

<div><div>مؤسسة مستشفى سرطان الأطفال - مصر Children's Cancer Hospital Foundation - Egypt</div></div>		Policy Name:  Medication Administration	
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		Issue Date:	01.09.2015
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		No# of Pages:	11
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		Next Review Date	31.12.2025
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## 1.0 Change of policy

### 1.1 No changes

## 2.0 Purpose

- 2.1** The purpose of this policy is to provide general guidelines for safe and effective medication administration.

## 3.0 Policy

### 3.1 Policy statement:

- 3.1.1 This policy is provided to ensure that CCHE right patient administrate the right drug in the right dose with right route of administration at the right time and document it right in the patient medical records and file.
- 3.1.2 Qualified individuals permitted to administer medications are identified and document the medications that are administered in the patient's medical record.

### 3.2 Scope:

- 3.2.1 The policy and procedure is to be followed for administration of medications at all CCHE departments.

### 3.3 Responsibilities

- 3.3.1 Medical director
- 3.3.2 Head of Pharmaceutical services.
- 3.3.3 Director of nursing.

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3.3.4 All nursing

3.3.5 All pharmacists

## 4.0 Definitions /abbreviations:

**4.1 CCHE:** Children Cancer Hospital – 57357 Egypt

**4.2 CPID:** Continuous Performance Improvement Department

**4.3 MMU:** Medication Management & Use

**4.4 MMS:** Medication Management & Safety

**4.5 Medication may only be administered with:**

4.5.1 Reference to the prescription.

4.5.2 Knowledge of the health status of the patient, including allergies and/or adverse reaction status

4.5.3 Knowledge of the action of the medication, its recommended dosage and any precautions associated with the medication

4.5.4 Knowledge of service-specific practices.

**4.6 Medication administration:** The provision of prescribed medications by authorized nursing personnel (staff nurse, charge nurse) in a manner that assures proper patient and medication identification, monitoring of the medication's effect on the patient, knowledge of possible side effects, and appropriate documentation.

**4.7 Medication Related Events:** An error made in administering a medication in relation to a near miss, wrong dose, patient, drug, route, rate, time, adverse reaction, the omission of a medication and prescribing or dispensing errors.

**4.8 MAR:** Medication administration record.

**4.9 E-MAR:** Electronic Medication Administration Record.

**4.10 Medication Order Review:** A process that assures that the MAR/E-MAR is a correct reflection of current medication orders and is appropriate for the patient and their condition.

**4.11 Written Orders:** An order hand-written or entered electronically.

**4.12 Right patient:** Identify the patient with the identification band and verbal identification when appropriate.

**4.13 Right dose:** Verify the dosage on the medication label against the patient physician order.

**4.14 Right time:** Verify that this is the appropriate time for the medication.

**4.15 Right route:** Verify that this is the appropriate route of administration.  
(Topical, oral, injection, I.V ...etc.)

**4.16 Right drug:** Verify the name of the drug on the label against patient physician order.

**4.17 Intramuscular injection:** An injection into a muscle.

**4.18 Intravenous injection:** injection to a vein

## 5.0 Procedure:

**5.1** Treating Physician writes medication for patient in physician order and, request form or CPOE

**5.2** Department clinical pharmacist clinical review drug request (dosage, duration, drug- drug interaction) and record medication in drug chart form and share request on access then verify

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with IV prep pharmacists in case of IV medications or dispensing pharmacists in case of oral medications according to Safe medication prescribing policy and Verification & Reviewing of Prescription Orders policy

- 5.3 Medications prepare scan deliver.
- 5.4 Clinical pharmacist reviews received medication against physician Medication order scan medications deliver to ward.
- 5.5 Assigned nurse receive patient medication from clinical pharmacist after scanning deliver to nurse.
- 5.6 Nurses have one hour before/after dose time to start administering and documenting the medication on Cerner (e.g. if dose time 2:00pm the range time will be from 1:00pm to 3:00pm) after that time the medication will be appeared as overdue.

#### 5.7 Process of Pre-medication administration:

- 5.7.1 Qualified personnel (staff nurse / charge nurse) when administering medications is responsible to perform these steps prior to administration of a medication.
- 5.7.2 Follow hand hygiene guidelines before administer medication.
- 5.7.3 Review prepared medication versus medication order by physician (ON CERNER).
- 5.7.4 Using barcode scanner to make positive identification.
- 5.7.5 Open the E-MAR on a computer in the patient's presence or bring the MAR or Medication order to the patient
- 5.7.6 Review the on e-MAR, MAR or order in the patient's presence.
- 5.7.7 Verify Patient identification using by Compare the ID band adhered to the patient with matching information on the e-MAR, MAR or order.
- 5.7.8 Compare E-MAR or order, while in the patient's presence, to the label of the medication.
- 5.7.9 Verify the medication labeled correctly is the right medication, dose, route, time, patient name, medical number, expired date (beyond use date) & volume (Double check with 2 qualified persons).
- 5.7.10 Provide patient education, the nurse educates the patient and/or direct caregiver, as to the purpose of the prescribed medications and possible side effects.
- 5.7.11 Aseptic technique must be followed prior to the medication administration regardless of the route.
- 5.7.12 Administer the medication.

