MEDICATION MANAGEMENT AND HANDLING - CHW

PRACTICE GUIDELINE ©

DOCUMENT SUMMARY/KEY POINTS

This **document is to be read in conjunction with the** **Medication Handling in NSW Public Health Facilities PD2013_043**

Please observe the following key points when prescribing medication. Extra important requirements follow but this table includes important check points for the prescribing process.

I'm going to PRESCRIBE medication…

- Have I chosen the correct chart?
  - There are separate charts for regularly administered medication, PRN medication, Pain therapy, Oncology orders.
- **Have I written all essential details on the medication chart?**
  - The 1st Prescriber writes patient name on the dotted line below the patient label to verify that you are prescribing for the correct patient
- **Have I checked whether the child has had reactions to any medications, completed and signed the Drug Reaction section?**
  - Even if no allergies or reactions: write NIL
  - If allergies are present: attach 'ADR' sticker
- **Can't I just alter the existing drug order?**
  - NO! - for any change one must cancel the previous prescription and write a new one.
- **Have I used the full generic name for the medication?**
  - Try to do this as it avoids sound-alike, look-alike errors. If the drug is a combination – use Brand. Also use Brand if non-bioequivalent drugs are chosen e.g. Cyclosporin, Warfarin

This document reflects what is currently regarded as safe practice. However, as in any clinical situation, there may be factors which cannot be covered by a single set of guidelines. This document does not replace the need for the application of clinical judgement to each individual presentation.

Approved by:	SCHN Policy, Procedure & Guideline Committee	
Date Effective:	1st April 2015	**Review Period:** 3 years
Team Leader:	Chair	**Area/Dept:** Medication Safety Committee

- **Does the drug I've prescribed interact with existing medication?**
  - Check with colleagues or pharmacy if unsure
- **Have I chosen the correct dose for the child's condition and weight and adjusted the dose if necessary for renal or hepatic impairment?**
  - Make sure the child's weight is on the front and back of the medication chart and double-check all calculations. Order DOSES, not volumes or number of tablets. Try to round doses up or down to the nearest dosage unit.
- **Never leave a decimal point naked!**
  - Use leading zeroes e.g. 0.1 mg not .1 mg. Eliminate trailing zeroes e.g. 15 mg not 15.0 mg.
- **Have I used only approved abbreviations?**
  - There are no exceptions to this rule – some can be misunderstood – see this document for approved abbreviations.
- **Can all the details of my prescription be easily read?**
  - For clarity, preferably print your prescription rather than writing in longhand. Illegible prescriptions are not a valid order.
- **Have I printed and also signed my name?**
  - Your identification is a legal necessity but it also helps contact you if required.
- **Have I told nursing staff I've written this prescription?**
  - It's best to make it clear to them now, to save having to come back later!
- **Is there anything I'm not sure about?**

STOP! Check everything again. If still unsure – discuss with a colleague. Also check the Hospital's Intranet – Drug Therapy menu item on front page: http://chw.schn.health.nsw.gov.au/o/groups/drug_therapy/

Please observe the following key points when administering medication. Extra important requirements follow but this table includes important check points for the medication administration process.

I'm going to GIVE A DOSE of medication …

- **Is this the right patient?**
  - Always check the patient identification band!
- **Do I have the right chart?**
  - Double check against the patient identification band.
- **Just what am I giving?**
  - Can I read the drug name and dose clearly? Have I retrieved the correct product – does the name on the chart match the drug label? Have I measured the dose correctly – CHECK!
- **Is it the right date and time to be giving this dose?**
  - Double check the order and previous administration signatures for notes
- **Are there any special precautions?**
  - Check that allergies are recorded – ask parent or refer to notes if not, and confirm both the brand and generic name. Make sure this drug or similar isn't among the ones listed. Check dilution and administration rate for IV doses and double check pump settings.
- **Am I about to give this dose by the correct route?**
  - Double check the prescribed medication. Ensure the prescribed route is available.
  - All oral medications that require a syringe to deliver the medication **must** be in an oral syringe
- **Is this a drug which requires a double check?**
  - If unsure, check with your team leader or look it up!
- **Is there anything I'm unsure about?**

STOP! Check everything again. If still unsure – discuss with a colleague. Also check the Hospital's Intranet – Practice Guidelines, Medication: Handling and Management via Drug Therapy menu item on front page http://chw.schn.health.nsw.gov.au/o/groups/drug_therapy/

CHANGE SUMMARY

- Section 4.2: Removal of information relating to the sharing of vials for intravenous administration.
- Section 4.6: Additional information added relating to the intravenous administration of medications, due to updates to the CHW Intravenous Fluid Management Guideline.
- March 2017 – added a link to the MoH policy directive on the front page.

READ ACKNOWLEDGEMENT

- **Training/Assessment Required** – All Registered Nurses (RNs), Enrolled Nurses (not medication accredited) and Enrolled Nurses (medication accredited), employed by CHW (including those employed on the casual pool) must successfully complete the Mandatory Drug Calculation Test and perform 20 medication checks before they can check or administer medications.
- All nursing staff working in clinical areas should read and acknowledge the document.
- Medical staff should read the document.

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1 Introduction

The Children's Hospital at Westmead (CHW) has a priority to safely manage, monitor and administer medications by ensuring the following:

- Correct **prescribing** of medication.
- Administration of the **correct medication**.
- The **correct patient** receives the prescribed medication
- Administration of the **prescribed dose**.
- Administration of the medication dose by the **correct route**.
- Administration of each dose of medication at the **correct time** prescribed.
- Administration of parenteral medication in the **correct dilution** and at the **correct rate**.
- **Safe storage** of medication.
- **Patient safety** is maintained and monitored.
- Implementation and adherence to legislative provision of the **Poisons Act** and **NSW Health guidelines**.

Guidelines produced by the Australian Pharmaceutical Advisory Council (2005) identify principles on which these standards of practice have been broadly based.

2 Prescribing Medication

Please note the information covered in 2.1 to 2.20 has been removed from this document and can now be found in Safe Prescribing.

The information covered in 2.22 t0 2.23 has been removed from this document and can now be found in Developing Standing Orders and Nurse Initiated Medications.

2.21 Standing Orders

A Standing Order provides an authorisation for permanent nursing staff, including pool nurses but not agency nurses or ENs, to administer a medication without a prior written order on a medication chart. All protocols for standing orders must be approved and reviewed annually by the Drug Committee. All approved standing orders are accessible from the Policies and Procedure Intranet page.

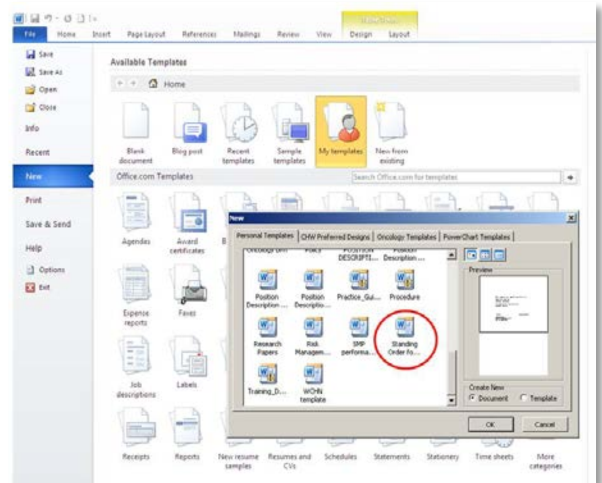
The following should be included in the standing order:

- Approval must be granted by the Drug Committee for the Standing Order
- A written protocol has been developed and submitted to the Drug Committee.
- The medication name, strength, dose, route and frequency of administration are to be included in the protocol.
- Indications and contraindications must be clearly documented in the standing order protocol.
- Any restriction on categories or nursing staff who may administer the medication is to be clearly identified.

- The clinical area responsible for developing the standing order is also responsible for ensuring it is reviewed annually as well as maintaining a copy of the document readily available for clinical staff in the area.

Where the standing order is for a specific Medical Officer, he or she is responsible for ensuring the instructions are correct, sign and date the protocol. This is to be undertaken annually prior to submission of the Standing Order to the Drug Committee for annual review.

Standing Order templates are accessed via 'Word>file>new>My Templates>Standing Order for Medications'.



Documentation:

When a nurse administers medication in accordance with the Standing Order, he/she must record the administration on the medication chart (or anaesthetic record) in the "once-only" section; this must be signed by a medical officer within 24 hours of administration.

The following is a list of drugs approved by the Drug Committee as Standing Order Drugs:

- Salbutamol (Nebulised)
- Oral Dexamethasone
- Laceraine Topical Wound Anaesthetic

3 Drug Supply

Supply of medications within the hospital is generally restricted to items on the Hospital Drug Formulary. The drug formulary is a list of drugs collated for use by prescribers within the hospital and regularly reviewed by the Director of Pharmacy and Drug Committee. If the drug is unavailable on the formulary, additions to this comprehensive list are reviewed by submission to the Drug Committee with supportive information. Please contact the secretary of the Drug Committee for further information.

To comply with the *Poisons and Therapeutic Goods Act 1966, Poisons and Therapeutic Goods Regulation 2008*, DOH Medication Handling in NSW Hospitals Policy PD2013_043 and good clinical practice guidelines, medications used for patients of the hospital should be supplied or dispensed by the Pharmacy Department.

These include prescription and non-prescription medications for:

- Inpatients
- Discharge
- Outpatients (unless ongoing community supply processes are arranged)
- Clinical Trials

This Guideline may be varied, withdrawn or replaced at any time.

This is to ensure accuracy and safety in provision of medications, and also that proper documentation and complete patient medication records are kept, especially for unregistered and clinical trial medications.

There may be exceptions when the Pharmacy is unable to supply medications:

- Non-formulary items, prior to Drug Committee approval
- Some non-prescription items including Complementary medicines
- Sponsor company problems
- After Hours (an after-hours room containing short term supply of most urgently needed medications may be accessed via the After Hours Nurse Manager. The On-Call Pharmacist is available 24/7 to discuss supply of medications not available in the after-hours room).

Emergency After Hours Drug Supplies

There are provisions for after-hours supply of pre-labelled starter packs containing some common medications around the hospital. On the rare occasion that a patient cannot access drug treatment, the Regulations allow for prescribers to dispense a 3 day supply of drugs in an emergency, so long as they complete patient details and full instructions in their own handwriting with the medications AND the original prescription covering the supply is forwarded to Pharmacy and a copy included in the patient's medical record.

Please discuss any issues with a pharmacist to resolve any problems with the supply of patient's medications. There may be options for selecting drugs within the same therapeutic class or consideration for special requests.

