Medication Administration Course

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Introduction

Your job may require you to administer medication, prescribed by a doctor, to an individual that has a medical problem. This requires specific training to ensure that you are knowledgeable and safe in the administration of medication(s). When administering medications, attention to detail is of utmost importance so that errors are not made. Medication errors occur when attention to detail is neglected. This may compromise the health and well-being of the person in your care. Although medication errors are usually not intentional, most occur when a person is distracted or have competing responsibilities, the consequences may be severe enough to warrant emergency care. This course is designed to address the essential aspects of medication administration with the intent of preventing errors and maximizing health outcomes. With your commitment to detail and correct process, I am confident that you will be successful in the safe administration of medication to those who cannot self-administer.

This course follows the learning outcomes of the Alberta Council of Disability Services.

Waiver: By offering this course, Breath for Life Inc provides a standardized approach to the effective delivery of medication based on the Alberta Counsel of Disability Services Learning Outcomes. Breath for Life Inc, or its educators, will not be held responsible for medication errors that occur within your workplace. Breath for Life will not be held responsible for misinterpretations in content and understands that this course is an entry point into the complexities of administering medication which requires further in-house training and orientation supported by standardized protocols to direct the administration of medication.

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Chapter 1

Fundamentals of Medication Administration

General Considerations for Medication Administration

- All administered medications must have a **doctor's order and a pharmacy label**:
    - Prescribing medications is the responsibility of the doctor, nurse practitioner or pharmacist who have knowledge of what is best for the recipient. Prescribed medications should always have a label. If there is no label it was not prescribed and it should not be administered unless cleared by a pharmacist. Your go-to person is the pharmacy that dispenses the medications.

- Understand the **process** before administering medication:
    - There should be a standardized process in place to ensure that none of the essential steps are missed when administering medications. Standardization means that everyone is doing the job following the same process consistently.

- Always **wash your hands** before and after medication administration:
    - This process must follow the steps of clean technique to prevent cross contamination.

- **Do not touch** the medication (wear gloves)
    - Wear gloves when there is a potential for exposure. Touching a medication may result in a sensitivity reaction or you could experience adverse effects because of exposure.

- Medication should be administered as close to the prescribed time as possible: typically, a 1/2 hour window before or after the administration time is allowed unless approved by a pharmacist.

- Medications that fall outside the best before date **(expiry date)** should not be administered. Expired medications lose their potency and are less effective over time.

- Medications that have been **contaminated** (eg. fall on a floor) should never be administered: dispose of contaminated medication appropriately.

- Medications that are wasted or expired must be disposed of appropriately.

- Always inform the pharmacy when a medication has been contaminated and wasted, for which another medication is borrowed or taken from another date or from the overall supply (affecting the number of medications available for administration) so that it can be replaced.

- Always check medication to ensure that they are consistent in size shape and color.

- Medications have both beneficial and adverse effects: you must be aware of how a medication affects the recipient.

The Rights of Medication Administration:

There are several rights that apply to medication administration. The idea is to administer medication the right way to prevent error. These rights are followed by medical professionals at all levels to safeguard the individual's well-being. A casual approach to any of these rights may result in a drastic error. When an error occurs, regardless of how minor it may seem to you, an incident report must be completed.

Rule: Always prepare one person's medication at a time. Do not overwhelm yourself by preparing several individuals' medications simultaneously. This usually results in error.

- The Right Person
    - Although this seems obvious the person must be identified to receive the correct medication. Errors are made when a person is not correctly identified. Have the person tell you his/her name or provide the person with a name band and compare the Medication Profile Sheet, Medication Administration Record and/or Medication Label with the person's stated name and/or name band. Always refer to the person by their name and not an alias. A picture may also be placed in the person's file to help identify the person.
- The Right Medication:
    - If the right person is not identified the likelihood of administering the wrong medication to a person is greatly increased. To prevent an error in administering the wrong medication always compare the medication with the person's Medication Profile Sheet, the Medication Administration Record, the medication label and by identifying the person before the medication is administered. When a medication is taken by the person it is too late to make corrections.
    - Pharmacists are able to provide labelled pictures of the medications that you administer. This is useful to help identify the medications administered.
- The Right Time:
    - Medications should be administered at the right time to achieve maximal therapeutic effect and to prevent the possibility of an overdose especially when the medications are administered several times throughout the day.
    - Medications must be administered within a one-hour window (1/2 before or after) of their prescribed time.
    - If there is a late administration, or you forget to administer a medication, and approvals are not in place to administer a late administration, you will need to call a pharmacist to seek clarification on the best course of action:
        - An incident report will need to be completed.
        - If you forget to give a medication, seek clarification with the pharmacy when the medication should be administered next.

- The Right Dose:
    - You must ensure that the correct dose of the medication is administered. Knowing the correct dose is essential to prevent over or under dosing. Correct dosing is typically controlled by a pharmacist who packages medications in sealed envelopes or in blister (bubble) packs. There should be no reason for you to guess a dose or calculate a dose.
    - If the person vomits, the amount of medication that has been absorbed by the body cannot be accurately estimated. In this situation, an extra medication would not be administered to replace what was lost: call the pharmacy for clarification on this matter. Again, an incident report would be completed and the pharmacy would be informed if required by your agency or facility.
- The Right Route:
    - There are several routes of administration: oral, rectal, dermal, inhalation and injection.
- The Right Reason:
    - Medication must be administered for the right reason. Although you may have little control over this consideration, you do have an important role in understanding why a medication has been prescribed. If a patient asks you why they are taking a medication, saying 'because the doctor wants you to take it' is an uninformed answer. Giving the patient information that is meaningful helps empower the patient: the patient has a fundamental right to know what they are consuming.
- The Right Documentation:
    - The most common documents are the Medication Administration Record for both regular and PRN medications, the Incident Report and the Progress Report. Documentation is a legal requirement which reflects accountability.
- The Right Effect: All medications elicit an effect whether beneficial or adverse. You must know what to expect in terms of effects when administering medications.
- The Right Frequency: This means understanding how many times a medication is administered during the day. The greater the number of times a medication is administered the closer you need to be to the administration time.
- The Right Method: Understanding how to prepare a medication is important to maximize effectiveness.
- The Right to Refuse: Although we respect an individual's right to refuse, communicating with a person about the consequences of refusal is important to reinforce the importance of taking prescribed medication. Understanding empowers. Blindly accepting a refusal without understanding the reasons for a refusal (whatever the refusal represents) goes against the reasons for why the person is under your care.

