

Reference Number: FOIAH2324/349
From: Other
Date: 26 September 2023
Subject: All Trust policies that include information on the checking of medicines when they are being administered to patients, and any associated documents

Q1 I am emailing to make a request under the Freedom of Information Act. I request that a copy of the following documents (or documents containing the following information) be provided to me please:

All Trust policies that include information on the checking of medicines when they are being administered to patients, and any associated documents e.g. medicines policy, specific medicine/ clinical area policies, codes, appendices to the relevant policies etc.

A1 [See attachment - MMCode Section 11 The Preparation, Administration and Recording of Medicines](#)

Medicines Management Code
SECTION 11 - THE PREPARATION, ADMINISTRATION
AND RECORDING OF MEDICINES

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11.1 General Introduction (See Also MMCode Section 5)**a) Approved medicines**

Only medicines that have been supplied or approved for use by the pharmacy department must be administered to patients. This applies also to alternative medicines such as aromatherapy oils and homeopathic remedies. Samples of medicines must not be used for patients without the express permission of the pharmacist (see policy on medical representatives).

A patient's own medicines may be used for that patient only, if approved for use by a doctor, nurse, pharmacist or pharmacy technician (see also 'one stop' dispensing in section 8.10).

Medicines used in clinical trials must only be supplied by the pharmacy department.

b) Prescriptions

All medicines to be administered by an authorised nurse or Health Care Professional must be prescribed by a doctor, dentist or authorised prescriber, via the Trust electronic prescribing systems or on an approved prescription sheet, when electronic prescribing is not possible. Exceptionally a verbal order may be given (see 5.10).

c) Responsibility

The nurse in charge is responsible for ensuring that drugs are given at the prescribed times. If a patient is absent from the ward or cannot receive a drug at the prescribed time, the delayed dose can be administered at a later time if a doctor or pharmacist confirms that it is appropriate.

d) Nurses and practitioners

References to a nurse in this guidance should also be taken to mean a practitioner who is a healthcare professional authorised by the Trust to administer medicines to children. If this practitioner is participating in intravenous therapy, or any other specific treatments which require additional training, they must, in addition, be trained and competent in this area (for intravenous therapy see section 14).

11.2 Preparation

Medicines must only be prepared for administration by a Registered Nurse trained in drug preparation and administration or by a doctor or pharmacist or Healthcare Professional approved by the Trust. Nurses and Healthcare Professionals in training may prepare medicines for administration if under the direct supervision of appropriately trained staff.

Unless prepared in the pharmacy, individual practitioners are accountable for the preparation of medicines they administer.

11.3 Administration of Medication

11.3.1 Authority to Administer

For operational purposes of the policy, the term 'practitioner' is defined as any professional who is entered on a healthcare professions register, e.g. NMC, HCPC, GPhC.

Nursing Auxiliaries and Healthcare assistants or those without statutory registration to a healthcare profession cannot check or administer medication unless specifically authorised by Trust policy.

Nursing Associates (introduced into the care and nursing workforce in 2019) are registered professionals with the NMC. They may administer medicines by the following routes: Oral, Topical (to a site where the drug is intended to have its effect e.g. eye, outer ear, nasal passages, skin preparations, transdermal patches), Subcutaneous, Per rectum, inhaled. Additional routes of administration may be considered, but this must be agreed with the Head of Nurse education and Support worker development, supported by competency training and ratified through the Medicines Management and Optimisation Committee. They are not permitted to administer medicines under a Patient Group Directive (PGD) and they are unable to qualify as Non-Medical Prescribers.

All nurse associates will complete the medication safety mandatory training package and the "Preparation and Administration of Medicines" workbook prior to administering medicines at Alder Hey. Subject to competency assessment in the usual way they can administer medicines by specific routes (in line with the normal double checking standards) – as outlined in the national guidance document (Oral, Topical, subcutaneous, rectal and inhaled). This may be developed in time to include IVs but further training is required for this route, so it will not be part of their initial role. As a new profession they are not yet included in the list of approved professionals who can legally work under a PGD.

Students in training may be involved in the process of administration of medication to children in line with the training criteria defined in 11.3.2 Training.

All practitioners should refer to specific guidelines for drug administration from the relevant statutory bodies such as "Professional Guidance on the Administration of Medicines in Healthcare Settings" RPS/RCN January 2019.

Health Care Assistants employed by the Trust to care for patients in their homes may administer medicines to the child in their care providing they have followed the Trust's approved training scheme and demonstrated their competence.

Bank and Agency staff - Trust employees who undertake bank or agency duties in their usual clinical area of practice can administer medication to children in accordance with this code, but not in any other areas of clinical practice, unless deemed competent to do so.

Practitioners who are authorised exceptions to dual checking and administration procedures are those whose area of practice is not supported by another registered professional. Named practitioners governed by this

exception are registered community nursing staff, registered nursing staff in the Ophthalmology Department, Dermatology Department, Children's Community Nursing Team (CCNT) and Outpatient Parenteral Antibiotic Therapy (OPAT) Team and Tier 4 Mental Health Unit (Sunflower House) Unit. A Standard Items for Single Checking list identifies those drugs which may be administered without a double check by registered nurses who have completed the competency assessment for single checking (see Appendix 11.13 and 11.14). Registered nurses within Tier 4 Mental Health Unit (Sunflower House) Unit must only use this in exceptional circumstances where there is no qualified second checker. This applies to any non parenteral medication used.

Operating Department Practitioners (ODP) and Operating Department Assistants (ODA) may administer medicines to children provided they have accredited training in the preparation and administration of medicines and have demonstrated their competence. A second check of medicines is required in line with standard practice.

Anaesthetists are an authorised exception to dual checking administration procedures. They must recognise the increased risks associated with being sole practitioners throughout the process, from prescribing, drug selection and administration and work within a local SOP for self-checking.

11.3.2 Training

- a) This code should assist practitioners in the identification of training needs in respect to any competencies required for the administration of medicines.
- b) It is the responsibility of the Alder Hey Children's NHS Foundation Trust to provide training in respect of this code as requested by the practitioner. A competency training package "The Preparation and Administration of Medicines Workbook" is available at <http://intranet/SiteAssets/SitePages/Medication%20Safety/Preparation%20and%20the%20Administration%20of%20Medicines%20Workbook%2014.03.19.pdf>
- c) Practitioners in training shall have access to competency assessments prior to registration with their statutory bodies which is timely and determined by learning objectives.
- d) Intensive care nurses and staff nursing ventilated children, who may administer nebulisers via an endo-tracheal tube, must have been previously assessed as competent at hand-ventilation.
- e) Intensive care nurses and staff nursing ventilated children, who may administer nebulisers via a ventilator circuit, must have been previously assessed as competent in using that specific ventilator.

11.3.3 The Prescription

- a) The Practitioner must comply with procedures detailed in the appendices and in the Electronic Prescribing and Medicines Administration Standard Operating Procedure.

- b) Medicines must be re-prescribed electronically or on the appropriate paper charts for patients who are readmitted. Medicines must be placed 'on hold' in the Meditech EPMA system for patients on home leave and 're-activated' on re-admission.
This precaution eliminates the risk of a patient being inadvertently given a medication which was prescribed during a previous admission.
- c) Prescription instructions must not be taken by telephone or verbally except in an absolute emergency. The ability to prescribe remotely using the electronic prescribing system should minimise the necessity for this.
- d) The prescription is visible on MAR and must be consulted prior to administration of medication.

11.3.4 Checking Responsibilities and Procedures

- The administration of medication to children, with the exception of the Standard Items for Single Checking List, must be undertaken **INDEPENDENTLY** by two registered professionals who are confident and competent to do so (see Appendix 11.15). Accountability for the actions of each practitioner involved in the process does not differ whether identified as 'first' or 'second' named individual. Doctors, pharmacists and suitably trained pharmacy technicians may check the administration of medicines.
- The administration of medication to children from the Standard Items for Single Checking List, can be undertaken by an individual registered professional who is accountable for their actions and must be confident and competent to do so.
- Drugs administered by medical staff, with the exception of the Standard Items for Single Checking List, should be checked by a second person whenever possible.
- Practitioners must ensure that they are competent to check and administer prescribed medication to children and to undertake first or second checking accountability on the prescription chart/MAR.
- The following are eligible:-
 - a) Nursing staff/Practitioners who obtained a competency assessment as a condition of registration.
 - b) Paediatric nursing students seconded from their clinical area to another within the Trust in possession of a pre- or post-registration competency assessment can act as third checker.
 - c) Nursing staff/Practitioners who have undertaken a competency assessment following registration.
 - d) Student Nurses with a valid and current competency assessment as a third checker.

- e) For medication that is not on the Standard Items for Single Checking List, a third checking practitioner should be included in the process if they are nursing students working towards a competency assessment or student practitioners involved in the care of the child that the medication is being administered to.
- f) Practitioners remain accountable for their actions and will be required to undertake a competency assessment should this be indicated.

11.3.5 Drug Calculation

Drug calculations must be undertaken by all of the practitioners involved in the procedure, independently. A comparison should then be made. If a calculator is used, the answer should be verified by manual calculation. (See Appendix 11.14/11.15 for details of independent checking process)

11.3.6 Dispensing Medication from Medication Trolley / Storage

Unless a medication is on the Standard Items for Single Checking List, Practitioners must ensure that:

- The medication is dispensed from its container in full view of both practitioners involved in the process. Lone, unobserved preparation and subsequent retrospective checking of medication by the second accountable practitioner is in **direct contravention of this code**.
- They verify the volume and/or amount of drug prepared for administration.
- They secure the medication storage facility.

11.3.7 Delivery and Administration of Medication to the Patient

- **All** practitioners involved in the preparation and transport of medication to a patient must remain with the medication until the patient has received and taken the prescribed dose administered in full with the exception of the Standard Items for Single Checking List and continuous infusions. In situations of high consequence infectious diseases (HCID)/pandemic outbreaks. The dual checking procedure can take place outside of the quarantine area. This is to minimise the number of practitioners entering the quarantine area. The administration can be undertaken by a single practitioner and be observed by the second practitioner from outside the quarantine area (e.g. through a cubicle window).
- Both nurses involved in the medicines administration process must wear red aprons stating “drug round in progress” unless there are extenuating circumstances. During the medicines administration process, interruptions should be avoided and conversation limited to that required for safe administration.
- **All practitioners involved must verify the allergy status of the patient**
- All practitioners involved in the delivery of medication to the patient must verify the identify of the patient from the identification bracelet (or alternative

method of positive patient identification as permitted by Trust policy) against the prescription chart.

- **Barcoded Medicine Verification**

The Trust introduced verification of medicines for administration using closed loop technology (i.e. bar coded medicine verification).

It is expected that this will become the default process of medicines administration where possible, in areas with access to Meditech EPMA.

The process to be followed for BMV is described in the [SOP for Electronic Prescribing](#)

- The medication should be administered in the presence of all practitioners involved in the procedure according to the procedure for that route. A record of administration should only be completed once the medication has been administered to the patient unless triggered automatically via closed loop technology.
- All medication should be administered as close as possible to the time at which they are prescribed to be given. The **Critical Medicines List** (see [DMS](#)) should be used to identify medicines where timely administration is particularly important. Medication used for life threatening conditions must be given immediately, critical medicines must be given within 1 hour of the intended prescription time and urgent drugs must be given within 2 hours of the intended prescription time.
- Any medicine prepared at ward / department level but not given at once must be discarded. Medicines prepared in advance in the Pharmacy/Aseptic services unit must be labelled with drug name, strength, dose, expiry date and stored securely or destroyed once expired or no longer required.
- All equipment used in the administration of medication should be disposed of according to Trust policy. **Remember – If it doesn't fit, do not administer.**

11.3.8 Inaccurate Administration of Medication (e.g. Wrong Drug, Wrong Patient, Wrong Dose, Wrong Time, Omitted in Error)

- Follow the Trust Incident Reporting Policy.
- If a drug which is considered life-saving, critical or urgent is not given within the appropriate time limit, a senior nurse or doctor must be alerted and the event reported as an adverse incident.