4 Drug Administration

All staff must refer to the medical officer's instructions documented on the medication chart when administering drug therapy. If an order is unclear, illegible or ambiguous it is the responsibility of the administering clinician to clarify the order, have it re-prescribed before administration and ensure it is recorded on "Safety at Kids" as set out in Section 2. Staff do not have a role in administration of medication to anyone other than patients of the CHW. The only exception to this is administration of Methadone to parents - refer to 7.10.2 Clinicians administering medication are responsible for ensuring that they are aware of any drug sensitivities or allergies, drug actions and interactions as well as the appropriate manner in which to safely administer the drug. To administer a prescribed medication safely and effectively the 5 principles of right must be ensured; they are:

- **Right Medication:** The medication chart must be reviewed prior to the administration of each medication. This should ensure that the prescribed drug is consistent with the patient's condition, no therapeutic duplications have been administered, and allergies and/or drug reactions to the medication have been considered. Check the name of the drug, that it is the correct form and has not expired.
- **Right Patient:** Check the patient's name and MRN on the identification arm bands against the medication chart. In an outpatient area check with the parent and confirm the child's date of birth. Check for any allergies or previous drug reactions.

- **Right Dose:** Check the appropriate dose has been prescribed using the references identified in 2.9. Calculate the correct dose and where 2 people are required to check the drug, ensure both persons calculate the dose independently. If more than three dosage units are required to administer any dose, RE-CHECK the calculation.
- **Right Route:** Check to ensure the route of administration prescribed is correct and meets the needs of the patient. Make sure you have chosen the correct dose form for that route. Read the label and ensure oral liquid doses are drawn up in an oral syringe.
- **Right Time:** Check that the prescription is current and valid; ensure the drug has not been given or ceased, check the dates, times and that the medication concurs with the prescribed frequency.

It is important to remember that patient safety is paramount during any medication administration procedure. Therefore ensure all items of equipment taken to the bedside are taken away at the end of the procedure and discarded appropriately (including cannula caps). Standard precautions apply for all medication administration procedures.

Medication doses are never to be left at the bedside for later administration.

4.1 Administration of Medication – Policy

- All Registered Nurses (RNs) and Enrolled Nurses employed by CHW (including those employed on the casual pool) must successfully complete the Mandatory Drug Calculation Test and perform 20 medication checks (Appendix V) before they can check or administer any medications. It is recommended that all nursing students (undergraduates) successfully complete the Mandatory Drug Calculation Test
- Enrolled Nurses Role - Enrolled nurses can either be classified as a "Enrolled Nurse (Medication Accredited)" or "Endorsed Nurse (Non Medication Accredited)". Endorsement can only be given by the Nurses and Midwives Board of Australia (NMBA). All Enrolled Nurses are considered to be 'Medication Accredited'; those ENs who have not yet completed the required units to qualify to administer medications will have a notation on the register against their name which will read: *Does not hold Board-approved qualifications in administration of medicines'.* Refer to NSW MoH Policy "Administration of Medications by Enrolled Nurses".
- Before any nurse can administer any IV medication and then every two years they must undertake the mandatory Administration of Intravenous Medications Clinical Assessment and be deemed competent. (see appendix IV)

4.2 Nursing Grade - Checks and Administration guide

Nurse Grade	Can they Check?	Check with Whom	Can they Administer?
AIN	No	N/A	No
Undergraduate Nurse – Pools (employed by CHW but are 3rd year nursing students)	Yes Can check medications via all routes (excludes S8 medication)	CHW RN or authorised casual pool RN Not with: - New graduates - EN (non-med accredited) NEVER ALONE	No

Nurse Grade	Can they Check?	Check with Whom	Can they Administer?
Nursing students (Undergraduate) (nursing students on clinical placement)	Yes Via all routes (excludes S8 medication) under the direct supervision of 2 RNs	2 CHW RNs or authorised casual pool RNs Not with: - New graduates - EN (non-med accredited) NEVER ALONE	Yes - under direct supervision of 2 RNs for all medication routes
Trainee Enrolled Nurse (TEN)	Yes Under the direct supervision of 2 RNs	CHW RN or authorised casual pool RN TEN CNE	Yes – under the direct supervision of 2 RNs
EN (non-Medication Accredited)	Yes Can check with an RN unscheduled, S2, S3 and S4 oral medications only. Cannot check: - standing orders - nurse initiated medications - phone orders - S8 drugs	CHW RN or authorised casual pool RN Not with: - New graduates	No
Enrolled Nurse (Medication Accredited)	**Yes** Can: - check S8 medications (*except* if S8 or S4D medications being loaded as a continuous infusion) - undertake the S4D and S8 Dangerous Drugs balance check with a RN - check IV additives in fluids Cannot check: - standing orders - nurse initiated medications - Phone orders - Inotropes - Potassium, muscle relaxants and midazolam being loaded as a continuous infusion - Blood products or PN - Cytotoxic chemotherapy	CHW RN or authorised casual pool RN Not with: - New graduates - EN (non-med accredited) - EN (med accredited)	Yes – with an RN Cannot administer: - S8 medications - Standing orders - Nurse initiated medications - Phone orders - Inotropes - Blood products or PN - IV additives - Cytotoxic chemotherapy - S4D infusions - Potassium, muscle relaxants and midazolam infusions
Agency EN	No	N/A	No
Agency RN	Yes (RN's employed by a nursing agency can only check medications once successfully completing a SAMUEL drug calculation test)	Permanently employed RN to that ward or authorised casual pool RN	No
Pool RN's (casual)	Yes (once successfully completing a SAMUEL drug calculation test)	Permanently employed RN to that ward or authorised casual pool RN	Yes with the checker
New Graduate RN (first 12 months)	Yes	RN permanently employed on ward, permanent ward pool	Yes with the checker Cannot administer S4 and S8 including opioids and

Nurse Grade	Can they Check?	Check with Whom	Can they Administer?
	Can check scheduled drugs (S4 and S8) including opioids and epidurals when deemed competent by the ward.	staff, other 1st year RN after 6 months of employment Not with: - EN (med accredited) - EN (non-med accredited) - New graduate RN - Undergraduate AIN - 3rd year undergraduate nursing student	epidurals until completed SAMUEL drug calculation test, performed 20 medication checks and deemed competent by ward. Cannot administer Nurse Initiated drugs within their 12 month program (with the exception of Middleton Ward)
RN (Permanently employed)	Yes	All nursing grades	Yes with the checker

- The same nurse must prepare record and administer the medication ordered.
- Where medication is administered over a period of time, including intravenous infusions, the maintenance of the infusion may be carried out by more than one nurse, with adequate handover.
- For IV medication, the medication is to be taken to the patient in an individual tray by both the administering nurse and the checking nurse.
- Prepare and administer one medication for one patient at any one time. This is to avoid any potential confusion of medication doses.
- No medication is to be left at the bedside. If it is not administered it must be taken back to be either destroyed or kept safely in the medication room.
- **Two** nurses must ***independently*** check all IV, IMI, subcutaneous and oral medications unless otherwise stated in section 4.4. An ***independent*** double check is a process in which a second nurse (or other health care practitioner e.g. pharmacist or medical officer) conducts a verification, which can be in the presence or absence of the first nurse or practitioner. In either case, the most critical aspect is to maximize the independence of the double check by ensuring that the first nurse does not communicate what he or she *expects* the second nurse to see, which would create bias and reduce the visibility of an error. Refer to Appendix VIII for further information.
- The two nurses must witness the administration of the medication and sign the medication order upon completion of the administration.
- Withheld or missed medications are to be documented on the medication chart using the code on the medication chart. If this omission is inadvertent, it is recommended that the clinician discovering this fact makes an IIMS entry via “Safety at Kids”.
- Wherever possible administer the medication at the same/similar time and in a similar manner to how the parents/carer does at home.

4.3 Calculation of Medication: formula

- Check strength of product in milligrams (mg) per millilitre (mL).
- The dose required (mg) is divided by the strength of product (mg/mL), therefore the formula is:

$$\frac{\textbf{Dose required (mg)}}{\textbf{Strength in stock (mg)}} \times \textbf{Volume in stock (mL)} = \textbf{Volume to be administered (mL)}$$

Note that Dose and Strength units must be in same terms (mg or microgram etc.)

e.g. Need 3mg dose and have 25mg/5mL mixture

$$\frac{3\text{ (mg)}}{25\text{(mg)}} \times 5\text{ (mL)} = 0.6\text{ mL}$$

4.4 Single Check Medications

Single check medications are those which only 1 RN is required to check, these medications are:

- Oral antipyretics
- Oral antibiotics
- Topical creams and ointments
- Oral vitamins
- Inhaled medications
- Oral antifungals
- Laxatives
- Topical anaesthetic gels
- Ear drops
- Nasal drops
- Eye drops excluding preparations containing steroids

4.5 Intravenous Drugs to be Administered by a Medical Officer

The following list is of drugs which must be administered by a Medical Officer, **except** appropriately accredited nursing staff. They include:

- Adrenaline
- Alteplase (rTPA)
- Aminocaproic Acid
- Anaesthetic agents
- Antiarrhythmics
- Antivenoms
- Beta blockers
- Flumazenil
- Ketamine bolus
- Contrast mediums
- Neuromuscular Blocking Agents
- Monoclonal antibodies (MABs)
- Infliximab (1st dose)
- Biologicals

4.6 Routes of Administration

4.6.1 *Intravenous Medication*

- All IV medication is to be given using the needle-less access system. Refer to Hazardous and Cytotoxic Drugs – Administration and Handling – CHW for CLAVE system.
- Intravenous antibiotic solutions should not be discarded into the sewerage system or air, i.e. sinks, drains or toilets. Instead either inject surplus solution into cotton balls and

discard these into clinical waste or re-inject surplus solution into the vial and discard into the appropriate receptacle. This ensures minimal exposure of the environment to antibiotics, and allows the natural breakdown of sewerage in the sewage treatment centres and minimizes the antibiotic load in the air.

- There are no set IV times for administration. All IV medications are to be administered as charted from the time of the first dose given. The order should be re-written if the times charted in ED are unsuitable for the ward. Contact Pharmacy for advice on timing of doses and Therapeutic Drug Monitoring.

4.6.2 Infusions

- Where an infusion or a syringe pump is used to administer a medication the settings must be checked by a second person.
- Before commencement of an infusion or changing a flask, IV fluids are to be checked by 2 qualified clinicians [RN, EN (med accredited) or MO].
- If small volumes of medication are to be infused continuously over a given time period e.g. an opioid infusion, a syringe pump is to be used. The rate and an hourly pre-set limit are to be checked with a 2nd clinician [RN, EN (med accredited) or MO]. Both clinicians signing for the medication are to check the infusion within 15 minutes of commencement and record. Hourly check of the infusion is to be documented.
- When transferring care of a patient to another nurse, the rate, volume and contents remaining in the syringe should be checked and documented by the RN transferring the patient to the accepting RN.
- Enrolled nurses' responsibilities are outlined in Section 4.2.
- All IV fluids containing medications are to be accurately documented on the appropriate chart (fluid balance chart, flowchart).
- All intravenous infusions are to be prescribed on the appropriate chart by the medical officer every 24 hours.
- At the commencement of each shift the RN responsible for the patient is to check the IV fluid against that ordered, ensuring correct fluid, additives and rate.
- For IV medications administered in the community setting, the responsible RN must have the infusion checked by a 2nd RN prior to leaving CHW.