  Refusal Challenges:
  Challenge # 1:
  The person does not understand why a medication has been prescribed and refuses to take it. What would you do?

  Challenge #2:
  The individual refuses the medication due to its awful taste or size. What would you do?

Challenge #3:
The individual complains of side effects associated with the Medication and refuses to take it. What would you do?

Challenge #4: The person believes that the medication is not needed and refuses to take it. What would you do?

The Three Check Process

A three-check process is encouraged to prevent the occurrence of errors:

1. Preliminary check
2. Intermediary check
3. Final check

It has been determined that these checks help prevent errors. If you think about the process, the process will work for you and errors will be prevented.

Notes:

Chapter 2

Documentation

The Documents that must be completed, when administering medication, are based on the two main categories of prescribed Medications:

1. Regular medications which are administered following a schedule
2. PRN medications which are administered intermittently without a schedule

Medication Profile Sheet

The medication profile sheet details all of the individual's prescribed medications. This includes both Regular medications and PRN medications. It must be updated as medication orders change.

The Profile Sheet may not be a requirement within your institution but it is useful for quick reference and may be handed over to the next level of care: eg. EMS when a patient needs to be transferred to a hospital or when a person is transferred out of a facility to another facility. It must be remembered that this sheet is confidential and must be protected from public view.

Medication Profile Sheet

Name: **Johnny Dolittle**			Date:	
Allergies: pollen, cat hair, milk, eggs, perfume.				
Regular Medications				
Date Prescribed	**Medications**	**Dose/Frequency**	**Time**	**Route**
Jan 3, 2020	Diclofenac SR	75mg bid	0800, 1800	po
~~Jan 3, 2020~~	~~Hydrochlorothiazide~~	~~25 mg 1 tab qAM~~	~~0800~~	~~Po Discontinued~~
March 3, 2024	Enalapril	2.5 mg bid	0800, 2000	po
March 3, 2024	Codeine Phosphate	30mg tid	0800, 1400, 2000	po
PRN Medications				
Date Prescribed	**Medication**	**Dose/Frequency/Time**	**Criteria/reason**	**Route**
Feb 6, 2011	Tylenol	325 mg q6h PRN	Shoulder Pain	po

Medication Administration Record (MAR) for Regular Meds

The Medication Administration Record (MAR) is a legal and confidential document which is a record of administered medications, that is signed off as medications are administered. **The MAR, detailed on the following page, is meant for <u>regular administered medications</u> only and is not intended for PRN medications**. The PRN record will be discussed later.

The MAR for Regularly Administered Medications is signed off by a person when the medication is administered successfully. It is never signed off before a medication is administered because there is no certainty whether administration will be successful. As this is a legal document this document must be retained in a record keeping system for up to 7 years or longer. The MAR may be created by your facility or may be generated by a pharmacist.

Basic considerations include:

- A column for the prescribed medications, the time(s) of administration, and the dates of administration throughout the month.

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The MAR is specific to the individual receiving medication and MARs must include:

- The Individual's Name,
- The date, month and the year of the current MAR,
- Entries must be in black or blue pen
- Never delete information on a MAR by using an eraser or white-out. If an error is made, cross it out and initial it. This follows the guidelines around legal documentation.
- Place your name in the correct area on the MAR along with your initials. As you sign off the MAR for each successful administration, enter your initials into the grid of boxes assigned for each administration date and time. Your initials convey successful administration on a specific date at a specific time. Entering your initials is a legal requirement. You must not initial the MAR until a medication is administered nor initial the administration of a medication for someone else. Your initials are entered with each successful administration only.
- If a medication starts on a date and time during the month that does not represent the beginning of the month, identify the time of administration and draw a line from the first day of the month through the dates up to the start date. This indicates that the medication was not administered prior to the start date and time. The same approach applies to a discontinued medication. If a medication is discontinued during the month, identify the time of administration and enter a line from the date the medication was discontinued to the end of the month. Discontinued medications are not administered and this has to be properly illustrated on the form to prevent an administration error. At the end of the month, every grid box specific to the date and time of a prescribed medication must be accounted for, even if a medication was not administered.