#### 5.7.13 Sign and document medication administration.

- 5.7.13.1 The assigned nurse and the charge nurse/ qualified nurse will sign on the MAR with the actual time the medication was administered.

#### 5.7.14 For chemotherapy administration:

- 5.7.14.1 Follow the steps from 4.7.1 to 4.7.5.
- 5.7.14.2 Pharmacist and nurse educate the patient or patient guardian on purpose of medication and possible side effects.

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- 5.7.14.3 Assigned nurse and charge nurse/ qualified nurse will double check the medication/s with patient (MAR) on electronic system.
- 5.7.14.4 Both sign on E-MAR system.

## 5.8 Types of Administration routes in CCHE:

### 5.8.1 Oral administration

- 5.8.1.1 Verify the MAR's order.
- 5.8.1.2 Have the medications checked as per the requirements
- 5.8.1.3 Correctly identify patient Look at the identification band and compare it with the drug chart.
- 5.8.1.4 **Check MAR order with second nurse to verify the following:**
  - 5.8.1.4.1 Right patient's Name, Medical record.
  - 5.8.1.4.2 Right Medication Name
  - 5.8.1.4.3 Right Dose, Concentration, Additives, Preparation, & Rate
  - 5.8.1.4.4 Right route & Direction
  - 5.8.1.4.5 Right time.
- 5.8.1.5 Check for any notification of medication allergies/adverse reactions.
- 5.8.1.6 Wash hands or wear gloves.
- 5.8.1.7 Ensure privacy of patient by closing curtains around bed or closing door to room.
- 5.8.1.8 Collect the medication and the ordered dosage.
- 5.8.1.9 Pour the medication into the medication cup – do not touch the medication.
- 5.8.1.10 Explain Procedure to patient and /or parent the type of medication that is being given
- 5.8.1.11 Give the medication with fluids as appropriate.
- 5.8.1.12 Remain with patient until patient swallows medication.
- 5.8.1.13 If the patient refuses to receive his/her medication, then the nurse is required to notify physician who prescribed the medication and document the outcome and patient sign medical service and/or treatment refuse consent
- 5.8.1.14 Immediately after administering the medication, document the medication administration in the patient's clinical record.
- 5.8.1.15 Monitor and record the patient's response to the medication.
- 5.8.1.16 If the patient starts to exhibit side effect or problems after the administration of the medication, the prescribing physician is to be notified immediately.
- 5.8.1.17 Discard used disposable equipment appropriately.

### 5.8.2 Intravenous Medications – Continuous Infusion:

- 5.8.2.1 Follow procedure steps 4.8.1.1 to 4.8.1.8
- 5.8.2.2 Inspect the IV site for signs of phlebitis or infiltration, & tubing expiry date.

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- 5.8.2.3 Prepare the equipment (patient's chart, medication tray, IV set, prep swab, drug label).
- 5.8.2.4 Inspect IV solution for expiry date, and volume required, and that packing is appropriate.
- 5.8.2.5 Inspect the IV tubing and verify expiry date.
- 5.8.2.6 Cleanse the top of the IV bottle with alcohol swab and insert the IV tubing using aseptic technique.
- 5.8.2.7 Do not touch the top of the cleansed bottle or the IV tubing.
- 5.8.2.8 Insert the IV tubing into the bottle, close the clamp and turn right side up, slowly opening the clamp to allow the fluid to run through the tubing completely.
- 5.8.2.9 Check for air bubbles, if there are air bubbles, remove them by a quick flick of the fingers and allow the fluid to push the air bubbles out.
- 5.8.2.10 Close the clamp on the IV tubing.
- 5.8.2.11 Close the IV tubing with the cap again.
- 5.8.2.12 When using a syringe pump, let some of the IV solution with the medication run Through the pump until all of the air has been removed from the IV tubing in the pump, then reattach to the IV.
- 5.8.2.13 Verify that the Right IV Solution is being used for the infusion (check compatibility).
- 5.8.2.14 Check sensitivity to light.
- 5.8.2.15 Check potential for allergic reaction.
- 5.8.2.16 Observe for immediate reaction.
- 5.8.2.17 For chemotherapeutics infusion nurse should check every 15 minutes until infusion complete to avoid extravasations.
- 5.8.2.18 Sign and initial on E-MAR.
- 5.8.2.19 Follow procedure steps 4.8.1.13 to 4.8.1.17