4.6.3 Intravenous Bolus Medication

Some IV medication can be given as a bolus dose, recommendations can be found at CHW Drug Dosage Guidelines: or CHW Paediatric Injectable Medicines Handbook or in accordance with the Pharmacy Department Guidelines or manufacturer's recommendations.

They are given as either a *rapid IV push: in less than 30 seconds* **OR** *slow IV push: within 3-5 minutes*.

4.6.4 Intermittent Infusion

Sometimes it may be more appropriate to deliver IV medications as an infusion e.g. Vancomycin, therefore it is important to ensure patient safety by using guidelines to guarantee appropriate dilution and infusion times. Some literature refers to adequate

flushing volumes, therefore there is an imperative that these are managed and monitored appropriately. Some handy hints:

- Use syringe drive pumps to deliver intermittent drug infusions – cap the line once the flush after the infusion is complete, therefore ensuring the line remains in situ and capped until the next IV medication is required.
- If any intravenous giving set is used this must be discarded once disconnected.
- Ensure the appropriate volume of flush is given after the volume of fluid containing the medication is given.

The flush ensures the remainder of the IV medication is administered therefore it is important to know what fluid volume is required to ensure all medication is delivered – it is not appropriate to guess or use 20 mL routinely unless there is clear evidence this is the dead space in the IV line – check manufacturer instructions.

4.6.5 Intravenous Additives

- Whenever substances are added to IV fluids, their physical and chemical compatibility with the fluid and with any other added substance must be checked prior to making the addition. If doubt exists concerning the compatibility of various drugs or solutions to a patient, the ward pharmacist or on-call pharmacist should be consulted. Another source of this information can be found through accessing electronic databases via the Clinical Information Access Program (CIAP). It is the responsibility of the administering nurse to understand compatibility and stability of any IV additives and the ratio of fluid to the additive and to assess the patient's condition at least hourly during the administration.
- As a general rule, no more than one substance should be added to any IV fluid (the exception is for oncology patients with some pre-approved fluid regimens for cytotoxic administration).
- IV Fluid containing Potassium Chloride (KCl) must not be used as a base solution to administer IV medications.
- IV mixtures prepared by nurses should be for use on their shift only and be administered by the same 2 nurses.
- NEVER add to a bag of fluids already hanging as a bolus dose could be administered inadvertently.
- Care must be taken to adequately mix the final solution prior to administration.
- Solutions that show some precipitate should be discarded. However colour change can be normal for some additives so check manufacturers' recommendations.
- All additive solutions prepared must be accurately and adequately labelled. It is recommended that as a minimum the label is to include the following:
  - patients name, MRN & ward
  - name and volume of IV fluid
  - name of drug and amount added
  - final volume (mL)
  - date and time of addition
  - date and time to be discarded
  - signature of person making the addition

- signature of person checking the drug

All lines and medications/IV fluids should be labelled in accordance with NSW Ministry of Health Policy Directive (PD2012_007): '**User applied Labelling of Injectable Medicines, Fluids and Lines**': http://www.health.nsw.gov.au/policies/pd/2012/pdf/PD2012_007.pdf

4.6.6 Oral or Enteral Medication

The most common route for medication administration is orally. In the paediatric population it is important that the medication is age and ability appropriate e.g. syrup for infants and tablets for young people. Enteral medication should always be given in the liquid form and any device flushed well after administration. The following principles apply for administration of oral medication:

- Any liquid mixtures should be shaken vigorously to evenly distribute the suspended drug prior to measuring doses.
- Measure doses in a suitably sized **ORAL** syringe. Use an **ORAL** syringe closest in volume to the dose to be measured. Use an ORAL mixing cannula to draw up the mixture from its container if required.
- **Never** add any medication to any infant feeds. The exception to this is the addition of minerals ordered by the medical officer and this is always to be undertaken under the direct supervision of a dietician.
- **Never** give oral medication to a sleeping child.
- Where appropriate offer a suitable drink after the medication.
- If a syringe is used for oral medication, the child should be encouraged to suck it whilst the stream is directed into the side of the mouth. However it is advisable to use medication dispensing receptacles (cups) to administer oral medication where practicable.

4.6.7 Inhaled Medications

Refer to:

- Asthma Inhaled Medications Administration Using Inhalation Devices including Nebulisers
- Salbutamol Standing Order

4.6.8 Rectal & Vaginal Medication

When rectal or vaginal medication is given, 2 nurses **must** be present to ensure the child or young person and staff are not left vulnerable particularly in relation to child protection issues. The following principles will ensure patient dignity and safety:

- Ensure privacy and comfort whenever a rectal medication is given.
- Explain clearly what is happening to the child, parent or caregiver.
- Always use a water soluble lubricant on the suppository, or tip of a catheter etc.
- Slowly introduce the medication into the rectum or vagina; it should not be forced.
- For rectal medication insert the catheter or suppository for 1-2 cm for a baby and 5-6 cm for older children and young people.
- If a catheter is used to administer the medication, ensure that you flush with 2.5mL of normal saline following administration of the medication.

- Always place the patient on the left side to administer all rectal medications.
- Rectal medications must NOT be administered to oncology patients.

4.6.9 Intramuscular (IM) Medication

It is recognised that the administration of intramuscular (IM) medications is an unpleasant procedure for children and their families. Wherever possible, the use of the IM route for administration of medication should be avoided. To avoid any risk of local neural, vascular or tissue injury the IM injection should be given deep into the muscle mass. The needle used for IM injections should be long enough to reach the substance of the muscle. The following principles apply for IM injections:

- Do not use the same needle the solution has been drawn up with – change needles prior to administration.
- Use needles no longer than 2.5 cm.
- Clearly identify the site of injection – the dorsogluteal site should be avoided in children less than 2 years because of immature anatomical structures which may lead to complications.

Sites for injection include:

- Anterior-lateral aspect of the thigh.
- Vastus lateralis lateral mid-thigh
- Anterior mid-thigh
- Deltoid muscle
- Ventrogluteal (gluteus medius, gluteus minimus)

Further information can be found in the Immunisation Practice Guideline:
http://chw.schn.health.nsw.gov.au/o/documents/policies/guidelines/2006-8098.pdf

4.6.10 Subcutaneous Medication

The most common sites for subcutaneous injection are the upper outer aspect of the upper arm and the upper outer aspect of the thigh and the abdominal wall. For more information see Immunisation Practice Guideline.

Implanted Subcutaneous Injection Site (ISIS)

An ISIS is an indwelling catheter which can be left in place for up to 7 days, eliminating the need for multiple injections, and can deliver any subcutaneous injections. These can be bolus or infusion doses. The following principles are used with the Insuflon©:

- Children can bath and swim with the insuflon© in place.
- The catheter must never exceed 7 days indwelling time.
- Remove the catheter early if there are signs of redness, pain, inflammation or leakage.
- The insertion sites are usually either the anterior upper thigh, posterior aspect of the upper arm or the abdomen.

- To insert the ISIS- clean the site with an alcohol swab, pinch the skin at the insertion site and insert the ISIS at a 20-40° angle. Remove the introducing needle.
- Secure the ISIS by applying the dressing – ensuring the insertion site is covered and clearly visible and the hub is open to the air.

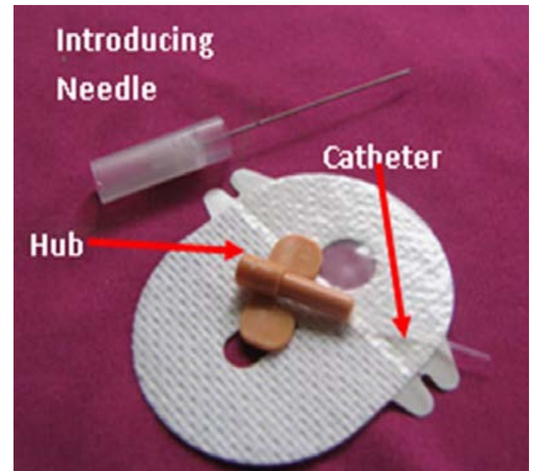


Diagram 1

Subcutaneous medications are given via the hub of the indwelling Insuflon© - it is important to observe the site at least once per day looking for redness, swelling, pain, leakage.

- Ensure the sites are rotated with each re-insertion

4.7 Drug Dose Preparation

Where there is no clearly defined method for the safe administration of a particular partial drug dose you must contact the staff in the Pharmacy Department for more information.

4.7.1 Reconstitution of Intravenous Medications

Refer to sections 4.6.1 through to 4.6.4 and the CHW Injectable Guidelines.

All vials for parenteral administration are to be used ONCE only. Do not share vials between patients. Do not store open vials for later use.

This practice protects patients from life-threatening infections that occur when medications become contaminated from unsafe use. Vials labelled by the manufacturer as 'single dose' or 'single use' should only be used for a single patient. Refer to the Center for Disease Control and Prevention position statement at: http://www.cdc.gov/injectionsafety/PDF/CDC-SDV-Position05022012.pdf

Further information can be found on page 52 and section 6.2.4 of the NSW MoH Medication Handling Policy Directive and page 32 (7.14) of the NSW MoH Infection Control policy.

4.7.2 Cutting Tablets

Where doses would be equivalent to half of a scored tablet, then such tablets may be divided in half to provide the dose. **Tablets (unless so scored) MUST NOT be cut into quarters**. Unused portions of tablets are to be discarded safely. In other cases check if an oral liquid preparation is available. If no liquid preparation is available, check with the Pharmacy staff to seek advice on finding a suitable solution for the oral medication. This may need to be prepared on-site in the Pharmacy Department. Oral cytotoxic medications MUST NOT be cut or crushed; refer to the Cytotoxic Drugs – Administration and Handling - CHW Policy for further information.

4.7.3 Crushing Tablets

- If all parts of a tablet require crushing for administration, then this should be done using a mortar and pestle or medication crushing device.
- Ensure the medication crusher or mortar and pestle are washed and dried thoroughly between each use.

- The crushed tablet(s) can usually be placed in water, juice, milk or some liquid to be given orally or via a gastrostomy tube. If giving via a nasogastric tube, care must be taken to ensure that the tablet is well dispersed to preventing blockage of the tube. Jam or honey can also be used to mix the crushed tablet to be given orally; the ward pharmacist can give direction on what liquids can be mixed with particular medications.
- It is important to remember, unless otherwise ordered, that crushed tablets are not to be administered via a transpyloric or jejunal feeding tube.
- Do not add medication to any bottle feed.

4.7.4 Dissolution/Dispersion of Tablets or Capsule Contents

- Some pharmaceutical companies have marketed preparations which are able to be dissolved/dispersed in a recommended volume of water e.g. an effervescent tablet preparation. These should be dissolved in accordance with the manufacturer's recommendation.
- Dispersed tablets are only partially soluble resulting in a suspension requiring good mixing prior to administration.
- Soluble tablets completely dissolve to give a clear solution.
- If a drug is only available in a powdered capsule form it can only be opened if used in its entirety and the pharmacy department staff has advised that the drug may be administered in this manner.
- In some cases, the solid contents of a capsule can be withdrawn, for example in patients who are allergic to the capsule shell component, and mixed with water or juice. The ward pharmacist will advise if the medication can be mixed with a particular fluid.
- When dispersed, the resulting solution must be stirred well before an amount is taken.
- A new tablet is to be used for each dose. Any remaining solution is to be discarded.