11.3.9 Measuring and Administering Oral and Enteral Liquids

Syringes intended for injection must not be used for the measurement and administration of oral or enteral medicines. **An oral/enteral syringe that will not connect** to intravenous apparatus is available and must be used for the measurement and administration of oral and enteral liquid medicines. **Remember – If it doesn't fit, do not administer.**

A measuring cup or 5 mL spoon can be used as an alternative for multiples of 5 mL doses when the patient will comply with this method of administration (see Procedure for the administration of oral medication in liquid form.)

11.3.10 Measuring and Administering Nebuliser Solutions

Nebuliser solutions may not be presented in an appropriate dose unit for some children and the dose volume must be measured. When a syringe intended for parenteral (IV) injection is used to measure the nebuliser solution it must be done immediately before administration and without interruption. **A nebuliser solution measured with a parenteral (IV) syringe must never be left unsupervised or it could unintentionally be given by injection.** (see Procedure for the administration of inhaled medication)

11.3.11 Administering Small Doses (Less than 1 mL)

Doctors and nurses must recognise the difficulty of calculating and measuring very small doses. A syringe graduated in 1/100ths of a mL must be used and there is a danger of confusing decimal fractions of a mL (e.g. 0.05 mL confused with 0.5 mL). Double dilutions to increase the volume to be measured can also result in error. The pharmacist should be consulted.

11.3.12 Crushing Tablets and Opening Capsules

Further information on manipulating medicines at the point of use can be found in the [MoDRIC guidelines](#)

Tablet crushing or capsule opening should only be used as an option if oral liquid preparations are unavailable or unsuitable. Tablets should only be crushed or capsules opened if information on safety and efficacy is available.

The crushing of certain tablets, e.g. cytotoxic drugs and warfarin, or the opening of capsules, may present a health hazard to staff, patients or parents. This hazard may arise from powder inhalation or absorption through the skin. Since it is inappropriate to conduct a hazard assessment each time a new drug is introduced, the procedure is adopted for all drugs manipulated in this way (see Procedure for the administration of oral medication in tablet form).

Staff, patients or parents

- Protective gloves should be worn when manipulating crushed tablets or opening capsules.
- A tablet crusher should be used for crushing tablets. This should be thoroughly cleaned after each use in soapy water and then dried thoroughly.
- A tablet crusher should never be re-used if there is evidence of powder residue in the device.
- It is important to ensure that an accurate dose can be obtained from the tablet crusher without leaving too large a powder residue.

Cytotoxic drugs used on the wards

- Cytotoxic drugs will be labelled with a CYT sticker indicating a hazard.

- Appropriate protective wear must be worn, e.g. mask, gloves, apron as appropriate.
- Cytotoxic drugs must not be manipulated at ward level.
(See **MMCode Section 26 Use of Systemic Anticancer Therapy Including Cytotoxic Drugs** on [DMS](#))

11.4 Recording of Administration

- All accountable practitioners must record the administration of medicines via their PIN in the electronic prescribing system or via the use of BMV where this is operated or by signing their initials against the medication administered on the prescription sheet ensuring that the correct date and time are clear and legible on the paper prescription chart. The record of administration should only be completed once the medicine has been administered to the patient.
- If, for any reason, medication is given after the time prescribed, practitioners must not amend the drug times indicated by the prescriber. The actual administration time will be accurately recorded on the electronic prescribing system. On the paper prescription chart, the practitioner must endorse the chart, clearly, above their signature, with the actual time that the drug was given.
- If the child is on strict fluid control, the drug, volume and any additional fluids must be documented on the child's fluid balance (input/output) chart as well as within the electronic system or on their paper prescription chart.

11.4.1 Recording of 'Once Only' Prescriptions

The record of administration of 'once only' prescriptions is made on the electronic prescribing system (Medicines Administration Record - MAR) when the practitioner(s) enters their PIN(s) or on the paper prescription chart as appropriate.

- The time of administration will be automatically recorded in the electronic prescribing system. On the paper prescription chart, practitioners must record the actual time given in 'Time Given' column.
- When the medicine has been administered both nurses must **sign their initials** in the 'Given/Administered By' column or enter their PIN in the electronic prescribing system with the exception of the standard items for single checking list.

11.4.2 Recording of Medicines which cannot be given at the prescribed time

If the patient is absent from the ward or for any reason cannot have the medicine due, enter appropriate code/comment in the administration box or on MAR (electronic Medication Administration Record). Initials must be included alongside the code on the paper prescription chart. If a patient is 'nil by mouth' the nurse should determine from the doctor whether doses are to be omitted or administered by a different route.

If a patient refuses the medicine, enter appropriate code/comment in the administration box. Initials must be included against the code on the paper prescription chart.

If a patient misses the dose but takes it later, the time of administration will automatically be recorded on the electronic MAR once the practitioner enters their PIN. Practitioners must record actual time of administration and sign their initials on a paper prescription chart.

11.4.3 Recording Discrepancies

Record reasons for discrepancies between the prescription and the drug administration record, e.g., indicate that the patient was in the Radiology department or operating theatre when a dose was due or that the medicine was not yet available. Explanation for delayed doses, should be entered on the MAR chart in the electronic prescription or recorded in the nurses notes against a paper prescription chart. If a different dose to that prescribed was given appropriately, this should be clarified with the prescriber and the prescription changed before the next dose if it is not possible to do so for this dose.

If medicines cannot be given this should be brought to the attention of the prescriber.

If a medicine is not available, the nurse should ensure that the person in charge of the ward is informed. The pharmacist should be contacted, or Omnicell Global list used to identify stock available in another area.

Unexplained discrepancies in ward stock balance

Investigate and inform Ward Manager or Nurse in Charge. Inform Pharmacy and complete a Trust incident report form.

Provide a written report on request.

Continuing discrepancies with drug stock may result in a drug being classed as a Controlled Drug by the Chief Pharmacist and ChiefNurse

11.4.4 Recording Administration of Controlled Drugs

All medicines classified as Controlled Drugs must be **checked and administered by two registered nurses**. In addition, the appropriate entry must be made in the Ward Controlled Drugs Record Book. A system of stock control must be initiated and maintained to ensure that balances shown in the Controlled Drugs Record Book are correct. See Controlled Drugs (Section 12) for further information.

11.4.5 Recording Administration of Medicines being administered by the Patient or Parent

When arrangements have been made for patients or parents to administer their own/their child's medicines e.g. prior to discharge or as part of rehabilitation or during overnight sleep studies, the nurse should ascertain that the medicines

have been taken as prescribed. This should preferably be done by direct observation but when appropriate, also by questioning the patient or parent.

The administration record should be initialled and patient 'self administration' (or PSA) should be entered alongside. On the EPMA MAR chart the nurse should enter a comment to indicate parent administration. See Section 11.8. See **Procedure for Parent, Carer, Patient Administration of Medication** on [DMS](#).

11.4.6 Recording of Administration of Drugs used on Patient Group Directions (Locally Agreed Prescribing Exemptions).

A Patient Group Direction (PGD) is written by a consultant, senior representative of the group that the PGD is intended for use by and pharmacy staff. It is approved by the Medicines Management and Optimisation Committee (a sub-group of the Drugs and Therapeutics Committee). PGDs are uploaded to the Intranet. The Pharmacy Department holds records of attendance at the initial generic PGD training session and competency assessment. A doctor's prescription is not required when a patient group direction is followed but **nurses and health care professionals must record on the electronic MAR or paper prescription sheet details of any drug preparations administered or applied as detailed in the PGD being used.**

11.4.7 On Patient's Discharge

All paper Prescription charts and Drug Administration Records must be filed in the patient's case notes and subsequently scanned as part of the episode of care.

11.4.8 Recording Emergency Prescriptions

The Electronic prescribing system allows prescribers to access the system and prescribe remotely. The following rules must be observed regarding prescribing in an emergency on paper prescription charts:

- 1) In exceptional circumstances, Prescribers may prescribe by telephone or verbally in an absolute emergency only. In the case of telephone requests the doctor must visit the patient as soon as possible and within 2 hours.
- 2) The prescription must be repeated back to the doctor to ensure accuracy by a senior registered nurse who should then record the details of the prescription and indicate that the prescription has been "ordered over the telephone/verbally by the doctor".
- 3) The prescription must be formally prescribed on the electronic system/paper prescription chart and countersigned by the doctor (PIN or signature), as soon as possible and in the case of verbal prescriptions, prior to leaving the ward.
- 4) Any prescription so written is valid for one administration only. Special conditions apply to mobile teams sent from the hospital to attend or collect seriously ill patients. The appropriate departmental policy should be consulted.

11.5 Intravenous Administration of Medicines by Nursing Staff and other Health Care Professionals (see MMCode Section 14)

All intravenous medicines are prescription-only-medicines and their preparation for infusion and subsequent administration must be by registered nurses or authorised healthcare professionals with appropriate training.

Nurses and health care professionals may administer medicines by the intravenous route (including first doses and use of central venous lines), providing that they have received specific training and been assessed as competent (see **MMCode Section 14** on [DMS](#)).

Nurses cannot be authorised to give cytotoxic drugs, medicines by the intrathecal or epidural route or to undertake procedures peculiar to special units e.g. Renal Units, unless they have received further special training and demonstrated their competence.

Patients who leave the ward to attend another department (e.g. radiology) or other areas of the hospital, e.g. atrium) must have their intravenous infusions continued unless there is a written direction to the contrary from a doctor. They must be accompanied by a competent nurse. Patients receiving cytotoxic infusions should not leave the ward except in an emergency.

11.5.1 Recording of Intravenous Infusion Fluids and added Medicines

Care should be taken that the administration of intravenous infusion fluids and of medicines added to continuous intravenous infusions is recorded in the appropriate place because it is important that the medicine/infusion combination is administered exactly as prescribed.

a) Recording administration of fluid

1. match the patient with the **name** on the **prescription sheet/MAR** and identification band or photograph
2. identify the intravenous infusion fluid to be given
3. check that it is due **now** and has not already been recorded as given
4. select the fluid matching name, strength and volume with the prescription, for all constituents
5. perform safety checks using ward 'Safety checks' list
6. fluids must be checked and administered by two nurses

This must be done immediately prior to administration

7. double check rate programmed into pump; begin administration of the fluid. Select appropriate profile from pump where they are available, e.g. Paediatric, Neonatal, TPN – lipid, TPN – Pharmacy solution, TPN - mixed bag.
8. enter **actual** time/bag bottle is started in 'Time/Date' box or on MAR
9. both nurses must **sign their initials** in the 'Start By/Check By' boxes or record on MAR

Each time an infusion container is changed these steps must be repeated.
(See **MMCode Section 14** on [DMS](#))

In addition, an approved label must be completed and stuck on the bag or burette or syringe.

See **MMCode Section 14** on [DMS](#) for more information.

The nurse should take special care that only injectable preparations intended for intravenous use are given intravenously and that the prescriber intends this route to be used. Remember – if it doesn't fit, do not administer.