MAR: Medication Administration Record

Medication Administration Record for: Johnny Dolittle
Month: March 2024
Physician's Name: Ima Doc; Phone #: 5553500035; Pharmacy: 2many Meds; Phone #: 5556636659

MAR

Name: Johnny Dolittle					Birth date: July 18, 1960																											
Admission Date: Dec 3, 2022					Age: 63			Sex: M			Rm #: 2			Height: 145 cm			Weight: 55 kg			Allergies: Yes to seafood												
Medication Order	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Diclofenac SR 75mg 1 /tab twice daily	0800	lm	lm	lm	jb	jb	jb	jb																								
	1800	ms	ms	ms	bg	bg	bg	bg																								
~~Hydrochlorothiazide 25 mg once daily~~	0800	lm	lm	lm	-	-	-	-	-	-	Discontinued																					
Enalapril 2.5 mg twice daily	0800	-	-	-	jb	jb	jb	jb																								
	1800	-	-	-	bg	bg	bg	bg																								
Codeine Phosphate 30 mg three times a day	0800	-	-	-	jb	jb	jb	jb																								
	1400	-	-	-	jb	jb	jb	jb																								
	2000	-	-	-	bg	bg	bg																									

Name: Myra Singelton_____, Initials: ms
Name: Jethro Banks_____, Initials: jb
Name: Barry Good_____, Initials: bg
Name: Lima Maul_____, Initials: lm

Questions:
When will Codeine be administered next?
When did the medication Enalapril start and how is a MAR managed when a medication is entered during the month?
How is a MAR managed when a medication is discontinued?

Managing Discontinued Medications

Discontinued medications are not to be administered to the individual when directed by the doctor. The following steps highlight the procedure to be followed:

- On the **Medication Profile Sheet**, draw a diagonal line through the medication that is discontinued. Do not scribble it out, use white out or an eraser.
- **On the MAR**, identify the time (s) and enter a line from the last day of administration to the end of the month for **each time** of administration
- Write the word discontinued to provide clear communication to the next administrator.
- Document the discontinued medication in the progress notes and the communication book (the communication book is not a legal document but it is confidential).

Let's give it a try: Mr Iduno's Furosemide 40 mg taken orally every morning at 8 AM was discontinued on May 4th. He was taking this dosage for 2 months. Enter the information and then discontinue it.

Medication Order	**Time**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**etc**	**30**

Managing Leave of Absence (LOA) Medications

When an individual in your care is allowed to leave the care facility for a period of time, Leave of Absence medication must be prepared so that the person is able to continue their medication therapy. This may be an afternoon pass, a day pass, a weekend pass or a general leave. You must prepare the individual's medication for the time period of their leave.

The following applies:

A medication envelope is usually used to contain the prepared medication (s). The following information is entered onto the envelope:

- Individual's name;
- The date and time of administration: the more dates and times around administration the greater the number of envelopes required. A new envelope is used for each date and time of administration. If several meds are to be administered at the same time for the same date, those meds can be placed into the same envelope.

- Medication and Dose: if the agency you work for regards this as a breach in privacy governed by FOIP* enter the number of pills supplied in the envelope;
- Special Instructions as required: eg. Do not take with meals.
- Your Initials.

*Freedom of Information and Protection of Privacy

1. Enter LOA on the MAR for the period that the person will be absent and initial the MAR. The initials indicate that the meds were prepared by that person. A **legend system**** may make this easier.

Medication Order	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	etc	31
Loxapine 1.25 mg Po qd	0800	–	–	–	–	–	–	–	–	–	–	–	–	LOA jb	LOA jb	jb	jb				

2. Provide verbal or written instructions to the person responsible for the off-site administration of the medications.
3. Document in the progress record that LOA medications have been prepared and instructions were given to the person assuming responsibility for administration.

****Why a legend system?**
Some agencies and facilities create a list of common considerations or events that may occur when administering medications (LOA, refusal, wastage, etc) and assign a number system (legend) to these considerations so that they can be easily inputted onto the MAR.

For instance, instead of entering the letters LOA on the above MAR, a number assigned to LOA would be entered onto the MAR making the entry less cumbersome.

- Assigning 1 to LOA (1 = LOA) would simplify the entry for each day that the person is on leave
- Assigning numbers to common problems or considerations would be agency or facility specific.

Creating Monthly MARS

Monthly MARS must be created or generated before the beginning of each month so that administered medications can be signed off as they are administered. This is a legal requirement. They must always be available from one month to the next.

Managing Received Medications
When prescribed medications are received by your facility you must perform an accuracy check:

- Compare the pharmacy label with the information on any bottle, vial, container, blister pack, etc.
- Ensure that the information on the label is clear, legible and easily understood
    - Always ensure that the name, medication, dosage and time frame around administration are clear.

- Verify the correct quantity of pills is received and that there is consistency in the size, shape and color if using a blister pack or bubble pack system. Remember do not touch the medication.
- Check the expiry dates on all bottles and containers
- Enter the pharmacy label information onto all relevant forms
- If a medication is discontinued ensure all forms are updated accordingly.
- Place the new medication in the appropriate storage area.
- Document the start of a new medication in the progress notes and in the communication book.

Call the pharmacy when:

1. There are questions about or inconsistencies with the following:
    - name of patient (maybe the name was spelt incorrectly)
    - the medication (number of meds available, size, shape, color)
    - medication dose (dose imprints often appear on the medication)
    - time frame around administration,
2. The label has become damaged, defaced or illegible.
3. If you have any questions regarding the administration of the medication: reason for administration, how to administer the medication, if there are any food/fluid restrictions, whether medications can be crushed or split in half, etc.

Administration of PRN Medications:

Administration of PRN (pro re nata translated to 'as needed') medications requires a physician's order and pharmacy label. 'As needed' does not mean whenever the person requests it or wants it or when you think the person needs it. PRN medications are administered when certain symptom criteria are experienced by the person and the administration is governed by a time frame so that overdoses and harm do not occur. For instance, the order: Administer Advil 200 mg orally for arthritic pain every 4 to 6 hours PRN, captures the following essential information around PRN medication administration. The symptom criteria that defines the administration of Advil is arthritic pain. The dosage of 200mg is specific and the time frame every 4 to 6 hours is directive and must be followed. If this order were written as follows: administer Advil 200 mg orally 4 to 6 times per day would be incorrect as this could be misinterpreted that a person can take 4 to 6 pills at a time. This would cause serious problems. In this case pharmacy would need to be called for a new label clarifying the time frame.

