

## **MEDICATION - ADMINISTRATION**

*This LOP is developed to guide clinical practice at the Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this LOP.*

### **1. AIM**

- To ensure safe administration of medication

### **2. PATIENT**

- All women and neonates requiring medication

### **3. STAFF**

- Midwifery, nursing and medical staff

### **4. EQUIPMENT**

- Depends on route of administration- see Educational notes

### **5. CLINICAL PRACTICE**

- Administer all medication in line with the below practices- see Educational notes

### **6. DOCUMENTATION**

- Integrated clinical notes, or electronic equivalent
- National Inpatient Medical Chart (NIMC) or electronic equivalent
- NSW health fluid chart

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**7.1 PRINCIPLES FOR SAFE MEDICATION ADMINISTRATION**

- All medications must be administered according to a Medical Officer’s orders and pharmacy/manufacture’s instructions.
- The medication orders must be clear, legible and not open to misinterpretation and may be in the form of:
  - A prior written order on an individual patient’s medication chart (NIMC) or anaesthetic record
  - An approved electronic order on eMR
  - A standing order
  - A verbal, telephone, facsimile or email order
- If the staff member considers a medication order is unclear or ambiguous, or is concerned that the order may be incorrect or inappropriate for the particular medical condition, the staff member must contact the prescriber for clarification before administering the dose
- The same person should select, prepare, administer and record the administration.
- Doses must be prepared for only one patient at a time, immediately before the intended use
- Medications should be prepared for immediate administration to a single patient and not retained for later use due to the risks of contamination, potential instability, potential mix-up with other medications and to maintain security of the medication
- All medications must be stored in patient care areas in the same container as received from pharmacy.
- All registered nurses (RNs), registered midwives (MWs) and enrolled nurses (ENs) without notation must successfully complete the Medication Assessment Paper prior to administering medications.
- Medication cupboards and trolleys must not be left unattended. If the nurse is interrupted during the distribution of medications, the trolley must be locked and the key taken with the nurse.
- If a medication is not given, this is to be noted on the medication chart (or electronic equivalent) and also in the clinical progress notes including the reason why it was not given.
- Always remain with the patient until such time as the medication has been administered. (Unless on an infusion).

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**MEDICATION – ADMINISTRATION cont'd**

- Always check name, strength of the medication, expiry date on the ampoule or bottle. If details are not legible, return to Pharmacy.
- Infection control, hand hygiene and workplace health and safety policies must be followed.
- Aseptic technique must be followed in preparation and administration of medications.

**IF IN DOUBT ABOUT ANY MEDICATION, ALWAYS CHECK WITH THE NURSING UNIT MANAGER, RN/MW IN CHARGE, PHARMACIST OR MEDICAL OFFICER.**

**Undergraduate Nursing Students**

During periods of clinical placement, these students may only administer medications under the direct supervision of a RN/MW/EN.

**NB Undergraduate nursing students are not to carry the S8/S4D keys at any time**

**7.2 MEDICATIONS THAT MUST BE DOUBLE CHECKED ON ADMINISTRATION**

The following drugs must be checked by two RN/MW/ENs or Medical Officer (MO)

- Anti-coagulants
- Insulin
- Schedule 4 (D) and 8 drugs
- All intravenous solutions
- Steroids
- Vaccinations
- Dinoprostone (Prostin/Cervidil)
- Rhesus D immunoglobulin
- Misoprostol
- Gemeprost (Cervagem)
- All medications for administration to neonates

**3. REPORTING MEDICATION INCIDENTS**

Medication incidents are actual or near-miss events involving medication at all points of care.

All medication incidents must be reported and managed in the Incident Information Management System (IIMS) as per [NSW Ministry of Health PD 2007\\_061 Incident Management](#).

Medication Incidents must be reported:

- 1) At the time of their occurrence or as soon as noted.
- 2) By the person who discovers the incident.
- 3) As a clinical notification in IIMS- a separate notification for each medication incident.
- 4) To the Nursing/Midwifery Unit Manager (NUM/MUM) or Nurse/Midwife in Charge
  - a. If the incidents meets the criteria for a SAC 1 or SAC 2 the NUM/MUM or Nurse/Midwife in Charge must escalate to the Nursing/Midwifery Co-Director or After Hours Nurse Manager or delegate as soon as practicable.
- 5) The incident number must be recorded in the patient medical record.

In addition, actual incidents must be documented in the patients' health care record which must include details of the incident, its effect on the patient, intervention(s) if required and outcome (s).

All medication incidents are reviewed by the RHW Medication Safety Committee.

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## **MEDICATION – ADMINISTRATION cont'd**

### **7.4 MEDICATION PROBLEM OR DEFECT REPORTING**

All staff must be alert to the possibility of defects in the medications they handle, and must report any anomaly which may indicate a deficiency in the quality, safety or efficacy of the product to the ward pharmacist who will notify the Senior Pharmacist. Such problems could include incorrect or illegible product labelling, discolouration, cloudiness or incorrect tablets/capsules in a pack.

The Senior Pharmacist will notify the relevant authorities as per PD2013\_043.

### **7.5 DISPOSAL OF EXPIRED , UNWANTED OR UNUSABLE MEDICATIONS**

Unwanted medications in patient care areas include:

- Expired, contaminated or damaged medication
- Patients own medications not returned to the patient
- Partly used packs no longer required for use.

Unwanted medications that are not in the manufacturer's original immediate container (blister platform, foil, or sealed bottle/vial, as applicable) must be returned to Pharmacy for disposal.

