CONTROLLED DOCUMENT

University Hospitals Birmingham NHS Foundation Trust

The Medicines Code

CATEGORY:	Procedural Document
CLASSIFICATION:	Clinical/Governance
PURPOSE	To ensure that all, prescribing, supply, dispensing, handling, storage, administration and disposal of medicines within the Trust complies with legislative requirements and best practice, supporting improved safety and quality of patient care.
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Medicines Code

Contents

1. Introduction

1.1. Statement

The purpose of the Medicines Code is to ensure that medicines are used in a safe and effective way that minimises and manages the risks to both patients and staff. This Medicines Code defines the policies and procedures to be followed within all areas of University Hospitals Birmingham NHS Foundation Trust (UHBFT) for the prescribing, ordering, dispensing, sorting and administering of medicines.
Following the merger of QE and HEFT in early 2018 to form the wider UHBFT, review of the Medicines Code and associated procedures is in process to align practice across all sites. Within this Medicines Code, reference to certain policies and procedures for all sites will be made and appendices must be referred to during the transition phase.

1.2. Scope

The Medicines Code covers all matters relating to the use of medicines in the Trust. It details the procedures which must be adopted to ensure acceptable standards for all aspects of medicines management.

The Medicines Code applies to all staff including individuals employed by the Trust, students, locum and agency staff and all staff employed on honorary contracts, who deal with medicines in any way (e.g. procurement, prescribing, supplying, dispensing, administering, disposal or transportation) on or off the premises.

Those in charge of wards and departments are responsible for ensuring that their staff, especially new starters and locum staff, follow procedures in this Medicines Code, which may differ from procedures elsewhere. Copies of the Code will be available in all wards and departments (via the intranet), and this requirement, together with standards within the Code, will be subject to the Safe and Secure Handling of Medicines audit programme. The minimum compliance standard for the audit is 85%; all clinical areas audited which do not reach the minimum standard will work on an area specific action plan, and be re-audited within the audit programme's framework. For further information on the programme of audit, see appendix 4.

In the Code, 'medicines' has the same meaning as medicinal products in the Medicines Act 1968. Medical gases are classified as medicinal products. Advice on handling of other substances, perhaps not traditionally thought of as medicines (e.g. dietetic products) are also included in this Medicines Code.
The Code is not intended to supersede or conflict with professional standards or Codes of practice which are in place. All activity relating to medicines within the Trust must comply with relevant law and the requirements of other external official agencies.

Where the Medicines Code uses the word MUST, this is either a legal requirement or a non-optional Trust approved procedure. The word SHOULD is used for good practice principles governing the use of medicines.

More detailed local procedures on any aspect of the Code may be necessary in particular departments. These must be agreed with the relevant Clinical Service Lead and the Chief Pharmacist; and approved by the relevant Divisional Medicines Management Expert Panel (MMEP), Medicines Management Advisory Group

(MMAG) and other relevant committees where appropriate. Where such local procedures are produced, copies of such documents must be made available on the Trust intranet following the relevant Controlled Documents process.

As part of a formal induction, newly appointed medical, nursing and pharmacy staff, and any other person who will have dealings with medicines, must read this Code and any relevant associated procedures, to acquaint themselves with the contents. This is the responsibility of the individual's line manager, overseen by the appropriate head of department, ward or consultant, as well as the individual member of staff and must be documented in the Trust local induction checklist.

For a Glossary of Terms refer to Appendix 1.

2. Procurement of Medicines

2.1. General Information

Medicines may only be purchased or acquired by a pharmacist or member of Pharmacy staff or Trust Stores staff acting under delegated authority of the Chief Pharmacist.

The Pharmacy and Procurement departments have the responsibility to safeguard patients, prescribers, staff administering and the Trust by ensuring that products used within the organisation are of appropriate quality and are safe for use. Secure records concerning suppliers, batch numbers, product quality and supply of medicines must be retained to ensure an appropriate audit trail exists and is available in the event of an untoward incident. It is for these reasons that **all** medicines must only be supplied to hospital wards and departments by Pharmacy or Procurement department. This is essential to comply with certain legal constraints, and to ensure that all medicines are assessed before use.

Samples, clinical trial material or any other medicines must not be supplied directly to wards, departments or clinicians by alternative suppliers.

Pharmaceutical industry representatives visiting the Trust are expected to abide by Trust Hospitality, Gifts and Sponsorship Policy. Any representative attempting to leave samples in clinical areas must be referred to the Pharmacy Department.

3. Ordering and Receipt of Medicines from Pharmacy

3.1. Ordering Medicines in Clinical Areas

3.1.1. Stock Medicines

Each ward or department has a stock list specifying which medicines and the amount of each product to be held in the ward or department. These products are referred to as the stock medicines in the clinical area. The list of stock medicines will vary with the nature of the clinical area, but will include only those products required for routine patient treatment.

At QE sites stock lists are available via “Finance Tools” or ward stock controller. At Heartlands (BHH), Good Hope (GHH) and Solihull (SH) sites stock lists are available via the stock list functionality on the Pharmacy intranet page.

The pharmacist or pharmacy technician responsible for the ward or department and the ward/department manager, in consultation with the relevant prescribers, should agree the list and review it at least annually or more frequently if necessary.

Certain medicines cannot be held as part of a stock list without specific Trust approval through the Medicines Management Advisory Group (MMAG) e.g. unlicensed medicinal products, concentrated potassium chloride ampoules.

The ward or department manager is responsible for maintaining ward stock, either in conjunction with a member of the Pharmacy team (BHH, GHH and SH) or the ward stock controller (QE). Where a stores ‘topping-up’ service is not in operation, a registered nurse or other competent member of staff can order stock medicines using the PICS (where in operation) or via Pharmacy**.**

Verbal requests for stock medicines will only be accepted in exceptional circumstances.

Pre-printed top-up sheets are official records and must be retained for two years by the ward or department. All documents related to the movement of medicines are required for audit trail purposes and must be completed in full, signed and dated.

3.1.2. Non-stock Medicines

The Pharmacy Department supplies medicines not kept as stock on the ward or department for individual patients. Non-stock medicines will not be dispensed by the Pharmacy Department without reference to the patient’s prescription.

Supplies of non-stock medicines can be obtained by either:

- contacting a member of the ward based pharmacy staff
  Or
- Ordering via the relevant EPMA system to the inpatient Pharmacy dispensary.

Where the request for the medication is urgent (e.g. a dose of a time-critical medicine may be missed) the pharmacy team MUST always be contacted to highlight the order.

Non-stock medicines ordered for individual patients and patients’ own medicines must accompany the patient if they are transferred to another clinical area. On arrival, the registered nursing staff receiving the patient must store these medicines securely in a locked cupboard. Any discrepancies must be investigated immediately and escalated to Pharmacy if not resolved.

The Pharmacy Department will retain records of non-stock issues for two years.

3.1.3. Controlled Drugs (CDs)

The responsibility for the ordering, receipt and safe storage of CDs is that of the Ward or Department Manager. See the Trust Controlled Drug Procedures for further details.

3.1.4. Concentrated Electrolyte Injections including Concentrated Potassium Chloride Injections

Potassium Chloride 15% injection and Sodium Chloride 30% injection are concentrated electrolyte injections for which the following requirements apply:

- Only those locations agreed by the MMAG can hold stock of concentrated electrolyte injections – this includes concentrated potassium chloride ampoules. All other wards and departments must use the commercially prepared ready to use potassium chloride infusions available to meet most clinical requirements.

- Concentrated potassium chloride injections and sodium chloride 30% must be ordered, and have their receipt, issue and administration recorded, as per Controlled Drug documentation. Specific “Controlled Drug” order books and registers clearly identified as for potassium chloride only must be used for the purpose of ordering and registering both concentrated potassium chloride and sodium chloride 30% solutions.

- Concentrated electrolyte injections **must always** be stored in a locked cupboard, separated from other common diluents such as sodium chloride and in the case of potassium chloride, have their stock balance checked at least once daily by two registered practitioners.

- A second registered practitioner must always check for correct product, dosage dilution, adequate mixing and correct labelling during the preparation of, and again prior to intravenous administration of, solutions prepared from concentrated electrolyte injections.

3.1.5. Concentrated Potassium solutions

Concentrated Potassium solutions must not be lent or borrowed between wards or departments. All supplies must be obtained directly form Pharmacy except out of normal Pharmacy hours when the resident / on call pharmacist in conjunction with the Clinical Site Manager may, if essential, authorise a supply to be transferred from one ward or department. The on-call pharmacist must inform the pharmacy the next working day**.**

Pharmacy will audit the process for requisition, receipt, storage and issue of concentrated Potassium Chloride injection and other concentrated electrolyte injections, bi-annually as part of the Safe and Secure Handling of Medicines Audit.

3.1.6. Discharge Medicines

Discharge medicines must be prescribed on the relevant EPMA system. At QE, all discharge medicines will be supplied from the Discharge Pharmacy, except for Blister Packs, Recovery at Home, and any discharge medicines for Heritage Building wards which will be supplied from the Pharmacy Department, Heritage Building. At BHH, GHH and SH, all discharge medicines will be supplied from the Pharmacy Department in each site.

3.2. Receipt of Medicines in Clinical Areas

3.2.1. Introduction

The ward or department manager (e.g. registered nurse, operating department practitioner (ODP), radiographer) has overall responsibility for the receipt of medicines in a department. This responsibility may be delegated to the registered practitioner in charge of a shift who in turn may charge any other member of staff (including student nurses 18 years and over with valid Trust ID) with receipting medicines for that shift. Only registered nurses, ODPs, nursing associates, radiographers or medical practitioners may receipt CDs.

The individual receipting medicines must check the contents of the delivery against the appropriate paperwork to ensure that all items have been received and identify any items requiring special storage conditions e.g. refrigeration or CDs. These items must be dealt with immediately.

3.2.2. Stock Medicines

Medicines must be stored securely as soon as possible. If it is not possible to check the contents against the computer-generated delivery note and put away the medicines at the time of delivery, then the delivery box must remain sealed and in a secure and locked location, until such a time as this is possible. The check must be completed during the shift in which the delivery occurred. Any discrepancies must be notified as soon as possible to the registered practitioner in charge of the clinical area and the Pharmacy department for further investigation. A record of the check must be made by signing and dating the delivery note. Delivery notes must be retained in the clinical area for two years.

3.2.3. Non-stock Medicines

Transit bags containing non-stock medicines may contain medicines for missed doses or discharge medicines and must always be opened upon receipt in the clinical area and locked away in their correct storage location.

3.2.4. Medicines Requiring Cold Storage

Medicines requiring cold storage must be placed in a refrigerator immediately upon receipt. Before placing the medicines in the refrigerator, the responsible person should check that the fridge has been monitored daily (including minimum and maximum. temperatures) and that the current temperature is between 2-8°C. Refer to section 6.1.2.5.

3.2.5. Controlled Drugs

CDs must be accepted for delivery and receipted in the CD order book by the registered nurse/ODP in charge of the clinical area at the time. See the Trust Controlled Drug Procedures for further details.

3.2.6. Discharge Medicines

On receipt of a patient's discharge medicines onto the ward or department, a registered nurse must check the medicines against the discharge letter and the 'to take out' (TTO) drugs listed either on the relevant EPMA system or on the inpatient prescription chart. The discharge letter will be endorsed by Pharmacy staff as to the supply source, e.g. original pack supplied, patient's own, or fridge. Nursing staff must confirm that all the medication details are correct and report any discrepancies

to the Pharmacy Department. All discharge medicines must be securely locked away until required.

CDs supplied on a discharge prescription must be stored in the CD cupboard immediately upon receipt (except those exempt from safe custody requirements – see Trust Controlled Drug procedure) and until the patient is discharged (segregated from ward CD stock). An entry must be made in the patient's own section of the CD register, or in the 'Patient's own CD register' on receipt of the CDs and at discharge.

At the point of discharge, further checks must be made before giving the medicines to the patient. These checks may be made either on the ward at discharge, in the discharge lounge, or by Pharmacy staff at the Discharge Pharmacy. The checks must include:

- Re-printing the discharge letter and checking that all TTO medicines dispensed match those listed on the letter and against the list of medicines on the EPMA system or prescription chart.
- When discharging from the ward or discharge lounge, the registered nurse must confirm the patient's ID (scan the patient's ID and confirm against PICS at QE) to ensure that the correct medicines are given to the correct patient.
- Ensure that all medicines are labelled for the individual patients, with specific directions on how to take the medicine.
- For guidance on returning any patients' own medicines to the patient on discharge, refer to section 7.1
- If there are any alterations or deletions, contact the ward Pharmacy team or Pharmacy dispensary to rectify.

When providing patients with medicines to take home at discharge it is essential that the registered professional responsible for discharging the patient ensures that:

- the patient is clear which medicines they have been prescribed, how to take them, and is aware of changes made to their medication regimen at admission or during their inpatient stay;
- the possibility of duplicating therapy with supplies of medicines at home is minimised;
- required therapy is not omitted;
- discharge information is clear and unambiguous to all other healthcare professionals including those in primary care, with explicit reference to medication changes;
- the relevant information is provided for any specialist medications, as per local procedures.

When a registered practitioner is responsible for discharging more than one patient at a time, they must ensure that the discharge medicines for each patient are checked and taken to patients separately to avoid any potential error.

3.3. Transportation and Delivery of Medicines

3.3.1. Introduction

All medicines being transported between departments must be in the custody of a designated responsible person who is responsible for the medicines at all times during transit.

All staff collecting or transporting medicines from the Pharmacy Departments will be required to show their Trust identity badge, or an alternative Trust approved form of identification (e.g. student nurses with an identity badge from their place of study) and sign Pharmacy documentation as proof of collection.

Patients, their relatives or representatives may only collect medicines to take home. In all other circumstances members of the public must not act as messengers for medicines transport.

3.3.2. Stock Medicines

Deliveries of stock medicines will be made to clinical areas in (a) sealed box(es). Delivery staff will require a signature from a registered practitioner as proof of delivery.

3.3.3. Non-stock Medicines

Medicines will be transported from the Pharmacy Department to clinical areas in tamper evident, (numbered or barcoded) bags by portering rounds at set times throughout the day. Logistics/Portering staff must sign for *collection* from the Pharmacy department; and on *delivery* to the clinical area they will require a signature from a registered practitioner as *proof of delivery*.

In exceptional circumstances where it is not possible to obtain a signature from a registered practitioner in the clinical area, Logistics/Portering staff must return the sealed transit bag to the Pharmacy Department. Where this occurs out of Pharmacy opening hours, Logistics staff must contact the on-call pharmacist to arrange secure storage and/or collection of the transit bag. If a CD transit bag cannot be delivered, the Clinical Site Manager must also be contacted.

3.3.4. Controlled Drugs

CDs must be transported between locations in tamper evident, numbered, transit bags. Refer to Trust Controlled Drug Procedures for further details.

4. Supply of Medicines Outside of Pharmacy Opening Hours

4.1. Introduction

Outside Pharmacy opening hours there is an on-call pharmacist available to provide urgent medicines-related advice and where appropriate, to supply medicines.

The current Pharmacy opening hours and contact numbers are available on the Pharmacy department page on the Trust intranet.

4.1.1. Queen Elizabeth Hospital

The Out of Hours Medicines Pyxis Cupboard on the 4th floor in the main hospital holds a range of medicines that clinical areas may require when Pharmacy is closed

or medicines are urgently required. The drugs stock locator on PICS can be used to identify medicines stocked in this cupboard.

The Clinical Site Manager will have access to the Pyxis cupboard and is responsible for obtaining items when requested.

All items removed from the Out of Hours Medicines Cupboards must be recorded on the documentation provided; all discrepancies will be the subject of a full investigation.

For out of hours supply of a 'Starter TPN bag' (i.e. from Friday pm to Monday am), the allocated Parenteral Nutrition (TPN) refrigerator in the Pharmacy corridor in the Heritage Building is accessible to the Clinical Site Manager. Refer to the Trust Parenteral Nutrition Procedure, Controlled Document No. 657 for further information

4.1.2. Heartlands, Good Hope and Solihull Hospitals

Each hospital operates a system giving access to an emergency medicine cupboard which contains important medicines (but not Controlled Drugs) that may be needed when the pharmacy is closed. Access to the cupboards is through the appropriate senior nurse on duty for the site. It is essential that any medicines taken from the cupboards are fully recorded so that they can be replaced at the earliest opportunity by pharmacy staff.