PRN medications are entered onto what is called the **Standing Order Form**. A standing order basically means that a medication stands as an active order which is available when a person experiences problems (symptoms) for which the medication is prescribed and required for symptom relief.

Considerations:

- If a PRN medication was prescribed for a short-term problem, and the problem is expected to resolve without reoccurring, the status of the PRN should be reviewed with the pharmacy or doctor to determine whether the medication should remain active or be discontinued. For instance, if a doctor orders cough syrup as a PRN medication for a bronchial infection and the infection resolves with the outcome that coughing stops, the status of the PRN medication should be reviewed and discontinued if the person no longer has active symptoms. Cough syrup can always be re-prescribed when needed.
    - Some problems are recurrent, such as constipation, arthritic pain, menstrual cramps, etc. PRNS prescribed for these problems will remain active and are typically reviewed yearly by a doctor to ensure that they are still required by the patient.
- You must always understand the reason why a PRN was ordered and that reason does not apply to any other symptom criteria experienced by a patient. For instance, if a patient was ordered Tylenol for a headache, that medication cannot be used for any other problem (such as arthritis, menstrual cramps, pain related to a stubbed toe) unless approved by a pharmacist or the patient's doctor. Consult with your pharmacist.

Standing Order Form

Name of Person: _____, Date of Birth: _____
Doctor's Name: _____

Sample Standing Order Form: See appendix D for blank form

Symptom Criteria:	**Medication**	**Dosage**	**Time**
1. Fever > 38 Celsius	Tylenol	325 mg	q6h PRN
2. Headache	Advil	200 mg	q6h PRN
3. Constipation Day 1 Day 2 Day 3	 Pegalax Ducolax Suppository Enema	 One packet 5 mg	 At bedtime (qhs) In the qam In the qam
4. Arthritic Pain	Advil	200 mg	q4-6h PRN

PRN Medication Administration Record

PRN Medication Administration Form				
Date	**Time**	**Medication**	**Reason**	**Initials**
March 4, 2024	11:15	Advil 200 mg	Headache pain.	JB

Last date reviewed: June 5: 2023
Next date for review: June 2024

Incident Reporting

Medication challenges and errors may be encountered when administering medication. It is your responsibility to ensure that the person is safe and their well-being is assured.

When medication challenges or errors occur an **Incident Report** must be completed. The Incident Report details some of the common errors or challenges that may occur and the requirements around reporting a problem.

Generic Medication Incident Report

Today's Date: _____; Date of Incident: _____
Patient's Name: _____; Your Name: _____
Individual Responsible if Applicable: _____

Type of Incident:
□ Incorrect Patient □ Incorrect Medication □ Incorrect Dose □ Incorrect Route
□ Incorrect Time □ Other: wasted med (dropped), rejection or refusal, reaction, vomiting, etc.

Medication Incident Details:

Notification List: Enter time and date for each party notified.

	Date	Time	Initials
Team leader/ On call			
Pharmacist			
911			
Parent/Guardian			

Detailed Instructions from the Pharmacist, 811, 911, etc:

Follow-up Requirements:

_____ _____
Signature Date

Investigation Report:

_____ _____
Signature **Date**

Documentation of Medication Incidents

- When a **medication incident** has occurred, **circle the grid box on the MAR, corresponding to the date and time of the incident,** and provide an explanation of the incident on the Incident Report Form. The circle alerts administrative personnel that an incident occurred and that an Incident Report was created. If a medication was not administered enter the circle only: you do not initial what was not administered. If the medication was administered, enter your initials with a circle around it. For instance, if a person spits out a medication, in theory the medication was administered but the patient spit it out, this would represent an incident which needs to be reported.

Progress Notes or Patient Care Records

Patient care records, are a record of your delivery of care throughout the day and how well the patient received that care. It reflects successes and challenges including details such as: the patient took their medications successfully at suppertime or the patient spit out their medications and an incident report was completed.

Chapter 3

Right Method of Administration

Medication administration should follow a procedural process defined by your place of employment.

Administration procedures should include the following key considerations:

- Wash your hands
- Protect yourself from any exposure to medications: wear gloves and face protection as required
- Prepare one person's medication at a time
- Proper identification of the person who will receive the medications
- Reference to the Profile Sheet and the MAR for regular or PRN medications
- A review of the rights
- The Three Checks
- Documentation requirements

Key considerations when preparing or administering the following medications:

- **Administration of Liquid Medication (Notes):**

  Decanting from a larger bottle to a smaller medication cup may be riddled with challenges; the greatest challenge is achieving accuracy in the pour. Pharmacies sell stoppers and syringes which form a closed system when you place the syringe tip into the stopper. When you invert the closed system and draw the medication into the syringe there are no accidental spills, no drips that can damage the label and accuracy is achieved as the markings on a syringe are clearer than the graduation lines on a medication cup.