4.7.5 Withdrawing Fluid from Liquid Filled Capsules

Some medications are only available in a liquid filled capsule. This is usually due to pharmaceutical aspects of degradation due to light and air so that it is not available in either solution or tablet form. The concentration of the drug in the capsule is labelled on the container e.g. calcitriol capsules contain 1.47 micrograms of calcitriol per millilitre. These medications are to be ordered by weight (micrograms or milligrams) and the appropriate volume calculated for administration. The volume to be administered is withdrawn using a 1 mL syringe and needle. If there are problems withdrawing the liquid then a second capsule is to be used to obtain the correct dose. Consult a pharmacist if unsure for advice.

4.7.6 Use of Parenteral Preparations Orally

In a few instances, parenteral preparations may be used orally, when an oral liquid dose form is unavailable. In the experience of the Pharmacy staff at CHW, this is mostly employed where emergency situations exist and where IV use is contraindicated, however, before doing so please contact the pharmacy staff for advice. Some of the drugs which can be used enterally are:

- Calcium Gluconate*
- Clonidine*
- Flucloxacillin*
- Glycopyrrolate*
- Hysoscine N-Butyl Bromide (Buscopan)

- Midazolam*
- Omeprazole*
- Phenoxybenzamine
- Potassium Chloride*
- Sodium Chloride*
- Sodium Bicarbonate*
- Vancomycin
- Ketamine
- Phytomenadione*

*oral dose forms are available

4.8 Parent Administered Medication to their Hospitalised Child or Self Medication by a Young Person Inpatient

Parent administration of medication can help facilitate the involvement of families in the continuing administration of medication while their child is hospitalised. The ability and willingness of each parent or adolescent to participate must be assessed and evaluated by the nurse-in-charge before any procedures regarding medication are negotiated. Parents must only administer medication to their own child. Medication suitable for parent administration would be given orally, by gastric tube or by inhalation; other routes would need to be considered on an individual basis.

Specific Instruction:

- On admission, when taking the nursing history or negotiating care with the parent/carer/young person, medication administration is clearly indicated on the form. A note is made on the medication chart that the parent or young person is administering the medication.
- If the medication is not required during inpatient care, the medication should be returned home with the parent/carer.
- Each day the parent or young person's availability and willingness to give the medication is to be confirmed and documented in the patient's record.
- If medication is brought in by the family to be used during the hospitalisation, then the medication is to remain in the original packaging with the patient's name and instructions clearly visible.
- The patient's home medication regimen is prescribed on the medication chart by the admitting medical officer.
- A record must be made of each dose taken (by the nurse witnessing the administration of the dose). All medications are to be signed for on the medication chart as administered by the parent or young person.
- The responsibility of ensuring the medication is given according to the agreed regimen remains with the nurse caring for the child or young person.
- The medication is to be securely stored in the ward medicine room which is inaccessible to other patients or visitors.

This Guideline may be varied, withdrawn or replaced at any time.

- The nurse in charge of the ward is responsible for ensuring that the storage of self-medication is monitored.
- Schedule 4D and S8 medication is to be stored and administered according to the Poisons Act.

4.9 Patient/Parent/Caregiver Education

The patient and/or caregiver should be given information regarding their medication and course of treatment by the prescribing medical officer. A pharmacist, nurse or doctor should reinforce this information prior to discharge. The information should contain the name, action, dose, frequency and the most common side effects, which may arise. Parents or caregivers must also be given information on storage, preparation, measuring and administration techniques for medications they will be administering at home. If administration devices are required, instructions for use, cleaning or maintenance must be given. Consumer Medicines Information (CMI) leaflets are available and will be issued by pharmacists as required.

5 Drug Storage and Management

The nurse in charge of the clinical area is the person responsible for the storage of all drugs, in accordance with the Poisons and Therapeutic Goods Regulation 2002 (Clause 30 (3). All prescribed drugs must be stored in a locked cupboard, room or trolley out of the public and patient access. The cupboard, room or trolley must be kept locked when not in immediate use and any keys kept on the person of the nurse in charge. The code for the room is only to be made available to clinical staff and should be changed every 3 months (contact the Security Department). S4D drugs must be kept separate and securely from all other drugs (except those maintained on the Drug Register and kept with the S8 drugs as described in 7.8). The following principles are a guide to safe drug storage:

- Care must be taken with storage of drugs, particularly those which may have an adverse effect if administered in error due to a drug mix-up. For example Lignocaine ampoules should not be stored next to Water for Injection ampoules. Potassium is kept locked in a red box away from all other drugs.
- All drugs should be stored in the same container as received from the Pharmacy Department. Mixtures and lotions must not be poured from one bottle to another
- Re-labelling or over-labelling of containers must not occur.
- Exemptions to the above are storage of S4D drugs on resuscitation trolleys where emergency access is required and also those drugs requiring refrigeration (e.g. nitrazepam, clobazam mixtures).
- Exemptions also apply to Operating Theatres. However the drugs must be locked up at the end of any operating session and outside of operational hours.
- Self-administered medications must be stored in a locked cupboard which is inaccessible to visitors or other patients, this would include parent-administered medications – the key to the cupboard is to be given to the parent/care giver. Where

This Guideline may be varied, withdrawn or replaced at any time.

there is no lockable cupboard, the medication is to be stored in the locked medication room within the unit.

- Patient's own medication is to be sent home with the family or stored in the locked medication room once the hospital supply is ensured.

5.1 Complementary and Alternative Medicine

The term Complementary and Alternative Medicine (CAM) encompasses a wide range of disciplines of alternative practices. These include herbal, homeopathic, essential oils (aromatherapy), nutritional (vitamins & minerals) and some food supplements. In general, such therapies are not to be given while the child is in hospital. However:

In **exceptional** circumstances, and **only with the express support of the treating consultant**, such substances may be administered to a child in the hospital. This may occur, for example, in the case of a child who has a terminal illness, where the child and/or the parents perceive the substance to be of a particular benefit. Open communication with parents/carers about any medications and/or treatments given to the patient should occur to allow full discussion around the use of any CAMs. The nursing staff will not be involved in administering the substance, unless it has been dispensed from Pharmacy. The parents will give the substance to their child provided that there is no impact on the surroundings or other patients.

The child's clinical record is to reflect the administration of the substance which was administered by the parents and how it has been given. In addition, information about the product may be supplied by the parent and may be included as a part of the child's medical record. The ward pharmacist should be notified of any of these therapies and the consultant for that patient must express support for the ongoing use of the CAM. The Consultant should document all discussions relating to the CAM use in the patient's Medical Record. For more information, refer to Complementary and Alternative Medicine Use at SCHN policy and the TGA website: http://www.tga.gov.au/docs/html/cmreport.htm

6 S4D and S8 Drugs

The nurse in charge of the ward or clinical area is responsible for ensuring a record is kept of all S8 & S4D drugs in a ward register. The list of S4D drugs, which have been included to be accountable on the register, can be found in Appendix I.

2 nurses or 1 nurse and a medical officer/pharmacist/other authorised person must be present whenever the drug cupboard is accessed.

Entry details to be recorded in the ward register can be found at the following link:

- http://www0.health.nsw.gov.au/policies/pd/2007/pdf/PD2013_043.pdf
- S8 medications are to be administered to CHW patients only.

6.1 Witness to Administration and Discarding

When a registered nurse administers an accountable drug, another authorised person must be present to witness the entire procedure and administration (this includes the signing of the drug register). Details regarding the witnessing and administration of S8 and S4D drugs can be found at the following link: http://www0.health.nsw.gov.au/policies/pd/2007/pdf/PD2013_043.pdf

This Guideline may be varied, withdrawn or replaced at any time.

It is also recognised here at CHW that the witness may be a Registered Nurse, an Endorsed Enrolled Nurse, Medical Officer or Pharmacist. For enrolled nurses refer to 4.1. The witness may also be any other person authorised by the registered nurse in charge of the patient care area to complete this task, such as a radiographer. Any witness must be a person who is fully familiar with Schedule 8 medication handling and recording procedures.

6.2 Operating Suite

Due to the high volume of S8 drug use in the operating theatres and recovery the following are to be noted:

- S4D drugs not in immediate use are to be stored in a locked cupboard fixed to the wall.
- Supply for one patient only of S8 drugs can be kept on theatre trolleys. This can be re-stocked at the end of each use.
- Unlocked theatre trolleys must be located away from public access where they are supervised by theatre staff.
- At the end of the normal working day, drugs on trolleys must be returned to the appropriate storage area which is locked until required for use again. This could be for use after hours or the next working day.
- Drugs for immediate and emergency use may be kept out of the locked storage, provided that they are inaccessible when theatres are unsupervised.

  For more information refer to the following link:
  http://www0.health.nsw.gov.au/policies/pd/2007/pdf/PD2013_043.pdf

6.2.1 Operational Procedures for S4D & S8 Drugs

- The operating suite floor manager or the nurse-in-charge after hours, must collect the S8 keys from the after-hours Nurse Manager before entering the operating suite.
- At the completion of the shift, the nurse rostered "in-charge" must return the S8 keys to the after-hours Nurse Manager.
- The DD cupboards within the operating suite are located in the following areas:
  - Anaesthetic Room 1 – Emergency Theatre Room
  - Anaesthetic Store Room
  - Anaesthetic Store Room – near rooms 7-8
  - Main Recovery Clean Utility Room
  - Cardiac Catheter Laboratory (alcove)

6.2.2 Checking S4D & S8 Drugs

When a S4D and S8 drug is required, the anaesthetist contacts the anaesthetic nurse allocated to the theatre room to check the drug. All other requirements are outlined in 7.2.

6.3 Palliative Care Patients

If S8 drugs are prescribed for palliative care patients under the care of a CHW team (i.e. palliative care team) that have been discharged the following must occur:

- S8 drugs are to be prescribed and dispensed during Pharmacy open hours wherever possible for Palliative care patients being discharged.
- If a drug is required urgently after-hours for a patient who is at home in palliative care or being discharged for home palliative care, the on-call pharmacist can be contacted by the AHNM to dispense the medication required.

6.4 Supply

The NSW Ministry of Health (NSW MoH) do not permit the storage of S4D and S8 drugs in the after-hours cupboard. If the need arises for after-hours S4D and S8 drugs, it would be appropriate to make every attempt to borrow from another ward. Where this is not possible, the after-hours Nurse Manager is to be notified as they can access the Pharmacy Department for S4D drugs but the after-hours pharmacist on-call will be required to be called back for S8 drugs.