### **7.6 ADMINISTRATION OF MEDICATION STEPS 1-6 RELEVANT TO ALL FORMULATIONS**

1. Check the medication order is written in accordance with [Ministry of Health Policy Directive 2013\\_043 Medication Handling in New South Wales Public Health Facilities](#).
2. Check patient's known allergies against the medication chart or electronic equivalent and with the patient. If an allergy to the medication being administered is identified do not administer the medication and contact the patient's medical officer.
3. Obtain the **correct medication** from the appropriate location.
4. Perform 5 rights of medication administration:
  1. Right **Patient**
  2. Right **Drug**
  3. Right **Dose**
  4. Right **Time**
  5. Right **Route**
5. Check medication expiry date. If medication is expired, discard and obtain new medication.
6. Inform the patient (or appropriate guardian) what the medication is, why you are giving it, and any possible side-effects of the medication. Follow step 7 onward for each particular formulation (see below).

### **7.7 ADMINISTRATION OF ORAL MEDICATIONS**

- Must be administered by RN/MW/ENs only.
- Tablets must not be broken unless they are scored, use particular caution with sustained, modified, controlled-release medications and enteric-coated medications.
- Instruct patients to swallow whole, enteric-coated, controlled-release, extended-release or modified release medications, or part thereof, do not chew or crush.
- Medicines must be administered in accordance with their product information whenever possible. Changing the form of a medicine may alter its stability or effectiveness, increase the risk of toxicity, or result in an unacceptable taste or texture.
- Oral medications must not be left in bedside lockers/ tables.
- For safe administration of Digoxin ensure the patient's apex beat is taken for one minute prior to administration. If the radial pulse is less than 60 beats per minute, notify the Medical Officer as per orders. The apex beat should be noted on the medication chart.
- For safe administration of hypoglycaemic agents ensure BSLs are performed as required prior to administration. Fasting patients should have hypoglycaemic agents withheld or dose confirmed by the primary care team.

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**MEDICATION – ADMINISTRATION cont'd**

**Equipment**

- Medication cup or oral/enteral dispenser (orange-coloured syringe for the purpose of administering liquid medicines). Parenteral syringes must not be used.
- Medication order
- Prescribed medication
- Gloves (if required)

**Procedure**

7. Ensure steps 1-6 are followed as detailed above (see point 7).
8. Assess the patient's ability to take or swallow the preparation.
9. Remove the correct dose/volume of medication from its container and place into medication cup without touching the medication. If medication is required to be handled, perform hand hygiene and don gloves prior to handling.
10. Check it is the **correct medication** and that it is not compromised in anyway check tablets are not broken or chipped. If medication is damaged, discard and obtain new medication.
11. Perform hand hygiene before touching patient.
12. Check patient's known allergies against the NIMC or electronic equivalent and with the patient. If an allergy to the medication being administered is identified, do not administer the medication and contact the patient's medical officer.
13. Inform the patient (or their appropriate guardian) what the medication is, why you are giving it, and any possible side-effects of the medication.
14. Observe the patient swallow the medication
15. Perform the 6<sup>th</sup> right of medication administration- **right documentation**, to indicate the medication has been administered.
16. Perform hand hygiene.
17. Observe patient for any reaction. Document any adverse reactions and what action was taken in the patient's medical record.

**Administration of Medications via Enteral feeding tubes and to patients with swallowing difficulties**

Medicines must be administered in accordance with their product information whenever possible. Changing the form of a medicine may alter its stability or effectiveness, increase the risk of toxicity, or result in an unacceptable taste or texture.

**For the administration of liquid medicines only oral/enteral dispensers** (i.e. purple or orange-coloured syringes) are to be used. Parenteral syringes must not be used

**Enteral Feeding Tubes**

All medications for administration via enteral devices should be in a form that does not block the device (i.e. liquid or soluble) but retains the absorption characteristics of the original product. Most oral medicines are designed for administration within the gastric environment. Therefore in patients receiving feeds/medications via an enteral device, this should be brought to the attention of the MO and pharmacist.

The pharmacist can advise on the most appropriate method of administering medication.

**Patients with swallowing difficulties**

For patients on a "soft foods/thickened fluids diet", the pharmacist should be contacted to review the patient's medications and advise the most appropriate method of administering medication.

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## **MEDICATION – ADMINISTRATION cont'd**

### **7.8 ADMINISTRATION OF DRUGS BY INJECTION**

Staff administering parenteral medications must have had the appropriate qualifications, education and training, within their context of practice. See RHW policy accreditation for medication administration.

The RN, MW, MO or EN administering intravenous medication or fluid must ensure the recommendations for safe administration of the drug are adhered to. For information relating to the specific details of administration (reconstitution, compatibility, method of administration and special precautions e.g. medications requiring cardiac monitoring) please refer to the Australian Injectable Drugs Handbook. Additional information can also be found in the MIMS or product information supplied from the manufacturer with the drug. **If the information in these differs from the medication order, consult with the MO or pharmacy.**

- All fluids for IV infusion must be ordered on the NSW Health Fluid Order Form except when the entire bag is used as a medication diluent for a single intermittent infusion of a drug ordered on the medication chart. IV medications are ordered on the NIMC or electronic equivalent.
- Additions of medications to intravenous fluids should be prepared immediately prior to administration using aseptic technique
- All intravenous medications administered by a RN, MW or EN must be checked by a second person (one of whom must be a RN or MW). The second person may be a RN, MW, Medical Officer, Pharmacist or an EN. **NOTE:** ENs can only check intravenous medications if they have completed all relevant board approved units of study for medication AND intravenous medication administration and who have been accredited within the last 12 months. The check must include the drug, dose, calculation, intravenous fluid, patient's identity and countersigning the administration on the NIMC (or electronic equivalent)/NSW Health Fluid Order Chart.
- Any infusion must be completed within 24 hours of preparation unless specified otherwise by manufacturer's guidelines e.g. neonatal TPN.
- No more than one medication can be added to an intravenous solution unless the compatibility of the combination is detailed in the Australian Injectable Drugs Handbook (Refer to CIAP).
- Incompatibility may occur between a medication and the IV infusion, between two medications, between the medication and the container or between the medication and light. Signs of incompatibility include crystallization (precipitation) and/or colour change (degradation). If this occurs during administration of the infusion, stop the infusion and contact the Medical Officer.
- For patients with fluid restrictions and/or complex medication therapy, consult MO or Pharmacy.
- Please refer to RHW LOP – [Labelling of Injectable Medications, Fluids & Lines](#) for further information relating to labelling.