11.5.2 Specific Solutions

a) Simple solutions or mixtures of glucose and sodium chloride e.g glucose 5%, sodium chloride 0.9%, glucose 5% with sodium chloride 0.45%, e.g. Plasmalyte; Plasmalyte with Glucose

1. These solutions will be administered and checked by two registered nurses.
2. Changes to the rate of an established fluid must be prescribed. The change can be made by a registered nurse and must be checked by a second registered nurse.

Student nurses who have received training in intravenous therapy may perform the tasks above under the supervision of a registered nurse.

b) Complex solutions

1. Preparation of these solutions must be undertaken and independently checked by 2 registered nurses who have completed the extended intravenous therapy training. These solutions must be administered and supervised by two registered nurses who have completed the extended role in intravenous therapy.
2. Changes to the rate of an established infusion must be prescribed. The change can be made by a registered nurse with an extended role in intravenous therapy, checked by a second registered nurse.

c) Intravenous feeding solutions

1. These solutions must be connected and independently checked by 2 registered nurses who have completed the extended role in intravenous therapy.
2. Changes to the rate of an established infusion must be prescribed. The change can be made by a registered nurse with an extended role in intravenous therapy, checked by a second registered nurse.

11.6 Cytotoxic Drug Administration

When administering any cytotoxic agent the nurse must refer to the **MMCode Section 26 Use of Systemic Anticancer Therapy Including Cytotoxic Drugs** on [DMS](#).

11.7 Intrathecal Administration

Healthcare Professionals may only administer or assist in the administration of drugs by the intrathecal route if they have received specific training and demonstrated competence.

Any nurse assisting in the administration and checking of drugs by the intrathecal route to oncology patients must have received specific training and have their name recorded on the IT register. Consult the **MMCode Section 26 Use of Systemic AntiCancer Therapy Including Cytotoxic Drugs** and **MMCode Section 26.17 Intrathecal Chemotherapy (ITC) Management** on [DMS](#).

Unless specifically trained and registered at Alder Hey to check the administration of intrathecal cytotoxic chemotherapy staff must not become involved under any circumstances.

Warning. Inadvertent administration of vincristine by the intrathecal route is usually fatal.

11.8 Self Administration of Medicines by Parents

Parents can be encouraged to administer medicines to their children when this is appropriate to the clinical condition of the child and when the responsible nurse has assessed the parent as competent. See 11.16.

The Clinical Pharmacy Standard Operating procedure (CP29) Appendix 11.16 describes how the process of parent / self-administration is facilitated. Ward Managers should contact their Near Patient Pharmacy (NPP) team or a Senior

Pharmacist if they have parents or patients who would like to administer their own medicines. The NPP team will assist in establishing the process, which is nurse-led.

Parents must not be permitted to administer any medicine of their own to their child (including herbal, homeopathic remedies and aromatherapy) unless they have been documented as part of the medication history and approved by a doctor, nurse or pharmacist.

11.9 Use of Medicines by Visitors

Parents and visitors must avoid bringing their personal medicines into ward areas and must inform the nurse in charge if they need to take medication whilst on the ward with their child.

11.10 Procedures for Drug Administration

Procedures for the Administration of Medicines are described in the following Appendices

- **ENTERAL ADMINISTRATION** - Refer to the procedures for the administration of oral medication in tablet, liquid form or buccal form or administration via naso-gastric, gastrostomy or jejunostomy in Appendices 11.2-11.5
- **INTRAMUSCULAR ADMINISTRATION** - Refer to procedures in Appendix 11.6
- **RECTAL ADMINISTRATION** - Refer to procedures in Appendix 11.7
- **OPHTHALMIC ADMINISTRATION** - Refer to procedures in Appendix 11.8
- **TOPICAL ADMINISTRATION** - Refer to procedures in Appendix 11.9
- **INHALED MEDICINE ADMINISTRATION** - Refer to procedures in Appendix 11.10
- **SUBCUTANEOUS ADMINISTRATION** - Refer to procedures in Appendix 11.11
- **ADMINISTRATION OF MOUTHWASH** - Refer to procedures in Appendix 11.12

Appendix 11.1 - General Procedure for the Administration of Medicines**11.1.1 The Prescription****Practitioners must ensure that:-**

- The current electronic or appropriate paper prescription chart is being used, that no other chart is inappropriately in circulation and that any paper prescription chart is with the child's current records.
- The prescription has been confirmed by PIN (if electronic) or signed and dated by a registered medical practitioner or authorised prescriber if prescribed on a paper prescription chart.
- **Any handwritten prescription chart is legible and has been written in permanent ink.**
- The prescription clearly identifies the child by name, date of birth, hospital number, weight, ward and consultant.
- The prescription/electronic record identifies any known drug sensitivities/allergies.
- The medication has not already been recorded as given.
- The time the previous dose was given is entered and clearly visible.
- The medication is being given at the correct time.
- The frequency between doses is correct.

11.1.2 Checking

With the exception of the Standard Items for Single Checking List, and sole practitioners and Anaesthetists approved to work under a single checking arrangement the administration of medication to children should be undertaken by two authorised professionals who are confident and competent to do so. Accountability for the actions of each practitioner involved in the process does not differ whether identified as 'first' or 'second' named individual.

The margin of error is increased if there is any variance from the following formula

- One patient/one time/2 professionals/1 current prescription 'chart' or MAR

Practitioners must ensure that:-

- The patient is wearing an identification bracelet indicating the details which correspond to those on the prescription chart/electronic record. See also Trust policy on identification of patients.
- They are aware of any contraindications or allergies and these are recorded in the electronic patient record and on any paper prescription charts
- The drug is indicated.
- The dosage is appropriate for the age and weight of the child.
- The child and carer is informed and prepared for the procedure.
- The correct drug is selected, matching the label with the prescription.

- They are aware of possible side effects.
- They are aware of possible interactions with other medication.
- The drug is appropriate for the route of administration, and has not been given already.
- The form of medication (liquid, nebulised, tablets etc) is appropriate for the condition and developmental age of child.
- They are aware of recommendations for giving individual drugs e.g. with food.
- The strength of medication is suitable for the dose and the dose units are confirmed as clear and correct. e.g. Milligrams, Micrograms.
- The drug has not exceeded the expiry date.
- The drug has been stored under the correct conditions.

11.1.3 Drug calculation

Practitioners must ensure that:-

- Drug calculations are undertaken by all of the practitioners involved in the procedure, independently. (See Appendix 11.14 for details of independent checking process)
- Calculations made with a calculator are then checked manually.
- The only accepted formula for calculating the amount of a preparation required is:

$$\frac{\text{Dose required}}{\text{Dose provided in the medication}} \times \text{Volume in which the provided drug is contained} = \text{Volume of medication to be administered}$$

This is often referred to as:

$$\frac{\text{What you want}}{\text{What you have got}} \times \text{Volume it is in} = \text{Volume of medication to be administered}$$

e.g. Dose of furosemide is 20 mg and you have furosemide syrup 50 mg in 5 mL

$$\frac{\text{Dose required (20 mg)}}{\text{Dose provided in the medication (50 mg)}} \times \text{Volume in which the provided drug is contained (5 mL)} = \text{Volume of medication to be administered (2 mL)}$$

11.1.4 Dispensing Medication from Medication Trolley / Storage

Practitioners must ensure that:-

- The surface is clean prior to preparation
- Equipment is chosen for the correct administration of the medication in line with the criteria, e.g. enteral syringes for enteral route; medicine cup for large volumes.
NB. If equipment does not fit, do not administer.
- The medication is dispensed from its container in full view of both practitioners involved in the process. Lone, unobserved preparation and subsequent retrospective checking of medication by the second accountable practitioner is in direct contravention of this code with the exception of the Standard Items for Single Checking List,
- They verify the volume or amount of drug prepared for administration.
- They secure the medication storage facility upon completion.

11.1.5 Delivery and Administration of Medication to the Patient

Practitioners must ensure that:-

- They consider the safe transport of medication to the patient and are encouraged to use appropriate equipment for this purpose, e.g. plastic tray. If an IV medication leaves the hands of a practitioner it needs to be labelled.
- All practitioners involved in the preparation and transport of medication to a patient remain with the medication until the patient has received and taken the prescribed dose administered in full, or the IV medication is connected to the pump and rates independently checked.
- All practitioners involved in the delivery of medication to the patient must again verify the identity of the patient from the identification bracelet against the prescription chart.
- All practitioners involved in the delivery of medication should verify the allergy status of the patient.
- The privacy and dignity of the patient to whom the medication is to be administered is upheld at all times and appropriate measures are taken to facilitate this.
- The medication should be administered in the presence of all practitioners involved in the procedure according to the procedure for that route.
- Any medicine not given at once at ward level must be discarded. Any medicine prepared in Pharmacy/Aseptic services unit must be labelled with drug name, strength, dose, expiry date and stored securely or discarded once expired or no longer required.
- A timely assessment of the effectiveness of the medication is made and documented.
- All equipment used in the administration of medication is disposed of according to Trust policy.

- Where manipulation of a medicine is required to achieve the stated dose, the MODRIC guidelines should be consulted.
http://www.alderhey.nhs.uk/wp-content/uploads/MODRIC_Guideline_FULL-DOCUMENT.pdf
- The Medicines for Children website www.medicinesforchildren.org.uk has some helpful videos to support carers/parents administering medicines. They may also be of relevance to professional staff.
- Appropriate equipment for that route of administration is used. **Remember – If it doesn't fit, do not administer.**

Appendix 11.2 - Procedure for the Administration of Oral Medication in Tablet Form:

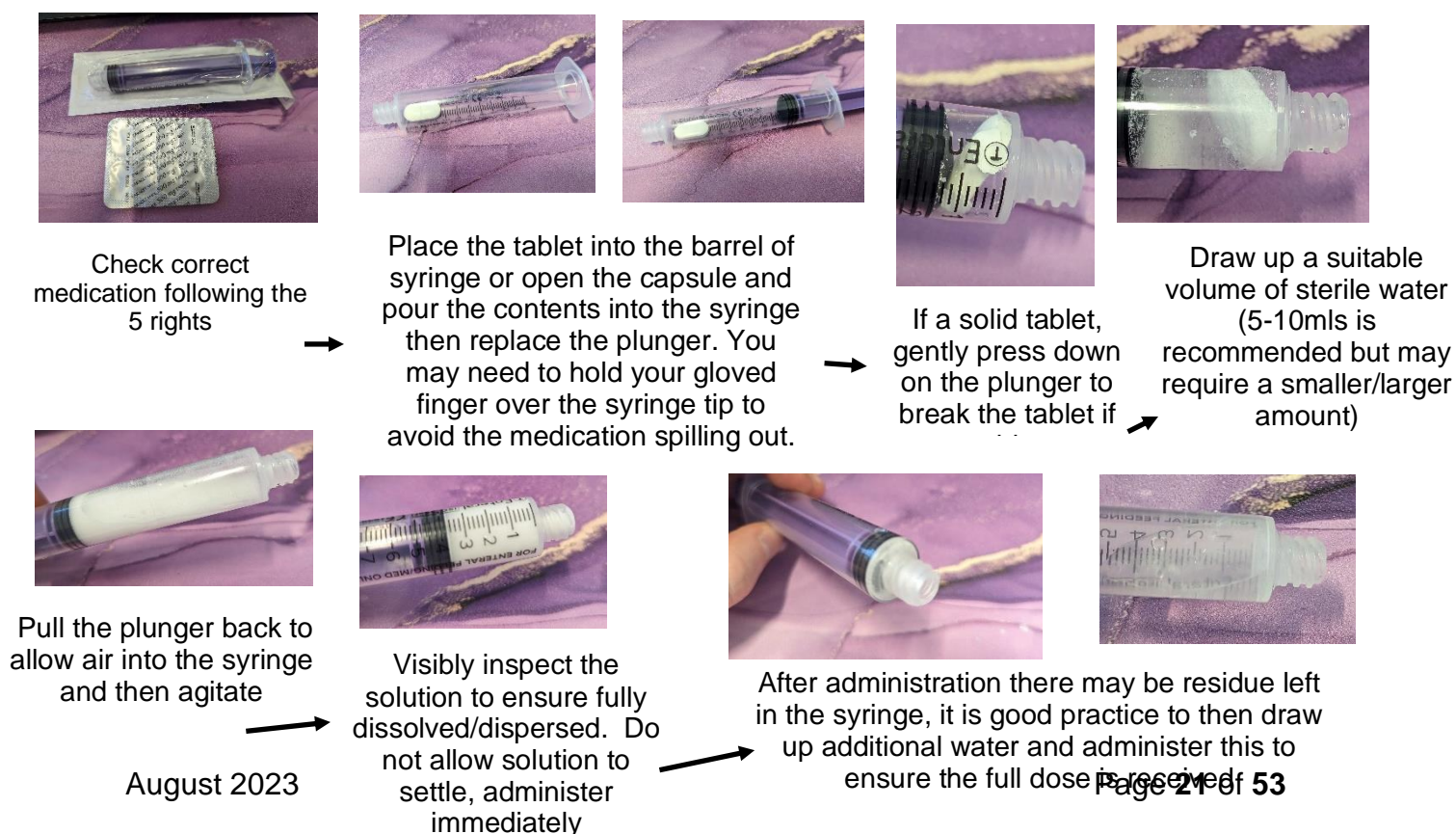
Action	Rationale
Assess the child's level of understanding and swallowing reflex.	To ensure that the child is able to take and swallow the intended medications.
Prepare the child and family for the procedure.	To help reduce fear and anxiety. To increase child and family co-operation. To reduce the potential for discomfort.
<p>If oral medication is bulky consider the following action:</p> <ul style="list-style-type: none"> • Ascertain if the drug available in a liquid preparation. • If tablet is large and scored appropriately, split in half or quarters with a tablet cutter. • Crush* the tablet and mix with 'ready to feed' water (Consult Pharmacist / Medicines Information to ensure this is an appropriate action for this medication). 	To aid administration of the drug.
Use only appropriate equipment for breaking down any drug eg tablet cutter, tablet crusher, pestle and mortar*. Discard any excess medication immediately.	To ensure effective and safe manipulation of drugs suitable for administration.
Prior to administration of medicines offer the child a small drink.	To moisten the GI tract to facilitate taking of medications.
Help the child place the tablet or capsule into their mouth if necessary.	To ensure that the medication is placed safely in the child's mouth.
Offer a drink and encourage the child to swallow.	To aid administration.
Ascertain that the medicine has been swallowed.	To ensure that the child receives medication.
Following administration make the child comfortable and be alert for any untoward side effects.	To ensure the comfort of the child and to detect any complications associated with drug administration
Wash and dry equipment	
Praise and reassure child. Ask them if we can do anything differently next time.	To ensure future administrations and stress-free and successful.

***See guidance below for dispersing tablets**

Dispersing tablets for administration via mouth or via enteral tubes

- Guidance should be sought from pharmacy to ensure medication is suitable for dispersion. Further guidance for antibiotics is available using this link <https://www.sps.nhs.uk/articles/using-solid-oral-dosage-form-antibiotics-in-children/>
- Not all tablets or capsules are suitable for crushing or dispersion e.g. modified released, enteric coated, cytotoxic products or those where very accurate dosing is required.
- If there is a liquid formulation available this should be used for administration unless there are exceptional circumstances. Crushing or dispersing solid formulations of medicines is often outside of manufacturer's product license, and is considered 'unlicensed' or 'off-label'. The pharmacokinetics of some products may be altered by dispersion. Contact pharmacy for more information.
- Medication that does not dissolve/disperse fully has the potential to block enteral tubes. Ensure medication is fully dissolved or dispersed before administration.
- Dispersing tablets in a closed system (i.e. within the barrel of a suitable sized syringe) reduces operator contact with tablet particles and ensures a more accurate dose is received.
- Tablet crushers/pestle and mortars are no longer routinely used due to potential loss of dose (reportedly up to 25% of the dose can be lost during manipulation and transfer) and cross-contamination. If used they must be fully cleaned between every use with non abrasive soap and water and left to air dry. Cleaning wipes are not to be used.
- Some tablets do not readily disperse and may need to be manually crushed and mixed with water before administration to ensure no tablet fragments remain which may block the tube. Before administration, visually inspect to ensure tablet has fully broken up. After administration, rinse the medicine pot with more water and draw up using the same syringe and administer. This is to ensure the full dose has been given.

How to disperse medication for oral/enteral administration using a closed system



References

Manipulation of Drugs Required in Children (MoDRIC) – A Guide for Health Professionals

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Sutherland, K.; Falconer, J.(1999) Administration of Medicines Part 2. ***Nursing Times*** No 32.2 Vol. 95 (28) insert

Sutherland K. Falconer J. 1999. Administration of Medicines Part 3. ***Nursing Times*** No 32.3 Vol. 95 (30) insert

<https://www.sps.nhs.uk/articles/using-solid-oral-dosage-form-antibiotics-in-children/>

Appendix 11.3 - Procedure for the Administration of Oral Medication in Liquid Form:

Action	Rationale
Assess the child's level of understanding and swallowing reflex.	To ensure that the child is able to take and swallow the intended medications.
Prepare the child and family for the procedure.	To help reduce fear and anxiety. To increase child and family co-operation. To reduce the potential for discomfort.
Shake the bottle of medication.	To ensure equal distribution of the drug within the liquid.
Draw up required dose into appropriate sized oral/enteral syringe.	To ensure accurate measurement of the dose. Oral/enteral syringes cannot connect onto intravenous lines in order to minimise the risk of error. Remember – If it does not fit, do not administer.
Ensure that when drawing up the medication, the label is in the palm of the hand.	To prevent spillage of the medication which could deface the label.
Prior to administration of medicines offer the child a small drink.	To moisten the GI tract to facilitate taking of medications.
Help the child to take the medication if necessary.	To aid administration of the drug.
Offer a drink and encourage the child to swallow.	To aid administration of the drug.
Ascertain that the medicine has been swallowed.	To ensure that the child receives medication.
Following administration, offer the child a drink unless specifically contraindicated due to the child's condition or instructions associated with the drug).	To ensure that any medication residue is delivered and to prevent buccal irritation. To facilitate the comfort of the child.

References

Downie, G. et al. (1995) *Pharmacology and Drug Management for Nurses*, Churchill Livingstone, Edinburgh

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Sutherland K. Falconer J. 1999. Administration of Medicines Part 3. *Nursing Times* No 32.3 Vol. 95 (30) insert

Appendix 11.4 - Procedure for the Administration of Buccal Medication:

Action	Rationale
Assess the child's level of understanding and ability to comply with taking medication by the buccal route.	The child's co-operation is crucial to the effective administration of medication via this route.
Prepare the child and family for the procedure.	To help reduce fear and anxiety. To increase child and family co-operation. To reduce the potential for discomfort.
Ensure that the patient does not smoke before taking the medication.	Nicotine has a vasoconstrictor effect which will slow down the absorption of the drug.
Follow the manufacturers instructions. If the buccal preparation is a tablet, caution the child against chewing the tablet, and ask them not to touch it with their tongue.	To avoid the child swallowing the tablet accidentally.
Place the tablet in the upper or lower buccal pouch, between the cheek and gum.	Allows the drug to be absorbed quickly because the thin epithelium and abundant vasculature of the oral mucosa allow direct absorption of the drug into the bloodstream.
Instruct the child to keep the buccal medication in place until it dissolves completely.	To ensure absorption of the medication.
Ensure that the child does not have a drink until the medication has dissolved.	To ensure absorption of the medication.
Following the administration and dissolving of the medication, inspect the child's mouth for signs of irritation.	To ensure the child is safe and comfortable.

The procedure for sublingual administration is similar except that the drug is placed under the tongue.

References

Manipulation of Drugs Required in Children (MoDRIC) – A Guide for Health Professionals. D'Angelo, H.H.; Welsh, P.N. (1998) ***Medication Administration and Intravenous Therapy Manual: Process and Procedures***, Springhouse Corporation, Springhouse, California.

Appendix 11.5 - Procedure for the Administration of Medicines via Naso-Gastric, Gastrostomy and Jejunostomy Tubes:

Action	Rationale
Ensure that the formulation and preparation of the intended medicine is appropriate for administration via the enteral route.	Some oral dosage formulations are not suitable for crushing prior to administration e.g. <ul style="list-style-type: none"> • extended slow release medications • enteric or protective coated medications • sublingual or buccal medications.
Prepare the child and family for the procedure.	To help reduce fear and anxiety. To increase child and family co-operation. To reduce the potential for discomfort.
Verify the type of feeding tube is correctly placed following Trust guidelines	To confirm correct feeding tube placement. See NG Tube Placement Policy.
Having confirmed correct tube placement, then the tube is flushed with 1-3mls of 'ready to feed' water, before and after the medication. Use ENFit syringe for whole process.	To clear the tube for medication delivery. Dilution will help reduce the osmolarity of hyper-osmolar medications. To facilitate drug delivery to the stomach or small intestine.
If more than one medication is to be administered, then the flushing procedure is repeated between each medication.	To minimise the risk of drug interactions between medications.
Administer medication via the feeding tube. Repeat flushing procedure	To deliver prescribed medication. To flush the tube and maintain patency. To prevent adverse drug interactions with subsequent fluids.
If the child is receiving continuous feeds, the feed is recommenced. If the tube is not being used again immediately, a spigot is inserted.	To ensure that child's nutrition is maintained. To prevent leakage of gastric contents from the tube.

References

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Mitchell, J.F. (1990 Oral Dosage Forms That Should Not Be Crushed: 1990 Revision ***Hospital Pharmacy***. 25: April

Appendix 11.6 - Procedure for the Administration of an Intramuscular (IM) Injection:

Note: IM administration should only be undertaken by nurses with specific training and recent practice.