For more information refer to: http://www0.health.nsw.gov.au/policies/pd/2007/pdf/PD2013_043.pdf

6.5 Balance Checks

Balance checks of all S4D and S8 drugs are to be undertaken at least once every 24 hours. Where possible, a balance check should be done during, or at the change-over, of every shift. It is recommended that the nurse in-charge (or delegated nurse) of each shift undertake this procedure. The Pharmacy Department staff will undertake quarterly audits and the results will be sent to relevant parties.

6.6 Loss or Destruction of Accountable Drugs

All breakages or loss of accountable drugs must be reported to the Pharmacy Department staff as required in (Clause 124 of the Poisons Regulation 1994 – update reference). This must be done at the earliest convenience of staff. Outside of normal business hours the Nurse Manager must be notified.

The person/s who found the breakage or loss must complete a "Ward Stock Damage Report" which is kept in the drug cupboard (refer to Appendix II).

6.7 Specific Requirements

This Guideline may be varied, withdrawn or replaced at any time.

A prescription for an S8 drug must include either a finite period of administration or a maximum number of doses. The exception to this is if the drug is ordered as a "regular" not a "prn" medication for long term chronic therapy. Discharge prescriptions for S8 drugs should be written as described below:

6.8 Drug Storage

S4D and S8 drugs are to be kept in a locked cupboard (S8 cupboard) which is secured firmly to a wall. The keys to the cupboard are to remain with the registered nurse in charge of the unit or his/her delegate. This key is to be kept separate from any other key on a **RED** cord which is to be visible at all times.

- No items other than S4D or S8 drugs (e.g. keys, cash or documents or valuables) are to be kept in the S4D and S8 cupboards.
- If the clinical area is closed, all S4D and S8 drugs and key are to be returned to the Pharmacy Department and will remain in the Pharmacy Department until the area re-opens – this must be co-ordinated with the Pharmacy Department.
- Spare keys to the S4D and S8 cupboards are kept in the Pharmacy Department and are only available during normal business hours.
- If the S4D and/or S8 key has been inadvertently taken out of CHW, the person who removed the key is to be asked to return immediately to CHW with the keys, a balance check is attended, and the Pharmacy must be contacted. Consider changing the locks.
- If the S4D and/or S8 key is unable to be found, the cupboard is to have the lock changed.
- Patient's own S8 & S4D medications must be recorded in the unit register separately from the ward stock and kept accountable until discharge or discarding.

6.9 Return of S8 and S4D Drugs to Pharmacy

- The Pharmacy or the ward pharmacist are to be notified of out-of-date or unnecessary S8 and S4D stock held on the ward.

- The ward pharmacist together with a registered nurse check and write out the stock requiring removal from the ward in the DD register.
- Out of date stock should be annotated “Out of date – destroyed on ward” and the entry in the register signed by both parties.
- All out-of-date stock is to be destroyed on the ward (as per accepted Ministry of Health Policy).
- Any reusable stock is to be returned to pharmacy by ward pharmacist.
- Stock for return should be annotated “Returned to Pharmacy” and entry in the register signed by both parties.
- A record of drugs to be returned to pharmacy should be made in the DD order book and signed by both parties. The pharmacist will take the original copy to pharmacy for recording.

6.10 Destruction of S8 and S4D Drugs Returned to Pharmacy

S8 and S4D drugs that are deemed unusable are destroyed **within** the Department of Pharmacy. This includes drugs that have expired or have been returned to the pharmacy by parents or carers of children who no longer require them.

The Poisons and Therapeutic Goods Regulation 2008, Regulation 126A refers to the destruction of unusable or unwanted drugs of addiction in public hospitals. It states that the destruction of such drugs may be carried out by an authorised director of a public hospital. The destruction must be conducted in the presence of a witness. This witness must be either a pharmacist, registered medical practitioner, authorised midwife, authorised nurse or registered dentist.

At The Children’s Hospital at Westmead the authorised director is the Director of Pharmacy and the witness is the delegate appointed by CHW Executive.

The frequency of destruction will vary. There will be at least TWO scheduled destruction episodes per year, namely in March and in September. Destruction may also be required when the total amount of drugs of addiction stored in the Department of Pharmacy exceeds 20 items **or** when otherwise deemed necessary due to space constraints.

The Director of Pharmacy will report to the Drug Committee twice annually to document the destruction of S8 medicine within CHW Pharmacy, in April and in October.

The Procedure at The Children Hospital at Westmead for the destruction of Drugs of Addiction is as follows:

- The Director of Pharmacy or delegate authorised in writing will destroy each item in the Drugs of Addiction Destruction Book in the presence of a witness (delegate appointed by CHW Executive).
- The destruction will be recorded in the Drugs of Addiction Destruction Book. The record will include:

  - the date
  - the identification number of the items destroyed.
  - the name and signature of the authorised director and witness.
- A horizontal line will be drawn to indicate the completion of the destruction for that occasion.
- The following is a suggestion of techniques for destruction:
  - LIQUIDS: Pour liquid into drain (sink) and flush with water. Deface bottle with permanent ink and place in contamination bin
  - TABLETS: Remove from strips (or bottle), place into drain (sink) and flush with water.
  - INJECTIONS: Withdraw the contents of the ampoules or vials, expel into the drain (sink) and flush with water.

6.11 Methadone Dispensing and Management

At this stage there have been no admissions to CHW of patients who have been prescribed methadone outside the pain and palliative care service. With the opening of the new inpatient mental health unit this situation may change. Occasionally parents, who are the recipients of methadone, have a child in hospital and may have difficulty accessing their normal source of dispensing. In these circumstances the following should be used to guide practice:

6.11.1 Administration of Methadone to Young People

When a young person who has been prescribed methadone presents to CHW, the medication will be dispensed by the Pharmacy Department according to the same procedure as for other restricted drugs. Patients who have take-away methadone doses should hand them to the nurse on the ward so that the medication can be checked and shown to the admitting medical officer who will ensure that they contact the original prescriber and then prescribe the dose on the patient's medication chart. The patient's own methadone doses should be given to the parent/carer to take home. If this is not possible, it should be registered and stored in the DD cupboard but hospital stock should be used while the adolescent is an inpatient and the medication returned to the patient on discharge if still required.

6.11.2 Parents who are Unable to Attend their Usual Dispenser on Sundays and Public Holidays

It is not advisable for parents on methadone to have 'take-away methadone doses' in their possession, as facilities do not currently exist at CHW which enable parents to secure medications. The methadone doses are signed into the ward DD register by 2 authorised persons and placed in the S8 cupboard in accordance with existing requirements in 7.1. An individually labelled bottle with a pre-measured dose for each day will be made available and the accompanying documentation will be:

- The prescription.

- Identifying information about the prescription and the methadone recipient (parent) from the original prescriber and the counsellor. The parent receiving the methadone must be identified from this information and the parent must provide identification which correlates with this information e.g. credit card, Medicare card, driver's license.
- The parent should not be allowed into the medication cupboard.
- The nurse administers the dose to the parent. This should be done in a suitably discreet environment. The parent/carer will either drink the dose from the bottle or a cup. The parent/carer must swallow the dose in front of the 2 authorised clinicians and the dose is signed for in the S8 register.
- The dose should be given as close to the prescribed time as possible.
- If the parent/carer is not present on the ward on the day for which the dose is dispensed or there are any problems with dispensing, the pharmacist is to be notified on the next working day and the dose is not to be given.

6.11.3 Guidelines for Parents who bring their Take-away Methadone Doses into CHW

Parents who have take-away methadone doses should hand them to the nurse on the ward so that he/she (along with another authorised person) can register and store the methadone in the S8 cupboard. This is, however, entirely voluntary. The bottle should be given to the parent on request and the dose does not have to be administered by the nurse.

6.12 Dexamphetamine and Methylphenidate Prescribing & Supply

Authority is required on an individual basis to prescribe the Schedule 8 central nervous stimulant drugs, namely dexamphetamine and methylphenidate. Specialist medical practitioners who are approved by the NSW Ministry of Health for the management of Attention Deficit Hyperactivity Disorder are exempted from requirements for individual patient authority for stimulants where their prescribing is within set Ministry criteria. Copies of these criteria can be obtained from the Pharmaceutical Services Branch, or on the website at http://www.health.nsw.gov.au/public-health/psb/pubs.html and click on 'Pharmaceutical Services Publications'.

In a public hospital, exemption to the above authority requirements applies for a period of up to 14 days following a person's admission as an inpatient.

In practice:

- For a child admitted to hospital currently receiving either dexamphetamine or methylphenidate in the community, the order is written on the NIMC by the ED physician or admitting team.
- The medication will be supplied from pharmacy, on receipt of a copy of the NIMC order and DD order book request. The supply will be labelled for that individual patient.

- For a child remaining in hospital beyond the 14 day exemption period, an authorised paediatrician must prescribe the ongoing supply.
- For an admitted child initiating dexamphetamine or methylphenidate therapy, prescription must be by an authorised prescriber. If there is no registered paediatrician involved in the care of that patient, then individual approval should be sort by a senior member of the treating team to cover ongoing supply during admission. This approval can be obtained from the Pharmaceutical Services Branch on (02) 9879 5239 (Monday-Friday business hours)

7 Cytotoxic Drugs

This section has been removed from the Medication Management and Handling Practice Guideline to form a stand-alone Procedure entitled "Cytotoxic Drugs: Administration and Handling": http://chw.schn.health.nsw.gov.au/o/documents/policies/procedures/2011-8019.pdf

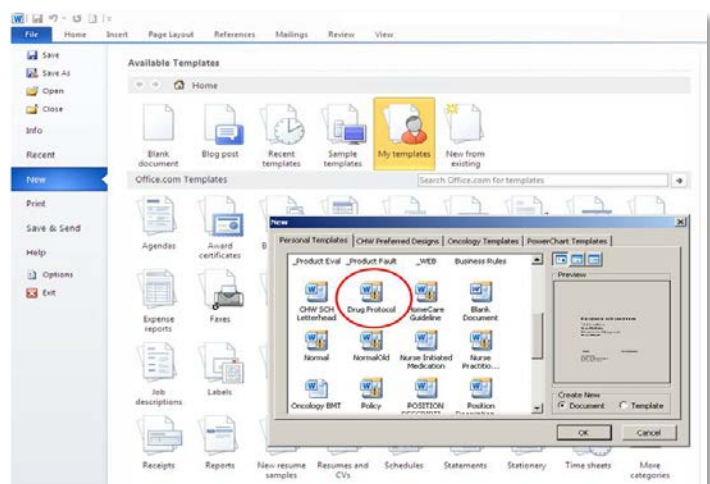
Restricted Antibiotics

An antimicrobial stewardship program is established at CHW. The program consists of groups of restricted antibiotics and accepted indications for use. This information can be found at: http://chw.schn.health.nsw.gov.au/o/groups/drug_therapy/resources/antibiotic_approval.php. This approval system requires electronic requests to be logged **as per hospital policy** (Antimicrobial Stewardship Policy and Procedure**)** when restricted antibiotics are prescribed. This program is designed to control the rise in resistant micro-organisms resulting from the use of broad-spectrum antibiotics.