Infusion devices are **MANDATORY** for:

- Delivery Suite – Oxytocin inductions and insulin
- Total Parental Nutrition (TPN)
- Nursery/Neonates
- Infusions of Magnesium Sulphate
- Infusions of Heparin
- Infusions containing Potassium
- Sedation/narcotics

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### MEDICATION – ADMINISTRATION cont'd

- Cannulae including safety intima/subcutaneous cannulae are to be changed after 48 hours and must not be left in for over 72 hours.
- Time and date of cannula insertion must be recorded and insertion site to be reported on each shift in the patient medical record (follow appropriate policy for care of PICC or CVC line).
- Cannulae must not be removed unless vein tissue or no further fluids or IV medications are required. To minimise IV infection, care should be taken to ensure all non-required cannulae are removed.

**NB Blood born infectious diseases may be acquired directly from contaminated blood. Avoid direct contact of your skin with a patient's blood during any procedure.**

Protect yourself from blood contamination:

- (i) Wear gloves
- (ii) Use alcohol based hand hygiene solution. If any stinging occurs indicating a skin break cover the site with a non-porous tape or wear gloves.
- (iii) Wear protective eye wear and mask if blood splashes are possible.

#### 7.8.1 ADMINISTRATION OF INTRAVENOUS MEDICATIONS/FLUIDS

##### Equipment

- Puncture proof receptacle (eg blue plastic tray)
- Standard pre-printed blue NSW Ministry of Health Injectable medicines label
- Medication order
- Prescribed medication (including IV fluids)
- Gloves
- Sharps container for used needle(s)
- Alcohol swabs
- Diluent (if required)
- Needle for administration of suitable calibre or appropriate equipment for needleless systems
- Equipment for drawing up e.g. blunt needle or other approved device

##### Procedure

7. Ensure steps 1-6 are followed as detailed above.
8. Confirm and assess the patient has intravenous access
9. Check that the vial/ampoule/syringe/bag is intact, check medication for integrity and presence of particulate matter. If concerned please contact pharmacy.
10. Assemble drawing up equipment and syringe aseptically. If using vial decontaminate rubber bung with alcohol swab.
11. Prepare medication/fluid in accordance with Australian Injectable Drug Handbook ([via CIAP](#)), Manufacturer's instructions/ Product Information, MIMS or advice given by ward Pharmacist. Care must be taken to adequately mix the final solution prior to administration.
12. **If medications or fluids are removed from the original packaging and leave the hands of the person preparing the medication; the bag, flask, burette or syringe must be labelled.** All sections of the standard pre-printed blue NSW Ministry of Health injectable medicines label must be completed. Please refer to RHW LOP- [Labelling of Injectable Medicines, Fluids & Lines](#).
13. Attach label to the bag, flask, burette or syringe (the label must be placed on the front of the bag, flask, burette or syringe, ensuring name of fluid, batch number and expiry number or graduations remain visible).

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14. **Both staff members must attend the patient's bedside to ensure the medication/fluid is administered to the correct patient** (identify patient by checking identity band and ask patient to verbally confirm their identity).
15. Check patient's known allergies against the medication chart or electronic equivalent and with the patient. If an allergy to the medication/fluid being administered is identified do not administer the medication and contact the patient's medical officer.
16. Inform the patient (or their appropriate guardian) what the medication/fluid is, why you are giving it, and any possible side-effects of the medication.
17. Perform hand hygiene and don gloves before touching patient.
18. Aseptically clean injection port with alcohol swab and allow to dry.
19. Inspect IV site and assess for signs of redness, inflammation or swelling.
20. If IV solution is in progress ensure fluid is compatible with the medication and no other medication is in the primary flask/burette. **No medication should be added to blood or blood components.**
21. If an infusion is in progress, stop the infusion.
22. Assess the cannula for patency. This can be achieved by observing the site, ensuring a good flow of the drip on gravity or flushing the cannula with 5 to 10 mL of 0.9% sodium chloride prior to IV medication/fluid administration.
23. Administer medication or fluids:

**For administration via Injection**

- Clean the injection port with an alcohol swab and allow to dry.
- Inject drug at prescribed/appropriate rate.

**For administration of Infusion via Burette**

- Fill burette to appropriate amount of infusion solution. Medications prepared as additives must be mixed thoroughly with the IV solution by agitating the burette several times.
- Clean the injection port with an alcohol swab and allow to dry.
- Inject medication into burette. Care must be taken to adequately mix the final solution prior to administration.
- Attach standard pre-printed blue NSW Ministry of Health injectable medicines label.
- Adjust drip rate to administer the solution at the appropriate rate. Settings must be checked by a second person.

**For administration of Fluids or Infusion via Bag**

- Remove the protective cap or tab from the bag. If using flask with plastic cap over rubber bung decontaminate rubber bung with alcohol swab and allow to dry.
  - Close roller clamp on giving set.
  - Remove protective cap or spike from previous bag to reveal spike.
  - Using aseptic technique, insert vented spike into new bag. Ensure line is primed and check absence of air bubbles.
  - Open roller clamp on giving set.
  - Adjust drip rate to administer the solution at the appropriate rate. Settings must be checked by a second person.
  - Secure the IV giving set to the patient.
24. Check the solution for a change in colour or clarity which might indicate that precipitation or other reaction has occurred. If precipitation occurs, a complete line change must be performed.
  25. Secure completed intravenous additive label to the flask or administration set in such a way that the contents may still be inspected.
  26. No label is required for the injection of medications for administration in manufacturers' pre-prepared syringes. E.g. Clexane®.