4.1.3. Pharmacy On–Call Service (UHB Wide)

An on-call pharmacist is available 24/7 across UHB and may be contacted via the hospital switchboard. The on-call pharmacist can provide advice on where essential medicines can be obtained from (if not available in the ward stock lists (see section 3.1.1) or if necessary will dispense any newly prescribed and urgent medication.

The on-call service is not available to supply routine ward stock medicines, to provide repeat dispensing or for the dispensing of discharge medication except in exceptional circumstances, when the prescriber should contact the on-call pharmacist personally.

The pharmacist may be called for urgent advice on medication treatment, by nursing and medical staff.

4.2. Inter-ward transfer of medicines ('Borrowing' medicines)

Transferring medicines between wards must only be instigated to avoid a missed dose, and must be led by the person in charge/senior sister. The medicines stock transfer book should be used to document transfer of medicines to other wards.

In the first instance, if a medicine is required within Pharmacy opening hours; the dispensary, ward pharmacist or ward pharmacy technician, must be contacted to determine if a supply can be made available **within an hour** of the dose administration time.

The practice of obtaining medicines from the Emergency Drug Cupboards or other wards/departments applies to both ward stock and non-stock items, and can take place at any time of day to facilitate urgent doses of critical medicines. Urgent critical medicines should be supplied to requesting wards to avoid missed doses (see section 9.2.10 for further information about critical medicines and missed doses)

The drug stock locator function on PICS (where in use) or Pharmacy intranet page must be used to determine other areas that stock the medication required.

Only full/complete and unused packs supplied by the Pharmacy or stores department may be transferred to the ward requesting a supply. Medicines must never be decanted from one container to another, nor should parts of blister packs be borrowed. Transfer of individual doses of medicines that are not in their original container must not take place as it may lead to a medication administration error.

The supplying ward can request that the supply be returned to them after the dose has been administered to the patient on the lending ward.
Ward managers of supplying wards are responsible for documenting the medicines that are issued to other wards for reimbursement purposes.

CDs must **not** routinely be transferred from another ward or department. The on-call pharmacist must be called if an emergency supply of a CD is needed (see Controlled Drug Procedures). CDs that are transferred out of hours must be signed out of the supplying ward's CD register and subsequently signed in to the accepting ward's CD register.

The Clinical Site Manager must obtain supplies from the Emergency Drug Cupboard / Out of Hours Medicines Cupboards and where the medicine is not available within the Emergency Drug Cupboard / Out of Hours Medicines Cupboards or as stock in another clinical area, permit the ward to contact the on-call pharmacist for advice and/or supply.

4.3. Medicines for Patients Discharged outside Pharmacy Opening Hours

Prescriptions for discharge medicines must be printed to the Pharmacy Dispensary as soon as the final take home medications are agreed.

Only medicines labelled specifically for the patient, with specific directions for use must be issued to the patient.
Ward stock medicines and those not labelled with directions for use by individual patients (inpatient labelling) must not be given to patients to take home.

Medication which is annotated by hand in place of a computer-generated label is not acceptable for issue to patients. The exception to this is where approved pre-packed medications are issued, and staff are required to complete dosing instructions before issuing to the patient. Under no circumstances must identification/addressograph labels be used in the place of dispensing labels.

In the event that discharge medication is required and Pharmacy is closed then:

- Patient packs which have been dispensed for the respective in-patient and have a computer-generated label with administration directions and information as for discharge medicines, may be issued to patients to take home from the ward in accordance with their discharge prescription.

- Where these supplies are insufficient, pre-packed, pre-labelled containers of medicine are available in some clinical areas to facilitate discharge. The registered practitioner must ensure they follow the procedures detailed in the

Trust Procedure for the Supply of Pre-Packed Medication. Two registered practitioners must check the pre-pack before supply.

- Only in exceptional circumstances should the on-call pharmacist be called to supply discharge medication. For example, in the event of a bed crisis then the on-call pharmacist **must** be called. The Trust site manager can request the on-call pharmacist to supply TTO medications out of hours.

- Where approved, Patient Group Directions (PGDs) may be used for the supply of a pre-packed container of medicines issued by Pharmacy for the purpose (see Trust PGD Procedure). Two registered practitioners must check the pre-pack before supply against the relevant PGD. The registered practitioner making the supply must:
    - be deemed as competent against the relevant PGD
    - ensure the patient meets the criteria detailed in the PGD and supply is not contraindicated
    - ensure that the supply is documented
    - complete the pre-pack label.

5. Dispensing and Supply of Medicines

To dispense is to make up and/or supply a clinically appropriate medicine directly to a patient for self-administration, or for administration by a parent in the case of a young child, or to a ward or department for administration to a patient by a registered nurse or other competent practitioner.
It includes a number of other functions, including:

- checking the validity of the prescription
- checking the appropriateness of a medicine for an individual patient
- assembly of the product.

Local Standard Operating Procedures must be followed and appropriate records maintained.
All dispensing procedures must conform to professional and legal standards and guidance. It is a legal requirement to ensure that a Patient Information Leaflet (PIL) is supplied with a dispensed medicine.

Where unlicensed medicines are supplied, it is essential to have an audit trail for their use, which links the batch number of a product with a particular named patient. Pharmacy will maintain records of unlicensed medicines dispensed for named patients. Stores will record batch numbers of unlicensed medicines issued to wards/departments as stock (where approved).Refer to the Trust Procedure for Prescribing, Procurement, Dispensing, Supply and Administration of Unlicensed Medicines / Unlicensed and Off-label Medicinal Products for Adults and Children Procedure.

6. Storage and Safe Custody of Medicines in Clinical Areas

6.1. Safe Custody of Medicines

6.1.1. General

Medicine stocks and stock lists on a ward or department should be reviewed as a minimum at yearly intervals by the senior sister/charge nurse and a pharmacist/pharmacy technician to ensure that stock levels are kept to a minimum and are not out of date.

The senior sister/charge nurse must determine the process by which medicine stock is monitored in their area. However, staff responsible for ordering stock medicines have a responsibility to rotate stocks and check product expiry dates. It is good practice to check product expiry dates at least once a month. Any medicine stock discrepancies or suspected discrepancies must be reported to the Matron, Divisional Head of Nursing and the Pharmacy Governance Team or Chief Pharmacist.

Any unusual appearance or disappearance of drugs must be reported using the online Trust incident reporting system. Refer to section 11.2 for further details.

The safe and secure storage of medicines will be audited bi-annually by the Pharmacy Department. Ward managers with the support of the respective speciality's Matron will be responsible for developing and completing action plans based on the results of the audits.

All medicines, disinfectants and reagents must be stored in a secure, locked location - a medicines cupboard, trolley or other secure receptacle - to minimise risk of diversion or misuse by hospital staff, patients or members of the public.

This includes medicines for self-administration, for discharge and those medicines awaiting disposal.

Exceptions to the requirement for drugs to be stored in locked facilities are:

- Medicines stored in the Pharmacy Departments (excluding CDs which must be stored in a CD cupboard) where swipe access ensures security.

- Parenteral fluids and sterile topical fluids because of their bulk may be stored where swipe access or locked room restricts access or where storage is in patient facing areas and required for immediate use.

- Medicines for emergency resuscitation (e.g. cardiac arrest boxes, anaphylactic shock packs). Boxes must be tamper evident and clearly marked "for emergency use". Once an emergency box has been opened, the opened box must be returned to Pharmacy as soon as possible and a replacement requested.

- Medications required for immediate/urgent use for self-administration such as salbutamol inhalers or sublingual glyceryl trinitrate may be left in the patient's custody. However, the registered practitioner must ensure that the patient understands the need for their safekeeping, and the need to inform staff when the drug is used.

- Emergency medicines stored in theatre recovery units required for immediate access when patients are present as per Royal College of Anaesthetists (RCoA) guidelines 2016 which states there must be immediate access to emergency drugs at all times.

- Medical gases

6.1.2. Storage Facilities

- Cupboards, trolleys and fridges must be kept locked when not in use and sited where it is most convenient; to allow adequate space; to permit surveillance; and to afford maximum security against unauthorised entry.

- Medicine cupboards and fridges should be sited in a clean utility room to which the general public does not have access. Storage facilities must be cleaned on a regular basis according to a schedule.

- Cupboards must not be sited above or near radiators or major sources of heat, nor above sinks where they may be subject to higher than average humidity.

- Cupboards must conform to the relevant British Standard (BS2881) or be otherwise approved by the Pharmacy Department.

- Medicines for internal use must be stored separately from those for external use, disinfectants, diagnostic use and reagents.

- Preparations for use by intrathecal and epidural routes must always be stored separately from medicines intended for other parenteral routes.

- Care must be taken to separate parenteral infusions from non-parenteral preparations.

- Potassium containing infusion fluids must be segregated from all other infusion fluids to prevent inadvertent misselection.

Clinical areas should have the following lockable storage facilities:

6.1.2.1 Internal Medicines Cupboard

To be used for the storage of all medicines for internal use with the exception of CDs.

6.1.2.2 Medicines Trolley (not all areas)

Used for the storage of stock medicines in current use, with the exception of CDs. Where medicines trolleys are employed they must be kept locked and secured to a wall or in a locked room (or with swipe access) when not in use. When a trolley is in use, it should not normally be left unattended but if this is unavoidable the trolley must be locked before it is left. Medicines must not be stored on the shelf under the trolley or in the waste drawer.

6.1.2.3 External Medicines Cupboard

This is a separate lockable, cupboard from the internal medicines cupboard and

must be used for the storage of all preparations for external use e.g. creams or lotions etc.

6.1.2.4 Controlled Drug Cupboard

CDs are subject to rigorous storage and safe custody procedures. All schedule 2 and schedule 3 (unless exempted e.g. midazolam and tramadol), and patients' own CDs must be kept in a locked cupboard designated for the purpose.

The CD cupboard must be a separate locked cupboard that complies with the Misuse of Drugs (Dangerous Drugs Safe Custody) Regulations 1973 (and BS2881:1989). Units which are not manned 24 hours a day must have CD cupboards that have been approved by the Chief Pharmacist to store CDs following a risk assessment by the Pharmacy Department.

CD cupboards should be located behind a locked door or where this is not possible for operational reasons, located in a monitored area.
See Trust Controlled Drug Procedures for further information regarding storage of CDs.

All CDs must be stored in a locked receptacle which can only be opened by a person who can lawfully be in possession of the keys, such as a registered nurse, ODP, or pharmacist; or a person working under their authority i.e. a pharmacy technician, or Physician Assistant (Anaesthetics) [PA(A)].

In certain circumstances, for example when CD discharge medicines (TTOs) are sent to the ward before the patient leaves; the medicines must be stored in the CD cupboard. These medicines must be segregated from the ward CD stock.

General measures for the storage of CDs include the following:

- Cupboards must be kept locked when not in use.
- Where Abloy Cliq® is not in use, the lock must not be common to any other lock in the hospital.
- Keys must only be available to authorised members of staff and at any time the key-holder should be readily identifiable, or keys must be traceable to individual member of staff (AbloyCliq®).
- The cupboard should be dedicated to the storage of CDs.
- No other medicines or items should normally be stored in the CD cupboard other than where the Trust has carried out a risk assessment and have approved the storage of another medicine in the CD cupboard e.g. concentrated potassium chloride (see Trust CD procedure for further details).
- CDs must be locked away when not in use.
- There must be arrangements for keeping the keys secure. This is particularly important for areas such as day surgery units and five-day wards that are not operational at all times.

The registered practitioner, in charge of the area, is responsible for ensuring safe custody of all CD cupboard key(s) at all times, including areas where Abloy Cliq® is installed. (See section 6.4 for further details on key management).

6.1.2.5 Medicines Refrigerators/Freezers

All cold line medicines must be stored in a designated medicines refrigerator and be an approved appliance for the storage of medicines obtained through the Trust

Procurement processes. A dedicated refrigerator must be used solely for the storage of those medicines labelled ‘store in the refrigerator’ or ‘store between 2 - 8°C’. It must be kept locked. Food or pathological specimens must not be stored in the medicines refrigerator.

Ideally the refrigerator should be wired into the wall to avoid it being turned off inadvertently. If this is not possible the plug must be marked to indicate that it must not be turned off.

Refrigerator temperatures must be monitored and recorded on a daily basis (unless the area is closed). It is the responsibility of the registered practitioner in charge to ensure that this is done. A maximum/minimum thermometer must be kept towards the rear of the refrigerator or an inbuilt monitor used to make daily recordings of maximum, minimum and current temperature on a chart kept on the outside of the refrigerator (see Appendix 9). The acceptable temperature range is 2 to 8°C. Any readings found to be outside of this range must be re-checked. If the result is confirmed to be a deviance, this must be reported to the registered practitioner in charge of the clinical area and to the Pharmacy Department who will advise on appropriate action to be taken for the medicines involved. The faulty equipment must be reported to ENGIE (QE) or the Estates Department (BHH, GHH and SH) immediately. All records of temperature monitoring must be retained in the department for 2 years.

Wards or departments storing intrathecal products which require refrigeration must have a separate dedicated refrigerator for this purpose.

Wards or departments who regularly administer and store parenteral nutrition products must have a separate dedicated refrigerator for this purpose. In areas where parenteral nutrition is administered less frequently, it must be stored in locked refrigerators designed for the storage of medicines.

Medicines refrigerators must not have a freezer compartment. A special medicines freezer must be used when freezer facilities are required for medicines. Daily recordings of maximum, minimum and current temperature must be made and documented on a chart kept on the outside of the freezer. It is the responsibility of the registered practitioner in charge to ensure that this is done. The acceptable temperature range is minus 10 to minus 20°C. Any readings found to be outside of this range must be re-checked and the actions described above for refrigerators taken.

Ward/Department Managers are responsible for ensuring that appropriate monitoring of refrigerators and/or freezers is undertaken and any required actions taken. Medicines known to be thermos-labile which are to be transported off site must be carried in a secure cool bag/box with pre-cooled packs and temperature monitoring must be carried out each time the bag/box is accessed.

6.1.2.6 Patients’ Bedside Medication Lockers and TTO cupboards

Where specific lockable medicine storage lockers are in use in a clinical area, these must conform to the relevant British Standard as a minimum and must be attached directly to a wall or be a purpose designed integral part of the bedside locker. Only patient specific medicines may be stored in authorised locked bedside storage lockers. In areas where TTO cupboards are used to store patient

TTOs that are imminently due for discharge, the cupboard must be lockable and located within the ward medicines room.

6.1.2.7 Fire Resisting Cupboard

Flammable substances displaying a flame symbol should be stored in a fire resisting cupboard when not in use. Clinical areas must not hold large stocks of flammable substances. For further advice contact the Trust Fire Safety Adviser.

6.1.2.8 Resuscitation Trolley

A resuscitation trolley/pack must be located where it is readily accessible in an emergency and where surveillance will prevent unauthorised access. All medicines stored within the resuscitation trolley/pack must be tamper-evident.

6.1.2.9 Warming cabinets (Theatres only)

Where fluids are decanted from their original packaging in to warming cupboards, these cupboards must be locked at all times when not in use.

6.1.2.10 Reagents and disinfectants cupboards

Some areas may have cupboards for the separate storage of reagents and/or disinfectants. These must not be used for the storage of medicines.

6.2. Medicines Packaging and Handling

6.2.1. General

Medicines must be stored in the containers in which they are supplied by Pharmacy.

Medicines must not be transferred from one container to another, nor must they be taken out of their containers and left loose.

Medicines labels and containers must never be altered.

Medicines supplied in original patient packs often contain strip packaging. These strips must be stored in their original containers. Once a strip is removed to administer a dose, vigilance must be exercised to ensure that the strip is returned to the correct container, and in good condition, to aid future identification of the medicine.

6.2.2. Managing Loose Ampoules and IV Infusion Bags

The original packaging, in addition to protecting the medicine, also provides a number of safety features that ultimately protect patients from the risks of medication errors. For example: print size of the medicine name, strength, expiry date and batch number.

Ampoules and IV infusion fluids must not be taken from their original packaging unless there is an imminent intention or expectation to use them.
A number of risks exist if this is not adhered to:

- An ampoule or IV infusion fluid may be returned into the wrong box and subsequently used, mistakenly, in the belief that it is medicine named on the packaging that it has been taken from.
- The use of open containers containing large numbers of loose ampoules or IV infusions for so called convenience of access, risks mixing of products having the same outward appearance. It becomes impossible to rotate

stock, to check expiry dates, to undertake a batch recall, if necessary and increases risks of wrong medicines administration errors.