#### 5.8.3 IV infusion –Port:

- 5.8.3.1 Verify MAR's order.
- 5.8.3.2 Double Check on medication with a charge nurse.
- 5.8.3.3 Check the patient's identity – look at identity band and compare with the drug chart.
- 5.8.3.4 Explain to the patient and /or parent/s the type of medication that is being given.
- 5.8.3.5 Wash hands or wear gloves according to infection control guidelines.
- 5.8.3.6 Verify that the port is functioning by drawing blood from one of the lumens.
- 5.8.3.7 Flash port with 10 ml normal saline using 10 ML syringe.
- 5.8.3.8 Connect the medication into Port using aseptic technique.
- 5.8.3.9 Document on E-MAR.

#### 5.8.4 Topical medication:

- 5.8.4.1 Follow procedure steps 4.8.1.1 to 4.8.1.8.

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- 5.8.4.2 Apply topical medication using circular motion and leave few minutes to dry.
- 5.8.4.3 Follow procedure steps 4.8.1.13 to 4.8.1.17.

#### 5.8.5 Subcutaneous injection:

- 5.8.5.1 Follow procedure steps 4.8.1.1 to 4.8.1.8.
- 5.8.5.2 Choose site of injection.
- 5.8.5.3 Clean site of injection with alcohol swab in circular motion.
- 5.8.5.4 Inject medication with 45 degree in low fat areas and 90 degree in high fat areas.
- 5.8.5.5 Discard needle in sharp container.
- 5.8.5.6 Follow procedure steps 4.8.1.13 to 4.8.1.17

#### 5.8.6 Intramuscular injections:

- 5.8.6.1 Follow procedure steps 4.8.1.1 to 4.8.1.8.
- 5.8.6.2 Intramuscular injections are used only in chemotherapeutic medications.
- 5.8.6.3 Select appropriate injection site
- 5.8.6.4 Collect supplies. Needle length, needle gauge, volume inserted and preferred site for intramuscular injections in infant and children are important. See appendix No.1.
- 5.8.6.5 Prepare child and family, use distraction techniques (bubbles, books) to reduce child's anxiety.
- 5.8.6.6 Gently tap injection site to stimulate nerve endings and minimize pain
- 5.8.6.7 Clean skin at site using antiseptic wipe.
- 5.8.6.8 Position syringe at 90° angle to skin surface.
- 5.8.6.9 Inform patient that they will feel a pricking sensation as the needle is inserted through the skin.
- 5.8.6.10 Quickly and firmly thrust the needle through the skin and subcutaneous tissue into the muscle.
- 5.8.6.11 Support the syringe with the non-dominant hand and pull back on the syringe with the dominant hand.
- 5.8.6.12 If no blood appears (Air bubbles appear), slowly inject the medication into the muscle. There should be little or no resistance against the force of the injection.
- 5.8.6.13 If blood appears in the syringe as aspiration, the needle is in a blood vessel. Stop the injection, withdraw the needle and prepare another injection site using new equipment and inject into another site.
- 5.8.6.14 Gently but quickly remove the needle at a 90° angle to skin surface.
- 5.8.6.15 Cover the injection site immediately by dry gauze or cotton and apply gentle pressure. Unless contraindicated
- 5.8.6.16 For the medication injected, massage the muscle to help distribute the medication.

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- 5.8.6.17 Inspect the injection site for any signs of active bleeding or bruising. If bleeding
- 5.8.6.18 Continues apply pressure to the site. If bruising develops, apply ice to the area.
- 5.8.6.19 Follow procedure steps 4.8.1.13 to 4.8.1.17.

#### 5.8.7 Instillation of Eye Drops:

- 5.8.7.1 Follow procedure steps 4.8.1.1 to 4.8.1.8.
- 5.8.7.2 Check directives to ensure correct eye is treated.
- 5.8.7.3 Encourage patient to tilt their head back slightly, and using forefinger gently pull lower lid (conjunctiva sac) down.
- 5.8.7.4 Encourage patient to look upwards
- 5.8.7.5 Drop prescribed amount of medication into center of lid.
- 5.8.7.6 Instruct patient to slowly close their eyes, but not to squeeze/rub them, and then open them.
- 5.8.7.7 Wipe away excess solution with gauze.
- 5.8.7.8 Recap dispenser.
- 5.8.7.9 Follow procedure steps 4.8.1.13 to 4.8.1.17.