Action	Rationale
Assess the suitability of this route of medication administration to the child, and ascertain that it cannot be given by another route.	The use of IM injections in paediatric practice is avoided whenever possible. Some drugs are only to be given IM eg immunisations, L-Asparaginase, Adrenaline in anaphylaxis.
Prepare the child and family for the procedure. Consider and use distraction techniques.	To help reduce fear and anxiety. To increase child and family co-operation. To reduce the potential for discomfort.
Use topical anaesthesia such as Ametop or Emla if prescribed.	To minimise discomfort.
Confirm the age of the child.	To assess the most suitable muscle for injection.
Assess the suitability of the muscle mass to tolerate the drug type and drug volume, and the intended number and frequency of injections to be given. The muscle needs to be well vascularized and accessible.	<p>To minimise the risk of complications, and to ensure the drug is administered into the muscle. Sites are:</p> <p>Vastus lateralis: Usually used in children less than 7 months old, and not suitable thereafter due to an increased risk of complications.</p> <p>Ventrogluteal: Is the largest muscle in the young child and is recommended for children over 7 months old. As the muscle is large and accessible, the risk of complications are minimised.</p> <p>Dorsogluteal: Traditional site for IM injections, but there is an increased risk of the drug being administered into the subcutaneous tissue as the gluteal muscle mass is small.</p> <p>Deltoid: Is a small muscle in the upper arm. It has a good blood supply and drug absorption is fast making it ideal for vaccinations. It should not be used for repeated injections and can only tolerate a minimal drug volume.</p>



IM Injection AH.pptx

Action	Rationale
<p>Assemble the correct equipment for the procedure:</p> <ul style="list-style-type: none"> • Use a filter needle to draw up the drug. • Assess the length of the injection needle required based upon the size of the child and the selected site. • Appropriate size syringe for the drug volume. 	<p>To minimise the risk of particulate injection.</p> <p>To minimise the risk of complications. The needle needs to be long enough to go through the subcutaneous layer into the muscle, but not penetrate the bone.</p> <p>To prepare the correct dose. The smaller the syringe the greater the pressure exerted which could lead to greater discomfort.</p>
<p>Draw up the drug using no-touch technique using a filter needle.</p>	<p>To minimise the risk of infection. To remove particles bigger than a 5-micron diameter.</p>
<p>Place the injection needle on the syringe and prime the needle.</p>	<p>To gain the correct dose.</p>
<p>Clean the skin according to Trust Policy and allow to evaporate.</p>	<p>To minimise the risk of infection. To facilitate the coagulation of any organisms.</p>
<p>Assist the child to adopt the most appropriate position for the selected site:</p> <ul style="list-style-type: none"> • Deltoid: Child places their hand on their hip • Ventrogluteal and dorsogluteal: Prone: Child lies toes-in. Supine: Child flexes one or both knees. Side lying: Child flexes the upper leg at 20 degrees. Standing: Child stands toe-in on the side to be injected and lets the other leg take their weight. • Vastus lateralis: Baby is cuddled or lies supine during procedure. 	<p>To aid absorption and minimise discomfort.</p> <p>To relax the muscle and make it more accessible.</p> <p>To help rotate the femur internally, forcing the muscles in the buttock to relax.</p>

Action	Rationale
<p>Assess the most appropriate method of holding the skin during the procedure:</p> <ul style="list-style-type: none"> • Bunching: The skin and underlying tissue is held and bunched. • Skin stretching: The skin is stretched flat between the finger and thumb. • Z-tracking: The skin is pulled downwards or to one side, the injection is given and the retracted skin is then released. <p>Insert the needle in a dart-like action smoothly and steadily at a 90 degree angle.</p>	<p>To ensure the injection reaches the muscle. To minimise the risk of complications.</p> <p>To increase the muscle mass and decrease the risk of the needle hitting the bone.</p> <p>To displace the subcutaneous tissue and facilitate the drug reaching the muscle.</p> <p>To decrease the risk of the drug leaking into the tissues therefore to reduce discomfort and potential complications.</p> <p>To minimise discomfort. To reduce trauma to the tissues. To ensure the needle reaches the muscle.</p>
Aspirate the syringe for 5 seconds.	To allow blood to appear to ensure the needle is not in a blood vessel. Inadvertant drug delivery into a vessel could lead to anaphylaxis.
Administer the drug slowly at a rate of 1ml per 10 seconds.	To allow the muscle fibres to stretch in order to absorb the drug. To prevent leakage at the injection site.
Wait for up to 10 seconds before withdrawing the needle at a 90 degree angle smoothly and steadily once the injection has been administered.	To allow the medication to diffuse into the surrounding muscle. To prevent leakage at the injection site. To prevent damage to the tissue.
Apply gentle pressure to the site with sterile gauze for approximately 30 seconds. Do not massage or rub the area.	To prevent bleeding. To prevent tissue irritation.
Encourage the child to exercise the limb.	To facilitate rapid drug absorption. To increase the blood flow and oxygen to the area to minimise discomfort.
Review the injection site 2-4 hours after the injection for any bruising or swelling. Report and document.	To ensure there are no local complications. To facilitate follow-on care. To maintain effective records.

References

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Workman, B. (1999) Safe Injection Techniques. *Nursing Standard*, 13 (39) p 47-53

Appendix 11.7 - Procedure for the Administration of Rectal Medication:

Action	Rationale
Assess the child's level of understanding and suitability for rectal medication.	To ensure that rectal medication is the appropriate treatment for the child.
Ensure that the preparation is appropriate for rectal use.	To prevent inappropriate medication being given rectally. Most rectal medication is available in other preparations such as oral or intravenous.
Prepare the child and family for the procedure.	To help reduce fear and anxiety. To increase child and family co-operation. To reduce the potential for discomfort.
Adopt universal precautions as per Infection Control policies. ie wears gloves and apron.	To minimise the risk of cross infection
Explain to the child and family what you are going to do in words they will understand. Obtain verbal consent from child or parent if appropriate.	To keep child and family involved.
Having confirmed that rectal administration is appropriate, ask the child to lie on their left hand side with their legs drawn up to their chest. If the child is unable to do this, ensure that they are in the most comfortable position possible.	So that the bowel is hanging in the appropriate position and to help prevent trauma. To allow the child to still receive the medication taking care not to damage the bowel lining.
Ensure that the child's privacy and dignity is maintained at all times.	To prevent embarrassment.
<ul style="list-style-type: none"> • Enema Identify whether lubrication is required or whether the drug needs warming. Administer the enema as prescribed.	To prevent damage to the bowel lining and to aid comfort on administration. To deliver the medication.
<ul style="list-style-type: none"> • Suppository Remove all packaging Lubricate the suppository if indicated. Insert the suppository. Maintain the patients position and hold the buttocks together for 1 minute. If possible encourage the child to remain prone for 20 minutes.	To ensure that it is effectively retained in the rectum. To prevent suppository being repassed. To aid retention of the suppository.
Clean the child after the procedure and ensure they are comfortable.	To maintain dignity, personal cleanliness and comfort.

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Appendix 11.8 - Procedure for the Application of Eye Ointment:

Action	Rationale
Assess the child's level of understanding and ability to comply with having medication applied to the eye.	The child's co-operation will assist in ensuring the effective administration of medication via this route.
Prepare the child and family for the procedure. Inform that vision will be blurred temporarily but this is normal.	To help reduce fear and anxiety. To increase child and family co-operation. To reduce the potential for discomfort.
Remove the cap from the tube, and place the cap upright on a clean surface.	To prevent contamination of the ointment.
Gently pull down the lower lid of the affected eye.	To facilitate application of ointment.
Squeeze a small ribbon of medication onto the conjunctival sac from the inner to the outer canthus.	To administer the ointment.
Rotate the tube on completion of drug administration.	This cuts off the ribbon of medication.
Encourage the child to blink or close their eyes briefly.	To facilitate the application of medication over conjunctival surface by allowing body heat to melt the ointment.
Clean any excess ointment from around the eye area with a soft clean dry tissue.	To aid comfort.
If both eyes are affected and require treatment, then separate tubes of ointment must be used for each eye. These are labelled Right and Left.	To minimise the risk of cross infection between the eyes, and contamination of the ointment.

References

D'Angelo, H.H.; Welsh, P.N. (1998) ***Medication Administration and Intravenous Therapy Manual: Process and Procedures***, Springhouse Corporation, Springhouse, California.

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<http://www.aonet.html>

Appendix 11.9 - Procedure for the Administration of Medicines Applied**Topically:**

Action	Rationale
Assess the child's level of understanding and ability to comply with having medication applied topically.	To ensure that the medication is applied appropriately.
Prepare the child and family for the procedure.	To help reduce fear and anxiety. To increase child and family co-operation. To reduce the potential for discomfort.
Expose the area to be treated.	To enable application of treatment.
Assess the patient's skin condition for signs of irritation, allergic reaction, or skin breakdown. Ensure that the child's skin is intact (except in the case of a skin lesion such as an ulcer where the treatment is to be applied to).	Application of ointment to broken or abraded skin may cause systemic absorption.
Remove residue from previous applications.	Prevents skin irritation from an accumulation of medication.
Assist the child to assume a comfortable position that provides access to the area to be treated.	Assists with the application of treatment.
Remove the cap from the tube, and place the cap upright on a clean surface.	To prevent contamination of the ointment.
Wear gloves as per Infection Control policies (sterile if required by procedure).	To protect operator from absorbing the medication. Sterile gloves ensure aseptic application.
Use a sterile spatula to remove sufficient cream to cover intended area for treatment. (Not required for single-application tubes).	To prevent contamination of ointment / paste. Ensures economical use of cream / paste.
Transfer the ointment from the spatula to sterile gauze held in the gloved hand.	To facilitate application.
Apply the ointment / paste to the affected area with long smooth strokes that follow the direction of hair growth.	To avoid forcing medication into hair follicles, thus minimising the risk of irritation and folliculitis
Avoid the application to mucous membranes of medications formulated for the skin.	Drug absorption through mucous membranes is rapid. Overmedication may result.
Follow prescribers directions, and / or any special instructions from pharmacy in respect of paste / cream.	To ensure appropriate and effective application of prescribed treatment.
If required, cover the treated area with a suitable sterile dressing.	To ensure that the treatment stays in contact with affected skin under aseptic conditions.
If applied to hands, put on cotton / polythene gloves as indicated in the treatment directions.	Prevents soiling of patients clothing and bed.
If applied to entire body, puts on loose pyjamas or a gown.	Prevents soiling of patients clothing and bed.

Appendix 11.10 - Procedure for the Administration of Inhaled Medications:

Action	Rationale
<p>Ascertain that prescribed drugs can be given via the inhaled route.</p> <p>Assess the child's cognitive ability to use an inhalation device.</p> <p>Prepare the child and family for the procedure.</p> <p>Assist the child to adopt an upright position.</p>	<p>To ensure correct administration of prescribed medication.</p> <p>To aid the safety and comfort of the child.</p> <p>To help reduce fear and anxiety. To increase child and family co-operation. To reduce the potential for discomfort.</p> <p>To facilitate the inhalation of the drug.</p>
<p>Inhalers:</p> <ul style="list-style-type: none"> • Turbohaler: <p>Unscrew and lift off the white cover.</p> <p>Hold Turbohaler upright and turn the bottom grip clockwise until it clicks.</p> <p>Encourage the child to breathe out gently.</p> <p>Place the mouthpiece into the mouth, chin up, behind the teeth and ensures a good seal with the lips.</p> <p>Hold the Turbohaler horizontally and encourage the child to take a large diaphragmatic breath. Encourage the child to hold their breath for 10 seconds, or for as long as is comfortable.</p> <p>Remove the Turbohaler and encourage the child to breathe out slowly.</p> <p>Replace white cap after use.</p> <p>Clean the device according to instructions. (Never wash the mouthpiece, clean daily with dry gauze.)</p>	<p>To aid delivery of the drug.</p> <p>To make the dose available for inhalation.</p> <p>To facilitate the inhalation of the drug.</p> <p>To deliver the drug.</p> <p>To allow delivery and diffusion of the drug within the airways.</p> <p>To ensure safe storage of medications.</p> <p>To prevent infection and maintain the integrity of the system.</p>
<ul style="list-style-type: none"> • Accuhaler: <p>Hold the outer case with one hand and place the thumb of the other hand in the thumb grip.</p> <p>Slide the outer case away until it clicks. Slide the lever until it clicks.</p>	<p>To aid delivery of the drug.</p> <p>To make the dose available for inhalation.</p> <p>To aid delivery of the drug.</p>