As such, MOST areas must store IV fluids in their original boxes. The only exception to this is where there is a requirement to store fluids in patient facing areas. Where IV fluids are to be stored in the same room as patients are being treated, it is acceptable to store fluids out of their original packaging. This is to minimise the infection control risk posed by cardboard boxes in patient facing areas.

Where an ampoule or infusion fluid is taken from its box and is subsequently not needed, **one** of the following actions must be taken.

- Discard the unused ampoule or infusion bag. It is better to waste the medicine than run the risk of returning the ampoule or infusion to a wrong box. (See Trust Controlled Drug Procedures for disposal of Controlled Drugs)
- In situations where discarding the medicine would result in an out of stock situation or for “high cost” medicines, the ampoule can be returned to its **original** container. This must only occur where two registered practitioners confirm that the ampoule is being returned to the correct container by checking all of the following:
    - Medicine name
    - Strength
    - Ampoule size
    - Expiry date
    - Batch number

  If the original container is not available the ampoule must be discarded.

Controlled Drugs removed from their boxes and **not** used must always be returned to the original container following the procedure described above. If the original box is no longer available, pharmacy should be contacted to remove the single ampoule of Controlled Drugs in line with the Controlled Drugs procedure. The disposal of a Controlled Drug must be entered in the CD Register and witnessed by an appropriate healthcare professional (registered nurse, ODP, doctor, pharmacist or CPT). Refer to the Trust Controlled Drug Procedures for further details.

Fridge item medication removed from the outer box and not used must be checked as described above, but an additional assessment must be conducted to ensure that the product has been stored appropriately. Contact pharmacy to confirm correct storage conditions for a specific product or if further information is required.

Consolidation of multiple part-used boxes of ampoules must be avoided by proper stock organisation in the medicines cupboards. The only situation where consolidation may occur is where this is of the same Batch Number and Expiry date.

6.2.3. Medicine Samples

Samples of medicines must not be accepted by any clinical area and administered or supplied to patients under the care of the Trust. Anyone wishing to leave samples must be referred to the Pharmacy Department.

6.3. Disposal of Medicines No Longer Required in Clinical Area

6.3.1. General

Pharmaceutical waste is classed as 'special waste'; it must be disposed of by incineration, in approved containers, at high degree temperatures in order to completely destroy all potential substances.

Pharmaceutical waste must not be disposed of via the foul water system in a sink or sluice.

Medicines, other than Controlled Drugs, and empty containers which are no longer suitable for use in the clinical area, must be placed into the appropriate medicines waste bin as detailed in the Trust's guide to medicines wastage. This procedure must be followed for unwanted patient's own medicines, once the patient has agreed to their destruction. See Appendix 6a and 6b for flowchart: "Medicines No Longer Required in Clinical Areas".

All part-used infusions, injection containers, and anything which may be contaminated with blood or body fluids must be treated as hazardous waste and disposed of accordingly in yellow clinical/highly infectious hazardous sharps bins.

Nominally empty containers, all part-used infusion or injection containers which are contaminated with cytostatic/cytotoxic medicines must be disposed of accordingly in purple lidded yellow sharps bins.

For additional information about the disposal of chemotherapy and cytotoxic medicines refer to the relevant Trust procedures available on the intranet.

6.3.2. Deceased Patients

For deceased patients, the following procedure must be applied when handling any remaining patients' own/dispensed medicines:

Where it is suspected that a medicine might be responsible for patient harm:

- The medicine **must be retained** either in the clinical area or in the Pharmacy department until the incident has been suitably investigated and a resolution agreed.

Where no harm is suspected:

- For patients who were being nursed in isolation, any remaining medicines, which had been kept in the vicinity of the patient (e.g. bedside locker/ trolley) must be placed in the appropriate medicines waste bin (blue, yellow, or purple-lidded) and sent for incineration.
- For all other patients, refer to Appendix 6 for the management of unwanted medicines.

Where Controlled Drugs are involved refer to the Trust Controlled Drug Procedures for further information.

6.4. Drug Key Management (including Abloy Cliq®)

6.4.1. Access to Medicines Storage in Clinical Areas

All cupboards, trolleys, lockers and refrigerators storing medicines must be kept locked at all times when not in use. The electronic key system, installed in some areas of the Trust, (Abloy Cliq®) enables individual staff members to have their own

programmed key to the area(s) that they are working in, and enables the use and location of keys to be monitored and accounted to individuals.

Areas that do not have Abloy Cliq® installed must have medicine cupboard keys that are of the type that cannot be easily duplicated without appropriate authorisation. These areas must have **one** central set of medicines cupboard keys that must not be divided at any time.

The registered nurse, ODP, or lead practitioner in charge of the clinical area at the time has overall responsibility for controlling access (by keys or other means) to the medicines storage areas. The responsibility remains with this individual even if they delegate the duty to another registered practitioner. Where digital locks or swipe card/fob access is used to replace keys then the registered practitioner in charge of the clinical area must ensure that codes are changed, or access reviewed every 3 months. It must be documented that the code changes and reviews have been undertaken by the department manager.

No person may have access to the cupboards or trolleys or take medicines from them, unless they have authority to do so from the registered practitioner with this responsibility.

All medicines keys must be kept by authorised members of staff on their persons at all times.

Authorised members of staff must ensure they do not leave Trust premises with keys to medicines storage areas. Keys taken away inadvertently from the clinical area must be returned immediately and in person and an online incident form must be completed.

6.4.2. **Abloy Cliq®**

No unauthorised person can obtain keys to open cupboards (including controlled drug cupboards), trolleys, lockers and refrigerators. Authorised members of staff will have access to the Abloy Cliq® key cupboard located in each ward or department. Access to keys will depend on the individual's job role, and the keys are coded to only open certain areas that are associated with that individual's role. The following have access to Abloy Cliq® keys:

- Healthcare Assistants
- Housekeepers/Logistics
- Medical staff
- Registered nurses
- ODPs
- Pharmacy staff
- Nursing Associates
- PA(A)'s

Individuals are responsible for the safe keeping and management of their allocated Abloy Cliq® key, and must **not** lend their key to other members of staff to use.

6.4.3. Patient bedside medication lockers

Individual patient bedside medication lockers are accessible by a key which must be stored securely with other ward medicine cupboard keys, or are compatible with

Abloy Cliq®. The safe and secure storage and transfer of individual patient medicine locker keys is the responsibility of the registered nurse in charge.

6.4.4. Loss of Keys

On discovering that the keys to a medicines storage area are lost or misplaced, or an Abloy Cliq® key is missing, the registered practitioner in charge of the clinical area at that time must:

- Ensure that the medicines trolley(s) and medicines cupboards, including CD cupboards, are secure.
- Undertake a thorough search of the clinical area (this may include checking with all staff known to have held the keys, and contacting staff who have finished their shift). Immediately report the loss, and actions taken to the Matron for the clinical area (in hours) or Clinical Site Manager (out of hours).
- Complete an online incident form to report the loss.
- For Abloy Cliq® report the loss to the designated Abloy Cliq® practitioner
- The Clinical Site Manager must report the loss to the Pharmacy department/on-call pharmacist to agree any further actions required and ensure the matron and Divisional Heads of Nursing for the area are informed.

For areas without Abloy Cliq®, the following also applies:

- Where the loss involves CD cupboard keys, the Matron for the clinical area (in hours) or Clinical Site Manager (out of hours) must obtain the spare set of CD keys from the designated location.
- Ensure that the locks on the medicines trolley(s) and medicines cupboards are changed as soon as possible, involving on call staff as required.
- The Trust holds a set of master keys for CD cupboards which is available from a secure, designated location for use in the event of lost/stolen keys. Access to these keys in an emergency is possible via the Clinical Site Manager and On Call Pharmacist.

6.4.5. Changes to Locks on Medicines Cupboards/New Medicines Cupboards

For replacement keys, the matron or ward manager (out of hours the Clinical Site Manager) will ensure that the new keys replace the spare set retained in the designated location. Any old keys must be removed and destroyed, and a record of replacement Abloy Cliq® keys will be kept by the Lead Nurse Medicines Management.

6.5. Closure of a Ward or Department

Each situation must be assessed locally to safeguard medicine supplies and prevent potential unauthorised access.

When a ward or department closes for a period of less than seven days, the stock medicines may stay on the ward or department, provided there is adequate security to prevent unauthorised access to them. If the location is not to remain closed to access, e.g. access required by building contractors, medicines must be moved to a secure location. The individual procedure to be adopted must be agreed by the Chief Pharmacist or the Pharmacy Clinical Governance team and the Department Manager, taking advice from the Trust Security Manager as appropriate.

When a ward or department is closed for a period of longer than seven days, all medicines must be returned to the Pharmacy or relocated to a secure alternative patient care area. CDs must be returned to Pharmacy with the CD register and order book in a sealed package.

6.5.1. Decommissioning a Clinical Area

Where a clinical area is to be decommissioned for the foreseeable future, then the ward or departmental manager must consult the Chief Pharmacist or the Pharmacy Clinical Governance team to agree the procedure to be adopted.

6.5.2. Medicines in Unmanned Departments

When medicines are stocked in departments that are unmanned for significant periods of time (e.g. radiotherapy, interventional radiography) then an increased medicines security risk exists. The following action is required to minimise potential breaches in security:

- The department manager and a senior pharmacist must individually review and undertake a risk assessment of the department with regard to the accessibility and storage of medicines used in that area.
- The range, quantities and reorder levels of medicines stocked must be kept to a minimum.
- CDs must only be stocked when essential, with range and quantities kept to a minimum. The relevant clinical service lead must discuss the clinical need with the Trust Accountable Officer for CDs who must approve this decision.
- Key holding must be tightly controlled; this includes maintaining a record of staff holding keys out of manned hours.

Where potential risks are identified, these must be mitigated through discussion with security, pharmacy and risk management staff, and logged on the risk register for the area.

6.6. Missing Medicines

On the discovery that a medicine is missing from a clinical area the following action must be taken:

- An extensive search must be undertaken and if a verified loss is established then the registered practitioner in charge must notify their matron or head of department and the clinical pharmacist for the area (outside of working hours notify the Clinical Site Manager and on call pharmacist).
- Relevant staff, including those from the previous shift, must be questioned about medication transfers to other wards, or non-adherence to drug key management procedure (section 6.4).
- In all instances of medicines loss, an online incident form must be completed.
- If the reason for the absence of the medication cannot be established then:
    - **During working hours -** contact the relevant Divisional Associate Director of Nursing or Associate Director for Allied Health Professionals; Divisional Director of Operations; and Pharmacy Governance team, who will agree and document appropriate action in accordance with Trust risk management procedures, and where appropriate consider further escalation of the loss.
    - **Outside working hours** - contact the on-call Trust manager who after discussion with the Clinical Site Manager and on call pharmacist will agree and document appropriate action. As soon as practicable,

the loss will be reported to the relevant Divisional Head of Nursing or Associate Director for Allied Health Professionals; Divisional Director of Operations; and Pharmacy Clinical Governance team. They will confirm the actions taken, advise on any further actions required, and where appropriate consider further escalation of the loss.

- Where the loss involves CDs, the escalation process in the CD Procedures must be followed. The Pharmacy Clinical Governance team will be responsible for informing the Accountable Officer for CDs at the first available opportunity, who will advise whether the police need to be notified.

6.7. Illicit Substances

The Trust does not condone the use of illicit substances. In accordance with its duties under the Misuse of Drugs Act, 1971, the Trust does not knowingly permit the use of, or dealing in, illicit substances on its premises. Refer to the Trust CD procedure.

The use, supply or unauthorised possession of illicit substances by Trust staff while at work or on Trust premises is likely to result in internal disciplinary and possibly criminal proceedings. The relevant Trust Policies must be adhered to (see Appendix 5).

7. Using Patients' Own Medicines

Patients' own medicines are the property of the individual patient, however with the patient's agreement; suitable patient's own medicines may be used within the Trust. They will be stored safely in the patient's bedside medicines locker and returned to the patient on discharge.

Medication brought in by the patient must only be used when it can be positively identified, meets defined quality criteria and is appropriately labelled. Verbal agreement from the patient or carer will normally be obtained before the medicines are used for the inpatient stay.

The patient will be informed if the medicines are unsuitable for further use and verbal agreement obtained before destroying these medicines.

Patients' own medicines must meet the following criteria in order to be used:

1. Medication is clearly identifiable, i.e. it is in the manufacturer's original packaging and in English.
2. Medication is in its original manufacturing condition. Any evidence of tampering, poor condition, or medicines decanted into unlabelled medication pots must not be used.
3. Medication is clearly labelled by the dispensing Pharmacy to match the original container; is labelled specifically for the patient; and has directions for administration on the label.
4. Medication is in date.

Administration of patients' own medications which are in blister packs or dosette boxes may be advantageous to patient care in particular to avoid an unacceptable delay of a time-critical medicine. Hence this is considered acceptable in the following circumstances:

- Obtaining the medicine would lead to an unacceptable delay.

- Medication to be given is not available from the pharmacy (or if the pharmacy is closed, the emergency drug cupboard).

Before using a dose(s) from the blister pack the following steps should be taken:

- Ensure that medication is essential and is not available as stock, is in the emergency drug cupboard or can be obtained from pharmacy before the dose is needed.
- Ensure that all medicines to be given are prescribed correctly and that the prescription on the drug chart for the medicine(s) needed exactly match(es) the corresponding label on the blister pack. If there are any discrepancies, clarify the prescription with a doctor.
- Check that the blister pack has been dispensed by a pharmacy within the last four weeks.
- Wherever possible identify the exact blister to be administered from the correct day and time of day as it would be taken if the patient was self-administering (e.g. if a Sunday at 6pm, give Sunday teatime blister).
- Check that each dose unit needed corresponds with a pharmacy label and the prescription on the drug chart. The blister pack should detail the colour, shape, and any imprint codes for each tablet or capsule contained within.
- If in doubt, about identifying the correct tablet or capsule, do not administer. Contact the ward pharmacist (or on-call pharmacist if out-of-hours) for advice/supply.
- Ask another nurse, doctor, or pharmacist (if on ward) to check that the correct blister and medicine has been selected.
- If there are other medicines within the same blister that are not needed, because they have been discontinued or ward stocks are available, these should be disposed of in-line with section 6.3
- A new supply must be obtained as soon as possible from the pharmacy, though further doses can be used from the blister pack until new stock is available, following the same procedure.

7.1. Handling of patients' own medicines not being used in a clinical area:

One of the following courses of action can be taken:

- **If the medicines are likely to be required on discharge or a decision is not yet clear:** they should be retained for return to the patient at the time of discharge

- **If the medicines will NOT be required on discharge:** with the verbal consent of the patient, these should be disposed of in a blue sealed waste container. If the patient refuses to give consent, the medicines must be returned to the patient on discharge, clearly marked that they should not be used and an entry made in their clinical records.

Any patients' own medicines returned to Pharmacy will be assumed to be unwanted medicines and automatically destroyed.

7.2. Patients' Own Controlled Drugs

CDs brought into hospital by a patient must be stored in the ward CD cupboard and documented in the ward CD Register on a page specific for "patients' own medicines" (QE) or in the separate Patients Own CD register (BHH, GHH AND SH). See CD procedures for further information.

8. Prescribing Medicines

8.1. General Information

8.1.1. Prescribers

A prescriber must be one of the following:

- **Practitioners registered with the UK General Medical or Dental Councils**
- **Provisionally registered medical/dental practitioners (FY1s)** carrying out prescribing activities relating to their duties as junior medical or dental staff. These practitioners are only permitted to prescribe inpatient and discharge medication.
- **Non-medical prescribers** who have been authorised to prescribe in the Trust and whose name is annotated in the relevant professional register; signifying that they are qualified to prescribe drugs, medicines and appliances as either a supplementary or independent prescriber.

The Prescribing Competency Framework, issued by the Royal Pharmaceutical Society and endorsed by NICE, and the professional bodies representing all prescribers in the UK provides a general framework of good practice for **all** prescribers to adhere to.
Registered non-medical prescribers can prescribe medicines in accordance with the current legal framework and the Trust Non-Medical Prescribing Procedure.