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27. On completion of the infusion/injection, flush the device:

**For Administration via Injection**

- Flush the line with 10 to 20mL of sodium chloride 0.9% post injection and re-establish flow of fluids and verify correct drip rate (if applicable).

**For Administration via Infusion**

- Flush the cannula with 10mL of Sodium Chloride 0.9% and re-establish flow of fluids and verify correct drip rate (if applicable).
28. Place all needles and syringe in puncture proof receptacle. **DO NOT RESHEATH NEEDLE.**
  29. Inspect injection site for signs of redness, swelling or inflammation. If present report to Medical Officer and record details in the patients' medical record.
  30. Ensure all drawing up needle or vial access pin and syringes are placed in an approved sharps container and other equipment into the appropriate waste bin.
  31. Remove gloves and perform hand hygiene.
  32. Perform the 6<sup>th</sup> right of medication administration- **right documentation**, to indicate the medication has been administered. The second person checking is responsible for countersigning the administration on the NIMC or electronic equivalent/Fluid Order Chart.
  33. Observe patient for any reaction. Document any adverse reactions and what action was taken in the patient's medical record.

**7.8.2 ADMINISTRATION OF NON-INTRAVENOUS INJECTIONS**

**Medication routes discussed in this section include intramuscular (IM), intradermal and subcutaneous (subcut). All injection routes require the administrator to use an aseptic technique.**

**Intramuscular Injection**

- A method of administering medications deep into the muscle tissues.
- Possible sites include ventrogluteal, dorsogluteal, rectus femoris, vastus lateralis and deltoid.
- No more than 2mL of medication should be injected via the intramuscular route.
- This route may be contraindicated in some patients e.g. with blood clotting disorders, myocardial infarction and/or on anticoagulant and/or thrombolytic therapy.
- Complications include contractures, palsy, peripheral nerve injury, local irritation, pain, infection, neuropathy and bleeding.

**Intradermal Injection**

- Used for the administration of vaccinations, allergy, tuberculin allergy panel testing and regional anaesthetic.
- When an observation for inflammatory reaction is a priority, best sites are highly pigmented, thinly keratinized and hairless. Most commonly used area is flexor (anterior) surface of forearm, but the upper chest, upper arm, shoulder blade and upper back may also be used.
- No more than 0.5mL should be injected via the intradermal route.
- Staff must be accredited to administer a Mantoux test.

**Subcutaneous Injection**

- A method of administering medications into the fat and connective tissue underlying the dermis and epidermis.
- Suitable for administration of medications that require slow and steady absorption.

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- Injection sites include the lateral aspects of the upper arms, anterior and lateral aspect of thighs, abdomen (avoiding a 5cm diameter around umbilicus), and the superior aspect of buttock. The site recommended for insulin injection is the anterior abdominal wall. Other appropriate sites: high on the upper outer quadrant of the buttock, lateral aspect of upper arm or anterior and lateral aspect of thigh.
- The volume of medication given into any one subcutaneous site should not exceed 2mL.
- Rotate sites for frequent subcutaneous injections to prevent fat atrophy, and to maximize medication absorption.
- The injection site and size of needle are based on individual patient assessment. Patients with less adipose tissue are at risk of drug misplacement. Patients with conditions that may result in decreased peripheral circulation, such as obesity, oedema and shock, may have delayed absorption from the subcutaneous site.

**Equipment**

- Puncture proof receptacle (e.g. blue plastic tray)
- Medication order
- Prescribed medication
- Standard pre-printed Beige (subcut) or pink (miscellaneous) NSW Ministry of Health injectable medicines label
- Gloves
- Sharps container for used needle(s)
- Gauze or cotton balls
- Alcohol swabs
- 1 or 2 mL syringe
- 23/25 gauge needle (if required)
- Diluent (if required)
- Drawing up needle or vial access pin (if required)

**Procedure**

7. Ensure steps 1-6 are followed as detailed above.
8. Check that the vial/ampoule/syringe is intact and medication for integrity and presence of particulate matter. If concerned please contact pharmacy.
9. Prepare medication aseptically as per manufactures instructions. If using vial decontaminate rubber bung with alcohol swab.
10. Ensure appropriate gauge needle is attached to syringe
11. Expel air (not performed in the case of pre-filled syringes, as the air must remain in the syringe to facilitate diffusion of medication into the tissue).
12. Check patient's known allergies against the medication chart or electronic equivalent and with the patient. If an allergy to the medication being administered is identified do not administer the medication and contact the patient's medical officer.
13. Perform hand hygiene and don gloves before touching patient.
14. **Both staff members must attend the patient's bedside to ensure the medication/fluid is administered to the correct patient** (identify patient by checking identity band and ask patient to verbally confirm their identity).
15. Explain the procedure to the patient. Inform the patient (or appropriate guardian) what the medication is, why you are giving it, and any possible side effects of the medication.
16. Select the appropriate injection site, refer to sites listed above. It is important not to use the same point within an injection area. Repeated injections into the same point can cause fat hypertrophy and will affect medication absorption.
17. Cleanse skin with alcohol swab thoroughly and allow to dry. Optional for patients with diabetes as continual swabbing toughens the skin.