- **Administration of the Epi-pen (Notes):**

  The epi-pen is a short version of the word epinephrine which is adrenaline. Adrenaline being our survival hormone is an essential medication when a person experiences an anaphylactic reaction. Because the Immune System is activated when a person is exposed to something they are sensitive to, histamine is released into the body, which can result in a life-threatening drop if blood pressure and airway closure. Epinephrine helps prevent these outcomes against a raging Immune System that is spilling out Histamine pushing a person into Shock and eventual death. The epi-pen has no effect on the Immune System and does not reverse the problem of histamine release. The beneficial effects of epinephrine are not long lasting and further administration is required on an as needed basis when symptoms of light headedness reflecting a drop in blood pressure and difficulty breathing occurs. A person experiencing anaphylaxis must be transported by ambulance to emergency.
  An epi-pen is a pre-poured auto-injector which is color coded (auto injector meaning: spring loaded and pre-filled for which all that is required is a push to administer the medication). The old adage "blue to sky, orange to thigh" has application but not all

epi-pens have a blue and orange color coded system directing its administration: color coding is determined by the manufacturer. The blue end is the lock which must be removed to unlock the injector: the orange end. The orange end must always be directed to the mid-thigh or vastus lateralis muscle. When injecting hold the injector against the skin, or against a single layer of thin clothing, push down and hold for 10 seconds. Rub the area and have the person move their leg so that the medication enters the circulation quicker. 911 must be called without delay.

- **Administration of Eye Medication (Notes)**

  Self-administering eye drops may be cumbersome at best. The blink reflex is about protecting the eye from anything that is directed at it. An eye drop will initiate the blink reflex and the medication may not successfully be instilled. To get around this problem, it is best to help a person when administering eye drops. Have the person lie down. Wearing gloves, place your index finger on their lower lid and have the person look up. With the pupil buried under the upper eyelid, the drop is not seen and the blink reflex is activated after the medication hits the eye. Wipe away the excess with tissue. Success is realized.

- **Administration of Ear Medication (Notes)**

  Have the person lie on their side and instill the number of drops required as per the prescription label. Have the person stay on their side for a few minutes and when they sit or stand-up wipe away the excess with a tissue.

- **Administration of Inhaled Medications (Notes)**

  Pressured inhalers must be shaken well before the medication is inhaled: thirty (30) seconds is the standard so that the medication in the pressurized container is thoroughly mixed. The medication settles out and if not properly shaken it is not evenly distributed in the pressured container. Without proper shaking there is no guarantee that the medication will be received as a consistent dose when a person takes a puff. To make administration easier and to ensure that a full dose of the medication is received, Aerochambers have been created. In the same way that a person would take a puff, or inhale a single dose, the medication is plugged into the Aerochamber and a single dose is released (never release more than one dose or puff into the chamber at a time). The person can breathe several times from the aerochamber still representing a single dose. This prevents unnecessary distress in taking the medication and prevents wastage. If a person requires a second dose, puff, as per the prescription label, the individual will take that second dose about a minute later - shaking is not necessary to administer the second dose. If airway distress persists, 911 should be called.

- **Application of Topical (Skin) Medication (Notes)**

  Application of a topical ointment requires the use of gloves to prevent exposure. Use an applicator to apply the ointment. Do not use your gloved finger as an applicator.

- **Administration of a Trans-dermal Patches (Notes)**

  Transdermal patches or medication patches should be applied to the upper body. These patches need to be rotated so that skin irritation does not occur. Tracking the

site of application is a common practice. When applying patches there is an on-time and an off time around application. This needs to be captured on the MAR so that a person is reminded when to take a patch off and when to apply a new patch.

- **Administration of Rectal Suppositories and Enemas (Notes)**

  Some agencies do not allow for the insertion of suppositories as this procedure is invasive. Wearing gloves is mandatory and having short finger nails is important so that the glove is not torn and the rectal mucosa is not traumatized. As anal sphincter tone can create discomfort when inserting, easing the suppository into the rectum, rather than pushing it in rapidly, prevents unnecessary discomfort during insertion. Common practice is to have the person lying on their left side and directing the suppository along the inner wall of the rectum.
  Always remember to be considerate of a person's privacy and be respectful of their dignity.

- **Administration of Medication through a Gastric Tube (Notes)**

  This consideration is outside the scope of consideration for this course. If a person has a g-tube it is best to involve public health so that the various challenges and considerations are addressed thoroughly.

Chapter 4

Common Medical Conditions and Symptoms

Fever

Normal body temperature is 37° Celsius (C) or 98.6° Fahrenheit. A range between 36.5° and 37.5° C is considered normal. A person is said to have a fever, requiring medical attention, when his/her oral temperature is higher than 38° C (100.4° F) for a period greater than 24 hours and/or if they have symptoms of a fever. A fever may be an indication of an underlying medical concern such as a bacterial or viral infection, or a serious underlying illness.

Treatment:

- Encourage the person to drink plenty of fluids avoiding caffeinated and alcoholic beverages.
- Give a luke-warm sponge bath. Be sure the water is at room temperature to prevent chilling.
- Sponge the person using the HUGS principle (head, under the arms, groin, sides of neck).
- Check if the person has PRN medications and/or Standing Orders to be given if the sponge bath does not reduce the temperature.
- Observe the person for other signs/symptoms: sore throat, aches and pains, chills.
- Take the person's temperature every hour until it returns to a normal reading twice in a row. You are allowed to take oral, axillary and tympanic temperatures. Rectal temperatures are no longer taken.
- If the person's fever rises above 39° C (103.1° f) or if the person's temperature remains higher than 38° C (100.4° F) for over 24 hours a doctor's appointment must be made.

Seizure Disorders

A seizure refers to chaotic electrical discharges that occur in the brain. It may be a single occurrence or recurrent over time (Epilepsy). Seizures cause changes in attention or consciousness, behavior, motor function and sensory awareness (Merck, 2008). Epilepsy may be without a cause and may develop at anytime in an individual's life. The risk of developing epilepsy is about 1% from birth to the age of 20 years and 3% at age 75 (Merck, 2008). Where a cause is known, such as: head trauma or injury, medical condition, substance abuse, etc., medical interventions such as medication may be tried to eliminate the seizure occurrence or decrease its frequency. However, it may be very difficult to determine the cause of a seizure disorder and treatment may be trialed without a known cause.