<p>Hold the Accuhaler level but away from the mouth.</p> <p>Encourage the child to breathe out as far as possible, but not into the device.</p> <p>Place the mouthpiece into the mouth, chin up, behind the teeth and ensures a good seal with the lips.</p> <p>Encourage the child to take a steady diaphragmatic breath.</p> <p>Remove the Accuhaler and encourage the child to hold their breath for 10 seconds, or for as long as is comfortable.</p> <p>Encourage the child to breathe out slowly and calmly.</p> <p>Close the Accuhaler by sliding the outer case back.</p> <p>Clean the device according to instructions.</p>	<p>To facilitate the inhalation of the drug.</p> <p>To deliver the drug.</p> <p>To deliver the drug.</p> <p>To allow delivery and diffusion of the drug within the airways.</p> <p>To maximise the effects of the drug.</p> <p>To ensure safe storage of medications.</p> <p>To prevent infection and maintain the integrity of the system.</p>
<p>• Easi-breathe:</p> <p>Shake the inhaler.</p> <p>Hold inhaler upright and open the cap.</p> <p>Encourage the child to breathe out gently.</p> <p>Keep the inhaler upright and place the mouthpiece into the mouth, chin up, behind the teeth and ensure a good seal with the lips. Check that the air holes on top are not blocked by the hand.</p> <p>Encourage the child to breathe in steadily through the mouthpiece and to continue to breath in when the inhaler "puffs".</p> <p>Encourage the child to hold their breath for 10 seconds, or for as long as is comfortable, and then breathe out slowly.</p> <p>Hold the inhaler upright and immediately close the cap after use.</p> <p>Wait a few seconds before repeating the procedure if prescribed.</p>	<p>To ensure the distribution of the drug.</p> <p>To aid delivery of the drug.</p> <p>To facilitate the inhalation of the drug.</p> <p>To deliver the drug.</p> <p>To allow delivery and diffusion of the drug within the airways.</p> <p>To maximise the effects of the drug.</p> <p>To ensure safe storage of medications.</p> <p>To maximise the effects of the drug.</p>

Clean the device according to instructions	To prevent infection and maintain the integrity of the system.
<p>Easyhaler:</p> <ol style="list-style-type: none"> 1. Remove mouthpiece cover and shake inhaler 2. With your thumb on the base of the device and a finger on the coloured button, press the dosing button down firmly once until it clicks, then release. 3. Breathe out and put mouthpiece between lips and teeth, sealing lips around mouthpiece. 4. Breathe in steadily and deeply. Remove from mouth and hold breath for about 10 seconds or as long as is comfortable. Breathe out slowly. 	<p>To aid drug delivery</p> <p>To aid drug delivery</p> <p>To aid drug delivery</p> <p>To deliver the drug</p>
<p>Large volume spacer (LVS) (Volumatic):</p> <p>Assemble the two halves of the LVS together. If a mask is to be used, place it onto the mouthpiece.</p> <p>With mask:</p> <ol style="list-style-type: none"> 1. Shake the inhaler and insert into the Volumatic® 2. Holding the Volumatic® at a 45° angle - place the mask around the child's mouth and nose ensuring a tight seal 3. Press the inhaler canister once to release a dose of the medication 4. Start breathing in slowly and gently (tidal breathing technique) 5. Continue for FIVE breathes 6. WAIT for 30 seconds and repeat steps 1-5 for any further doses required <p>Without mask</p> <ol style="list-style-type: none"> 1. Shake the inhaler and insert into the Volumatic® 2. Put the mouthpiece between the lips AND teeth, sealing the lips around the mouthpiece, with CHIN UP 3. Press the inhaler canister once to release a dose of the medication 4. Start breathing in slowly and gently (tidal breathing technique). The valve on the Volumatic® will make a clicking noise as the valve opens/closes 5. Continue for FIVE breathes 	<p>Providing the space between the inhaler and the mouth reduces the velocity of the aerosol and subsequent impaction on the oropharynx.</p> <p>To aid delivery of the drug.</p> <p>To ensure the distribution of the drug.</p> <p>To facilitate the inhalation of the drug.</p> <p>To aid delivery of the drug.</p> <p>To allow delivery and diffusion of the drug within the airways.</p> <p>To maximise the effects of the drug.</p> <p>To prevent infection and integrity of device.</p>

<p>6. WAIT for 30 seconds and repeat steps 1-5 for any further doses required</p> <p>Twice a week, pull the two halves of the Volumatic apart and wash the facemask and Volumatic in warm, soapy water. Do not rub. Rinse with clean water and leave to dry at room temperature.</p>	<p>To clean the device</p>
<p>Nebulisers:</p> <p>Select the appropriate administration set.</p> <p>Assemble the set correctly.</p> <p>Label the set with the date to be changed.</p> <p>If an existing set is used, check the maximum date of use has not expired.</p> <p>Decant the contents of the nebule into the nebuliser reservoir without contaminating the drug. If a syringe/needle is used to measure the dose volume, discard immediately after use.</p> <p>Dilute the drug as prescribed.</p> <p>Discard any unwanted solution safely.</p> <p>Select and set the appropriate air type and flow.</p> <p>Administer the drug via a mask ensuring the mist does not enter the child's eyes.</p> <p>Ensure specific safety requirements for certain drugs e.g. Colistin</p> <p>Ensures a responsible adult stays with the child throughout the procedure.</p> <p>Clean and dry the reservoir after use.</p> <p>Changes the administration set weekly.</p>	<p>To aid delivery of the drug.</p> <p>To aid delivery of the drug.</p> <p>To ensure the set is disposed of at the correct time.</p> <p>To ensure the set is still appropriate for use.</p> <p>To deliver the drug aseptically.</p> <p>To avoid wrong route administration.</p> <p>To administer the drug as prescribed.</p> <p>To maintain a safe environment.</p> <p>To facilitate the inhalation of the drug.</p> <p>To facilitate the inhalation of the drug. To prevent irritation to the eyes.</p> <p>To maintain a safe environment.</p> <p>To ensure the medication is administered. To comfort and reassure the child throughout the procedure.</p> <p>To prevent infection.</p> <p>To prevent infection.</p>

Appendix 11.11 - Procedure for the Administration of a Subcutaneous Injection:

Use the following link to view a video of how to administer a subcutaneous injection:
<https://alderheynhsuk.sharepoint.com/sites/MedicationSafety/SitePages/Useful-Recourses.aspx>

Action	Rationale
Assess the child's suitability for this route of medication administration.	To ensure the subcutaneous route is most appropriate for the prescribed medication.
Prepare the child and family for the procedure.	To help reduce fear and anxiety. To increase child and family co-operation. To reduce the potential for discomfort.
Assess the most appropriate site for injection. Commonly used sites include the outer aspects of the upper thigh, the outer aspect of the upper arm, the buttocks and the abdomen.	To ensure the correct anatomical site is selected.
<ul style="list-style-type: none"> • Insulin injections: Assemble the correct equipment for the procedure: <ul style="list-style-type: none"> • Select insulin syringe or insulin pen as appropriate. • Select correct size needle for the patient. Draw up correct dose as prescribed. Refer to manufacturers guidelines for specific instructions relating to the pen. 5 mm needle: Do not swab the injection site. Insert the needle smoothly and steadily into the skin at a 90 degree angle. Needle longer than 5mm: Do not swab the injection site Pinch the skin between the thumb and forefinger to lift adipose tissue away from the muscle. Insert the needle smoothly and steadily into the skin at a 90 degree angle.	Dedicated equipment must be used to reduce the risk of error. To ensure the drug is administered into the subcutaneous layer and not into the muscle. To gain the correct dose. Pens are similar, but there may be differences to be aware of. Swabbing the skin can harden the area in patients needing repeated treatment. To ensure the drug is administered into the subcutaneous tissue and not the muscle. Swabbing the skin can harden the area in patients needing repeated treatment. To ensure the drug is administered into the subcutaneous tissue and not the muscle. To administer the medication.

<p>Maintain the grip on the skin fold throughout the injection. Release once the needle has been removed.</p> <p>Wait for 10 seconds before withdrawing the needle.</p> <p>Withdraw the needle smoothly and steadily once the drug has been administered.</p> <p>Discard the equipment in the sharps bin as per Infection Control policy.</p>	<p>To ensure the drug is administered into the subcutaneous tissue and not the muscle.</p> <p>To allow the drug be taken up by the subcutaneous tissue. To prevent the drug leaking out of the injection site.</p> <p>To end the procedure.</p> <p>To maintain a safe environment.</p>
<p>Other injections:</p> <p>Assemble the correct equipment for the procedure:</p> <p>Select appropriate size syringe for the drug and drug volume</p> <p>Select appropriate length 24 gauge needle to access the subcutaneous tissue</p> <p>Draw up the drug aseptically using a filter needle</p> <p>Place the injection needle on the syringe and prime the needle.</p> <p>Clean the skin in accordance with Trust infection control/skin disinfection policy and allow to evaporate.</p> <p>5 mm needle: Insert the needle smoothly and steadily into the skin at a 90 degree angle.</p> <p>Needle longer than 5mm: Pinch the skin between the thumb and forefinger to lift adipose tissue away from the muscle.</p> <p>Insert the needle smoothly and steadily into the skin at a 90 degree angle.</p> <p>Maintain the grip on the skin fold throughout the injection. Release once the needle has been removed.</p>	<p>The smaller the syringe the greater the pressure it exerts.</p> <p>To ensure the drug is administered into the subcutaneous layer and not into the muscle.</p> <p>To minimise the risk of infection. To remove particles bigger than a 5-micron diameter.</p> <p>To gain the correct dose.</p> <p>To minimise the risk of infection. To facilitate the coagulation of any organisms.</p> <p>To ensure the drug is administered into the subcutaneous tissue and not the muscle.</p> <p>To ensure the drug is administered into the subcutaneous tissue and not the muscle.</p> <p>To administer the medication.</p> <p>To ensure the drug is administered into the subcutaneous tissue and not the muscle.</p>

<p>Wait for 10 seconds before withdrawing the needle.</p> <p>Withdraw the needle smoothly and steadily once the drug has been administered.</p> <p>Discard the equipment in the sharps bin as per Infection Control policy.</p>	<p>To allow the drug be taken up by the subcutaneous tissue. To prevent the drug leaking out of the injection site.</p> <p>To end the procedure.</p> <p>To maintain a safe environment</p>
<ul style="list-style-type: none"> • Insuflon: <p>Clean the skin in accordance with Trust Infection Control/skin disinfection and allow to evaporate.</p> <p>Insert the Insuflon using a 45 degree angle into a raised skin fold.</p> <p>Cover the device with a transparent semi-permeable dressing.</p> <p>Clean the bung on the Insuflon as per Trust policy and allow to evaporate.</p> <p>Inject the drug into the bung / attach the prepared infusion. Observe the site for any redness and swelling</p> <p>Document the insertion details of the Insuflon.</p> <p>Insuflon may remain in situ for seven days if the site is satisfactory.</p>	<p>To minimise the risk of infection. To facilitate the coagulation of any organisms.</p> <p>To ensure that the Insuflon is sited in the subcutaneous tissue.</p> <p>To secure the device effectively. To minimise the risk of infection. To ensure the site is visible and to detect early signs of tissue irritation.</p> <p>To minimise the risk of infection. To facilitate the coagulation of any organisms.</p> <p>To administer the drug as prescribed. To detect early signs of tissue irritation.</p> <p>To ensure accurate record keeping. To ensure that an alternative site is selected for the next injection. health and safety and infection</p> <p>Manufacturers recommendations.</p>