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18. Inject medication as outlined below:

**For intramuscular injections**

- Hold skin taut and insert needle into skin at 90 degree angle leaving approximately 0.5cm of the needle shaft exposed. For patients with minimal adipose tissue insert needle at 45 degree angle.
- Draw back on the plunger to ensure that the needle is not in a blood vessel. (If blood appears, withdraw needle, discard and repeat procedure with new medication, needle and syringe).
- Inject contents steadily using a slow and continuous movement at a rate of about 1mL per 10 seconds.
- Leave the needle in situ for about 10 seconds to allow diffusion through the muscle and then withdraw the needle.

***Neonates: Intramuscular injections are given in the upper outer quadrant of the thigh, quadriceps muscle***

**For intradermal injections**

- With bevel uppermost, insert needle at a 5 to 15 degree angle (almost parallel to skin surface) with the skin taut.
- Inject contents steadily. The injection should produce a wheal or bubble like area that can be seen beneath the surface of the skin.
- Withdraw needle. Do not massage or apply pressure.
- Apply a gauze or cotton balls to injection site.

**For subcutaneous injections**

- Pinch up approximately 2.5cm roll of subcutaneous tissue to increase the volume of subcutaneous space and to avoid injecting into muscle tissue. (Not required for patients' with limited subcutaneous tissue).
- Insert three quarters the length of the needle at a 90 degree angle to the skin or 45 degree angle for patients' with limited subcutaneous tissue.
- Inject contents steadily using a slow and continuous movement at a rate of about 1mL per minute. If using the 90 degree angle technique, hold the skin for the duration of the injection. It is not necessary to aspirate syringe plunger to assess for the flash back of blood.
- Pull the needle straight out.
- Release the skin if using the 90 degree angle technique.
- Do not massage injection area as this hastens the absorption of medication. If medication or blood leak back from the injection site after withdrawing the needle apply gentle pressure to the site.

**Additional requirements for the administration of Insulin**

- Ensure the patient is not NBM pre-op or not in a position to eat (nauseous) as insulin dose should therefore be reviewed or other glucose source provided.
- **Insulin must always be drawn up in a syringe calibrated in units.**
- Each patient must have his/her own individual insulin vial clearly labelled with the patient's name and MRN. When a vial of insulin is opened clearly write the date of opening on the vial (The vial must be discarded after 28 days of opening or on discharge of the patient).
- Insulin must be stored in the refrigerator away from the freezer. Insulin may be kept at room temperature after opening according to product information.
- Clear insulin should be as clear as fresh water and colourless. Cloudy insulin should be "milky" and of uniform consistency. To re-suspend cloudy insulin, roll the vial gently between the palms of hands (do not shake) until the liquid is uniformly cloudy. If lumps, flakes or sediment is still seen **DISCARD THE VIAL.**

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- Draw up insulin at patient's bedside and administer injection of insulin immediately after preparation, so as to maintain the integrity of the solution and avoid having to re-sheath the needle after drawing up.
  - Inject air from insulin syringe into vial.
  - Invert vial with syringe attached at eye level.
  - Withdraw insulin dose plus 3 to 4 units more than the required dose.
  - Remove needle and syringe from vial.
  - Holding insulin syringe upward flick syringe until air rises to top of syringe and expel any air with excess insulin until required dose is reached.
- 19. Place all needles and syringe in puncture proof receptacle. **DO NOT RESHEATH NEEDLE.**
- 20. Inspect injection site for signs of complications. If present report to Medical Officer and record details in the patients' medical records.
- 21. Ensure all needles and syringes are placed in an approved sharps container and other equipment into the appropriate waste bin.
- 22. Remove gloves and perform hand hygiene.
- 23. Perform the 6<sup>th</sup> right of medication administration- **right documentation**, to indicate the medication has been administered. The second person checking is responsible for countersigning the administration on the NSW Health Insulin Chart or electronic equivalent.
- 24. Observe patient for any reaction. Document any adverse reactions and what action was taken in the patient's medical record.

### **7.9 ADMINISTRATION OF TOPICAL MEDICATIONS**

- In accordance with NSW Health Policy Directive PD2007\_036 *Infection Control Policy* open **multi-dose lotion or cream in tubes/pots/containers** must only be used for an individual patient's use
- Topical medications are those which are applied to the skin.
- It is important for clinical staff to avoid topical medications having contact with their own skin.
- Patients must be monitored for local adverse effects of the medication such as irritation, burning or stinging.

#### **Equipment**

- Medication order
- Prescribed medication (labelled with patient's name)
- Spatula, cotton ball or swab
- Absorbent protector (if required)
- Gloves

#### **Procedure**

1. Inform the patient what the medication is (or appropriate guardian), why you are giving it, and any possible side-effects of the medication. If the preparation is known to cause staining, advise the patient to expect this.
2. Perform hand hygiene and don gloves before touching the patient.
3. Ensure site is clean and dry. Residue medication should be removed prior to application of medication.

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**MEDICATION – ADMINISTRATION cont'd**

4. Apply medication gently with a cotton ball/applicator to area as per medication orders and manufacturer's instructions. If hair is present apply in the same direction the hair lies on the skin. If more of the medication is required, use a new cotton ball/applicator for application of medication, ensure medication container is not contaminated.
5. Remove gloves and perform hand hygiene.
6. Sign the medication chart or electronic equivalent to indicate the medication has been administered.
7. Perform hand hygiene.
8. Observe patient for any reaction. Document any adverse reactions and what action was taken in the patient's medical record.