All non-medical prescribers must be approved by the Trust Non-medical Prescribing Group (NMPG) before commencing practice. The register of approved non-medical prescribers is available with the non-medical prescribing lead. .

8.1.2. Patient Group Directions (PGD)

In most cases the most appropriate patient care will be provided on an individual basis by a prescriber to a specific individual patient. However, a PGD for supply and/or administration of a licensed medicine by certain classes of registered healthcare professional can be used where it would benefit patient care without comprising safety.

All PGDs approved for use within the Trust are available on the Trust Intranet.
Registered healthcare professionals wishing to develop PGDs must refer to the PGD procedure for advice and guidance.

8.1.3. Approved Prescription Stationery

Medicines for individual patient use may only be dispensed from the pharmacy in accordance with a prescription entered on the Trust approved EPMA system or

written on a patient specific, approved prescription or official Trust stationery. Supplies of stock medicines do not need to be against approved stationery.

EPMA is operational in most clinical areas; however there are clinical areas in the Trust which do not use EPMA, and continue to use approved paper prescriptions or electronic medicines administration records. All prescription proformas must be authorised for use by the MMAG before implementation.
In the event of a Trust wide emergency resulting in the loss of the EPMA system, the Business Continuity Plan should be referred to. Prescribing should be on Trust approved prescription sheets as per guidance in Appendix 8.

8.1.4. General Principles

The prescriber and patient should agree on the health outcomes desired and on a strategy for achieving them ("concordance"). The prescriber should be sensitive to religious, cultural and personal beliefs that can affect a patient's acceptance of medicines. Advice on medicines derived from animal products is available from the Medicines Information Service.

Pharmacists, registered nurses or other health professionals who wish to query or comment on a patient's prescription should speak directly to the prescriber. In instances where the query relates to a potentially serious error or risk, the health professional must make a record of the conversation with the prescriber in the patient's case notes or on the EPMA system. A Trust incident reporting form (Datix) must also be completed.

8.1.5. General Prescribing Guidance (taken from the General Medical Council (GMC)

When prescribing medicines prescribers must ensure that their prescribing is appropriate, responsible and in the patient's best interests by ensuring that they are familiar with current guidance published in the British National Formulary (BNF), including the use, side effects and contraindications of the medicines prescribed. Refer to the national Prescribing Competency Framework for all prescribers.

When prescribing for a patient, a prescriber must:

- Be in possession of, or take, an adequate history from the patient, including: any previous adverse reactions or known allergies to medicines; current medical conditions; and concurrent or recent use of medicines, including non-prescription medicines. Known allergies, and the nature or symptoms of the reaction, must be recorded in the appropriate sections on the prescribing record.

- Reach agreement with the patient on the use of any proposed medicines by exchanging information and clarifying any concerns.

- Be satisfied that the patient has been given appropriate information, in a way they can understand and that they understand how, and are able to take the medicine as prescribed.

- Prescribe dosages, form and route of medication appropriate for the patient and their condition.

- Agree with the patient arrangements for appropriate follow-up and monitoring where relevant. This may include further consultations, blood tests or other investigations and processes for adjusting the dosage of medicines, changing medicines and issuing repeat prescriptions.

- Inform the Commission on Human Medicines, via the Medicines and Healthcare products Regulatory Agency (MHRA) of adverse reactions to medicines reported by patients in accordance with the Yellow Card Scheme.

- Discuss potential side effects of taking specific medication with patients and signpost to the Yellow Card Scheme to report adverse reactions to medicines.

- Provide patients with information about how to report suspected adverse reactions through the patient Yellow Card Scheme.

- Ensure there is a clear, accurate, legible and contemporaneous record of all medicines prescribed.

- Where possible inform the patient's general practitioner before any treatment is started, unless the patient objects to this disclosure.

8.1.6. Trust Medicines Formulary

Medicines are classified into a number of categories according to their formulary status within the Trust:

Formulary – medicines included in the formulary list and recommended for initiation by in the Trust. The formulary is accessible via the intranet and internet. Formulary medications are classified as follows:

Green	Initiation of prescribing unrestricted
Amber	Initiation and maintenance of prescribing by Specialists and transfer to Primary Care prescribing when appropriate, or initiation and maintenance of prescribing in Primary Care following recommendation from a Specialist. The Formulary will be annotated to reflect specific requirements for agreement and transfer of care. Some amber medicines may require a framework to support safe transfer and maintenance of care such as a **Rationale for Initiation, Continuation and Discontinuation** (RICaD) or Effective Shared Care Agreement (ESCA). The Formulary will be annotated to reflect these requirements.
Red	Initiation and maintenance of prescribing by Specialists only

Non-formulary – products are not routinely available for initiation, or recommendation to primary care prescribers, by a Trust prescriber.

Clinical Trials – will involve the use of existing marketed products used within their licensed indications; or new medicines, formulations or methods of administration unfamiliar to staff handling them. Clinical trial medicines may only be prescribed by clinicians directly involved with the

trial. (Refer to section 10 for further information).

Unlicensed medicines – will only be prescribed where no pharmaceutically equivalent licensed product or no suitable alternative licensed product is available for use at the time the patient requires it (refer to the Unlicensed Medicines Procedure).

NICE technology appraisal (TA) medicines – the NHS is legally obliged to commission and resource medicines and treatments recommended by NICE's technology appraisals. When NICE recommends a treatment 'as an option', the Trust must make sure it is available within 3 months (unless otherwise specified) of its date of publication. NICE TA medicines are added to the medicines formulary following the submission of a confirmed compliance statement, to MMAG, where a positive NICE TA has been published.

Where a prescription for a non-formulary medicine has been **initiated** by a hospital prescriber either:

- The EPMA system will either automatically redirect to a formulary preparation or identify the prescription as a non-formulary medicine

Or

- The pharmacist will recommend the equivalent formulary preparation.

Where PICS is in use, the formulary can be accessed via "PICS Help" (See section 8.2.1 for explanation of PICS). In all other locations, the formulary can be accessed on the intranet.

When patients are **admitted** on non-formulary products then a pharmacist must discuss treatment with the prescriber responsible for the patient's care and actions will be determined on an individual patient basis. The following options may be considered:

- Use of the patient's own medicines initially following Trust guidance.
- Where a patient does not have supplies of their own medication, change to an equivalent formulary preparation stocked by the Pharmacy Department or arrange for supplies of the non-formulary medicine to be specifically ordered following the completion of a 'New drug request form for Non-formulary Medicine (Continuation of Treatment)' form.

8.1.7. Introduction of New Medicines to the Trust

All medicines new to the Trust i.e. not previously used and stocked within the Pharmacy department **must** be requested through the relevant Medicines Management Expert Panels (MMEPs) and approved by the Trust MMAG (See Trust Procedure for the Introduction of New Drugs or Formulary Changes). Note that agents which a GP may prescribe will also require approval by the Area Prescribing Committee (APC). Once approved, medicines will be entered onto the EPMA. Non-dictionary medicines (type-ins – denoted by a lower case first letter or by the pre-fix **"."**) must not be used to by-pass the approval process.

Where a medicine is required urgently for an individual patient, interim access can be granted following approval from the relevant Divisional Director, Divisional Finance Manager and Chair of the MMAG via the 'single use drug request form (Chairman's Action Form)' (see Trust Procedure for the

Introduction of New Drugs or Formulary Changes) which must be completed and forwarded to the Formulary Team before the medicine can be supplied.

In some instances, pharmaceutical companies provide medications with no charge – these are termed 'Free of Charge' (FOC) medications – and a specific drug application form must be completed by the requesting clinician, with support from the appropriate Specialist Pharmacist. All FOC forms must be submitted to relevant MMEPs for clinical approval, and submitted to MMAG for overall approval. The FOC supply will continue until the clinician deems the patient no longer appropriate for the medication; or until commissioning becomes available for the medication for a specific indication.

Additionally some high cost medicines require approval from the APC, NHS England, or external funding networks before they can be supplied. The provision of such medicines will inevitably be subject to some delay.

8.1.8. Verbal Orders

Verbal orders are not permitted by telephone.

Non-emergency or non life-threatening situations:
Medicines must always be prescribed electronically via EPMA or in writing on a paper chart prior to administration.

In an emergency or life-threatening situations

- Cardiac arrest, the medicines administered should be administered and then recorded on the cardiac arrest record form.
- In other emergencies, the medicine(s) given must be documented in the patient's notes.

In these circumstances it is permitted for the prescriber to request the healthcare professional in their presence to administer a medicine via a verbal order and then to document details in the patient's notes.

Where PICS is in use, medicines may be retrospectively prescribed on PICS for the previous 24 hours, for the purposes of documenting emergency medicines administration.
Where JAC is in use, medicines cannot be prescribed retrospectively on JAC, although it is possible to do this where paper charts are being used. For JAC it is possible to prescribe 'emergency drug – see patient's notes' at the time of the emergency and this will be valid for 24 hours.

8.2. Prescribing for Inpatients (Electronic prescribing)

8.2.1. Electronic Prescribing and Medicines Administration (EPMA) Systems: Prescribing Information and Communications System (PICS) or JAC

A Trust approved EPMA system, known as PICS is available in the majority of settings at QEHB, or JAC at Heartlands, Good Hope and Solihull sites. . These EPMA systems are designed to provide a permanent, concise, and unambiguous record of all medicines, including medical gases prescribed and administered to a patient during their stay in hospital. Where EPMA systems are

available, they must be the only means of prescribing. Paper prescriptions must **only** be used in areas that do not have EPMA systems implemented.
Where JAC is in use, for prescriptions which the JAC system does not yet handle (e.g. continuous medication infusions, intravenous fluids, patient controlled analgesia devices, and warfarin), the Trust's appropriate specialist prescribing sheet must be used (e.g. a warfarin prescription sheet). In each case a corresponding electronic prescription should be written to refer staff to the paper prescription (e.g. warfarin – variable dose, see Anticoagulation sheet). **Under no other circumstances** should patient have both electronic and paper prescriptions.
If a patient transfers from an EPMA ward to a non-EPMA ward, a printed copy of the EPMA prescription chart **must** be transferred with the patient and utilised in place of the conventional medicine prescribing and recording sheet n the ward.

8.2.2. Training and Competence

All medical and non-medical prescribers who are required to prescribe using PICS or JAC must receive training from the PICS or JAC training team. The EPMA system trainers will issue passwords and prescribing privileges to medical prescribers once they deem an individual competent to prescribe on PICS or JAC. Non-medical prescribers, after receiving training from the EPMA trainers, will be issued with prescribing privileges.

Individual prescribers are responsible for ensuring the security of their EPMA password as they will be responsible for all prescriptions logged against their password. Passwords **must not** be shared between individuals.

Medical teams are responsible for ensuring that members of their team have access to the EPMA through appropriate arrangements for induction.

In areas where PICS is in use, in exceptional circumstances where the EPMA training team is unavailable **and** it is essential for the patient care, a username and password can be issued by a suitably trained practitioner to the individual. In these circumstances the individual issuing the password and prescribing privilege will take responsibility for the training and competency of the individual to whom they issue prescribing privileges.

In areas where JAC is in use, during normal working hours a call may be logged with IT helpdesk to resolve. Out of hours, the Electronic Prescribing on call service may be contacted.

8.2.3. Patient Admission onto the EPMA

Patients must be admitted onto the EPMA before prescribing of medicines can commence. The clinician who prescribes first for a patient on the EPMA is responsible for admission of that patient onto the system and must complete and confirm the patient's demographic details**,** allergy status and any known co-morbidities. For PICS, the clinician must decline or accept the potential for an automatic rules-based Meticillin Resistant *Staphylococcus aureus* (MRSA) prescription to be triggered during the admission.

8.2.4. Prescribing Process on the EPMA

Medicines prescribed on the EPMA are selected from the drug dictionary, which suggests default dose, route and duration for any given medicine – such defaults

are adjustable by the prescriber within set limits. Prescribers have full responsibility for checking and confirming all details of the prescription – this includes demographic details, co-morbidities, allergies, interactions, EPMA alerts and any defaults accepted.
Prescribers **must** select from a list of:

- Approved drug names.
- Drug forms (e.g. tablet).
- Doses in terms of active ingredient (with units of dose in full e.g. “units” and “micrograms”).
- Administration frequency (using approved abbreviations).
- Frequency and maximum dose in 24 hours for “as required” medicines.
- Administration routes.

The EPMA will:

- Enter date and time of writing the prescription.
- State times for administration according to frequency chosen.
- Record the identity of the prescriber.
- On JAC, there will be an ‘admitted on’ box that must be ticked when a patient is prescribed a medication that they were taking pre-admission and needs to be continued.

8.2.5. Non-dictionary Medicines on the EPMA

The existing EPMA dictionary is not an exhaustive list of all medicines so, on occasion, the prescriber may need to append a medicine to the dictionary temporarily to allow it to be prescribed – so called “non-dictionary medicines”. These must only be used in exceptional circumstances, and in most areas, can only be specified by consultants and specialist registrars. Such medicines have not been approved on EPMA and do not have default form, dose, route and frequency, and are not subject to the decision support which EPMA affords to standard prescriptions. In PICS, non-dictionary medicines are denoted either by a lower case first letter or by the pre-fix **“.”**. In JAC, non-dictionary medicines should be prescribed using the ‘unknown drug’ nomenclature, with the details of the medicine annotated in the comments section.

8.2.6. Password Level Warnings (PICS)

During the prescribing process PICS may issue a number of password level (“red”) prescribing warnings. These warnings require the prescriber to re-input their password to acknowledge/override the warning. In doing so, the prescriber takes responsibility for acting on, or dismissing, the warning as appropriate for that patient. PICS will keep a record of all passwords entered to acknowledge/override such warnings.

8.2.7. Amended or Cancelled Prescriptions

The EPMA will keep a record of all alterations and cancellations made to prescriptions.

8.2.8. Pausing or Suspending EPMA Prescriptions

8.2.8.1. Pharmacists may pause prescriptions where a valid clinical reason to do so exists, e.g. the prescription is deemed to be potentially dangerous and the prescriber is unable to review the prescription immediately. Regular review of the paused

prescription and communication with the medical team should take place.

8.2.8.2. PICS: Registered nurses, who have the rights to administer regular drugs, will be able to pause a defined list of prescriptions within PICS only in the following circumstances:

1. The drug is prescribed as a **regular** drug
2. The drug is prescribed **orally** or as a **nebuliser**
3. The drug is no longer required for the patient

Only drugs on the following list can be paused by registered nursing staff:

- Lactulose
- Senna
- Docusate sodium
- Paracetamol
- Ibuprofen
- Codeine phosphate
- Co-dydramol
- Sodium chloride nebulisers
- Metoclopramide
- Cyclizine
- Oxygen
- Nutritional supplements
  - Fortisip Compact
  - Fortisip Extra
  - Fortisip bottle
  - Fortisip Multifibre
  - Fortijuce
  - Fortisip Yoghurt style
  - Forticreme Complete
  - Calogen
  - Calogen extra
  - Enlive plus
  - Build up (Sweet)
  - Build up (savoury)

Once a drug has been paused by the registered nurse there is an expectation that medical staff will review the medication. After the second omitted dose of a paused medication the prescriber/medical staff must be reminded to review the prescription by a registered nurse.

Once the drug has been paused, it can only be restarted by an independent prescriber. PICS will warn registered nurses that although they are allowed to pause the prescription, they do not have the rights to resume it later.

8.2.8.3. Where JAC is in use, nursing staff are able to defer medicines if there is a reason that it cannot be admin (e.g. nil by mouth). However, this deferred dose will not be available to be administered at a later time, and a prescriber must be contacted to re-start the prescription.

8.2.9. Proposing Medicines (PICS)

On the PICS, a facility exists for certain groups of healthcare practitioners to propose medicines (See Appendix 2), or in some instances for the rules-based system to propose medicines on the basis of a patient's previous admission. The prescriber will be alerted by a red flashing 'Props' tab and must take responsibility for reviewing these proposals - authorising or deleting them as necessary.

8.2.10. Transfer of Patients to Other Hospitals

When patients are transferred to other hospitals, a paper copy of all drug prescription/administration records must be printed and accompany the patient. This documentation must be filed in the patient's records as documentation of medicines prescribed and administered. Where a contract exists between the Trust and another hospital (e.g. Moseley Hall Hospital, West Heath Hospital), all TTO medicines must be supplied on transfer, unless otherwise agreed with the hospital that a supply is not required.