8 Drug Protocols and Information

Requests for specific drug protocols are to be forwarded to the Pharmacy Services Manager, who will present them to the Drug Committee for endorsement. A Drug Protocol Template is available at: Word>File>New>My Templates>'Drug Protocol'.

Under no circumstance is any drug protocol to be used within CHW without prior approval and appropriate documentation being completed.



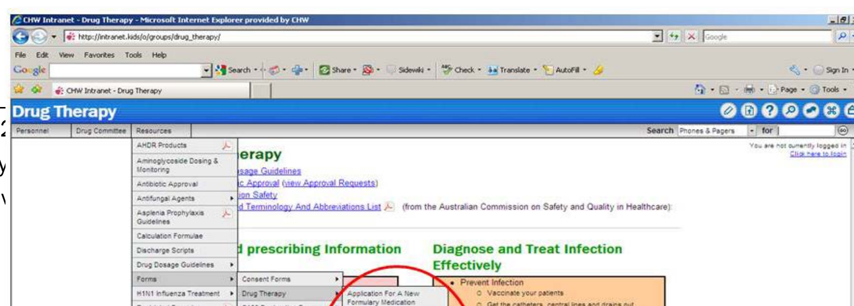
9 Drug Related Intranet and Internet Links

- NSW Health 100 Highly Specialised Drug Program: http://www.health.nsw.gov.au/policies/ib/index.asp (Periodical Information Bulletins)
- CHW Drug Dosage Guidelines: http://chw.schn.health.nsw.gov.au/o/apps/picu/drug_doses/
- CHW Injectable Guidelines: http://chw.schn.health.nsw.gov.au/o/apps/pharmacy/injectables/
- CHW Neonatal Dosing Guidelines: http://chw.schn.health.nsw.gov.au/ou/grace_neonatal_nursery/resources/medical_resources/handbook.pdf
- NSW Health Policy for Administration of Intravenous Medication in NSW Public Healthcare Facilities: http://www.health.nsw.gov.au/policies/pd/2007/pdf/PD2013_043.pdf
- MIMS (Username: nh1236, Password: pa94rody): http://proxy36.use.hcn.com.au/Search/Search.aspx
- Therapeutic Goods Authority – TGA Adverse Drug Reaction Bulletin: http://www.tga.gov.au/index.htm
- SCHN Procedural Sedation (Paediatric Ward, Clinic and Imaging Areas) Practice Guideline: http://chw.schn.health.nsw.gov.au/o/documents/policies/guidelines/2011-9017.pdf
- Pain Management Guidelines: http://chw.schn.health.nsw.gov.au/o/documents/policies/guidelines/2006-8215.pdf
- CHW High Risk Medications Policy: http://chw.schn.health.nsw.gov.au/o/documents/policies/policies/2010-8020.pdf
- CHW Antimicrobial Stewardship Policy and Procedure: http://chw.schn.health.nsw.gov.au/o/documents/policies/policies/2008-8007.pdf
- Drug information can also be located in the CIAP website: http://www.ciap.health.nsw.gov.au/

10 The Children's Hospital at Westmead Drug Committee

The Drug Committee is responsible for reviewing all aspects of drug use within CHW. Areas of the committee's responsibility include:

- Promoting cost-effective and quality drug use.
- Development and approval of all policies, procedures or practice guidelines regarding drug use, administration or prescription, whether hospital or unit based.
- Analysis of patient safety regarding drug incidents and developing strategies for medication error within CHW.
- Approval of drugs used within CHW according to the CHW formulary in conjunction with Senior Management.
- Applications for Individual Patient use of a drug, Extension to Individual Patient use of a drug, New Formulary Drugs etc can be found on the Drug Therapy Page under 'Resources>Forms>Drug Therapy'



11 The Pharmacy Department

The department is located on level 2 and is available for both inpatient and outpatient dispensing of prescription drugs. Information can be found at http://chw.schn.health.nsw.gov.au/ou/pharmacy/.

Drug Information and clinical pharmacy services are provided. An IV Admixture service is provided for preparation of all chemotherapy, parenteral nutrition and specialised parenteral drug doses. Pharmacists attend wards for medication review and patient/parent education as required. The hours of business are between 9.00 a.m. and 8.00 p.m. Monday to Friday for dispensing outpatient prescriptions and until 9.00 p.m. for inpatient prescriptions. On Saturday and Sunday the department is open from 9.00 a.m. until 12 midday for dispensing inpatient medication and collection of previously dispensed outpatient prescriptions.

After Hours

It is the responsibility of ward staff to ensure there is sufficient drug supply for patients on the ward. However, staff must contact the After Hours Nurse Manager who will be able to access the After Hours Drug Room (AHDR) for drug doses required for patient use prior to the next Pharmacy opening time. If the required item cannot be located in the AHDR, the AHNM will contact the on-call pharmacist and arrangements are made to obtain the item or provide the required information. Before leaving the hospital or call-back, the pharmacist will contact the AHNM to confirm there have been no further requests for information or medication.

The Emergency Department (ED) also keeps a small supply of drugs for dispensing by a medical officer on prescription for patients being discharged from ED after pharmacy hours or a PBS prescription may be written.

12 Resources

1. Alderson PJ and Lerman J. (1994). Oral pre-medication for paediatric ambulatory anaesthesia: a comparison of midazolam and ketamine. Can J Anaesthesia. (41): 221-6.
2. Audenaert, S.M. et al. (1995). Cardiorespiratory effects of pre-medication for children. Anaesthesia and Analgesia. (80): 506-10.

3. Author unknown. (1995). Isoprenaline test protocol: notes for the guidance of cardiology medical and nursing staff.
4. Beecroft, P & Redick, S (1989) Possible complications of intramuscular injections on the Paediatric Unit. Paediatric Nursing July -Aug Vol 15 No 4
5. Brown, K. (1993). Boosting the failing heart with inotropic drugs. Nursing. April. Pp.34-43.
6. Covington,T. & Trattler, M. (1997) Bulls-eye. Finding the right target for I.M Injections. Nursing 97 January 62-63Greenbatt, D. & Allen, M. (1978) Intramuscular injection-site complications. JAMA August 11 Vol 240, NO 6 542-544
7. Dahlmann, A.R. (1989). Captopril (Capoten). In Neonatal Network. 7(5):41-43.
8. Funk, W. et al. (2000). Oral pre-anaesthetic medication for children: double-blind randomized study of a combination of midazolam and ketamine vs midazolam or ketamine alone. Br J Anaesthesia.(84):335-40.
9. Goodman and Gilman (1996). The Pharmacologic Basis of Therapeutics. P1752.
10. Hahn, K. (1990) Brush up on your injection technique. Nursing Vol 20 No 9 : 54-58
11. Hanas, R. & Ludvigsson, J. 1990 'Side effects and indwelling times of subcutaneous catheters for insulin injections: A new device for injecting insulin with a minimum of pain in the treatment of insulin dependent diabetes mellitus', Diabetes Research and Clinical Practice. 10:73-83.
12. Hanas, R. & Ludvigsson, J. 1997 'Experience of pain from insulin injections and needle-phobia in young patients with IDDM', Practical Diabetes International. 14(4):95-9
13. Hayes, C. (1994) Injection Technique Intramuscular 2. Nursing Times 94(44) Supplement 1-2
14. Information Bulletin 97/8, Occupationally Acquired Sensitisation to Pharmacological Agents.
15. Jordan, S.C., Scott, O. (1994). Heart Disease in Paediatrics. (3rd ed.) Butterworth Heinrenann Ltd:Cambridge.
16. Kasma, D. Smith, G. (1997) Analysis of needle path during Intramuscular injection.
17. Lau, K.C. Cardiologist, (conversation) The Children's Hospital at Westmead, Sydney.
18. Mallet, J. Bailey, C (1996) Manual of Critical Care Nursing Procedures. Oxford: Blackwell Scienc
19. McConnell, E (1999) Administering a Z track IM injection. Nursing 99 January. p 26
20. MIMMS Annual, (1996). Captopril. Pp:2-48-50
21. MIMS. (1996). Dobutamine. Pp.2-152
22. Newton, M. Newton, D & Fudin J (1992) Big Three Injection Routes. Nursing 1992 Feb p 34 41
23. Noerr, B. (1991). Captopril. Neonatal Nework. 9(5):69-71.
24. Noerr. B. (1994). Dobutamine. Neonatal Network. 13(7):61-63.
25. NSW Health Policy Directive (PD2007_036) Infection Control Policy. http://www.health.nsw.gov.au/policies/pd/2007/pdf/PD2007_036.pdf (accessed April 2012)
26. NSW Health Policy Directive (PD2005_088) Non-Coring Needles - De-accessing from internal catheter ports. http://www.health.nsw.gov.au/policies/PD/2005/pdf/PD2005_088.pdf (Accessed April 2012)
27. NSW Health Policy Directive (PD2013_043) Medication Handling in New South Wales Public Hospitals. http://www.health.nsw.gov.au/policies/pd/2007/pdf/PD2013_043.pdf (Accessed April 2012)
28. NSW Health Policy Directive (PD2005_343) Medication - Administration by Endorsed Enrolled Nurses. http://www.health.nsw.gov.au/policies/pd/2005/pdf/PD2005_343.pdf (accessed April 2012)
29. Nursing Research Sept/Oct 97 Vol 46 No 5 p 288-292
30. Pegoli, V RN. Kotasek, D. 1997 'Daily administration of granulocyte colony stimulating factor using a subcutaneous butterfly'. International Journal of Nursing Practice. 3(2):141
31. Princess Margaret Hospital for Children; October 2003, No: 3.1, Standards for Prescribing Medication
32. Reidy, L.S., O'Hara, P.A. and O'Brien, P. (1989). Streptokinase use in children undergoing cardiac catheterisation. Journal of Cardiovascular Nursing. 4(1):46-56.
33. Royal Children's Hospital and Health Service District; August 2002, No: 01000, Medications
34. Schactman. M, and Vinsant-Crawford, M. (1988). Dobutamine rescue for intractable CHF. American Journal of Nursing. Dec. pp.1642-1643.
35. Schechter, N. Blankson,V. .Pachter, L.M. & Sullivan, C (1997)
36. Schnatz, D. Wax, J. Steinfield, J. Ingardia, C (1999) Meralgia Parestheica: An unusual Complication of Post-Caesarean Analgesia. Journal of clinical anaesthesia: Vol 11 August p 416-418
37. The Ouchless Place: No pain, children gain: Paediatrics Vol 99 No 6 June 1997
38. Van der Walt, J.H and Moran, C. (2001). An audit of peri-operative management of autistic children. Paediatric Anaesthesia. (11):401-8.
39. Winslow, E. H. and Jacobson, F.J. (1997). Rethinking subcutaneous injection technique. Australian Journal of Nursing. 97(5):71-2.

This Guideline may be varied, withdrawn or replaced at any time.