References:

Workman, B. (1999) Safe Injection Techniques. *Nursing Standard* 13 (39) p 47-53
 B D Consumer Healthcare, *Getting Started with Insulin Injections*

Appendix 11.12 - Process for Administration of a Mouthwash

Action	Rationale
<ul style="list-style-type: none"> • Prepare the child and family for the procedure. • Familiarise yourself with the instructions on the mouthwash container. 	<ul style="list-style-type: none"> • To help reduce fear and anxiety • To increase child and family co-operation • To reduce the potential for discomfort • To ensure you understand how to administer the product
<ul style="list-style-type: none"> • The child should brush their teeth as normal. • The child should rinse their mouth with water. • The child should wait for five minutes before using the mouthwash. 	<ul style="list-style-type: none"> • Some mouthwash preparations (e.g. chlorhexidine) can be affected by the ingredients in some brands of toothpaste
<ul style="list-style-type: none"> • Use the right amount (dose) of mouthwash as prescribed/as instructed by the manufacturer. • Measure the dose in a suitable container such as a measuring cup. DO NOT measure the dose of mouthwash in an oral or intravenous syringe. • In some cases the mouthwash may be provided as a spray with a nozzle which is directed into the buccal cavity. Follow the manufacturer's instructions for use. • Mouthwash can still be used if the patient is Nil by Mouth. 	<ul style="list-style-type: none"> • To comply with the "5 Rights" for medicines administration • To avoid wrong route administration
<ul style="list-style-type: none"> • Ask the patient to keep their mouth closed and to swish the mouthwash around their mouth vigorously. • In younger children, children who may not be able to do this or children who are Nil by Mouth, the mouthwash solution may need to be applied to a gauze swab and wiped around the mouth/buccal cavity and dabbed on the tongue. You must always keep hold of the gauze swab. 	<ul style="list-style-type: none"> • To ensure even coverage • To ensure even coverage • To avoid any choking risk
<ul style="list-style-type: none"> • Instruct the patient not to swallow the mouthwash but to spit it out. 	<ul style="list-style-type: none"> • If swallowed the mouthwash can lead to stomach irritation.
<ul style="list-style-type: none"> • Discard the gauze swab and measuring cup in the medicines waste bin (blue-lidded). 	<ul style="list-style-type: none"> • To comply with procedures for the disposal of waste medicines

1. Corsodyl 0.2% Mouthwash - Summary of Product Characteristics (SPC) - (eMC). 2017. *Corsodyl 0.2% Mouthwash - Summary of Product Characteristics (SPC) - (eMC)*. [ONLINE] Available at: <https://www.medicines.org.uk/emc/medicine/23034>. [Accessed 07 June 2017].
2. What is Mouthwash, How it Works and How to Use It | Oral-B <https://www.oralb.co.uk/en-gb/oral-health/why-oral-b/why-mouthwash/how-to-use-mouthwash> [Accessed 27 December 2018].

Appendix 11.13: Standard Items for Single Checking – All Wards (updated Jan 2022)

MEDICINE	FORMULATION
ANTI-INFECTIVES	
Amoxicillin	Liquid/Capsule/Tab
Azithromycin	Liquid/capsule/Tab
Cefalexin	Liquid/Capsule/Tab
Ciprofloxacin	Liquid/Tablets
Clarithromycin	Liquid/Tablets
Co-amoxiclav	Liquid/Tablets
Erythromycin	Liquid/Capsule
Flucloxacillin	Liquid/Capsule
Metronidazole	Liquid/Tablet
Nystatin	Suspension/Tablets
Phenoxyethylpenicillin	Liquid/Tablet
Trimethoprim	Liquid/Tablet
ANALGESICS/ANTIPYRETICS	
Diclofenac	Suppositories/tablets
Ibuprofen	Liquid/Tablets/Melts
Paracetamol	Liquid/Tablet/sups
SUPPLEMENTS	
Abidec	Liquid
Dalivit	Liquid
Dextrose/Glucose (Oromucosal Gel)	Gel
Ferrous Sulphate	Tabs
Folic Acid	Liquid/Tablets
Forceval	Caps
Magnesium Glycerophosphate	Liquid/Tablets
Polycal	Powder
Sodium Feredetate	Liquid
Thiamine	Tabs
INHALED / NEBULISED	
Beclometasone	Inhaler
Budesonide	Inhaler/nebs
Ipratropium	Inhaler/nebs/nasal spray
Salbutamol	Inhaler/nebs
Seretide	Inhaler
Flixotide	Inhaler
Symbicort	Inhaler
TOPICAL	
Ametop	cream

MEDICINE	FORMULATION
Aveeno	All products
Cavilon	All products
Clotrimazole 1%	Cream/ointment/topical solution
Dentinol	Gel
Dermol	All products
Diprobase	All products
Doublebase	All products
EMLA	Cream
Hydromol	Cream/Ointment
Hydrocortisone	Cream/Ointment
Medihoney	Barrier cream
Metanium	Ointment
Miconazole	Oral Gel and Cream
Mupirocin (Bactroban)	Nasal Ointment and Cream
Naseptin	Nasal Ointment
Octenisan	All products
50/50 (Liquid & White soft Paraffin)	Ointment
EYE/EAR DROPS AND MOUTH WASHES	
Atropine	Eye drops
Chloramphenicol	Eye drops/Ointment
Chlorhexidine	Mouthwash/gel
Ciprofloxacin	Eye/Ear drops
Ciprofloxacin + Dexamethasone	Ear drops
Clotrimazole	Ear drops
Cyclopentolate	Eye drops
Dexamethasone	Eye and ear drops
Dexamethasone, hypromellose, neomycin and polymyxin B (Maxitrol)	Eye drops
Diffiam	Oral spray + mouthwash
Gentamicin	Ear drops
Gentamicin + Hydrocortisone	Ear drops
Hypromellose	Eye drops
Phenylephrine	Eye drops
Prednisolone	Eye drops
Sofradex	Ear drops
MISCELLANEOUS	
Baclofen	Tabs/liquid
Bisacodyl	Tabs, supps
Carobel	sachet

MEDICINE	FORMULATION
Cetirizine	Tablet/Liquid
Chlorphenamine	Tablet/Liquid
Dexamethasone	Tablet/Liquid
Dioralyte	Sachet
Docusate	Liquid/Capsules
Domperidone	Tablet/Liquid
Gaviscon Infant	Sachets + liquid
Glycerine	Suppository
Hyoscine butylbromide	Tablets
Hyoscine patch	Patch
Lactulose	Liquid
Melatonin	Caps/tabs/liquid
Macrogol compound adult/paediatric	sachets
Omeprazole	Liquid/Cap/MUPS
Ondansetron	Tab/Melt/Liquid
Phosphate	Enemas
Prednisolone	Tab/Liquid
Relaxit/Microlax/Micolette	enemas
Senna	Liquid + tablets
Sodium picosulfate	Liquid + tablets
Thick and Easy	Sachet
SODIUM CHLORIDE 0.9%	
Sodium Chloride 0.9% 10ml ampoules	All routes

Appendix 11.14 - Competency Assessment for Single Checking of Medication on the Standard Items for Single Checking List:

Name: Ward/Dept:.....

Please document the amount and preparation you would use to administer the following doses. If you would be unhappy to administer the drug as a single checker in any of these situations, please state why and the action you would take

- 1. Paracetamol oral 180mg 6 hourly regularly for a 18 month old boy who weighed 12kg**

- 2. Paracetamol oral 400mg prescribed 6 hourly PRN for a 8 year old girl weighing 20kg**

- 3. Ibuprofen oral 300mg 8 hourly PRN prescribed for a 10 year old boy weighing 72kg**

- 4. Clarithromycin oral 187.5mg BD prescribed for a 7 year old weighing 23kg**

- 5. Coamoxiclav 2ml of 250/62 oral suspension prescribed for a 10 month old baby weighing 8kg.**

Competency assessed by

Name.....Title:.....

I authorise the above named nurse to undertake single-checking of the drugs on the Standard Items for Single Checking List

Signed:.....Date:.....

Competency can be authorised by Band 6 nurses and above within the clinical area. Standard answers are available from Anne.Johnson@alderhey.nhs.uk.

When authorised, the nurse is considered competent to apply single checking to all items in the Standard Items for Single Checking list throughout the Trust. The Ward Manager or Department Lead will retain a copy of the authorised competency assessment.

Please email a scanned copy of this document to IM&T Service Desk in-order to update Meditech access to allow Single Checking

Appendix 11.15 - Independent Checking

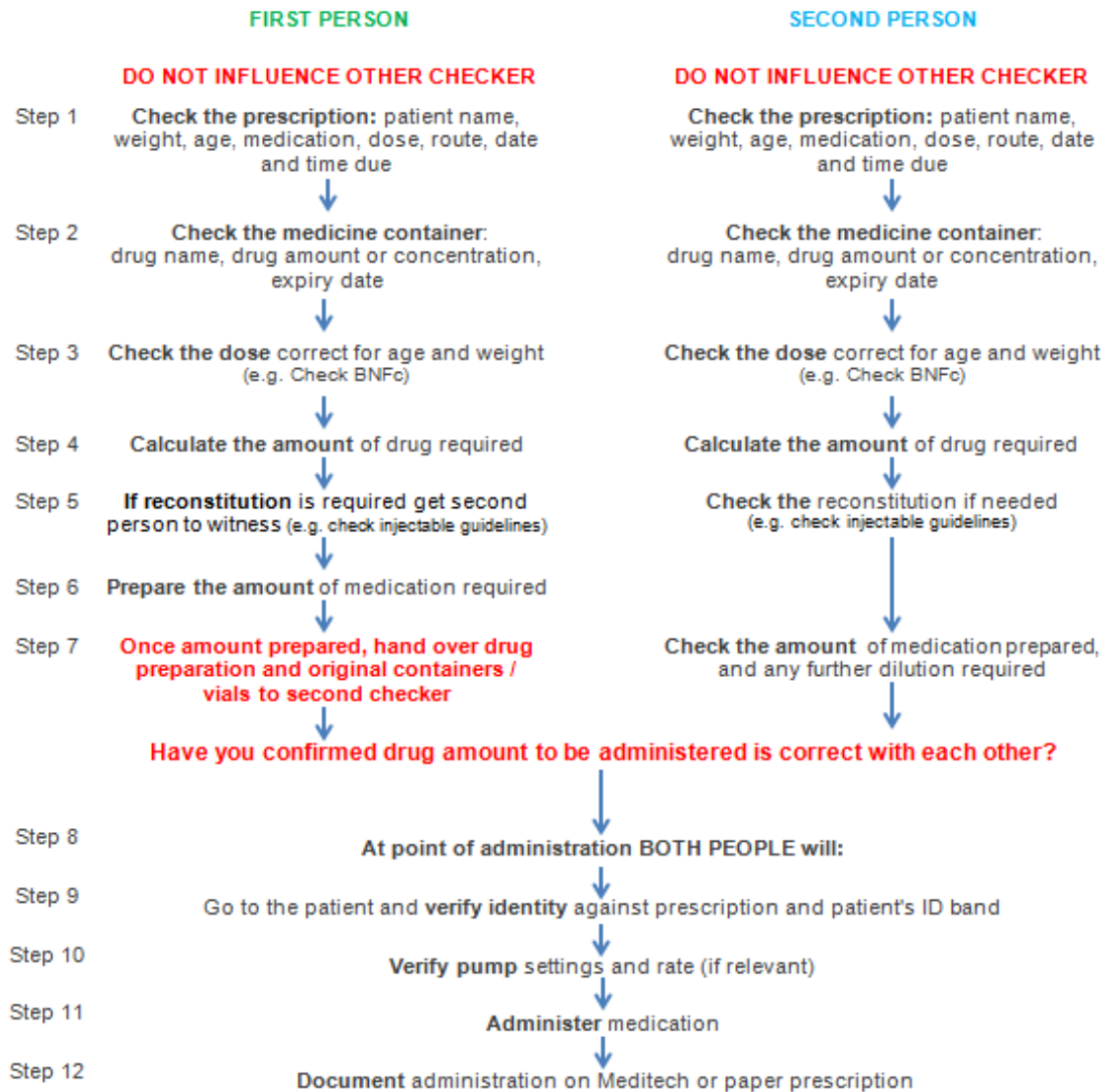


Alder Hey Children's
NHS Foundation Trust

Independent Checking Process

Follow each step in sync without influencing each other's thought process,
e.g. avoid talking unless a discrepancy is noticed
To be used for all drugs except those on the single checking list.