Many individuals who have epilepsy are on medication(s) to control their seizures (eg. Topamax, Dilantin, Valproic Acid). While medication may be helpful to decrease the frequency of seizures, they may not completely eliminate their occurrence. It is very important that individuals with a seizure disorder take their medication (s) as prescribed, attend scheduled physician appointments, and have medication blood levels checked as required.

Signs and Symptoms:

Individuals with epilepsy may experience different symptoms. Some individuals may experience a sensory phenomenon prior to the seizure episode such as a tingling sensation, a smell that is not present or an emotional change. This *aura* phenomenon, if experienced by the person, usually precedes complex partial or generalized tonic-clonic seizures (Merck, 2008). There are different types of seizures which present differently. Individuals with a seizure disorder usually present with one type of seizure.

Types:

Although you are not expected to diagnose seizures, knowing what to expect will assist you in recognizing their occurrence to make the right decisions.

Generalized Seizures: Tonic Clonic

Generalize seizures cause loss of consciousness. They are characterized by extreme muscle tenseness or rigidity (tonic phase) and repeated, forceful muscle contractions (clonic phase). The tonic phase is characterized by sudden onset muscle rigidity which results in a fall if the person is in an upright position. The person may scream out initially or make strange sounds during the tonic phase due to air being forced out of the lungs. The clonic phase is characterized by convulsions in which the muscles of the body violently and forcefully contract and relax. The person's eyes usually roll back and the person clenches their jaw. The person's lips may turn blue and the person may become incontinent (Ko, 2007). If this phase of the seizure resolves, the person is usually very tired. They will usually experience muscle pain, a headache and be confused.

Partial Seizures:

Simple Partial Seizures are usually characterized by abnormal muscle contractions. One limb or one side of the body is usually affected and there is uncontrolled movement of the head. Despite the fact that the person is aware of what is happening they have no control over the event.

During a Complex Partial Seizure the person does not lose consciousness but they are not aware of the event. The person may stare, perform purposeless movements such as lip smacking, chewing or fidgeting, utter meaningless sounds and resist your help. This type of seizure is followed by confusion.

Absence (Petit Mal)

Absence Seizures are manifested by a 10-30 second loss of consciousness and eyelid fluttering. The person usually does not fall but ceases activity abruptly. They resume activity when the seizure is over without knowledge of the occurrence.

Intervention:

When a seizure occurs you must do the following:

- Remain Calm.
- Time the seizure
- Remove glasses, loosen tight clothing, and protect the person from injury.

- During the seizure, protect the person's airway by rolling them on their side. Keep the person on their side when the seizure resolves.
- Stay with the person until they are fully alert; which can take up to ½ hour.
- Speak softly and reassure the person.
- DO NOT put anything in the person's mouth.
- DO NOT hold the person down or restrain the person.

Note: It is not physically possible for someone to swallow their tongue.

An epileptic seizure is considered to be a medical emergency when:

- the person is injured during the seizure,
- the person is pregnant,
- the seizure is a first-time occurrence
- the seizure lasts greater than the acceptable time limit determined by a neurologist
- repeated seizures occur (Status Epilepticus),
- the seizure occurs in water,
- the seizure is the result of head trauma or poisoning,

Observation and Documentation of a Seizure:

It is important to document what you have observed during the person's seizure. Record the information in the individual's progress notes or enter the information on a Seizure Record Form. The following should be recorded:

- The time the seizure began and ended.
- If the person fell or became stiff.
- Skin color: flushed, pale or cyanotic.
- Body movements of the limbs and torso. Did the person jerk or twitch? Did they lose consciousness?
- Look at the mouth: is the person making chewing movements, biting their tongue, or making smacking sounds.
- Watch the eyes: are they rolled back, staring or blinking?
- Did the person lose control of their bladder or bowel during the seizure?
- After the seizure: is the person sleepy, confused or alert? Does the person complain of a headache (postictal headache)?
- Comment on things you feel may be of assistance to EMS or the individual's doctor: eg. the seizure occurred at a rock concert when strobe lights were flashing or after playing a video game.

If a person is taking medication(s) for their seizure disorder, and a seizure occurs, the person needs to be seen by their doctor. A medication adjustment may be required. Ensure that the person takes the seizure report with them to their appointment.

Appendices

Appendix A: Abbreviations

ac	before meals
pc	after meals
hs	at bedtime
qd	daily
bid	twice daily
tid	three times per day
q	every
qam	every morning
qid	four times per day
qh	every hour
q4h	every four hours
po	per oral
pr	per rectum
PRN	as needed per condition
Cap	capsule
Tab	tablet
cc	cubic centimeter
gtts	drops
mg	milligrams
ml	milliliters
tsp	teaspoon
ung	ointment
SR	slow release
S/L	sublingual: under the tongue

Appendix B: Levels of Medication Administration

Some patients are able to administer medications independently. In this case you are responsible to monitor the person to ensure that:

- They are following the physician's instructions
- They understand what the medication is for and what side effects to expect
- They are handling and storing the medication properly

To ensure that individuals are administering their medications properly, you need to understand the different levels of medication administration.

1. Self-administration
    - The individual is independent in all regards. Regular assessments may be required when a change in medication occurs.