40. Wong, D. L. (1995). Whaley and Wong Nursing Care of Infants and children. Mosby: St. Louis.

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Appendix I: S4D – Ordering, Storage and Disposal

The following drugs are S4D, all requiring accountability in the ward drug register:

- Anabolic steroids
- Oxandrolone
- Testosterone Inj
- Testosterone Cap*
- Chloral Hydrate
- Clobazam Tab*
- Clonazepam Tab*
- Clonazepam Liq/Inj
- Diazepam Tab*
- Diazepam Liq/Inj
- Ephedrine
- Lorazepam Tab*
- Midazolam Liquid/Injection
- Nitrazepam Tab*
- Paraldehyde*
- Phenobarbitone Tab*
- Phenobarbitone Liq/Inj
- Pseudoephedrine* (>60mg strength)
- Thiopentone (Pentothal)

All dosage forms e.g. tablets, capsules, liquids, injections MUST be recorded, including all refrigerated S4D drugs. (Clobazam,and Nitrazepam mixtures)

In some wards, midazolam is stored for emergency use on resuscitation trolleys (Emergency) or in seizure control kits (Commercial Travellers). This is limited to 2 ampoules per trolley/kit. Ampoules taken from the cupboard to replace an ampoule used in trolley/kit should be recorded. An entry should be made in the DD book as follows:

"To replace stock in Trolley/Kit Number 1. Used for Baby Smith MRN"

The resuscitation trolley/kit must be checked for completeness of content (both S4D and other items) with each shift or once a day as per the ward policy, and there should be documentation of this check.

When a new trolley or kit is being prepared, a pharmacist and a nurse must document and transfer the S4D stock.

Appendix II: Ward Drug Stock Damage Report (S4D and S8)

The Children's Hospital at Westmead

Pharmacy Department

WARD DRUG STOCK DAMAGE REPORT ACCOUNTABLE DRUGS ONLY (S4D AND S8)

Time:	Date:
Ward:	
Drug:	
Form (Oral/IV):	Strength:
Manufacturer:	
Explanation of breakage or loss:	
Name (print):	Signature:
Witness (print):	Signature:
Record of breakage, destruction or loss must be made in the drug registers and countersigned by a Pharmacist (Monday-Friday 8.30am-5.00pm, Saturday 8.30am-12 noon) or a Supervisor (out of hours)	
Pharmacist (print):	Signature:
Supervisor (print):	Signature:
1. Evidence (if applicable) should be retained until countersigned and all forms to be returned to Pharmacy at the earliest opportunity	
2. All breakages and loss of ward accountable drugs must be reported to Pharmacy as required by Clause 124, Poisons Regulation 1994.	

Appendix III: Preparations Compounded at CHW Pharmacy

Preparation	Strength	Stock	Refrigerate
ACETAZOLAMIDE MIXT	50mg in 1mL		✓
ACETIC ACID TOPICAL SOLN	Dilute 3% commercial on ward		
ACETYLCYSTEINE bowel wash or oral solution	Dilute 20% commercial on ward		✓
ALLOPURINOL SUSP	20mg in 1mL		
AMIODARONE SUSP	5mg in 1mL		✓
ATENOLOL SUSP	10mg in 1mL		
AZATHIOPRINE SUSP	10mg in 1mL	✓	✓
BACLOFEN SUSP	5mg in 1mL		✓
BIOTIN CAPSULES	VARIOUS, (2mg in 1mL Adelaide)		
BIOTIN SUSP	5mg in 1mL	✓	✓
BONNEY'S BLUE Topical Soln			
CHOLECALCIFEROL (Vit D3)	5000 units in 1mL, 400 units in 1mL	✓	
CHOLESYTRAMINE Paste	5%, 10%	✓	
CLOBAZAM SUSP	1mg in 1mL	✓	✓
CMC GEL	1%	✓	✓
CYSTEAMINE MIXTURE	200mg in 1mL	✓	✓
CYSTEAMINE OINTMENT	0.55%	✓	✓
DAPSONE SUSP	2mg in 1mL		✓
DESMOPRESSIN ACETATE Nasal SOLN (Diluted)	10mcg in 1mL (100mcg/mL commercial)		✓
DIAZOXIDE SUSP	10mg in 1mL	✓	✓
DI-SODIUM HYDROGEN PHOSPHATE MIXTURE	0.5molar		
DI-POTASSIUM ORTHOPHOSPHATE	0.5 & 1molar		
FLUCYTOSINE SUSP	10mg in 1mL 20mg in 1mL		
FOLIC ACID SOLN	100mcg in 1mL 500mcg in 1mL	✓	
FOLINIC ACID mouthwash	1mg in 1mL		✓
FLECAINIDE SUSP	10mg in 1mL		
GANCICLOVIR SUSP	100mg in 1mL	✓	
GENTAMICIN Inhalation	4mg in 1mL		✓
HSC Suspending Vehicle		✓	
5 HYDROXY TRYPTOPHAN (5-HT Powders)	Various	✓	✓
HYDROCHLOROTHIAZIDE	10mg in 1mL	✓	✓
HYDROCORTISONE MIXT	1mg in 1mL		✓
HYDROXOCOBALAMIN (Vit B12)	5mg in 1mL	✓	✓
HYDROXYCHLOROQUINE	25mg in 1mL		
HYDROXYUREA SUSP	100mg in 1mL		

Preparation	Strength	Stock	Refrigerate
INDOMETHACIN SUSP	2mg in 1mL	✓	
ISONIAZID SUSP	10mg in 1mL	✓	
LOSARTAN SUSP	2.5mg in 1mL		✓
METHYLCELLULOSE GEL	1%	✓	✓
METOPROLOL SUSP	20mg in 1mL		
NITROFURANTOIN SUSP	10mg in 1mL		
OMEPRAZOLE SUSP	2mg in 1mL	✓	✓
PHOSPHATE –	See Di-Sodium/Potassium		
PLAIN INHALATION	--	✓	✓
PROBENECID SUSP	25mg in 1mL		✓
PROPRANOLOL SUSP	2mg in 1mL		✓
PYRAZINAMIDE MIXT	100mg in 1mL		✓
PYRIDOXAL-5-PHOSPHATE	Caps, various strengths		✓
PYRIMETHAMINE SUSP	2mg in 1mL		
SACCHARIN ELIXIR	3.26% w/v	✓	
SAPONIFIABLE BASE (Downie's Base)	--	✓	
SERTRALINE CAPS	12.5mg	✓	
SILDENAFIL SUSP	2mg in 1mL		✓
SILVER NITRATE Soln	Variable		
SODIUM BENZOATE	144gm in 1mL		
SODIUM CITRATE (Modified Shohl's)		✓	✓
SODIUM DICHLOROACETATE	Capsules 250mg	✓	
SOTALOL SUSP	5mg in 1mL	✓	✓
SPIRONOLACTONE (CHW) SUSP	2.5mg in 1mL	✓	✓
SUCRALFATE CREAM	10%		
SUCROSE MIXT	25%		✓
SUPHAPYRIDINE SUSP	200mg in mL		
SULPHASALAZINE SUSP	100mg in mL		
TACROLIMUS SUSPENSION	0.5mg in 1mL	✓	
TACROLIMUS OINTMENT	0.1%, 0.2% & 0.3%		
THIAMINE MIXT	10mg in mL		✓
THIOGUANINE SUSP	40mg in 1mL	✓	
THYROXINE SODIUM MIXT	10mg in 1mL		✓
TRIMETHOPRIM SUSP	10mg in 1mL		✓
UPTON'S PASTE	--		
VERAPAMIL SUSP	50mg in 1mL		
VITAMIN D2 (ERGOCALCIFEROL)	400units in 1mL 5000units in 1mL	✓	
ZINC SULPHATE MIXT	20mg in 1mL = 4.5mg in 1mL elemental zinc	✓	

Appendix IV: Administration of Intravenous Medications

Administration of Intravenous Medications Clinical Assessment

Please complete Section A and Section B.

Name: ____________________________ **Date:** ___________

Assessor: ____________________________

Section A **Administration of Intravenous Medication**	Yes	No	N/A
o Reads Medical Officer's order on medication chart			
o Ensures legality of the prescription o Takes action to ensure the legality of the prescription			
o Ensures medication has not already been administered.			
o Checks policy regarding medication to be administered including guidelines for dosage and administration of medication.			
o Washes hands.			
o Checks medication against order on medication chart.			
o Checks expiry date of medication.			
o Checks diluent and expiry date.			
o Checks Normal Saline and expiry date if "flush" required.			
o Correctly calculates medication dosage required.			
o Correctly draws up the medication dosage required.			
o Checks patient identity.			
o Checks for allergies.			
o Gives a clear explanation to the patient.			
o Checks cannula / CVAD site for inflammation, swelling or leakage.			

Section B ….by bolus via the port of an intravenous infusion giving set	Yes	No	N/A
o Checks compatibility of medication with infusion in progress.			
o Prepares injection site with alcohol prep swab.			
o Occludes line by pinching or clamping.			
o Injects medication over required time.			
o "Flushes" line with normal saline flush or fluid in progress.			
o Resets infusion rate.			
o Observes patient for reaction to medication.			
o Disposes of used equipment appropriately.			
o Records administration on medication chart.			
Section C ….via the burette	**Yes**	**No**	**N/A**
o "Flushes" line if another drug infusing in line.			
o Checks compatibility of medication with infusion in progress.			
o Fills burette with required fluid.			
o Prepares additive port with alcohol prep swab.			
o Adds medication to burette and mixes.			
o Applies completed additive label to burette.			
o Sets infusion rate.			
o Observes patient for reaction to medication.			
o Disposes of used equipment appropriately.			
o Records administration on medication chart and /or fluid chart.			

Competent/Not yet Competent

Nurse:_______________________________
(Sign and print)

Assessor:____________________________
(Sign and print)

Date:___________

Appendix V: Medication Checks

20 Medication Checks

Name: ______________________________
Date: ___/___/____

The purpose of the '20 Medications Checks' is to evaluate an individual's medication administration process (preparation, administration and documentation) prior to accreditation to administer medications in their area of practice. The medications chosen should reflect those used in the area of practice, including all routes of administration (eg IV, PO, Nebulised), high risk or high turnover medications used.

The individual being assessed should describe the process as the evaluation progresses, including verbalising the '5 rights'. The checking process should be undertaken between the individual being assessed and the assessor, ie two people checking as per the normal independent double checking process.

Drug Name/Route	CNE/NE/NUM/CNS Signature	Date
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		

This Guideline may be varied, withdrawn or replaced at any time.

Appendix VI: Medication Administration Times

Medication Administration Times ___Ward

Morning	Mane	0800			
Night	Nocte			1800/2000	
Twice a day	BD	0800		2000	
Three times a day	TDS	0800	1400	2000	
Four times a day	QID	0800	1200	1600	2000
Six hourly	6 hrly	0600	1200	1800	2400
Eight hourly	8 hrly	0600	1400	2200	
CF tobramycin	0630				

Refer to NSW PD 2006_028 and NIMC for recommended standard administration times

Figure 1: Chart to display non-standard medication administration times.