Remember the 5 rights
1: Drug, 2: Amount, 3: Route, 4: Patient, 5: Time



Judith Martin, Medication Safety Pharmacist
Andrea Gill, Clinical Pharmacy Services Manager
David Walker, Medication Safety Officer
Pauline Brown, Director of Nursing

Medication Safety Committee (MSC)
Alder Hey Children's NHS Foundation Trust

Independent Double Checking of Medicines

(Adapted from Institute of Safe Medication Practice Newsletter June 2013)

Background

Numerous studies have demonstrated the ability of independent double checks to detect up to 95% of medication errors⁽¹⁻⁷⁾. Based on this, an error rate of 5% (1 in 20) can be reduced to 0.25% (1 in 400) by introducing an independent double-check process.

Conduct double checks independently

To be most effective, the double check must be conducted independently by a second person^(2,4-7) to reduce the risk of bias that occurs when the person preparing and checking the medication is likely to see what they expect to see, even if an error has occurred. An independent double check requires two people to *separately* check each component of the work process. Two people are unlikely to make the same mistake if they work independently. If they work together or influence the checking process by suggesting what the checker should find, both could follow the same path to an error. So holding up a syringe and a vial and saying, "This is 5 units of insulin, can you check it?" is not effective. The person asking for the double check must not influence the individual checking the product in any way.

Use single checking for low-risk medication

The Trust has developed a list of medicines which do not require a second check. Nurses can complete a competency assessment which, once signed by their manager, will remove the prompt for a second check on Meditech. The competency assessment and list of medicines which do not require a second check are on page 37-40 of this document.

Conduct a cognitive review of the medication

Analysis of failed double-check processes and interviews with staff suggest that double checking often becomes a superficial routine task, and people may lose sight of its importance. These failed checking processes can often be traced to common themes: auto-processing in which the person checking the work of another does so in a habitual manner with little real appraisal; a deference to authority in which the person checking the work of someone who outranks them may not ask questions; a reduction of responsibility or overreliance on double checking in which staff believe someone else will catch any mistakes; social interactions that can lead to unrelated conversations that interfere with the checking process; and lack of time⁽⁸⁾.

What is often missing in the double-check process is a "sterile cockpit" environment without extraneous conversation and a more cognitive review of all components of the medication, the "5 rights".

- Is the **DRUG** appropriate for the patient?
- Is the **DOSE** or **AMOUNT** appropriate for *this* patient?
- Is the **ROUTE** of administration appropriate?
- Is this the correct **PATIENT**?
- Is this the appropriate **TIME** to give the medication?

These questions and more need to be answered independently by the initial clinician preparing the selected medication for dispensing and administration and the second clinician double checking the medication. Without a cognitive review of the prescribed medication during a double-check process, errors—particularly prescribing errors that may be overlooked if simply matching the drug order with the product—may not be detected and corrected before reaching the patient.

Standardize the process and provide tools

In order to reduce process inconsistencies, it is recommended that a standard process for carrying out an independent double check is produced and staff are educated about its importance and how to carry it out properly—as an independent cognitive task and not a superficial routine task. A checklist should make it easy for practitioners to follow the independent double-check process without relying on vigilance and memory.

THE INDEPENDENT DOUBLE CHECK PROCESS:

Before Administration

- Both nurses involved in the medicines administration process must wear red aprons stating “drug round in progress” unless there are extenuating circumstances. During the medicines administration process, interruptions should be avoided and conversation limited to that required for safe administration. Conduct the process in a medication prep room or another agreed area where interruptions can be minimised.

FIRST PERSON

Check all the following (remember to follow the 5 rights):

- The prescription/MAR: patient name, AH Number, weight, age/corrected gestational age, allergy status
- The drug, dose, route, date and time due
- The drug container: drug name, concentration, expiry date
- The dose is correct according to the BNFC (via Meditech or paper version) or local protocol
- Calculate the correct amount of the drug required
- Prepare the quantity of medication required for the patient – use injectable therapy guidelines when appropriate
- Hand over the prepared medication and original containers / vials to the second person

SECOND PERSON

Check all the following (remember to follow the 5 rights):

- Check the prescription: patient name, medication, dose, route, date and time of order
- Check the container: drug name, drug amount or concentration, expiry date
- Check the dose is correct according to the BNFC (via Meditech or paper version) or local protocol. Use injectable therapy guidelines when appropriate
- Calculate the correct amount of the drug required and that this is the amount prepared by the first person

BOTH PEOPLE

- All calculations **MUST** be 2-person checked. Calculations must be done independently and **any discrepancies must be re-calculated**. If necessary seek advice from another member of staff or a pharmacist.
- Go to the patient and verify identity against prescription and patient's ID band
- Verify pump settings, rate against the prescription and volume to be infused before commencing infusion (if IV administration)
- Confirm that your answers are consistent with the IV administration monographs in use in your area. Dose calculation tools are available in some areas.
- Administer medication
- Document on Meditech or paper prescription as appropriate

References

- 1) Kruse H, Johnson A, O'Connell D, et al. Administering non-restricted medications in hospital: implications and cost of using two nurses. *Aust Clin Rev.* 1992;12(2):77–83.
- 2) Campbell GM, Facchinetti NJ. Using process control charts to monitor dispensing and checking errors. *Am J Health Syst Pharm.* 1998;55(9):946-52.
- 3) Ross L, Wallace J, Paton J, et al. Medication errors in a paediatric teaching hospital in the UK: five years operational experience. *Arch Dis Child.* 2000;83(6):492–7.
- 4) Grasha T, Reilley S, Schell K, et al. Delayed verification errors in community pharmacy: implications for improving accuracy and patient safety. Technical Report Number 112101. Cognitive Systems Performance Lab. 2001. www.ismp.org/sc?id=195
- 5) Jensen LS, Merry AF, Webster CS, et al. Evidence-based strategies for preventing drug administration errors during anaesthesia. *Anaesthesia.* 2004;59(5):493–504.
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- 7) White RE, Trbovich PL, Easty AC, et al. Checking it twice: an evaluation of checklists for detecting medication errors at the bedside using a chemotherapy model. *Qual Saf Health Care.* 2010;19(6):562–7.
- 8) Armitage G. Double checking medicines: defence against error or contributory factor? *J Eval Clin Pract.* 2008;14(4):513-9.

Andrea Gill/Judith Martin/David Walker/Pauline Brown

MMOC: 17th January 2018, Version 1. Reviewed September 2021.

Medicines Management Code	
Section 11 - The Preparation, Administration and Recording of Medicines	
Version:	12
Ratified by:	Medicines Management and Optimisation Committee (MMOC)
Date ratified:	8 th August 2023 (agCA)
Name of originator/author:	Andrea Gill (Principal Pharmacist Medication Safety and Governance – Pharmacy / Snr Research Pharmacist – PMRU / MRPharmS (Consultant))
Name of responsible group:	MMOC (subgroup of Drug and Therapeutics Committee)
Name of executive sponsor:	Medical Director
Date issued:	29 th August 2023
Review date:	August 2026

Version Control Table				
Version	Date	Author(s)	Status	Comment(s)
12	Aug 23	Andrea Gill	Current	Added link to video of how to give a subcut injection. Added information on how to crush tablets
11	Feb 23	Andrea Gill	Current	Added Dextrose/ Glucose Oromucosal Gel) to single checking list
10	Jan 22	Andrea Gill, Ibrahim Vhora (Lead Pharmacist Neurodevelopmental Paediatrics)	Archived	
9	September 2021	Andrea Gill	Archived	Added index, updated single checking list, updated linked SOP for parents and carers administering medicines
8	Jul 20	Catrin Barker, Andrea Gill	Archived	
7.1	Mar 20	Catrin Barker	Archived	
7	Mar 18	Catrin Barker	Archived	
6	Oct 17	Catrin Barker	Archived	

5	Sep 16	Catrin Barker	Archived	Updated to reflect introduction of EPMA. Addition of MODRIC guidelines link. Addition of new devices for managing Asthma. Revised single checking list and competency.
4	Dec 14	Andrea Gill	Archived	
3	Dec 10	Tony Nunn (DTC Chair)	Archived	
2		Refer to archive	Archived	
1		Refer to archive	Archived	

Review and Revision(s) Log			
<i>Record of revision(s) made to guidelines since Version 1</i>			
Section Number	Page Number	Revision(s) made	Reason for revision(s)
11.11	36	Added link to video of how to give a subcut injection	Lack of familiarity highlighted to Medication Safety Committee
11.2	21	New information added	Added advice on crushing tablets
11.3.1 i)	3	Reference to single checking on DJU added	To support current practice
Appdx 11.13	43-45	Single Checking List updated	In line with current practice
Appendix 11.16	44 onwards	Updated linked SOP for parent and carer administration of medicines following review by MMOC	SOP updated following incident – Safeguarding and Medication Safety Team input included
Appendix 11.13	36-38	Updated single checking list following review by MMOC	Changes to drugs – some removed, some added
Throughout		Minor typographical and grammatical amendments	
Appendix 11.6	22	Inserted presentation on IM training package	To support understanding of IM injection
11.3.7	6	Added a link to the Critical Medicines list	Reference list for critical medicines
11.3.7	4	Amendment to dual checking procedure in cases of HICD	In response to COVID 19 infection
Throughout doc		Added Remember – If it does not fit, do not administer.	In response to findings from RCA L2 259 StEIS 2018/21324
11.16	42	Added SOP Medicines Administration for Inpatients by Parents and Carers	To support current practice
11.12	35	Added Administration of Mouthwash	To support current practice

11.8	10	Added Clinical Pharmacy SOP (CP29) on process for parent/self-administration added	To support current practice
Appendix 11.14	36	Independent Double Checking of Medicines appendix added	Independent Double Checking of Medicines approved by MMOC on 17 th January 2018
11.4 (first paragraph)	6	Sentence added - The record of administration should only be completed once the medicine has been administered to the patient.	To provide further clarity to process
11.3.1	2	Updated	Version 3 updated - introduction of single checking for a limited list of medicines
11.3.4	3	Updated	
11.3.6	4	Updated	
11.3.7			
11.1.2	12 - Appendix 11.1	Updated	
11.1.4	14 - Appendix 11.1	Updated	
	Appendix 11.12	New - added	
	Appendix 11.13	New - added	