8.2.11. Prescribing Discharge Medicines (TTOs)

Prescribers must complete the discharge letter on the EPMA or e-TTO system before a TTO can be generated by the system. The TTO must be a complete record of all medication a patient will be taking following discharge, even if they already have a supply of their regular medication. For a supply to be made, prescribers must request a supply on the EPMA at the point of prescribing. Where a medication is newly initiated it is a contractual requirement to supply a minimum of 14 days' supply, or for the defined course. Where the patient already has their own supply, the prescriber should indicate this to prevent an additional supply being made, except in circumstances where the patient has less than 14 days at home and will not be able to obtain a supply in a timely fashion.

The discharge letter should explicitly state which medicines have been discontinued, changed or started compared to pre-admission together with an explanation of any changes.

When the TTO prescription has been completed, the prescriber or registered nurse looking after the patient **must** print the TTO to the Pharmacy department, or contact the ward based pharmacist or pharmacy technician to inform them that the TTO is ready for clinical screening and processing.

8.3. Prescribing for Inpatients (paper prescribing)

8.3.1. General Guidance

- Only use Trust approved paper forms and prescriptions where EPMA systems are not in place.
- When using prescribing and recording sheets in the Trust, the patient's full name, demographics, name of current consultant and ward must be entered; and the names of all medicines must be printed in block capitals.
- Approved names of medicines should be used at all times, except where the current BNF cautions against this (e.g. brand-specific prescribing is required).
- Use the metric system for all prescribing. Dosage should be in accordance with the current BNF, with specific dosage units written in full, e.g. units, micrograms, nanograms.
- Patients' allergy status must be confirmed and prescribers must ensure that there is an entry in the allergy section on the EPMA system or paper chart and check against it before writing the prescription. If the allergy box is left blank, the nursing staff must not administer the medication and

Pharmacy must not dispense any medication for the patient against the chart.

- Some Latin abbreviations are accepted (see 8.4.4), and no other abbreviations are acceptable.
- The route(s) of administration must be clearly stated.
- Prescriptions must be signed in full, in indelible, black ink and dated by the prescriber. Print name to ensure legible.
- The times of administration must be clearly indicated and should reflect appropriate practice on that ward.
- The frequency of administration of “as required”/PRN medicines should be indicated by clear and definitely stated intervals, where possible. The maximum number of doses in any 24 hour period must be clearly stated where appropriate. The circumstances for administration must be defined.
- Any instructions as to the application of treatment e.g. left eye, or the duration or timing of treatment must be written in the “special instructions” box.
- Medicines that have been started pre-admission to hospital and which need to be continued must have the word “pre-admission” (“P/A”) written in the ‘start date’ box or tick the ‘admitted on’ box. This must be transferred when writing a new medicine prescribing and recording sheet.
- Medical gases, including Entonox and oxygen, must be prescribed as per Trust guidance.
- For children:
    - Prescribe paediatric preparations whenever possible to avoid the risk of giving adult dosages;
    - Always include the patient’s age and weight on the prescription chart;
    - Prescriptions should also detail calculations, i.e. mg/kg/dose or mg/kg/day but the prescription must state the actual calculated dose for the patient;
    - Prescribers should utilise the dose calculators or other tools where available.
- Prescribers are strongly encouraged to as a colleague to check any calculations that may be required when prescribing or administering medicines;
- Utilise the Medicines Management website (BHH, GHH AND SH) or Pharmacy intranet page (QE) for further support and information on medicines.

8.3.2. The Medicine Prescribing and Recording Sheet

- The medicines prescribing and recording sheet should be available to the prescriber whenever the patient’s treatment is being reviewed, to the nurse/midwife whenever medicines have to be given and to the clinical pharmacist or pharmacy technician when reviewing the inpatient treatment and discharge prescriptions.
- Not more than one medicine prescribing and recording sheet should be in use at any one time for a patient. Medicines must be prescribed on one sheet where possible, however where this is unavoidable due to the number of medicines prescribed; each sheet must be clearly marked as ‘sheet 1 of …’ etc. depending on the number of sheets in use.
- A new sheet should not be started when the first is not immediately available, e.g. misplaced or in use elsewhere.

8.3.3. Cancelling, Pausing, Rewriting and Amending Prescriptions

- Cancellations of any prescriptions no longer current must be signed and dated. A heavy line must be drawn through both the prescribing and recording sections of the medicine prescribing and recording sheet.
- When a new medicine prescribing and recording sheet is required, medicines still in use must be transferred from the old to the new sheet by the prescriber, the old medicine prescribing and recording sheet being cancelled by a heavy line, signed, dated (showing day, month and year), and retained in the patient's records.
- In most circumstances the medicine prescribing and recording sheet should not be altered. If a change is required, the old prescription should be cancelled and a new one written. It is only permissible to amend the dose or frequency of a prescription if this can be done clearly, with detail of the change documented within the "special instructions" box. The amending prescriber's signature and date must be written underneath the change details, and if appropriate, the time of the change. It is not permissible to alter a previously altered prescription; in such circumstances the prescription must be re-written.
- In non-EPMA areas, accurate records of any paused prescriptions must be maintained in the patient's records, and followed up by prescribers as soon as possible.

8.3.4. Legibility and detail of prescriptions

Where there is any doubt whatsoever concerning the detail of a prescription, the medication must not be administered until the prescription is verified and the doubt resolved. In the case of any difficulties, the Nurse-in-Charge must be inferred so that appropriate action can be taken.

8.3.5. Transfer of Patients to Other Hospitals

Refer to 8.2.10

8.3.6. Prescribing Discharge Medicines (TTOs)

Where a paper based system for TTOs is in use, the medicines must be prescribed on the official Trust TTO document. A patient addressograph must be affixed to every copy of the discharge drugs form. Information on the discharge medications must be clear, with drug names written in block capitals in black ink, with generic names used where appropriate.

Unless the pharmacist has been able to clinically check a TTO whilst on the ward, the patient's prescription chart must be sent to the Pharmacy with the TTO form to enable the prescribed discharge treatment to be checked against the inpatient treatment.

8.3.7. Prescribing by Medical Students

Medical students are **not** allowed to prescribe medications under any circumstances. They may prepare a prescription but it must be signed only by a registered doctor / non-medical prescriber in order to authorise the prescription.

8.4. Prescribing for Out-patients

8.4.1. General

The care of a patient attending an out-patient department or clinic is shared by the hospital doctor and general practitioner (GP). The hospital doctor who recommends a change in treatment is responsible for ensuring that a prompt and appropriate written communication is sent to the GP with recommendations. In some instances, if there is an urgent clinical need for a new course of treatment, the hospital doctor provides an initial supply by giving the patient an appropriate prescription.

The continued prescribing of regular medicines is usually the responsibility of the GP. The following situations are examples of exceptions to this general approach:

- When the patient needs to commence therapy immediately (an original patient pack or maximum of 14 day's supply can be given).
- When in the interest of patient care the consultant needs to retain clinical responsibility for the patient in accordance with Department of Health guidance 'Responsibility for prescribing between hospitals and GPs (EL(91)127)'. This will be assumed to apply in the following situations:
    - The medicine required is a 'hospital only' item.
    - Where treatment involves special monitoring e.g. cancer chemotherapy and HIV therapy.
    - Where social and ethical considerations are important
    - A period of stabilisation on new therapy is required.

8.4.2. Effective Shared Care Agreements

Effective Shared Care Agreements (ESCAs) outline the ways in which the responsibilities for managing the prescribing of a medicine can be shared between the hospital consultant and the patient's own GP. ESCAs are individual to a specific drug, and detail who is responsible for what aspect of care, and when early referral is required back to specialist services. They allow the seamless transfer of prescribing responsibility from specialist services to general practice.
Where a medicine is subject to an ESCA the consultant must discuss the patient with the patient's GP to obtain an agreement to share the patient's care prior to initiating treatment. The intention to share care must be explained to the patient by the prescriber initiating treatment. The doctor who prescribes the medication legally assumes clinical responsibility for the drug and consequences of its use.

A written ESCA must be in place which outlines the responsibilities for prescribing the medicine, the required monitoring and who will undertake this, any possible side effects of the medicine and any potential interactions. This will ensure that there is absolute clarity as to who is taking over the prescribing, and any associated monitoring responsibilities. A list of current ESCAs in place is available on the Birmingham, Sandwell, Solihull and environs Area Prescribing Committee Formulary website at: http://www.birminghamandsurroundsformulary.nhs.uk/default.asp

Patients should remain under follow-up in secondary care, where it is expected that the patient's overall response to treatment, and need for continued treatment will be reviewed.

8.4.3. Prescription Details in Outpatients

Outpatient prescribing may be completed through EPMA where available.
Where EPMA is not available, a Trust approved paper prescription may be used. In such circumstances, refer to the information below.
Prescribers must sign and date all prescriptions for medicines, and print their name and contact number or bleep number on all prescriptions.

All prescriptions must contain the following patient details:

- full name
- home address
- hospital number
- NHS number
- date of birth/age

The patient details must be on a printed PAS label whenever available and the consultant/clinic name checked as current.

The patient's weight must be on all prescriptions where the dose is based on weight, for example tuberculosis treatment, or anticoagulation subcutaneous injection.

A patient's allergy status must be checked prior to prescribing and the prescription must indicate any known drug sensitivity or allergy or that there is no known allergy.

The prescription should also detail the:

- drug name, form, strength and route of administration
- dosage including any specific directions
- duration of therapy for items which are a specific course, e.g. antibiotics, steroid course etc.

Prescribers must minimise the potential for error by using the following standards when writing prescriptions:

- **Write legibly in black ink.**
- **Use capital letters** for all drug names
- **Use approved names of medicines -** recommended International Non-Proprietary Names (rINNs) rather than the British Approved Names (BANs). See BNF if in doubt. If a proprietary name is used a different brand of the medicine may be substituted unless the prescriber specifically, and with good reason, requests otherwise, or there are clinical differences between brands e.g. sustained release theophylline preparations, sodium valproate preparations.
- **State dose in terms of active ingredient** not, for example the number of tablets except for compound preparations.
- **Write "units" and "micrograms" in full.**
- **Use only approved abbreviations (See 8.3.4)**
- Initial any alterations made to the prescription

Where it is not possible for the original prescriber to make any necessary amendments to the paper prescription, the pharmacist must contact the prescriber to confirm agreed changes and annotate the prescription with the term "prescriber contacted" or "PC" and be signed, dated and timed by the pharmacist.

8.4.4. Approved Abbreviations

The use of abbreviations used on handwritten prescriptions must be confined to those which are generally accepted and understood. Directions for which there are no approved abbreviations in the table below must be written in full.

4H, 6H, 8H	4, 6, 8, hourly		NG	nasogastric
OD	once a day		NJ	Nasojejunal

MANE	every morning		PEG	percutaneous endoscopic gastrostomy
NOCTE	every night		JEJ	percutaneous endoscopic jejunostomy
BD	twice a day		PO	by mouth
TDS	three times a day		PR	into rectum
QDS	four times daily		PV	into vagina
PRN	as required		SC	subcutaneous injection
STAT	Single Dose		SL	Sublingual
BUC	Buccal		TOP	Topical
INHAL	by inhalation		G	Grams
IM	Intramuscular injection		Mg	Milligrams
IV	intravenous injection		mL	Millilitres
NEB	Nebulised		units	international units

8.4.5. Controlled Drugs

Out-patient prescriptions for CDs are subject to the legal requirements of the Misuse of Drugs Act and Regulations. It is illegal for a prescriber to issue an incomplete prescription for CD. For guidance on CD prescription writing, refer to the Trust CD Procedures.

The Pharmacy Department cannot dispense a prescription for CDs until all the legal requirements are fulfilled.

8.4.6. Prescription Charges

Any out-patient receiving a supply of medicines is subject to the same levy of charges and exemptions as in the community. There are some situations where no charge is levied, for example single doses of a medicine to be given within the out-patient department.

8.4.7. Validity of Prescriptions

Out-patient prescriptions must be dispensed by one of the Trust's pharmacies. They cannot be dispensed at a community pharmacy.

NHS FP10HNC (formerly known as FP10(HP) prescription forms) prescriptions are in use in some out-patient areas and are intended to be dispensed at a community pharmacy and must therefore not be used to prescribe 'hospital only' medicines.

Prescriptions for CDs are valid for 28 days. All other prescriptions, including those from ED are valid for 6 months.

8.4.8. Use of Homecare

In a limited number of clinical specialities across the Trust, specific medicines are provided to patients in their own homes through an approved Homecare Provider. In all instances **prior** approval from MMAG must be obtained and a contract with a Homecare Provider put in place by the Chief Pharmacist. Prescribing will be undertaken by the hospital doctor on an approved prescription form. Please also refer to the Trust Homecare Medicines Procedure

8.4.9. Ordering and Storage of Out-patient Prescription Forms (Controlled Stationery)

Out-patient prescription forms, either approved Trust prescriptions or NHS FP10HNC are items of controlled stationery. Their issue to clinical areas is managed by Pharmacy.

Controlled stationery will be treated as a controlled drug (CD), in terms of ordering, storage and management in a ward/department.

Supply of FP10HNC prescriptions can only be obtained using an 'ORDER FOR CONTROLLED DRUGS' requisition in the Ward/clinic CD order book. This must be signed by the person in charge of the department and presented to the pharmacy department in advance of the prescription form(s) running out.

Out-patient prescription form requests should be on Trust headed paper and signed and dated by the registered practitioner in charge of the department (including their professional registration number).

Controlled Stationery may only be collected by a professionally registered member of staff from that department, who must produce their Trust identification badge. Prescriptions must be checked before signing for receipt, and then sealed in an envelope/bag before transit.

8.4.9.1. Secure Storage of the Prescriptions within Clinical Areas

Prescription forms must at all times be securely locked away.

FP10 prescription forms should be stored in the CD cupboard or in a safe (for those clinical areas without a CD cupboard) when not in use. Possession of keys must be controlled and auditable in the event of any security incident.

Clinic managers and prescribers are responsible for the security of these forms once issued by pharmacy and must ensure that they are securely locked away when not in use. Prescribers must not leave the prescription pads unattended when it becomes necessary for them to leave the room.

8.4.9.2. Receipt of FP10 Prescription Form(s)

A record MUST be made, in the 'amount(s) obtained' section of the 'WARD CONTROLLED DRUGS RECORD BOOK'. The following information must be recorded:

- *Amount:* record the EXACT quantity of prescriptions received
- SERIAL Numbers of the **first** and **last** serial numbers of each prescription pad or the prescription(s) if not a full pad.
- *Date received:* is the date prescriptions are received from pharmacy
- *Serial No. of Requisition:* is the serial number of the order form in the ward controlled drugs order book.
- *Name of staff involved:* Record the names of the person delivering and receiving the prescription stationery.

8.4.9.3. Record Keeping for the issue of controlled stationery

It is the responsibility of the ward and departmental managers, senior sisters and matrons to ensure that records of issuing prescriptions are kept, in order to provide accountability, and to assist in any investigation by the Pharmacy Department or by the NHS Counter-

Fraud Unit. In the case of FP10 prescription forms, they are also responsible for ensuring that there is no alternative other than to issue an FP10 (e.g. if the pharmacy department still open)

The prescriptions should be issued in sequential order.

A record of issue MUST be kept in the 'WARD CONTROLLED DRUGS RECORD BOOK' under the 'Amounts Administered' section which contains the following information:

- *Date*: date prescription(s) taken or given to prescriber
- *Time:* as above
- *Patient's name:* in here record the prescribers name receiving the prescription(s) or clinic/department name
- *Amount given:* quantity/number of prescriptions given to prescriber with the serial numbers.
    - where a full pad is given to the prescriber/clinic then record the **first** and **last** serial numbers of each prescription pad.
    - Where single prescription(s) are issued then record the serial numbers of each individual prescription(s).
    - FP10 prescriptions should only be used rarely, and signed out from the CD register immediately prior to its issue to the patient
- *Given by:* signature of person issuing the prescriptions.
- *Witnessed by:* signature of person witnessing the supply of prescriptions.
- *Stock Balance:* record the stock balance of prescription(s) left in the CD cupboard and the first and last serial numbers of each prescription pad.

It is the responsibility of the prescriber to maintain security of the prescription forms once issued to them.

