedure and representative findings

1. General medication administration considerations (review in the room, with the patient).

1.1 Upon first entering the patient's room, wash hands with soap and warm water, and vigorous friction for at least 20 seconds. Hand sanitizers may be used if the hands are not visibly soiled, but vigorous friction should also be used.

1.2 At the bedside computer, log into the patient's electronic health record and review the patient's medical history and previous administration times. Verify with the patient any medication allergies and discuss their physical allergic responses and reactions.

1.3 At the bedside computer, pull up the Medication Administration Record (MAR).

1.3.1 Review the medications that are due to be administered, and clarify with the patient if they have a preference or concerns prior to acquiring and preparing the medication.

1.3.2 Some patients may have difficulty swallowing whole tablets or capsules. This may require cutting the tablet into smaller doses or opening the capsule to release the powder or granules. Before splitting a tablet or opening a capsule you must ensure that that it is safe to do so. Enteric-coated medication, extended/sustained release medications should never be broken.

1.3.3 There are many medications that can be given in liquid form if swallowing partial tablets or granules is still difficult. Consult with a pharmacist to determine liquid preparation availability.

1.4 Leave the patient's room, wash hands as described above (1.1)

1.5 The nurse must now maintain a distraction/disruption free environment while dispensing and administering medications to prevent medication errors.

1.4 Acquire the oral tablet Medication from the medication-dispensing device using the 5 rights during the first safety check.

2. Go to the Medication Preparation area (this area may be in a secured room or in a secured portion of the nurses' station) and complete the first safety check using the 5 rights of medication administration. (Refer to the video "Safety Checks and Five Rights of Medication Administration for Acquiring Medications from a Medication Dispensing Device")

3. In the medication preparation area, prepare the oral medication as indicated in the MAR, pharmacy instructions, nurse drug guide, patient preference, and according to best practices and institutional policies/procedures. Pre-packaged oral tablets or capsules that do not require preparation will remain in original packaging.

3.1 Open oral medication packaging and prepare for medication preparation if difficulty swallowing, patient preference, or partial dosing required.

3.2 Oral tablet medication doses requiring administration of a partial tablet or for patient preference may be divided into smaller doses. Some prescribed doses require splitting a tablet to obtain the desired dose of the medication such as 1/2 a tablet or 1.5 tablets.

3.2.1 Divide large scored tablet into two equal pieces by grasping both sides of the tablet and breaking at the scored line.

3.2.2 For un-scored tablets, place the tablet evenly into a pill cutter and quickly close the device to ensure the tablet cuts evenly.

3.2.3 Dispose of remaining partial doses according to institutional policy if partial dosing is required. If cutting and/or breaking tablets for patients with difficulty swallowing, place all medication pieces into a medication cup.

3.3 Oral capsule preparation for patients who are unable to swallow a capsule will require obtaining a soft food (puree or pudding) from the nutrition room.

3.3.1 To empty contents of the oral capsule medication, grasp both ends of the capsule, twist and pull gently, and empty the contents into a medication cup. Be careful not to lose any of the contained medications.

3.3.2 Carefully spoon 2-3 tablespoons of soft food into the medication cup containing the capsule contents. This will facilitate administration and will help to mask the taste of the medication.

3.4 Premixed liquid oral medications will require gentle shaking of the medication for a few seconds to ensure equal distribution of the medication within the liquid.

3.4.1 Obtain an oral syringe and medication cup from the medication drawer in the medication preparation room. Intravenous syringes can easily be mistaken for intravenous use. The nurse should always use oral syringes when dispensing oral medications to avoid medication errors.

3.4.2 Calculate the appropriate volume to withdraw given the concentration provided on the liquid medication label. If the MAR indicates a dose of 30 mg and the concentration provided is 30 mg/15 mL, withdraw 15 mL from the container.

3.4.3 Place medication cup on level surface and crouch until you are at eye level with the volume measurement. Pour premixed liquid medication into the medication cup until it reaches the correct volume. Liquid poured while standing and looking down at the medication cup will cause an insufficient volume to be dispensed and a medication error.

3.4.4 If the medication indicates a precise measurement such as liquid digoxin, an oral syringe should be used to withdraw the medication from the medication cup.

3.4.5 Place a medication cup on level surface and pour a volume greater than needed for the prescribed dose. Keep a multi-dose container clean by pouring out the volume to be used before withdrawing with an oral syringe. If a single-dose container is used, the nurse may withdraw directly from the container and dispose of the remaining volume.

3.4.6 Place the tip of the oral syringe within the liquid medication and withdraw slightly greater than the prescribed volume.

3.4.7 Turn the tip of the syringe up and move it to eye level. Slowly push the plunger until all air is dispensed and the top of the plunger seal (bottom of the plunger seal cone) reaches the desired volume.