2. Medication Reminders
    - The individual is reminded to take their medication but administers it on their own
    - Staff will document that the reminder occurred but do not sign the MAR as they did not administer the medication

3. Medication Assistance
    - The individual recognizes the need to take medication and consents to assistance
    - Staff may supervise or monitor the person while the medication is prepared and taken
    - Staff may be responsible for the preparation of the medication when the person cannot prepare the medication – the person takes the medication at the scheduled time
    - Staff documents the assistance provided but **do not sign** the MAR as the person is deemed responsible for taking their medication

4. Full dependence
    - You are responsible for the preparation, the administration and the signing of the MAR as the person is deemed unable to do this on their own.

Appendix C: Medication Classifications

Analgesics (Pain Killers)
These medications are used to relieve pain.
There are two types of pain killers: non-narcotic and narcotic.
Non-narcotic pain killers include Tylenol and Advil.

Anti-Anginal Agents
Anti-anginal medication, such as Nitroglycerin, is used to treat angina. Side effects may include headache and dizziness.

Anti-Anxiolytics
Anti-Anxiolytics, such as Ativan, are used to reduce anxiety. Common side effects include drowsiness, dizziness, possible disorientation and reduced muscle coordination.

Anti-Biotics
Antibiotics, such as Tetracycline and Erythromycin, are used to treat bacterial infections. Common side effects include nausea, vomiting, diarrhea and rash.

Anti-Convulsants
Anti-Convulsants, such as Dilantin and Tegretol, are used in the treatment of seizure disorders. Common side effects include drowsiness, nausea, vomiting and rash.

Anti-Depressants
Anti-Depressants, such as Elavil and Prosac are used to treat depression. Common side effects include drowsiness, dry mouth, blurred vision, constipation, nervousness, insomnia, and agitation.

Anti-Emetics
Anti-Emetics, such as Gravol and Maxeran, are used to reduce or prevent nausea and vomiting. Common side effects include drowsiness, dry mouth and dizziness.

Anti-Fungals
Antifungal agents, such as Canestan are used to eliminate fungal infections such as athletes foot. Common side effects include nausea, vomiting, rash, and headache.

Anti-Histamines
Anti-Histamines such as Seldane, Sudafed and Claritin are used when a person has a sensitivity reaction or allergic reaction. Common side effects include drowsiness, dry mouth, and dizziness.

Anti-Hypertensives (High Blood Pressure)
Anti-Hypertensives are used to treat high blood pressure. There are many Antihypertensive medications available. Common side effects include drowsiness, dizziness, orthostatic hypotension (decreased blood pressure with postural change), and low blood pressure.

Anti-Psychotics (Major Tranquillizers)
Anti-Psychotic medications, such as Haldol, Stemetil and Largactil, are used to mitigate the negative impact of severe mental disorders. It is important to remember that these medications do not cure any disorder but merely allow the person to function in society. Common side effects include sedation, dry mouth, blurred vision, constipation, shuffling, stiffness, jerkiness, trembling, and fainting.

Anti-Virals
Antiviral medication, such as Zovirax, is used during a viral infection such as herpes or shingles. Common side effects include headache, nausea, diarrhea, and rash.

Bronchodilators
Bronchodilators, such as Ventolin, are used to make breathing easier during asthmatic episodes. Common side effects include dizziness, nervousness, tremors, rapid heart rate, headache, and chest pain.

Central Nervous System Stimulants
This class of medications which include Ritalin and Dexedrin are used for children with ADHD (Attention Deficit Hyperactivity Disorder). Common side effects include nervousness, insomnia, headache, decreased appetite and irritability.

Diuretics (Water Pills)
This class of medications which includes Lasix and Dyazide is used for such conditions as congestive heart disease and high blood pressure. It rids the body of excess fluid. Common side effects include dizziness, lightheadedness, muscle cramps, weakness, dry mouth and thirst.

Muscle Relaxants
Muscle relaxants such as Flexeril are used to reduce muscle spasms related to an injury. Common side effects include drowsiness, dry mouth, weakness, fatigue and diarrhea.

Nonsteroidal Anti-Inflammatory Agents (NSAIDS)
NSAIDS, such as Advil and Voltaren are used to decrease inflammation and thus reduce pain. Common side effects include indigestion, nausea, vomiting, heartburn, drowsiness, rash and diarrhea.

Stomach Acid Suppressants
Acid Suppressants, such as Zantac and Tagamet, are given to help decrease heartburn and gastric reflux. Common side effects include dizziness, headache, breast swelling and soreness in males, and constipation.

Thyroid Medications
Thyroid medications, such as Synthroid, is used to treat hypothyroidism. Common side effects include headache, palpitations, chest pain, heat intolerance, sweating, leg cramps, weight loss, diarrhea, vomiting, and nervousness.

Appendix D: Types of Packaging

Types of packaging for solid oral medication

Pill Bottles: Bulk	Holds medication in solid form: pills
One Day Medication Reminder	Plastic box which holds medication for the day. The box is divided into four compartments: breakfast, lunch, supper and bedtime
Three Day Medication Reminder	Plastic box which holds medication for three days. There are only three compartments: one for each day.
Seven Day Medication Reminder	Plastic box which holds medication for seven days. There are seven compartments: one for each day.
Weekly Dosette	Plastic box which holds medication for seven days. Each day is divided into compartments to reflect approximate dosing times.
Weekly Bubble Pack	This is a card with medication stored in plastic bubbles. The medication is divided into timelines to reflect approximate dosing times. Has a label with the person's name.
Monthly Bubble Pack	The way this card is packaged depends on the number and time of the medications taken. For instance, this card may have the same medication on the same card if administered at different times of the day or all the medications on the same card if they are administered at the same time of day. The pharmacy prepares these for the person requiring the medication(s). You will become familiar with whatever format the pharmacist uses.