At the end of each session, it is the responsibility of the ward/clinic sister or matron to ensure prescriptions are securely locked away when not in use. Reconciliation of the prescription forms must be carried out and documented.

8.4.9.4. Destruction and Disposal of FP10 Prescription Forms

FP10 prescription forms no longer required due to prescribers leaving the Trust or clinical areas that are no longer operating must be returned to the issuing pharmacy. These forms must be destroyed in a secure manner (e.g. shredding) before being put into confidential waste.

A record of the FP10 prescription form serial numbers that require destruction must be documented in the ward controlled drug record book. The destruction of the forms must be witnessed by another member of staff.

The destruction of FP10 prescription forms no longer required by NMPs in community services is managed locally by the NMP administrator.

Records of forms destroyed must be kept for a minimum of 18 months

8.4.9.5. Audit Trails

There must be an audit trail so that areas can identify which serial-numbered forms have been received and which have been issued to each prescriber. All unused prescription forms must be recovered and stored in the CD cupboard or safe at the end of each clinic or when there is a change in the prescribers during a clinic session.

Record keeping must be accurate, auditable and allow the 'history' of the generation of a prescription to be traced from receipt of the blank form to when it is prescribed.

Any clinical area(s) storing prescriptions is subject to an audit inspection by the Pharmacy Governance Team and the audit findings reported to the Chief Pharmacist and the MMAG.

8.4.9.6. Reporting Missing/Lost/Stolen FP10 Prescription Form(s)

In the event of a loss or suspected theft of a prescription form, the prescriber or senior nurse must notify the Chief Pharmacist (or member of Pharmacy Governance Team) immediately. The Chief Pharmacist has overall responsibility for prescription forms and is the Accountable Officer.

The reporting manager MUST:

Record this as a security incident on the Trust incident reporting system (Datix) initiating local notification and alert processes;

Provide detailed information of the investigations taken in finding the lost/missing FP10 prescription; and

The Chief Pharmacist must be informed of any unaccounted lost /missing FP10 prescription forms. In the absence of the Chief Pharmacist, a member of the Pharmacy Governance Team must be notified

8.5. Non-ward Area Prescribing

All prescribing and medicines administration undertaken in diagnostic or interventional departments such as Imaging or Endoscopy must be documented in one of the following places:

- On an approved prescription
- On Trust EPMA
- In the patient's records
- On an approved diagnostic/test request form which forms a permanent part of the patient's records.

In theatre medicines must be prescribed either on the EPMA system or on the patient's anaesthetic chart which forms a permanent part of the patient's notes.

8.6. Prescribing Radiopharmaceuticals (QEH)

Procedures exist for the review and validation of radiopharmaceutical requests. A radiological management system known as CRIS is in use. The CRIS system together with the Booking Diary is routinely checked by the radio-pharmacist, who specifically relates this to the original referring doctor's request.

All requests for radionuclide imaging are accepted by a team of authorised named individuals (approved by an Administration of Radioactive Substances Advisory Committee (ARSAC) certificated radiologist practicing under Ionising Radiation (Medical Exposure) Regulations 2000 (IRMER)). The list of authorised persons is held in the Nuclear Medicine Department. Requests are 'authorised' based on their compliance with a set of IRMER clinical referral criteria as agreed by the nuclear medicine practitioners.

8.7. Prescribing for Staff Members

Hospital prescribers should not normally prescribe medicines for other staff unless they are being treated following a GP or consultant referral or referral from the Occupational Health Department.

General Medical Council (GMC) Good Medical Practice states that wherever possible medical staff should avoid providing medical care to anyone with whom they have a close personal relationship.

Members of Trust staff, including doctors, and their families must be registered with a GP and obtain all chronic medication for themselves in the same way as other members of the public.

In exceptional circumstances the outpatient pharmacy is able to dispense private prescriptions for members of staff; however these must be prescribed in line with GMC guidance (no prescribing for self or family).

Where a member of staff falls ill on duty and has an urgent need for medication to enable them to continue their shift, they should be referred to the ED for a prescription, or health advice sought from Occupational Health.

Staff or visitors who require treatment for minor ailments must **not** receive medicines from stock within a clinical area. They must be referred to their own GP or attend the ED or a walk-in centre.

8.8. Prescribing Clinical Trial Medicines (Investigational Medicinal Products - IMPs)

Clinical trial medicines may only be prescribed by clinicians directly involved with the trial. Prescribers are required to be named on the study-specific trial master delegation log, which authorises them to prescribe within that trial. All trial prescriptions must be checked to ensure that the prescriber is on the trial master delegation list prior to dispensing. A copy of this log must be kept in the pharmacy study specific file.

The prescribing of clinical trial medicines must be in accordance with the trial protocol and must not be used for any other purpose. Prescribing must be on an authorised, study specific prescription form which clearly states the trial name. The inclusion of the Pharmacy Clinical Trials Service in set up of the study will ensure the design and

production of a suitable prescription form and that the appropriate handling instructions are devised.

Prescriptions must include but are not limited to:

- The official trial name and protocol number
- Visit number
- Patient identifying details:
  - full name
  - home address
  - unit number
  - NHS number
  - date of birth/age
- Dose, frequency, duration and route of administration
- Quantity of IMP required for the prescribed treatment period (this should correspond with pre-packs designed to meet the requirements of the treatment protocol wherever possible)

Further information on Clinical Trials is detailed in section 10.

8.9. Prescribing Cytotoxic Medicines

Cytotoxics must only be prescribed by practitioners familiar with their use.
FY1 doctors are **not** permitted to prescribe cytotoxic chemotherapy for administration to patients by any route.

Cytotoxic chemotherapy is potentially hazardous and fatalities have regularly been reported as a result of errors in prescribing, or in the interpretation of prescriptions. Prescribers must take care that their prescriptions are not only legible, but also unambiguous to another member of staff who may lack knowledge and expertise.

The prescription must make it clear whether the cytotoxic is a one off dose, a single dose to be repeated at intervals, or is a course of therapy. It is vital that there is no ambiguity in the prescribing of intermittent doses. For example, a cytotoxic dose to be administered once every 4 weeks must not be prescribed as 4-weekly.

Open ended courses must not be used; finite courses should be prescribed and reviewed regularly.

Unusual doses or dosage intervals must be prescribed clearly. For example, a recurring error is of patients taking methotrexate daily instead of once a week.

Vinca alkaloids must only be prescribed in 50ml mini-bags for administration over 5-10 minutes and will be supplied by the Pharmacy Department in distinctive blue packaging labelled with the additional warning “For intravenous use only – fatal if administered by other routes”.

Separate policies, procedures and expanded practice protocols exist for the prescribing, handling and administration of cytotoxic medicines. It is important that all medical, nursing and pharmacy staff are aware of, and comply with such policies, procedures and expanded practice protocols across each site.

8.9.1. Intrathecal Chemotherapy

A report commissioned by the Department of Health in 2001, following a number of incidents within NHS hospitals, recommended the formal designation of medical staff

competent to give intrathecal chemotherapy and that Trusts ensure intrathecal and intravenous cytotoxic treatment are always given at different times, by different people and in different locations (Department of Health (2001) The Prevention of Intrathecal Medication Errors: A Report to the Chief Medical Officer).

Hence, within the Trust **only** those prescribers listed on the Trust Intrathecal Register (held within the Oncology Pharmacy Department (QE) or the Haematology/Oncology intranet site (BHH, GHH AND SH)), can prescribe intrathecal chemotherapy. Refer to the relevant Trust policy for Intrathecal Chemotherapy.

8.9.2. Prescribing Other Intrathecal Medicines

Prescribers must be aware that normal injectable medicines for IV use are **not** appropriate to be prescribed by the intrathecal route without seeking further advice. Medicines for spinal injections are special preparations which are preservative free and of an appropriate pH for the route of injection.

8.10. Prescribing Dietary Products (Oral and Enteral)

Most dietary products are considered to be 'borderline substances'. However it is important to recognise that while some have an important and vital role in supplementing the oral intake to meet the nutritional requirements of patients, others are used as the sole sources of nutrition for patients or as the sole form of treatment for patients.

Dietary supplements can interact with medicines and therefore the use of a dietary product should always be recorded within the prescription chart. Dietitians are authorised to initiate the use of a dietetic product by prescribing the items on EPMA and documenting details in the patient's record.

The information to be recorded is:

- Details of the product to be used and the amount required
- Signature and name of the responsible dietitian with a contact bleep number
- Date of intervention

8.11. Prescribing Controlled Drugs

Refer to the Trust Procedures for CDs for further information on prescribing CDs.

8.12. Prescription Validation/ Checking

EPMA systems ensure that prescriptions are legible and complete. The system also includes some elements of clinical decision support: e.g. alert flags for allergies, medicines duplication alerts, drug interactions, specific contraindications, default dose/frequency checking and review dates for specific medicines e.g. antibiotics.

All prescriptions routinely undergo a clinical screen by a pharmacist in line with local pharmacy procedures and appropriate Trust clinical guidelines prior to dispensing.

At ward level prescriptions are validated by clinical pharmacists who:

- Check medicines taken prior to admission against prescribed medication and reconcile any discrepancies identified
- Clinically screen prescribed medicines for accuracy and suitability for the patient

9. Administration of Medicines

9.1. Medicines Administration

9.1.1. General

Medicines administration must only be undertaken:

- on the authorisation of a prescriber (electronic prescription or other approved prescription in accordance with a PGD approved for use within the Trust or against an exemption from prescription requirements under the Medicines Act 1968 (see 9.1.4, 9.4.5 and 9.4)

All Healthcare staff who are involved in the administration of medicines are listed in appendix 2.

Medicines must only be administered to patients by registered practitioners or any healthcare staff who have been assessed as competent in the administration of medicines. Registered practitioners and other healthcare staff administering medicines must achieve, demonstrate, and provide documented evidence of competence relevant to their duties in drug administration. All newly registered nurses and all new starter nurses must successfully complete the Trust approved drug assessment and associated workbook to prove competence in their area of practice. External agency staff may administer medicines but must do so in accordance with the Trust standards for medicine administration and their professional code of conduct. Non nursing staff e.g. clinical technologists, must contact the Clinical Education Team to arrange profession specific drug administration training.

In accordance with Codes of professional practice, the registered practitioner has a responsibility to recognise, and to work within, the limits of their competence. In addition, the registered practitioner has a responsibility to practise within the boundaries of the current evidence based practice and in line with up to date Trust and national policies and procedural documents. Evidence of continuing professional development and maintenance of skill level will be required and confirmed at the registered practitioner's annual appraisal by the registered practitioner's line manager.

Registered/qualified practitioners may be issued with electronic prescribing system passwords following completion of relevant training, and be provided with "medicines administration" privileges prior to being assessed as competent in the administration of medicines.

9.1.2. **Administration of Medicines by Non-Medical and Non-Nursing Staff**

Registered healthcare staff other than nurse, doctors and dentists may be involved in the administration of medicines. These individuals must have undertaken recognised Trust training and achieved the relevant competence in drug administration. Examples include the administration of radio-pharmaceuticals or diagnostic contrast media by radiographers, medicines administered by perfusionists, or medicines administered by nursing associates. Medicines administration must be against a prescription or in accordance with approved speciality specific directions (PGDs, PSDs) developed by the appropriate service manager, agreed with the Chief Pharmacist and approved by the Medicines Management Advisory Group.

9.1.3. Administration of Medicines by Non-registered staff

In certain specified circumstances, non-registered staff working in professional specialties, (e.g. healthcare assistants, nursery nurses, physician assistants or other) if appropriately trained and able to demonstrate competence, may undertake the administration of medicines against agreed written protocols signed by the Clinical

Service Lead of the specialty and approved by the Chief Pharmacist and Medicines Management Advisory Group.

9.1.4. **Administration of Medicines by Students** (see Glossary for definition of student)

Students of any profession are not permitted to administer medicines without supervision. They may, under the direct supervision of registered practitioners or qualified healthcare staff, administer medicines (all routes except intravenous route and those listed as restricted routes see 9.7.1) for the purpose of instruction and learning. Supervising registered practitioners or qualified healthcare staff must sign the administration record following administration of the medicine.

The supervisor will remain responsible and accountable for the administration of the medicine.

Students must **not** administer intravenous drugs as this must be carried out by a registered practitioner competent in IV drug administration in accordance with the relevant expanded practice protocol. Healthcare students may witness the administration and monitoring of intravenous infusions under direct supervision. Students must not 'flush' intravenous cannulae or disconnect and reconnect IV fluids when dressing patients.

Students can participate in the administration of CDs under supervision, however, only as an additional signatory to those required from two registered practitioners.

Student midwives may administer medicines on the midwives exemptions list, except controlled drugs, under the direct supervision of a midwife.

9.1.5. Administration of Medicines under Medicines Act Exemptions

Exemptions to medicines legislation permit certain other registered healthcare professionals e.g. chiropodists/podiatrists, ophthalmic opticians, additional supply optometrists to supply or administer defined prescription only medicines without prescription. Where this occurs products supplied to patients must always be sourced and supplied by the Trust Pharmacy Department, and appropriate records of supply must be maintained.

Registered midwives may supply and administer on their own initiative, any of the substances that are specified in medicines legislation under midwives exemptions, provided it is in the course of their professional practice.

9.1.6. **Exemptions to Medicines Legislation in the Event of a Pandemic Disease**

Other exemptions to the requirements for a prescription before a medicine can be supplied come into existence in the event of, or in the anticipation of, a disease being imminently pandemic; **and** also a serious, or potentially serious, risk to human health. The Department of Health will announce when this situation has arisen following which further advice will be issued within the Trust.

Administration of certain prescription only medicines for the purpose of saving a life in an emergency are detailed in section 9.4.

9.2. Basic Principles of Medicines Administration

9.2.1. General

Registered practitioners are expected to practice in accordance with the standards set in this medicines code and by their relevant UK professional bodies, and acknowledge any limitations in their knowledge, skills or competence to administer or check medicines. If there are such limitations they must refrain from this activity until trained and competent.

Wherever possible all practitioners should not be interrupted during the medicines administration process.

The basic principles must be that whether administering a medicine, assisting in its administration, or overseeing self-administration; the registered practitioner will:

- have a basic understanding of the therapeutic use and pharmacological aspects of the medicine
- have awareness of patient's condition, comorbidities and treatment plan
- be prepared to question any discrepancy
- be accountable and able to justify any action taken

A competent registered practitioner should be able to administer drugs without involving a second person. Exceptions to this, where a second check is mandatory and must be recorded for **all** registered practitioners, are:

- **All** Controlled Drugs
- **All** cytotoxic medicines
- **All** parenteral drugs with the exception of low dose subcutaneous heparin administered for prophylactic treatment
- **Medicines being administered to children under the age of 16** (except those medicines on the approved single nurse administration for paediatrics and neonatal list)

Where a dose calculation is required in the preparation of a medicine it is good practice for the calculation to be checked independently by a second competent practitioner.

When a second person is asked to check a calculation they must independently undertake the full calculation by their own method. They must not confirm the first person's answer until after they have performed the calculation.

Preparation of some parenteral medicines will require both the preparation and administration stages to be documented within the electronic prescribing system by **both** individuals involved in the process.

9.2.2. Administration of medicines by teams in the Community

Individuals working alone for the Trust in the community as part of a team can administer medicines without a second check providing they have:

- Undertaken area specific competence based assessment to allow them to administer independently
- Have been signed off as having achieved this competence.
- The medication has been risk assessed to confirm that administration without a second check is acceptable. This includes oral, intravenous, subcutaneous, and intramuscular medication

For staff practicing in the community, refer to the Medicines: Nurses, Midwives and Allied Health Professionals Practising in the Community procedure.

Appropriate monitoring and audit of the process must be in place.

9.2.3. Steps to be followed when Administering Medicines to Patients

All individuals administering medicines to patients are accountable for their actions. If the prescription is illegible, unclear or unusual the prescriber or pharmacist must always be contacted for clarification. Medicines must not be administered to a patient if the prescription is illegible or ambiguous.

The process adopted for supplying or administering a medicine to any patient by any route must ensure that:

.. the correct patient is administered to
.. the correct dose of
.. the correct drug by
.. the correct route with the correct formulation at
.. the correct date and time, with consideration to previous doses given.