**Application and removal of Transdermal Patches**

- Transdermal formulations provide a continuous, controlled systemic delivery of medications over a set rate over hours or days.
- **Ensure that any previously applied patch is removed prior to the application of a new patch. This should be recorded on the medication chart to ensure this has been done.**

**Equipment**

- Medication order
- Prescribed medication
- Gloves
- Pen

**Procedure**

7. Ensure steps 1-6 are followed as detailed above.
8. Perform hand hygiene and don gloves before touching the patient.
9. Remove previously applied patch. Fold the patch in half so reservoir is closed and the medication cannot be inadvertently absorbed or the patch reused and dispose carefully in the yellow sharps bin.
10. Follow product information carefully for specific instructions on preparing patch for application as incorrect removal of backing/liner may render the patch unusable or ineffective, particularly in the case of analgesia patches. Such information can be obtained from package insert, MIMS or Pharmacy Department.
11. Avoid your own skin having contact with medication during removal and application of patch as it may be absorbed.
12. Select appropriate location for patch. Ensure area is clean, dry, intact skin area with minimal hair - rotate sites to avoid skin irritation. Avoid placing patches on skin folds, scars, open wounds, burned or irritated areas.
13. Anti-anginal patches are most commonly applied to the chest, upper arm or shoulders. Anti-anginal patches must only be applied to the extremities when specifically ordered by a medical officer. If hair is likely to prevent the patch from sticking, the area can be clipped (shaving is not recommended).
14. Write date and time of application on patch.
15. Remove gloves and perform hand hygiene.
16. Perform the 6<sup>th</sup> right of medication administration- **right documentation**, to indicate the removal of a patch (if applicable) and that the medication has been administered.
17. Perform hand hygiene.
18. Observe patient for any reaction. Document any adverse reactions and what action was taken in the patient's medical record.

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**MEDICATION – ADMINISTRATION cont'd**

**Administration of Inhaled Medications**

- For information on nebulised medications refer to administration of medications using a nebuliser.
- Refer to package insert and product information for accurate instructions on use of all inhalation devices.
- Where possible patients should use an inhalational delivery system as it is equally efficacious, more convenient and cost effective than nebulised bronchodilators.
- If the patient is unable to effectively use an inhaler due to physical or cognitive factors a nebulised delivery device should be used.
- For education on the correct use of prescribed inhalational system, please contact your ward pharmacist.

**Equipment**

- Medication order
- Prescribed medication (labelled with patient's name)
- Spacer (if required)
- Syringe (should use a syringe readily distinguishable from parenteral syringe, if unable, ensure labelled with intended route)

**Procedure**

7. Ensure steps 1-6 are followed as detailed above.
8. Assess the patient's ability to co-ordinate with inhaled medication.
9. Check that the medication is intact and medication for integrity. If concerned please contact pharmacy.
10. Prepare medication appropriately as per manufacturer's instructions.
11. Check patient's known allergies against the medication chart and with the patient. If an allergy to the medication being administered is identified do not administer the medication and contact the patient's medical officer.
12. Inform the patient (or appropriate guardian) what the medication is, why you are giving it, and any possible side effects of the medication.
13. Perform hand hygiene before touching the patient.
14. Position the patient in an upright position to facilitate chest expansion.
15. Administer medication. If further inhalation is prescribed, wait 30 to 60 seconds before repeating.
16. Instruct patient to rinse mouth after using inhaled steroids.
17. Perform hand hygiene.
18. Perform the 6<sup>th</sup> right of medication administration- **right documentation**, to indicate the medication has been administered.
19. Observe patient for any reaction. Document any adverse reactions and what action was taken in the patient's medical record.

**Instillation of Eye Drops/Ointments**

**Equipment**

- Medication order
- Prescribed medication (labelled with patient's name)
- Disposable tissue
- Eye pack (if necessary)
- Gloves

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**MEDICATION – ADMINISTRATION cont'd**

**Procedure**

7. Ensure steps 1-6 are followed as detailed above.
8. Perform hand hygiene and don gloves before touching the patient.
9. Perform eye hygiene if required.
10. Verify the patient is not wearing contact lenses.
11. Identify the correct eye.
12. Assist the patient into the supine position with head tilted back.
13. Instruct patient to stare upwards.
14. Gently pull down lower eyelid.
15. If both drops and ointment are required, drops should be instilled first. If more than one type of eye drop or 2 drops is prescribed wait at least 5 minutes between administrations. If more than one type of ointment wait 10 minutes between administrations.
16. Instil medication.

**For Eye Drops**

- Hold the inverted dropper 2.5cm from the eye in the other hand perpendicular to the eye. Avoid direct fall onto corner or into lacrimal duct.
- Allow one drop to be instilled in the middle of the lower fornix.
- Allow the person to blink between each drop.
- Apply gentle pressure to inside corner of eye for 2 to 3 minutes to retard drainage, do not rub.
- Have patient roll eyeball in all directions for 1 to 2 minutes.

**For Eye Ointment**

- Prior to applying ointment, squeeze small amount of ointment onto a clean tissue, ensuring tip does not come into contact with tissue then discard.
  - Ask the patient to look upwards.
  - Instil 0.5 to 1cm strip of ointment from inner to outer canthus.
  - Ask patient to close their eyes gently for one minute and to avoid squeezing tightly.
17. Wipe away excess medication.
  18. Discard equipment and dispose of into the appropriate waste bin.
  19. Remove gloves and perform hand hygiene.
  20. Perform the 6<sup>th</sup> right of medication administration- **right documentation**, to indicate the medication has been administered.
  21. Observe patient for any reaction. Document any adverse reactions and what action was taken in the patient's medical record.

**Instillation of Ear Drops/Ointments**

**Equipment**

- Medication order
- Prescribed medication (labelled with patient's name)
- Gauze or tissues
- Eye pack (if necessary)
- Gloves

**Procedure**

7. Ensure steps 1-6 are followed as detailed above
8. Prepare medication appropriately as per manufacturer's instructions.
9. Perform hand hygiene and don gloves before touching the patient.