Medication Administration Times and the NIMC: Frequently Asked Questions:

Why do doctors have to write in administration times?
Misinterpretation of the intended frequency of a medication order can cause medication errors resulting in potential adverse patient outcomes. Prescribers entering times at the time of writing the prescription is designed to more clearly communicate the prescriber's intention and to decrease these types of errors, and potential patient harm. Data from the national pilot implementation of the NIMC showed a 7.6% increase in correlation between actual administration times and prescribed frequency when administration times were entered by the prescriber. This represents a reduction from 10 errors per 100 orders to 3 errors per 100 orders, i.e. a large number of potential adverse events averted. Several critical incidents, with significant clinical consequences (including one in a neonate), have also been reported to IIMS resulting from misinterpretation of frequency. Although there has been some controversy about this change in practice initially, many sites (eg most Queensland hospitals, including paediatric) now have this as standard practice, and report high levels of compliance and substantial reductions in frequency related errors.
For paediatric patients, additional considerations may need to be taken into account. Doctors and nurses are urged to use common sense, flexibility and good communication to ensure that patient care is not compromised at any time.

What happens if the Dr does not enter the times?
Nurses should not enter times routinely. However, the patient must still be administered the medication. An important part of safe prescribing is communicating orders clearly. For new orders, prescribers should ensure nurses are aware that a new medication has been prescribed, to ensure its availability and safe administration at the correct dose interval. The Paed-NIMC should foster discussion between Drs and nurses as to how and when a new medicine is administered. Getting this right at the time of writing the prescription is ideal and should ultimately save considerable time for all staff (eg in seeking clarification about or changing times if not appropriate).

What happens if the doctor does not write the most appropriate administration time?
The administration time is not considered part of the legal prescription, so the nurse may change the time to suit meal times, scans etc without breaching legislation. However, if there is any uncertainty regarding the intended frequency, the nurse should contact the prescriber to seek clarification first. It is also important to note that LEGIBILITY is a very important safety feature. The current version of the NIMC-paed has very little space to allow crossing out and writing new times clearly. Doctors and nurses should keep this in mind and make every effort to ensure that any changes are CLEAR.

What happens if the Dr prescribes tds times at 8am 2pm and 8pm but the first dose needs to be given now at 11am?
The answer to this FAQ depends on the type of medicine being given, the child's clinical condition and the route of administration. In general, the first dose can be written on the 'once only' section and then the next dose is ordered on the regular med chart- the prescriber can decide whether to give 'early' at 2pm or later at 8pm, depending on the clinical circumstances. For IV meds, the times in this example may have to be changed from the recommended ones to reflect 8 hourly dosing.

What should be done if an IV tissues?
This is not just a problem with the new chart, but a general medication administration issue. Options include recharting with new times, or omitting dose altogether and giving the next dose when due. As a general principle, nurses should try to stick to standard times. Which option is chosen, depends on the drug administered, time the IV line was out and the child's clinical condition. Being a complex problem, there is no standard answer that is appropriate for all circumstances. The individual case should be discussed with the Team doctor/s: e.g. in an unstable patient with an acute infection, an antibiotic should be given straight away once IV resited, whereas for a prophylactic antibiotic, a dose could probably be missed without compromising patient well-being.

How about medicines started in the ED or ICU? Do you play 'catch up' to get the meds around to standard times?
Medicine to treat acute illnesses should be started straight away. Regular medicines such as vitamins etc can be started the next day or at the recommended time. Emergency Department prescribers should write in the standard times, after noting the time the first dose was given. Depending on the drug, the doses could be gradually changed to standard times once transferred from ICU or ED eg daily gentamicin started at 2am could be gradually moved up to 8am.

What happens when you take a drug level e.g. gentamicin, anticonvulsants?
This FAQ pops up a lot and is not particular to the NIMC. The dose should be administered at the usual time (i.e. do NOT wait for the result)
UNLESS:
-otherwise instructed by the prescriber (eg by telling the nurse or writing a note in the "additional information" part of chart to wait for the result before administering the drug);
OR
-if there are clinical reasons to suspect toxicity (e.g. if the child is ataxic and taking phenytoin, the phenytoin levels may be toxic and so waiting for the drug levels to come back before administering that dose is appropriate).
In most instances of routine monitoring (eg trough levels for TDS gentamicin), there is no need to wait for the level to come back to administer that dose. However, the level should definitely be checked before the following dose is given.

This Guideline may be varied, withdrawn or replaced at any time.

Appendix VII: Clinical Competency - Nurse Initiated Paracetamol

Clinical Competency: Nurse Initiated Paracetamol

Candidate Name: ______________________________ *(print clearly)*

Assessor Name: ______________________________ *(print clearly)*

Demonstrates the knowledge and skills the safe administration of nurse initiated Paracetamol to children & young people

➢ Statement of performance criteria
- Procedure or policy components

Elements of Competency	Performance Criteria	Elements Achieved		Further Action Required
		Yes	No	
1) Identifies the need for a child to have a dose of nurse initiated Paracetamol	➢ Assessment findings using a recommended paediatric pain assessment tool indicate a child > one month of age has mild to moderate pain or a fever > 38.0^0 C			
2) The need for the administration of Paracetamol is explained to the child and or parent/carer	➢ Uses age appropriate words and phrases when communicating with the child ➢ Explains to the child and parent/carer the rationale for administering a dose of Paracetamol and describes the expected outcome			
3) Describes a knowledge of Paracetamol	➢ Describes the actions of Paracetamol and the side-effects • CHW Nurse Initiated Medication Protocol ➢ Is familiar with the dosage range for the administration of Paracetamol to children at CHW • CHW Nurse Initiated Medication Protocol			
4) Ensures the child is eligible to receive a dose of nurse initiated Paracetamol	➢ Demonstrates an awareness that the child is eligible to receive a dose of Paracetamol i.e. there are no contraindications • It is ascertained from the child and or parent/carer and the child's medical records that Paracetamol has not been administered to the child within the last 4 – 6hrs and the dosage of Paracetamol administered to the child in previous 24hrs does not exceed the recommended dosage range • CHW Nurse Initiated Medication Protocol • Reviews child's medical records			

Elements of Competency	Performance Criteria	Elements Achieved		Further Action Required
		Yes	No	
5) Safely administers a dose of Paracetamol	➢ Correctly administers the correct dose of Paracetamol according to guidelines **a)** CHW Nurse Initiated Medication Protocol **b)** NSW Ministry of Health PD2005_206			
6) Effectively plans for continuity of care	➢ Demonstrates an accurate awareness of legal implications pertaining to documentation • Ensures administration of Paracetamol is documented on the appropriate drug sheet			

Assessment Decision: ☐ Competent ☐ Not yet Competent (moving towards competency)

Action / Further Training Required:____
____

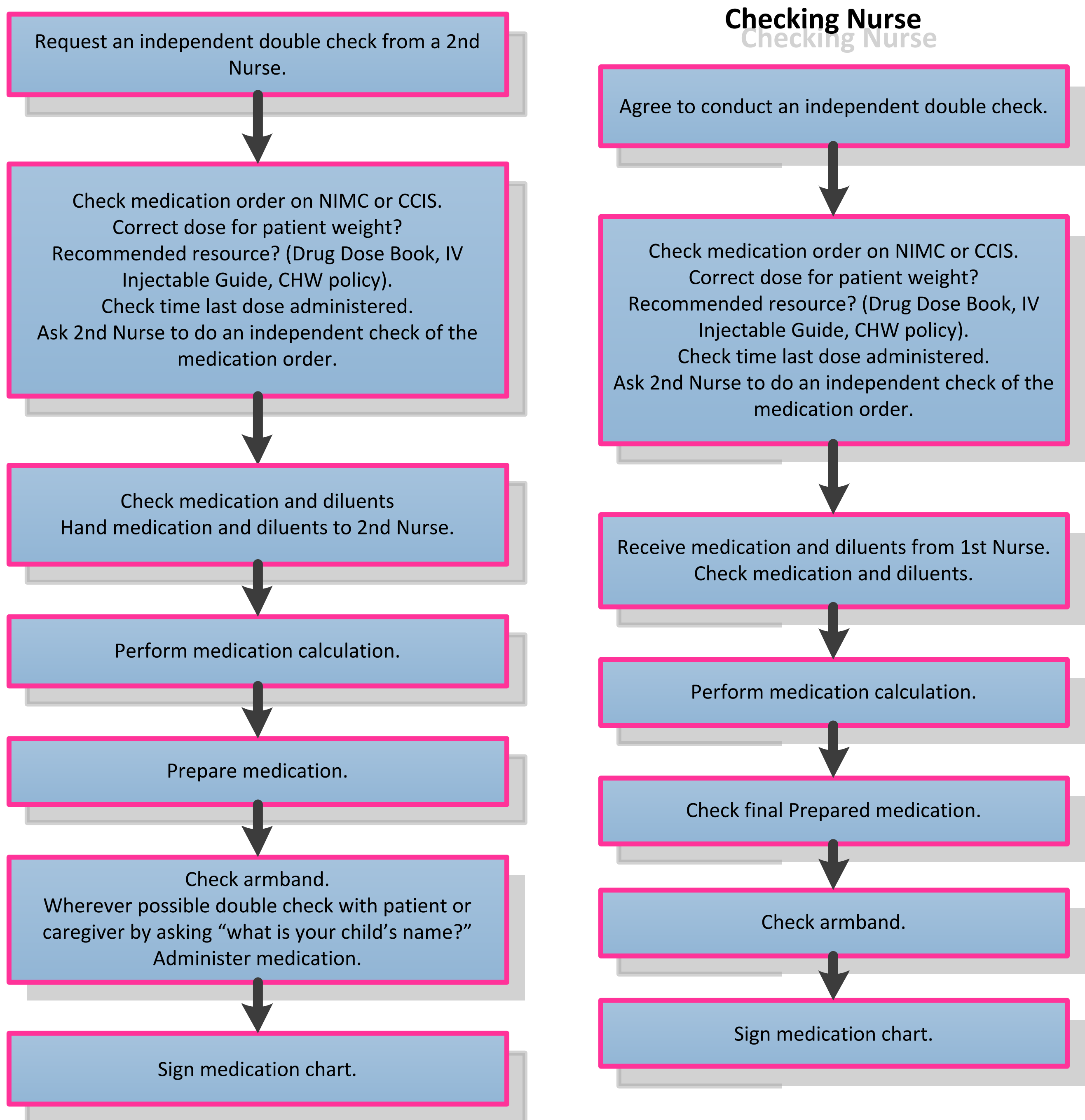
Details of Feedback to Candidate:____
____
____

Details of Feedback from Candidate:____
____
____
____

Assessor's Signature: ____________________ **Date**: ____________________
Candidate's Signature: ____________________ **Date**: ____________________

Appendix VIII: Independent Double Check: Algorithm

An independent double check is a process in which a second nurse (or other health care practitioner eg pharmacist or medical officer) conducts a verification, which can be in the presence or absence of the first nurse or practitioner. The double checking process does not finish at the point of preparing the dose, but rather at the point of administration of the medication, to the correct patient, in the correct way. The algorithm below describes the roles of the administering nurse and the checking nurse in a double checking process that is independent and includes all aspects of administration of medication.



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