Appendix E: Worksheets

Medication Profile Sheet

Date:

Name: _____ Birth Date: _____

Dr's Name: _____ Phone #: _____

Pharmacy Name: _____; Phone #: _____

_____

Allergies:

_____; _____; _____;

Regular Medications				
Date Prescribed	***Medications***	***Dose/Frequency***	***Time***	***Route***
PRN Medications				

Appendix E: Worksheets

Medication Administration Record

Medication Administration Record for: _____ (Name)
Month: _____, Year: _____
Physician's Name: _____; Phone #: _____; Pharmacy: _____; Phone #: _____

Name:					Birth date:																												
Admission Date:					Age:			Gender:			Rm #:			Height:			Weight:			Allergies: Yes__ , No__													
Medication Orders	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Printed Name: _____, Initials: _____

Appendix E: Worksheets

PRN Forms

Medication Administration Record for: (name) _____
Date:

Standing Order Form			
Criteria	**Medication**	**Dosage**	**Time**

PRN Medication Administration Record				
Date	**Time**	**Medication**	**Reason**	**Initials**

Printed Name: _____; Initials: _____

Printed Name: _____; Initials: _____

Appendix E: Worksheets

Medication Incident Report

Date: _____; Date of Incident: _____
Patient's Name: _____; Your Name: _____
Individual Responsible: _____
Type of Incident (Check one):

□Missed Dose □Incorrect Dose □Incorrect Client □Incorrect Medication
□Incorrect Time □Incorrect Route □Dropped □Other: Describe:

Medication Error Details:

Notification List: Enter time and date of each party notified in the space provided

	Date	Time	Initials
Team leader/ On call			
Pharmacist			
Doctor			
Hospital			
Parent/Guardian			
Staff in charge			
Other (specify)			

Pharmacist Instructions:

Follow-up:

_____ _____
Signature Date

Investigation Report:

_____ _____
Signature Date

Appendix E: Worksheets

Progress Notes

Date & Time	Notation

Name, Signature and Initial

_____

_____

_____

Appendix F: Final Activity

For the purpose of this exercise, today's date is March 8.

Mr. Likeme Ornot, born March 31st, 1966, **entered into your care on March 4th**, 2025 at 9AM. He is on the following medications which you must enter onto the appropriate forms:

- Ezetrol 10 mg to be taken orally with supper (1700)
- Avapro 75 mg twice daily to be taken orally at breakfast (0730) and supper (1700)
- Metformin 500 mg twice daily to be taken orally at breakfast (0730) & supper (1700)
- Loperamide 10 mg to be taken orally as need (PRN) for allergic rhinitis

Sign off the medications on the MAR for regular meds from the 4th to the 8th.

Additional Information:
In the admission interview he states he is allergic to Codeine, Penicillin, and cat hair. He is bald. His height is 5 foot 7 inches and weight is 215 lbs. He uses the pharmacy Side Effects on Too Many St. The phone number is 555-666-7777. His Doctor's phone number is: 555-777-6666.

Let's continue:
He has an appointment to see his Doctor today at 11:00 AM (today is March 8th). His Doctor's name is Dr. Id Uno. Metformin was discontinued because of intolerable side effects and he was prescribed Gliclazide 160 mg to be taken orally twice daily during breakfast and supper. Mr. Ornot has severe arthritis to his right shoulder. He was prescribed Voltaren 25 mg to be taken orally twice daily during breakfast and supper and Tylenol 325 mg 1 – 2 tabs to be taken orally every 6-8 hrs **PRN** for breakthrough pain. Voltaren and Gliclazide will start at suppertime, today.

Task enter these medications on the appropriate Forms paying attention to what is a Regularly Administered Medication and what is a PRN.

Additional Information:
You are Mr. Ornot's care provider. As you are administering Mr. Ornot's supper medications on March 8th, the patient chews the Voltaren and spits it out. He states: 'you could have told me not to chew it: it tastes bad'. You are uncertain whether you should provide him with another pill so you call the pharmacy and fill out an incident report.

You speak to Mr. Pill Buster. He tells you to not administer another Voltaren until tomorrow morning. He advises to administer 650 mg of Tylenol (2 – 325mg tablets) if pain keeps him up during the night. You administer the PRN Tylenol 650 mg at 2: 30 AM because he is unable to sleep due to pain. An hour later you check in on Mr. Ornot and he is sleeping.

Activity:
Based on the information, you are required to enter the medications on the Medication Profile Sheet. You must enter the medications on the MAR for regular meds and sign them off as per the administration period defined above. You must enter the PRNs on the Standing Order Form and sign off the PRN on the MAR for PRNs. You must fill out the incident

report because of the problem encountered when administering Voltaren and this must be reflected on the MAR for regular medications.
Bonus Question: What was the bonus question and what is the answer? This is a quality control question to determine whether you attended the virtual session? It will not be repeated.

Success Criteria
Your assignment will be graded based on the accuracy of your entries and a certificate will be awarded when the criteria around legal documentation is fulfilled. If it takes more than three attempts to meet the criteria, for which the instructor will provide feedback to help you succeed, you will be required to take the course over and reregister into the course at the fee assigned to the course. Please take snapshots of your assignment and email your completed forms to **medicationadmin@shaw.ca.** Your assignment will be due based on the timeline directed by your instructor. As this is a 6 hour course the course should be completed in one day. If your instructor gives you a timeline outside of this parameter, no further extensions will be granted and a certificate will not be awarded to you if the assignment is submitted late: no credits or refunds will be honored based on unfulfilled timelines.

Appendix G: References

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