#### 5.8.8 Instillation of Ear Drops:

- 5.8.8.1 Follow procedure steps 4.8.1.1 to 4.8.1.8.
- 5.8.8.2 Ensure adequate lighting.
- 5.8.8.3 Check directives to ensure correct ear is treated.
- 5.8.8.4 Wash hands and uncap medication dispenser
- 5.8.8.5 Encourage patient to turn their head with affected ear in an upward position
- 5.8.8.6 Straighten the auditory canal by holding auricle upwards and backwards
- 5.8.8.7 Instill prescribed amount of medication
- 5.8.8.8 Instruct patient to remain in that position for 5-10 minutes. Support their head with a pillow if necessary.
- 5.8.8.9 Wipe away excess medication on external ear with gauze.
- 5.8.8.10 Follow procedure steps 4.8.1.13 to 4.8.1.17.

#### 5.8.9 Rectal Suppositories if needed

- 5.8.9.1 Follow procedure steps 4.8.1.1 to 4.8.1.8.
- 5.8.9.2 Position patient on their left side with knees drawn up
- 5.8.9.3 Put on disposable gloves
- 5.8.9.4 Lubricate index finger and tip of suppository
- 5.8.9.5 Insert suppositories gently beyond the internal anal sphincter
- 5.8.9.6 Wipe anal area and encourage patient to rest
- 5.8.9.7 When required, assist patient to the toilet.
- 5.8.9.8 Discard used disposable equipment appropriately.



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5.8.9.9 Follow procedure steps 4.8.1.13 to 4.8.1.17.

#### 5.8.10 Nasal Drops/sprays:

- 5.8.10.1 Follow procedure steps 4.8.1.1 to 4.8.1.8.
- 5.8.10.2 Either tilts the child's head backwards, ensuring it is supported, or lie the child flat on their back with the head tilted backwards.
- 5.8.10.3 Place as many drops as has been prescribed into the nostril. If necessary, squeeze the bottle gently to allow the drops to fall.
- 5.8.10.4 Keep the head tilted and encourage the child to sniff gently to let the drops penetrate.
- 5.8.10.5 If required repeat for the other nostril.
- 5.8.10.6 Wash hands after nose drops have been administered.
- 5.8.10.7 Follow procedure steps 4.8.1.13 to 4.8.1.17.

#### 5.8.11 Inhalers:

- 5.8.11.1 Follow procedure steps 4.8.1.1 to 4.8.1.8.
- 5.8.11.2 Remove the cap and hold the inhaler upright
- 5.8.11.3 Shake the inhaler.
- 5.8.11.4 Breathe out slowly through your mouth.
- 5.8.11.5 Hold your inhaler as shown in the picture or as recommended by your doctor.
- 5.8.11.6 While you are breathing in, press down on your inhaler one time to release the medication.
- 5.8.11.7 Continue to breathe in slowly and as deeply as you can
- 5.8.11.8 Hold your breath for 10 seconds, if you can, to allow the medication to reach deeply into your lungs
- 5.8.11.9 Repeat steps 3 to 8 until you have inhaled the number of puffs that your doctor prescribed. Ask your doctor or pharmacist if you need to wait between puffs of your medication
- 5.8.11.10 Rinse your mouth thoroughly with water
- 5.8.11.11 Spit out the water. Do not swallow.
- 5.8.11.12 Follow procedure steps 4.8.1.13 to 4.8.1.17

## 6.0 References:

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## 7.0 Appendices:

### 7.1 Related Forms:

- 7.1.1 Physician's orders.
- 7.1.2 Drug request.
- 7.1.3 Infusion therapy sheet.
- 7.1.4 Chemotherapy drug chart.
- 7.1.5 Drug chart.
- 7.1.6 Documentation.
- 7.1.7 E-MAR/MAR.
- 7.1.8 Medical service and/or treatment refusal consent.

### 7.2 Related Policy(S):

- 7.2.1 Medication Management Program

### 7.3 Related Standards:

- 7.3.1 JCI standards 7th edition – MMU Chapter.
- 7.3.2 GAHAR standards MMS.16

### 7.4 Attachments

- 7.4.1 **Appendix 1:** Needle length, needle gauge, volume inserted and preferred site for intramuscular injections in infant and children
- 7.4.2 **Appendix 2:** Medication Administration Guidelines for ICU and O.R.

Age	Site	Volume
Newborn(one day- one month)	Vastus lateralis Rectus femoris	Up to 2ml Up to 2ml
Infant (one month – one years)	Vastus lateralis Rectus femoris	Up to 2ml Up to 2ml
Toddler (one yrs- 3 yrs)	Vastus lateralis Rectus femoris	Up to 2ml Up to 2ml
Preschool(3yrs- 6yrs)	Vastus lateralis Rectus femoris	Up to 2ml Up to 2ml
School age (6yrs- 12yrs)	Vastus lateralis Rectus femoris Deltoid Muscle	Up to 4ml Up to 4ml Up to 1ml

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Adolescence (12yrs- 18yrs)	Vastus lateralis Rectus femoris Deltoid Muscle	Up to 4ml Up to 4ml Up to 1ml
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