9.2.4. Patient Identification

A positive identification of the patient must be made **before** administration. Additional means of identification must include a positive identification either by two other members of staff, relatives/carers and where appropriate, interpreters and photographs (refer to Trust Policy for Patient Identification)

Inpatients:

Either the bar code on a patient's wrist band must be scanned to identify the patient, or the patient details on the wrist band must be read to confirm identity. The details on the wristband – patient's name and hospital number – must be confirmed against those on the prescription. In addition, the patient should state their name and date of birth wherever possible.

Where PICS is in use, it is configured to **only** recognise the unique barcode on patients' wristbands (i.e. will not recognise barcodes that are not on wristbands). Under **no** circumstances must a wristband be scanned that is **not** attached to a patient (any exceptions to this are audited and have serious safety consequences).

Where a wrist band is illegible/ damaged, the registered nurse or healthcare professional must ensure that the wrist band is replaced (check patient's name, address, and date of birth). Additional means of identification are essential when replacing wrist band(s), or when the patient cannot give their name and date of birth prior to administration of the medicine.

Where there are two patients with the same or similar name on the ward, extra care must be taken in the identification of the patient.

Outpatients or patients without a wristband

Three pieces of patient identification must be obtained before administering medication to the patient.

9.2.5. Check for Allergies/Sensitivities

The prescriber must check that the patient is not allergic or sensitive to any of the medicines prescribed, nor to any substances known to be included in any medicines prescribed, e.g. tartrazine or arachis (peanut) oil contained in some medicines.

Where patients are known to have a drug sensitivity or allergy this will be indicated on: the patient's prescription or on the electronic prescribing system, in the medical notes

and nursing records. A single red identification wristband (with printed black text on a white panel) must be used instead of the standard identification wristband to alert staff to an allergy.

If no allergies or sensitivities are known, the prescriber should have endorsed the appropriate section of the prescription 'none known'. Medicines must not be administered if the allergy status has not been recorded. The registered practitioner administering the drug must still check that the patient is not allergic or sensitive to any of the medicines prescribed at the point of medicines administration.

If there is any reason to suspect that a patient may be allergic or sensitive to any prescribed medicines or their constituents this must reported without delay to the medical staff looking after the patient and documented in the patient's notes and on the electronic prescribing system.

9.2.6. Check All Prescription and Administration Records

Check all records for the:

- date and time of the dose due and the previous dose
- signature of the prescriber (non electronic prescribing system prescriptions)
- medicine name, dose, form and route of administration
- duration/frequency of therapy
- Any special instructions that may have been applied by the prescriber

Check that the:

- prescribed dose has not already been given
- maximum dose of a variable 'as-required' prescription is not exceeded
- prescription is valid

If the prescription is unclear in any respect, the medicine must not be given until the prescription is clarified and the doubt resolved. In the case of any difficulties, the nurse in charge must be informed so that appropriate action can be taken.

9.2.7. Choosing the Correct Medicine

Select the correct medicine in the correct formulation for administration. Pay special attention to the identity of the medicine, as labelled, and the expiry date of the product. Not all strips have an expiry on them so they MUST be returned to their original container after use. Do not use any medicine if the dispensing label is unclear in any way. Where possible confirm correct selection of solid dose medicines by checking the information printed on the foil pack.

Calculate the number of tablets/capsules or volume of liquid medicine required to administer the prescribed dose and double check this calculation. It is good practice to ensure there is enough medication for the following two doses.

If the product requires preparation (e.g. reconstitution or dilution) the practitioner must ensure that they are aware of the correct method of preparation and that appropriate diluents and expiry of prepared products are considered. Further information can be found in the product's Summary of Product Characteristics (SPC) or by contacting the pharmacist for the clinical area or Medicines Information service.

9.2.8. Administration of Liquid Oral/Enteral Medicines

ALL doses **must** be drawn up in a purple ENfit syringe or a device provided by the manufacturer as part of the patient dispensing pack.

Where a syringe is required to administer oral/enteral medication, this **must** be a purple ENfit medicine syringe. Syringes for parenteral (intravenous) use must **not** be used for measuring or administering oral/enteral medicines.
Purple ENFit medicine syringes are for single use only and must be discarded after administration of the dose.
Medicines may not be readily available in a presentation suitable for administration to certain patients e.g. those unable to swallow or patients with feeding tubes. In these cases tablets or other dose forms should **not** be crushed or changed in a clinical area without contacting the Pharmacy Department or Medicines Information service for advice. This is because:

- Crushing tablets or opening capsules can alter the legal status of a product making the use of the medicine 'unlicensed'.
- Certain tablets or capsules must not be crushed or opened. This includes modified release formulations and enteric coated preparations.
- Some medicines are hazardous to the person administering them if crushed or opened.

Pharmacy will attempt to locate a suitable source of the medicine wherever possible.

When administering medicines via the PEG, NG, NJ and JEJ routes, ensure that the correct line is used to administer the medicine. Liquid medicines in bottles may need to be shaken prior to measuring the dose.

9.2.9. Administering the Medicine to the Patient

The administration of medicines involves the use of professional judgement in the context of each specific patient. Careful consideration should be given to the dosage, the method of administration, the route and the timing of every administration.

Each patient must receive medications that have been individually prepared for them. In the case of oral medicines, this must include witnessing that the patient has ingested the medicine. In no circumstances must medicines be left by the patient's bedside, or in a "tot" in the medicines trolley, to be taken or administered at a later time. If a dose of a medicine is removed from its container/packaging and then not used it must be destroyed.

Immediately **after** administering the medicine a record of the administration details must be completed on the electronic prescribing system or alternative record.

For "as required" (PRN) medicines the date and time of administration will be recorded automatically within the electronic prescribing system. For "variable dose medicines" the actual dose administered must be recorded.

For drugs given in accordance with a PGD, the details of the administration must be documented in the patient's records. Where PGDs are live on the electronic prescribing system, then the correct PGD must be chosen by the practitioner, against which they have completed competency training. Further advice can be sought from the Electronic Prescribing or PICS team.

9.2.10. Non-administration of Medicines, Missed or Delayed Doses

Every effort should be made to administer prescribed medicines as omission of certain medicines, or a delay in dosing, can be detrimental to a patient's well-being. Medicines identified within the Trust as "time-critical" medicines should never be delayed or omitted, unless clinically contraindicated or the patient refuses medication. Any omission or delay in the administration of time-critical medications must be discussed with the Prescriber or relevant Physician:

- All systemic anti-infectives - this includes all antibacterial, antifungal, antiviral and antiretroviral agents orally or parenterally.
- Medications used in resuscitation situations, e.g. *Glucose/glucagon, Naloxone, Flumazenil, IV Acetylcysteine and Anaphylaxis treatment*
- All systemic steroids (not topical agents) (regularly prescribed or short courses), such as prednisolone.
- All insulins.
- Medications for the treatment of Parkinson's disease
- Pyridostigmine for the treatment of Myasthenia Gravis
- Anticoagulants and VTE Prophylaxis
- Anti-epileptic medications (includes Benzodiazepines and Gabapentin or Pregabalin if confirmed for treatment of seizures)
- Strong opioids prescribed regularly for the control of chronic pain and control of post-operative pain.
- Anti-rejection medications.
- Desmopressin – all routes for diabetes insipidus
- Antipsychotic medications such as clozapine
- Treatments for the management of acute, severe symptomatic electrolyte disturbances

This list is not exhaustive, and there will be other medications that are only used in specialist areas where timeliness of administration is also crucial. If in doubt, this must be discussed with the prescriber or relevant physician.
For details of individual medicines within these groups refer to the relevant section in current edition of the BNF, or Medusa.

Where a patient is fasting for surgery or a specific procedure, or is 'nil by mouth' always check with the medical/surgical team whether or not to omit medication (see Trust Peri-operative Fasting Guidelines).

Where a patient is vomiting check with the prescriber whether any oral medicines can be prescribed and administered via another route and/or if a missed dose should be administered once vomiting ceases.

Where a patient is unable to physically swallow; check with pharmacist whether the medicine can be provided in an alternative form.

Where medicines are unavailable every effort must be made to obtain the medicine without delay so that the dose can be administered. Refer to section 4 for details of obtaining medicines.

Where a patient is off the ward for investigations etc. consider administering any missed doses later. Confirm this action is appropriate with the patient's medical team.

If the patient refuses to take the medicine or the medicine prescribed is not given for some other reason, the registered practitioner or healthcare professional must document this omission on the administration record in the electronic prescribing system using the appropriate codes.

A medicine that has been omitted or refused on two consecutive occasions must be brought to the attention of an appropriate prescriber and the omission/refusal documented in the patient's records. Where the omission/refusal of a single dose is considered to be clinically significant e.g. medicines on the critical list, this escalation must occur immediately.

9.2.11. Disposal of Medicines that Cannot be Administered to a Patient

Medicines removed from a container for administration must not be returned to the container if they are not administered to the patient. Liquid medicines, unused contents of ampoules or solid medicines must be disposed of in blue medicinal non-hazardous sharps bins.

For CDs in addition to the non-administration comment made in the electronic prescribing system an appropriate entry must be made in the CD register (see Trust CD Procedure). In the event that a medicine is unable to be administered to a patient, the dose must be disposed of in an in-use blue sealed container.

9.2.12. Covert Administration of Medicines

Covert administration is the practice of leading a patient to believe that they are not receiving medication when in fact they are, usually by disguising the medicine in food or drink. This covert administration of medicines is only likely to be necessary or appropriate in the case of patients who actively refuse medication **but** are judged **not** to have the capacity to understand the consequences of their refusal.

Staff must follow guidance set out in the relevant Trust Guidelines (including the Assessment and Care of Patients with known or Suspected Dementia or Delirium; Consent to Treatment).
It is recognised that there may be certain exceptional circumstances in which covert administration may be considered to prevent a patient from missing out on essential treatment. In such circumstances and in the absence of informed consent, the following policy applies.

- The best interest of the patient must be considered at all times.
- The medication must be considered essential for the patient's health and wellbeing, or for the safety of others.
- The decision to administer a medication covertly must not be considered routine, and should be a contingency measure. Any decision to do so must be reached after assessing the care needs of the patient individually. It must be patient specific, in order to avoid the ritualised administration in this way.
- There should be broad and open discussion among the multi-disciplinary team and with the patient's relatives, carers or advocates to establish the patient's past wishes and feelings and agreement that this approach is required in the circumstances, before the decision is taken to administer medicine covertly.
- The involvement of the pharmacist is especially important as adding medication to food or drink can alter its chemical properties and thereby affect its performance. In addition, if a formulation is crushed, dissolved or otherwise altered the product may be rendered unlicensed.

- The decision and the action taken, including the names of the parties concerned, must be documented in the patient's notes and regularly reviewed at appropriate intervals.
- Regular attempts should be made to encourage the patient to take their medication. This might best be achieved by giving regular information, explanation and encouragement, preferably by the team member who has the best rapport with the individual.
- Any registered nurse who may be involved in the covert administration of medicines is advised to seek professional advice from the Nursing and Midwifery Council.

The covert administration of medicines must not be confused with the administration of medicines against a person's will which may be considered unlawful. Registered nurses must refer to the NMC Standards of Proficiency for Registered Nurses (2018).

9.2.13. Administration of Medicines Requiring Refrigeration

When administering a medicine which requires storage in the refrigerator the practitioner should remove the medicine immediately prior to administration (unless the medicine needs to reach room temperature before administration). On removal of the medicine from the refrigerator, the practitioner must check that the current fridge temperature is between 2-8°C and that daily fridge temperature recording is in place. If there is reason to suspect that the cold chain has not been maintained then the Pharmacy Department must be contacted for advice.

9.2.14. Administration of Controlled Drugs

The Trust CD procedure must be adhered to at all times. For the administration of CDs within the operating theatre department, refer to Trust Controlled Drugs procedure.

When administering opioid medicines other than in an acute emergency, the guidance issued in the NPSA rapid Response Alert (RRR2008/003): Reducing Dosing Errors with Opioid Medicines must be followed.

Practitioners must:

- Be aware of any recent opioid dose, formulation, frequency of administration and any other analgesic medicines prescribed for the patient.
- Ensure where a dose increase has been prescribed, that the calculated dose is safe for the patient (e.g. for oral morphine or oxycodone in adult patients, not **normally** more than 50% higher than the previous dose).
- Ensure that they are familiar with the following characteristics of the medicine and formulation: usual starting dose, frequency of administration, standard dosing increments, symptoms of overdose, common side effects.

9.3. Self-Administration of Medicines by Patients

Patients may be responsible for administration of medicines to themselves. Approved guidelines, which include principles relating to safety, security and appropriate storage arrangements, and the education, training and assessment of ability to undertake self-administration, must always be followed.

For patients undertaking self-administration of medicines wherever possible, the administering practitioner should strive to:

- assess and promote the patient's knowledge and understanding about their medicines
- prepare the patient for self-administration of medicine(s) at home or in hospital as part of a planned programme towards independence
- involve relatives or other informal carers, where appropriate.

See Trust Guidelines for Self-Administration of Medicines.

9.4. Assistance with Medicine Administration by Parents and Carers.

It is accepted that, in certain circumstances, the assistance of parents/ carers in helping patients to take medicines, after the nurse has selected and prepared the medicine for administration, can be beneficial in ensuring treatment is taken. The nurse who selects and prepares the medicine must be assured that the parent/ carer is fully capable of safely administering the medicine by explaining why the drug is being given, how it should be given, observing administration and documenting actions taken. The nurse retains full responsibility for the administration and recording of the medicine.

9.5. Administration of Medicines for the Purpose of Saving Life in an Emergency

9.5.1. List of Medicines

The following list of medicines are exempt from the requirement for a prescription or PGD when administered for the purpose of saving life in an emergency, in line with Trust emergency response procedures, and for staff who have undertaken the appropriate training.

Drug
Epinephrine (Adrenaline) injection 1 in 1000
Atropine sulphate injection
Chlorphenamine injection
Glucagon injection
Glucose injection 50%
Hydrocortisone injection
Promethazine hydrochloride injection
Sodium chloride 0.9%, 1 litre
Atropine sulphate and obidoxime chloride injection
Atropine sulphate and pralidoxime chloride injection
Atropine sulphate, pralidoxime mesilate and avizafone injection
Flumazenil injection
Pralidoxime chloride injection
Pralidoxime mesilate injection
Sodium thiosulphate injection
Sodium nitrite injection
Naloxone hydrochloride
Snake Venom Antiserum
Oxygen

Refer to the Trust intranet for a list of trust wide Patient Group Directions that support the administration of other emergency treatments, including those that support the First Response Team.

9.5.2. Administration of Oxygen

Oxygen is a 'Prescription Only Medicine' within the Trust and as such must be administered against a patient specific prescription or in accordance with a PGD (see exceptions below).

If administering oxygen against a PGD, the registered practitioner must have been deemed competent against the relevant PGD prior to administration.

N.B. A number of Trust approved PGDs for the administration of oxygen exist to support safe and effective oxygen administration within the Trust. Please refer to the Trust intranet.

9.5.3. Oxygen can be administered without prescription or PGD in the following situations:

- Where a **registered practitioner** employed by the Trust is administering oxygen at a rate of 4 litres per minute to support the respiratory function of a patient where there is an acute risk of respiratory distress (i.e. patients acutely short of breath). The oxygen must be prescribed as soon as possible.
- Where **any Trust employee** is administering oxygen for the purpose of saving life in an emergency.

9.6. Administration of Parenteral Medicines

9.6.1. Definition

The term "parenteral medicine" refers to those medicines that are administered by injection. This definition includes any injectable route e.g. intravenous, intramuscular, subcutaneous, intra-arterial, intrathecal, intraocular, epidural, etc.

All healthcare practitioners are expected to acknowledge any limitations in their knowledge, skills or competence to administer parenteral medicines in their specific area of practice, and if there are any such limitations refrain from medicines administration until trained and competent to do so.

For the avoidance of doubt, it is not acceptable to decant medicines to be injected into an open-system (such as gallipot) prior to administration. This is in line with NHS Improvement alert NHS/PSA/D/2016/008: Restricted use of open systems for injectable medication

9.6.2. Use of Single and Multi-dose Injectable Containers

Serious infection and fatalities have been reported due to the inappropriate use of a single container to prepare more than one dose of an injection. The following rules are based on guidance issued by the Royal College of Anaesthetists, and aim to minimise the risk to patients.

