

JoVE: Science Education

Preparing and Administering Topical Medications

--Manuscript Draft--

Manuscript Number:	10259
Full Title:	Preparing and Administering Topical Medications
Article Type:	Manuscript
Section/Category:	Manuscript Submission
Corresponding Author:	Madeline Lassche UNITED STATES
Corresponding Author Secondary Information:	
Corresponding Author's Institution:	
Corresponding Author's Secondary Institution:	
First Author:	Madeline Lassche
First Author Secondary Information:	
Order of Authors:	Madeline Lassche Katie Baraki
Order of Authors Secondary Information:	

Author Name

Katie Baraki, MS RN; Madeline Lassche, MSNEd RN

Clinical Skills Education Title

Preparing and Administering Topical Medications

Overview

On the surface, administration of topical medications may appear to be harmless. There are a variety of different types of medications that can be administered via a topical route, ranging from antibiotics, to hormones, and even chemotherapy. This requires adherence to the five rights of medication administration and three checks during the administration process to ensure the safe administration of these medications. This video will demonstrate various techniques associated with the safe administration of topical medications within the context of the standards of safe medication practices.

Prior to acquiring medications from a medication-dispensing system (MDS), the nurse must consider if the topical medication is appropriate for the patient's medical conditions, medication allergies, current clinical status, and when previous doses of the medication have been administered. The nurse should also assess the topical medication administration site to verify the clinical appropriateness of the topical medication and evaluate medication effectiveness.

Procedure and representative findings

1. General medication administration considerations.

1.1 Review the patient's medical history for medication allergies and previous administration times.

1.2 Confirm any patient preferences regarding topical medication administration and address any patient concerns prior to acquiring and preparing the medication.

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

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

2. Complete the second safety check using the 5 rights of medication administration.

2.1 Confirm that you have acquired topical medications for the right patient on the MAR. At this point the "Right Patient" step has been completed for the second safety check.

2.2 Compare the topical medication name listed on the label with the medication name listed on the MAR. At this point the “Right Medication” step is complete.

2.3 Compare the topical medication dose/concentration listed on the label with the dose/concentration listed on the MAR. At this point the “Right Dose” step is complete. Note: Some medications may prescribe a specific amount to be applied, and these are generally supplied as single dose applications. If it is not provided as a single dose package, the MAR will describe the amount to be applied, such as “squeeze out one inch of medication”.

2.4 Verify that the medication route listed on the label is consistent with the route listed on the MAR. At this point the “Right Route” step is complete. Note: Some topical medications have varied concentrations depending on the location where they are to be applied. It is the nurse’s responsibility to verify that the topical medication provided is appropriate for the location that it is to be applied.

2.5 Review the MAR to confirm that it is the right time for administration. At this point the “Right Time” step is complete.

3. Gather necessary supplies and take the medications and supplies with you to the patient’s room.

3.1 Review information regarding the proper application of the topical medication with a nursing drug guide and institutional policies. For instance, topical antibiotic medications should be applied using swabs to prevent cross contamination of the application site with environmental contaminants. Topical steroidal creams should be applied using gloves to prevent accidental absorption of the hormones into the nurse’s skin.

3.2 Upon entering the patient’s room, wash your 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.

4. Complete the third safety check using the 5 rights of medication administration.

4.1 Verify that 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.

4.2 Compare the patient’s name and medical record number (MRN) from the name band with the patient identifiers provided on the medical administration record (MAR). At this point the “right patient” step has been completed for the third safety check.

4.3 Compare the topical medication name listed on the label with the medication name listed on the MAR. At this point the “right medication” step is complete.

4.4 Compare the topical medication dose/concentration listed on the label with the medication dose/concentration listed on the MAR. At this point the “right dose” step is complete.

4.5 Compare the medication route listed on the label with the medication route and application sites listed on the MAR.

4.6 Review the MAR to confirm that it is the right time for administering the medication. At this time the “right time” step is complete.

5. Provide patient teaching regarding the topical medication.

5.1 Tell the patient the medication name, indication and action.

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

5.3 Discuss any patient concerns regarding the medication and address them prior to administering the medication. Note: 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.

6. Administer the topical medication.

6.1. Inform the patient that application of the topical medication will require exposing the application site. Ensure patient privacy and dignity by covering intimate body sites as much as possible with a blanket or towel during administration.

6.2 Wash hands with soap and warm water, and vigorous friction for at least 20 seconds, then apply clean gloves.

6.3 Expose the application site, and if necessary, clean the site according to institutional policy and standards of nursing practice.

6.4 Wash hands with soap and warm water, and vigorous friction for at least 20 seconds, then apply clean gloves.

6.5 Squeeze out the appropriate amount of topical medication to be applied onto clean gloves or a swab (technique will be determined by the intended action of the medication).

6.6 Apply the topical medication according to instructions provided on the MAR, institutional policy and/or as described in the nursing drug guide.

6.7 If necessary, apply new dressings and then return clothing to original position.

6.8 Wash hands with soap and warm water, and vigorous friction for at least 20 seconds.

7. Document the medication administration

7.1. Documentation of topical medication includes the name of the medication, topical medication application site, date, exact time administered and your initials. Note: any assessments required prior to administration should be included in the documentation.

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

9. Upon exiting the patient 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.

Summary

This video reviewed the steps and skills associated with topical medication administration, including some administration variations necessary to prevent accidental medication exposure by the nurse and potential cross contamination. One common mistake is to not have an understanding of the various forms of topical medications for specific administration sites, which could result in patient harm if applied to incorrect locations. For instance, a topical antibiotic has formulations for both skin and eyes, and if applied incorrectly could result in loss of vision. Assessment of the application site prior to administration is critical because of the potential for skin irritation from the medication. Unexpected inflammation and irritation should be reported to medical staff to prevent further tissue damage.

Figures

Figure 1 – Swab Application of Topical Medication
Demonstration of applying topical medication using a swab.

Figure 2- Patient identification verification
Comparison of name band with patient verbal response and MAR



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	Room: 101
Ward: 101	Ward: 101
Height: 5'7"	Weight: 150 lbs

MAR: 01/01/18			
Time	Medication	Dose	Signature
08:00	Aspirin 81mg	1 tablet	[Signature]
12:00	Insulin 10 units	10 units	[Signature]
16:00	Morphine 2mg	2mg	[Signature]
20:00	Hydralazine 25mg	25mg	[Signature]