3.4.8 Return multi-dose container to medication dispensing device. If single-dose liquid medication container is used, dispose of remaining volume according to institutional policy.

3.5 Dispose of all medication packaging in trash receptacle.

4. All medications that have been removed from original packaging must be labeled with the medication and medication dose prior to leaving the medication preparation room. Using tape or a pre-printed medication label (if available), write the medication name and dosage amount on the label, and place on the syringe. Note: some institutions may require more information according to their medication labeling policy.

5. In the medication preparation area complete the second safety check using the 5 rights of medication administration. (Refer to the video “Safety Checks and Five Rights of Medication Administration for Acquiring Medications from a Medication Dispensing Device”

4. Gather needed supplies, including a cup of water, straw, non-sterile gloves, oral medication, and medication cups. Take the supplies into the patient’s room.

Administration

5. Upon first entering the patient’s room, set the medications down on the counter and wash hands with soap and warm water, and vigorous friction for at least 20 seconds. Hand sanitizers may be used if the hands are not visibly soiled, but vigorous friction should also be used.

6. In the patient’s room, complete the third, and final, medication safety check adhering to the 5 rights of medication administration. (Refer to the video “Safety Checks and Five Rights of Medication Administration for Acquiring Medications from a Medication Dispensing Device”

6.1 Verify the patient is wearing the correct name band by asking them to state their name and birthdate. Compare this information with what is provided on the name band

7. Provide patient teaching regarding the oral medication. Tell the patient the medication name, indication and action.

7.1 Review with the patient any side effects or adverse effects associated with the medication.

7.2 Discuss any patient concerns regarding the medication and address them prior to administering the medication. Should the patient refuse the medication, ensure that they are aware of the potential physiologic/psychological impact of their refusal on their health and recovery.

8. Administer the oral medication.

8.1 Ask the patient to take a small sip of water to ensure they are able to swallow without difficulty.

8.2 Open any pre-packaged medications and place in a medication cup.

8.3 Give the medications to the patient according to patient preferences and patient abilities.

9. Document the medication administration in the electronic MAR.

9.1 In the patient's electronic MAR, record the dose of the medication, route of administration, date, and exact time administered with your initials. Any assessments required prior to administration should be included in the documentation.

10. Prior to leaving the room, remind the patient about any side effects/adverse effects or considerations for which they should notify the nurse.

11. Leave the patient room. Upon exiting the room, wash hands with soap and warm water, and vigorous friction for at least 20 seconds. Hand sanitizers may be used if the hands are not visibly soiled, but vigorous friction should also be used.

Summary

This video demonstration presented the verification and administration of oral medication, including tablets, capsules, and liquid preparation. Because dosage variations in the institutional pharmacy may be limited, it is important for the nurse to verify the correct medication dose is obtained from the medication-dispensing device and prepared according to the dose indicated in the patient's medication administration record. For example, if a patient were ordered a dose of 30 mg, but the institutional pharmacy only had 20 mg tablets, the nurse would need to prepare and give 1.5 tablets. If an oral liquid medication's action requires precise measurement, an oral syringe should be used instead of a medication cup. A medication cup provides an approximate volume while a syringe will deliver exact volumes if correct technique is used during preparation. A common oral liquid medication error would be to pour a liquid medication without it being at eye level or on a level surface. In both cases, this would result in an administration dosing error, with under-dosing resulting in potentially as harmful effects as over-dosing depending on the medication administered and the desired effects. Adherence to the five rights and three checks of safe medication administration would ensure that the patient is receiving the intended and safe dose of the medication.

Figures

Figure 1 – Oral Tablet Forms (2.1)

Representation of a capsule, scored and un-scored tablet.

Figure 2 – Syringe Diagram

Syringe area for correct dosage calculation

Figure 3 – Patient Identification Verification (4.2)

Comparison of name band with patient verbal response and MAR

References

Potter, P. A., Perry, A. G., Stockert, A. H., & Hall, A. (2015). *Essentials for Nursing Practice, Eight Edition*. Elsevier, Mosby. St. Louis, MO.

scored tablet:



unscored tablet:



capsule:





Verify the patient has on the correct name band

Compare patient identifiers on the MAR with those on the patient's name band.

Please tell me your name and birthdate



Patient, John Q MDCN 123456789	
Admission Date: 01/01/18	Room: 101
Diagnosis: MI/Isch	Birthdate: 05/14/1955 Gender: Male
Height: 5'7"	Insurance: Medicaid

Nursing Orders			
Order	Time	Medication Name (Drug, Route, Schedule)	Time
12345	12:00 PM	Aspirin 81mg PO qday	12:00 PM
12346	12:00 PM	Metoprolol 50mg PO bid	12:00 PM