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**MEDICATION – ADMINISTRATION cont'd**

10. Identify the correct ear.
11. Assist the patient into a sitting or lying position with head tilted so the affected ear is facing upward.
12. Gently draw back pinna upwards to straighten the external canal.
13. Instil the **correct dose** of ear drops/ointment making sure drops run down side of canal. Ensure bottle or dropper does not touch the ear.
14. Ask the patient to keep ear tilted for 5 minutes.
15. Wipe away excess medication.
16. Discard equipment and dispose of into the appropriate waste bin.
17. Remove gloves and perform hand hygiene.
18. Perform the 6<sup>th</sup> right of medication administration- **right documentation**, to indicate the medication has been administered.
19. Observe patient for any reaction. Document any adverse reactions and what action was taken in the patient's medical record.

**Instillation of Nasal Drops/ Sprays**

**Equipment**

- Medication order
- Prescribed medication (labelled with patient's name)
- Equipment to perform nasal hygiene – if required
- Tissue
- Gloves

**Procedure**

7. Ensure steps 1-6 are followed as detailed above
8. Prepare medication appropriately as per manufacturer's instructions.
9. Perform hand hygiene and don gloves before touching the patient.
10. Protect bedding and drape patient to provide dignity.
11. Before administering the nasal medication, instruct the patient to gently blow his/her nose to remove excess mucous except in cases of nose bleeding or when patient has nasal packs insitu.
12. Advise the patient that drugs administered by nasal instillation may irritate the nasal passages, causing inflammation, pain, itching, and/or bleeding.
13. Assist the patient into the supine position with the head lower than the trunk. The positioning of the patient should be guided by the patient's physical ability, the anatomy of the nose (particularly if altered by disease or surgery), the nature of the condition being treated (where exactly the drops need to reach) and the type of medication being administered.
14. Administer medication.

**For Nasal Drops**

- Gently shake the bottle to re-suspend the liquid medication.
- Insert dropper into the bottle and fill dropper with the correct dosage as per medication order. Gently insert the tip of the dropper into the correct nostril.

**For Nasal Spray**

- For instillation of nasal spray by pump bottle or pressurized canister, gently shake the solution.
- Remove the cap and place it on a clean, dry surface.
- If using a pump bottle, fill the tip of the bottle with medication by holding it upright and away from you, and spraying a small amount of the liquid medication into the air.

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**CLINICAL POLICIES, PROCEDURES & GUIDELINES**

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**MEDICATION – ADMINISTRATION cont'd**

- If the patient is able, ask them to close off the nostril opposite the nostril in which medication is administered. If they are unable to do so, gently perform this step with the forefinger of your non-dominant hand.
- Ask the patient to breathe out, then inward slowly through the nose.
- As the patient begins to inhale, place the tip of the nasal spray container no more than one-quarter inch inside the nostril, pointing the tip toward the back of the nostril. Press down on the canister delivery button to deliver medication to the nasal mucosa.
- 15. Instruct the patient to keep his/her head tilted back for several seconds, and to breathe in through the nose and out through the mouth for 2 minutes to allow sufficient retention and absorption of the medication
- 16. Wipe excess medication from outside the nostrils.
- 17. Ask the patient to avoid nose blowing for 15 minutes to make sure that the medication is retained within the nostril
- 18. Discard equipment and dispose of into the appropriate waste bin.
- 19. Remove gloves and perform hand hygiene.
- 20. Perform the 6<sup>th</sup> right of medication administration- **right documentation**, to indicate the medication has been administered.
- 21. Observe patient for any reaction. Document any adverse reactions and what action was taken in the patient's medical record.

**7.10 ADMINISTRATION OF RECTAL MEDICATIONS**

- Suppositories and enemas are most commonly administered to empty the bowel before certain types of surgery/endoscopic procedures, to relieve acute constipation, when other treatments for constipation have been unsuccessful, or to introduce specific medication.
- Prior to administration of suppositories or enema check whether the patient has any relevant pre-existing conditions e.g. haemorrhoids, anal fissure etc. If there is a history of any pre-existing condition contact MO prior to administering.
- Ensure toilet facilities are accessible prior to administration.
- Encourage self-administration of suppositories where possible.
- Side-effects of the administration of rectal medications may include: bleeding, vasovagal response, electrolyte imbalance, exacerbation of cardiac and/or pulmonary conditions, and perforation or irritation of bowel mucosa.
- In addition to the medication order a medical order is required for administration of rectal medications if the patient has a history of disorders affecting the gastrointestinal system, which may include:
  - paralytic ileus or colonic obstruction
  - neutropenia and thrombocytopenia
  - a risk of perforation or haemorrhage of the colon e.g. diverticulitis, Crohns' disease or recent bowel resection
  - a risk of circulatory overload, hyperkalaemia or cardiac arrhythmias
  - following gastrointestinal or gynaecological surgery
  - inflammatory or ulcerative conditions of the large colon.
  - anal fissure or haemorrhoids

**Equipment**

- Medication order
- Prescribed medication (labelled with patient's name, if applicable)
- Kidney dish
- Disposable gloves
- Lubricant
- Gauze swabs
- Protective sheeting
- Tilting bed (if enema is to be retained).

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**CLINICAL POLICIES, PROCEDURES & GUIDELINES**

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**MEDICATION – ADMINISTRATION cont'd**

**Procedure**

7. Ensure steps 1-6 are followed as detailed above
8. Prepare medication appropriately as per manufacturer's instructions. Enema solution should be administered at body temperature. (Check temperature on inner aspect of wrist).
9. Perform hand hygiene and don gloves before touching the patient
10. Protect bedding and drape patient to provide dignity.
11. Place patient in left lateral position close to edge of bed, knees flexed, lying flat if possible.
12. Lubricate tip of suppository or enema and gloved finger.
13. Separate buttocks to expose anus and perform rectal examination for presence of haemorrhoids, fissures etc.
14. Insert medication or device:

**For Rectal Suppository**

- Insert the suppository slowly into the rectum, pushing it past the anal sphincter. If patients administer their own suppositories, inserting the blunt end first to minimize the need to insert the finger into the anal canal.
- Suppositories requiring local effect should be inserted apex (tip) first, while those requiring systemic absorption should be inserted base first.

**For Evacuant (Disposable) Enema**

- Remove cap of enema nozzle.
- Expel air from container and tubing.
- Gently introduce lubricated nozzle into the rectum, avoid excessive manual pressure, as indicated in product information.
- Gently squeeze container to administer fluid (total volume of enema administered should not exceed 250mL).
- While continually applying pressure to the bag, remove nozzle through gauze swabs, to avoid backflow of fluid into tubing.
- Dry perineal area.

**For Medicinal Enema**

- Gently introduce lubricated tubing into the rectum, avoid excessive manual pressure, as indicated in product information (to a height not exceeding 10cm).
  - Gently introduce fluid into rectum avoiding backflow of fluid into tubing.
  - Elevate the foot of the bed using tilt mechanism of bed if enema is to be retained.
15. **Administration should cease if a patient complains of pain, discomfort, cramps, bleeding, intolerance to fluid volume or development of cardiac or pulmonary symptoms such as shortness of breath, sweating, tachycardia or chest pain.**
  16. Advise patient to retain medication as long as possible but avoid prolonged retention
  17. Discard equipment and dispose of into the appropriate waste bin.
  18. Remove gloves and perform hand hygiene.
  19. Perform the 6<sup>th</sup> right of medication administration- **right documentation**, to indicate the medication has been administered.
  20. Observe patient for any reaction. Document any adverse reactions and what action was taken in the patient's medical record.

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**CLINICAL POLICIES, PROCEDURES & GUIDELINES**

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**MEDICATION – ADMINISTRATION cont'd**

**7.11 ADMINISTRATION OF VAGINAL MEDICATIONS**

- Intravaginal preparations are available as solutions, pessaries, gels, foams and rings.
- The term “pessary” may be used in two contexts: as medication in tablet form (can be instilled by nursing staff, unless otherwise stated) or as a therapeutic, supportive mechanism e.g. ring pessary for uterine prolapse (for insertion by a MO only).
- Perineal hygiene may be required prior to or following this procedure.
- The patient must remain in bed for up to one hour post-procedure to maximize retention of the medication.
- This procedure is best performed late in the evening when the patient is unlikely to get out of bed.
- Instruct patient on procedure for self administering where possible.

**Equipment**

- Receptacle
- Medication order
- Prescribed medication (labelled with patient’s name)
- Lubricating jelly
- Applicator (if required)
- Gauze swabs
- Peritoneal pad
- Gloves

**Procedure**

7. Ensure steps 1-6 are followed as detailed above
8. Prepare medication appropriately as per manufacturer’s instructions.
9. Perform hand hygiene and don gloves before touching the patient.
10. Protect bedding and drape patient to provide dignity.
11. Position patient in either: supine, flex knees and abduct hips as comfort allows, or lying in a left lateral position with buttocks at edge of bed.
12. Load applicator with pessary or cream.
13. Lubricate applicator or pessary.
14. Using gauze swabs, separate labia with one hand to expose vaginal orifice.
15. Gently insert pessary or loaded applicator as far as possible into the vagina. If using an applicator release medication and remove.
16. Apply peri-pad.
17. Advise patient to retain medication as long as possible.
18. Discard equipment and dispose of into the appropriate waste bin.
19. Remove gloves and perform hand hygiene.
20. Perform the 6<sup>th</sup> right of medication administration- **right documentation**, to indicate the medication has been administered.
21. Observe patient for any reaction. Document any adverse reactions and what action was taken in the patient’s medical record.

**7.12 SELF ADMINISTRATION AND TIME CRITICAL MEDICATIONS**

- A patient can self-administer the following medication under the supervision of an RN, MW or EN:
  - Eye drops
  - Ear drops
  - Inhaled devices
  - Nasal sprays
  - Insulin
  - Creams/ ointments.

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**CLINICAL POLICIES, PROCEDURES & GUIDELINES**

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**MEDICATION – ADMINISTRATION cont'd**

- In all cases, the medication must be prescribed on the NIMC or electronic equivalent with an annotation identifying that the medication is for self administration. A record must be made of each dose administered by the person responsible for administration by documenting 'S' on the NIMC or self on the electronic equivalent.
- Self-medication of other medication (including time critical medication) must comply with a ward specific policy for self-administration that has been approved by the Drug and Therapeutics Committee.
- Self- administration medications must be stored in a secure bedside drawer.
- Self-medication of Schedule 4D and/or Schedule 8 medication is not permitted.

**8. RELATED POLICIES / PROCEDURES / CLINICAL PRACTICE LOP**

- Labelling of injectable medicines, fluids and lines
- Medication- Storage and supply
- Medication- Prescribing

**9. RISK RATING**

- Low

**10. NATIONAL STANDARD**

- Medication Safety

**11. REFERENCES**

- [Ministry of Health Policy Directive 2013\\_043 Medication Handling in New South Wales Public Health Facilities](#)

**REVISION & APPROVAL HISTORY**

Reviewed Therapeutic & Drug Utilisation Committee 3/10/17

Approved Quality & Patient Safety Committee 21/8/14

Reviewed Therapeutic & Drug Utilisation Committee 12/8/14

Previously titled *Medication : Administration – General Principles for Administration of Medication* and replaced *Administration of Vaginal Pessaries ad Cream*

Approved Quality & Patient Safety Committee 19/11/09

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Reviewed October 2009

Approved RHW Council 27/11/00

**FOR REVIEW : OCTOBER 2022**