9.6.3. Single Use Containers

Single use containers of injectable products are for use for **one** patient only on a **single** occasion. Medicines within single use containers do not contain preservatives hence any volume remaining **must** be discarded after single use.

The above guidance applies regardless of the presentation (ampoule, vial, pre-filled syringe, infusion bag, etc.) and also includes situations where a single use product is given non-parenterally, such as for diluting nebuliser solutions or flushing enteral tubes.

Devices which facilitate multiple access into bags or bottles of infusion solutions, such as multi-dose adaptors or needles with three way taps **must not** be used. The only exception is where medicines are prepared under full aseptic facilities within the Pharmacy Department.

9.6.4. Multi-dose Containers

Multi-dose containers contain a combination of a drug and an antimicrobial preservative. The fact that it is possible to remove a drug more than once via a septum or bung does not in itself mean a product is suitable for multiple use. It will be identified on individual preparations whether they can be used as single or multi-dose container.

Multi-dose containers of injectable products may be used to prepare **one or more** doses usually in a single session e.g. an immunisation clinic however there are some exceptions where multi-dose containers are used on multiple occasions, on such occasions the container must be allocated to a specific patient.

In the case of insulin, if multi-dose vials must be used for more than one patient, they should only be kept and accessed in a dedicated medication preparation area (e.g., nurses station), away from immediate patient treatment areas. This is to prevent inadvertent contamination of the vial through direct or indirect contact with potentially contaminated surfaces or equipment that could then lead to infections in subsequent patients. If a multi-dose vial enters an immediate patient treatment area, it should be dedicated for single-patient use only, and labelled accordingly with patient name and registration number, date use commenced and expiry date.

The Trust standards for Aseptic Non Touch Technique (ANTT) must be adhered to for all preparations of parenteral drugs. A **new** sterile syringe and needle must be used to withdraw **each** dose and with the exception of insulin, the container must be used on one occasion for example, a single immunisation session.

If it is unclear to a practitioner if the injectable container is single dose or multi-dose, advice should be sought from a pharmacist or the Medicines Information Service

9.6.5. Additional Information for Single use Injectables within Theatres

The most appropriate sized ampoule/vial should be selected for the dose to be administered. In addition to the information provided below theatre staff are asked to be particularly aware of the single use status of ondansetron ampoules, metaraminol ampoules and remifentanil vials.

The contamination risk of propofol is particularly high. Propofol vials/ampoules are single patient use containers. The remainder of the vial must be discarded immediately. Where a spike is used to aid withdrawal from 50ml propofol vials, the spike must be discarded with the vial and a fresh spike used with subsequent vials.

Where an insulin infusion is made up within theatres, the vial must be labelled with the expiry date upon first piercing. Unused vials must remain in the original outer

cardboard packaging within the theatre refrigerator in a separate area from the vials in use. Any vial not within a cardboard outer, which has been used without an expiry date added, must be discarded. The infusion must be drawn up with a new needle and syringe away from the patient.

If multiple infusions are being prepared at the same time, infusion bags of sodium chloride 0.9% and glucose 5% can be used. These must be for single patient use only. All manipulations must occur on one occasion, and the remaining volume then discarded. Infusion bags of sodium chloride 0.9% and glucose 5% must not be retained for future preparations.

9.7. Intravenous Injections

9.7.1. Administration - Basic Principles

The administration of a medicine by the intravenous (IV) route can be hazardous. All staff administering an intravenous infusion must have an independent second check by another registered practitioner competent in drug administration, unless single checking has been locally approved. The second check process involves the second practitioner performing their own independent verification of the patient and the medication to be administered.

Registered practitioners who have accepted responsibility for the administration of IV medicines, and achieved competence against the approved relevant competencies can administer medicines by the IV route. The basic principles of medicines administration set out in section 9.2 must be applied to the IV administration of medicines.

All IV injections must be given in an environment that permits subsequent observation and resuscitation of the patient if required.

9.7.2. Intravenous Bolus Injections

The prescriber must document in the patient's notes; on an approved prescription, electronic prescribing system or other Trust approved documentation; even if the administration has already taken place.

Bolus injections must be given intermittently by slow, direct administration into an established central or peripheral IV access site.

9.7.3. Intravenous Infusions

Certain medicines are best given by infusion to achieve the desired therapeutic effect and/or reduce toxicity. Infusions can either be given intermittently or continuously in a prescribed IV fluid regimen. Preparation and administration of IV infusions including the second check must be documented on the electronic prescribing system, on other approved documentation or in the patient's notes. Advance preparation of infusions must be kept to a minimum and (as a maximum) within 1 hour of predicted time of use, dependent on patient clinical condition. When prepared in advance, all syringes and infusion bags must be labelled with the patient's name, medication (name, concentration, volume), and date and time of preparation. The practitioner using the prepared medication should have either prepared the medication or witnessed its preparation (except in case where prepared by Pharmacy department).

IV medicines may be administered via an established vascular access device. When opening a closed IV system, aseptic non-touch technique, as defined in the Royal

Marsden Manual of Clinical Nursing Procedures, must be followed. In addition, relevant Trust guidelines for the insertion, care and removal of peripheral venous cannulae and for the care of central venous access devices must be followed.

All IV infusions must be given via a specific infusion device e.g. infusion pump, which registered practitioners must be trained and have their competence assessed and documented.

IV infusions expiry times

Due to the risk of microbial contamination a maximum expiry date of 24hours must be given to infusions in progress, unless there is data for the specific product which indicates the need for a reduced expiry time. See appendix 8 for a list of medicines that have an infusion expiry time of less than 24 hours. Prescriptions where expiry times are longer than 24 hours must be approved by the ward pharmacist and lead doctor involved with individual patient care, and annotated by the pharmacist. The exception is where the infusion has been prepared under full aseptic facilities within the Pharmacy Department.

IV infusions that have been stopped and remain connected to the patient must be discarded after four hours of not being in use. If an infusion is re-started after this period, a new IV infusion must be prepared.

IV infusions containing additives should be examined from time to time whilst they are being administered. If cloudiness, crystallisation, change of colour or any other sign of interaction or contamination is observed the infusion must be discontinued.

9.7.4. Injectable Medicines Guide (Medusa)

The "Medusa" injectable medicines guide can be accessed from “PICS Help” at QE and from the Trust intranet in non-PICS areas. Medusa provides information about preparation and administration of injectable medicines including information on: reconstitution; method and rate of administration; compatible diluents; compatible drugs; adverse effects caused by IV administration; special handling precautions and other useful information.

9.7.5. Preparation and Administration of IV Bolus Injections and IV Infusions

All IV bolus doses and IV infusions must be prepared and commenced by a registered practitioner competent in IV medicines administration and independently checked with another registered practitioner who is competent in the administration of medicines.

Students may under direct supervision, prepare IV bolus doses and IV infusions.

Non registered practitioners may prepare and administer an IV flush only against a prescription for the purpose of cannulation.

Both registered practitioners and students where involved, must ensure:

- ANTT is used when preparing the injection/infusion,
- preparation is undertaken in a clean, uncluttered environment,
- before administering the medicine, there are no incompatibilities with other medicines or infusion fluids. This should be done by reference to the drug package insert, the online injectable medicines guide (Medusa), a pharmacist or the Medicines Information Service,
- before administering the medicine, the IV device is not blocked and is sited correctly,
- preparation and administration of the medicine has been documented on the electronic prescribing system or other approved documentation by the registered

practitioner and checker. Infusions must also be recorded on the Fluid Balance Chart.

For bolus doses, syringes containing the prepared medicines must be labelled with the name, dose and expiry date of the medicine; the patient's details; and the initials of the person preparing and checking the medicine. See section 9.6.8 for details of labelling infusions with additives.

All medicines for infusion are rate controlled and the rate of the infusion must be set and checked by both registered practitioners.

Infusions must be independently checked by a registered practitioner competent in the administration of medicines hourly, and at shift handover, to ensure correct operation of the device and prompt detection of device error or adverse event.

Any alterations in the infusion rate must be made in accordance with the prescription and independently checked by two registered practitioners competent in the administration of medicines, one of whom must be competent in IV medicines administration. Any alterations must be documented in the electronic prescribing system. Where frequent alterations of an infusion rate are expected e.g. dose titration over a very short period of time in the critical care environment, the dose following titration i.e. when the desired therapeutic effect has been achieved, must be recorded on the administration record.

Any staff and students not deemed as competent in the administration of medicines must not stop and restart infusions under any circumstances.

9.7.6. Flush procedure for IV boluses, IV intermittent injections and IV infusions

All bolus injections must be flushed with 5-10mls of a suitable vehicle.

Infusions given via volumetric pumps must be disconnected at the infusion bag and the line flushed with the volume of fluid held within the giving set (usually noted on the line packaging). Giving sets currently available (e.g. Intrafix®, SafesSet® and Alaris GP®) hold a residual fluid volume of between 20-25ml. Therefore, after infusions have completed the entire line must be flushed post infusion with 25-50ml of suitable flush fluid at a rate appropriate for the medication.

9.7.7. Administration of a Sodium Chloride 0.9% Flush

Up to **5ml** sodium chloride 0.9% flush can be administered against the relevant PGD located on the Trust intranet.

or **5-10ml** sodium chloride 0.9% flush against a prescription, to check position and maintain patency of peripheral cannulae, by registered practitioners and other healthcare staff who are deemed:

- IV competent against the approved Trust competencies for the administration of intravenous drugs and infusions

  and/or

- competent in the insertion of peripheral cannulae against the approved Trust competencies for the performance of peripheral cannulation

The administration of a sodium chloride 0.9% flush against a PGD **must** be checked by another IV competent registered practitioner or IV competent member of healthcare

staff and details **must** be documented in the electronic prescribing system or in Trust approved documentation.

9.7.8. Additions to IV Infusions

Many medicines are incompatible when mixed in an infusion. Single medicines should be administered wherever possible. In situations where addition/mixing cannot be avoided, for example due to fluid restriction then:

- Information about incompatibility for many commonly used medicines is available from:
  - The on-line injectable medicines guide (Medusa)
  - Medicines Information Service
- Each medicine must be reconstituted or drawn up in separate syringes immediately before adding to an infusion bag. Each bag must then be repeatedly inverted to ensure thorough mixing before administering.
- A visual inspection of the final product must be undertaken to check for absence of particulate matter before use.
- Infusions prepared must be labelled with an IV additive label containing: details of the medicine(s) added; quantity; date and time of preparation; details of time and date of expiry; and the patient's name. This additional labelling should not interfere with information on the manufacturer's label.
- If the infusion cannot be administered immediately it must be discarded.

9.7.9. "Mixing" Medicines in Syringes

"Mixing "is defined as the combination of two or more medicinal products together for the purpose of administering them to meet the needs of a particular patient.

Mixing two licensed medicines where one is not a vehicle for the administration of the other, results in a new, unlicensed product being produced. Unlicensed products are the personal responsibility of the prescriber.

Potential problems include degradation of the medicine(s) and therefore reduced efficacy, and precipitation/crystallisation. Crystallisation can occur either through formation of an insoluble product of medicine interaction, or because a medicine alters the pH of the solution rendering the second medicine insoluble.

The more medicines mixed, the greater the potential for interaction. Medicines which have a high or low pH in solution are more likely to cause an interaction. The following principles must be applied:

- Medicines should not be mixed unless essential to meet the needs of the patient. It is recognised that there are particular circumstances, for example for a patient at the end of life or receiving intensive care; where mixing will be in the patient's best interests as it will provide the most efficient way of managing the patient's symptoms.
- Advice should be sought from a pharmacist in deciding whether there are alternatives to administering mixed medicines. Licensed products should be used in preference to mixing medicines.
- Advice on which medicine(s) can be mixed, and in what dosages, is available from the Medicines Information Service.
- Medicines mixed in a near-patient area must be prepared immediately before use and be clearly labelled with details of the medicine(s) added, quantity, date. and time of preparation; details of time and date of expiry; and the patient's name

- The mixture in the syringe must be carefully inspected **before** use for any signs of crystallisation or precipitation.
- The syringe must be inspected every hour during its use.
- The patient must be monitored carefully, especially for evidence of reduced efficacy of any of the medicines.

9.7.10. Administration of Concentrated Electrolyte Injections

Concentrated potassium chloride injection, concentrated sodium chloride solutions and certain other concentrated ampoules intended for injection **after dilution** present specific hazards. These medicines must always be stored separately from other commonly used stock medicines, such as sodium chloride and water for injection. (Refer to section 3.1.4 for further details).

9.7.11. Intravenous Feeding

Intravenous feeding of patients is a complex process. The multi-disciplinary nutrition team must be involved directly in the care of every patient requiring intravenous feeding. Administration of parenteral nutrition must be in accordance with the Trust Policies and Procedures, and designated nurses and doctors administering parenteral nutrition must be trained and competent in the use of the apparatus involved.

9.8. Other Parenteral Routes

9.8.1. Restricted Injectable Routes

Within the Trust, the following routes are considered as “restricted routes” (not exhaustive):

- intra-arterial
- intra-articular
- intraosseous
- intraperitoneal
- intrathecal
- intraventricular
- intra-ocular
- spinal
- epidural

Unless a registered practitioner has been formally assessed as competent to give injections by any of these “restricted routes”, and there is documented evidence of this, they cannot give injections via these routes except as part of supervised training/assessment. All medicines administered by these routes require an independent second check of the medicine and dose by a registered practitioner competent in the administration of medicines.

9.8.2. Epidural Medicines

A number of risks exist related to epidural injections ,infusions and local anaesthetic blocks, including how the medicines and devices are labelled, stored and used. Within the Trust these risks must be minimised by:

Epidurals:

- using ready-to-administer licensed preparations wherever possible and storing them in separate locations from other medicines to reduce selection errors.

- clear labelling of epidural administration sets and catheters with the yellow label stating “EPIDURAL” – The date of changing/connecting the giving set must be documented on the label with the initials of the individual
- using dedicated infusion pumps and syringe driver devices for epidural infusions that are easily distinguishable from those used for other infusions.
- ensuring all staff involved in epidural therapy have received adequate training, and have completed the necessary competencies to undertake their duties safely.

The insertion of an epidural catheter is restricted to anaesthetists only. However, medical practitioners and registered nurses can, once trained and assessed as competent **change epidural bags** in accordance with the prescription instructions and relevant expanded practice protocols.

Local anaesthetic blocks agents:

- ensuring all staff involved in Local anaesthetic block procedures have received adequate training, and have completed the necessary competencies to undertake their duties safely.
- ensuring that during peripheral local anaesthetic block procedures there is appropriate segregation of the prepared product, and that it is correctly identified as Local Anaesthetic and is kept away from intravenous drugs.

9.8.3. Intrathecal cytotoxic medicines

Pharmacy staff involved in the dispensing, checking or issuing of intrathecal chemotherapy must have received appropriate training and their names must be on the intrathecal register. Intrathecal chemotherapy can only be issued from Pharmacy to the doctor who is to administer it. Alternatively a trained member of pharmacy staff may deliver the intrathecal chemotherapy to the administering doctor in the clinical area.

Confirmation that the patient has already received any intravenous chemotherapy due that day, or alternatively that no intravenous chemotherapy is due for the patient on that day, **must** be provided before the medicines can be released.

Intrathecal chemotherapy must only be administered by a consultant, registrar or staff grade who has been trained and assessed as competent to perform the procedure and whose name is on the Trust’s intrathecal register.

Intrathecal chemotherapy will only be checked by a registered nurse who has undergone appropriate training in intravenous and intrathecal chemotherapy and whose name is on the register. The registered nurse must be present throughout the procedure.

Prior to administering the intrathecal chemotherapy, the doctor and registered nurse must ensure that the designated area is free from any medicines for intravenous administration.

Refer to the Trust procedures for the Safe Prescribing, Handling and Administration of anti-cancer agents and the Intrathecal Chemotherapy Procedure for further details.

9.8.4. Other intrathecal medicines

Other medicines administered by the intrathecal route are specially formulated medicines which must be stored separately from other parenteral medicines and must only be administered by a consultant or registrar (e.g. intrathecal gentamicin).

9.8.5. Extra Corporeal Circuits - Haemodialysis and Haemofiltration Fluid Administration, Plasmapheresis and Perfusion

These procedures present increased risk from medication errors. The principles described above must be incorporated into specific procedures for haemodialysis, haemofiltration, plasmapheresis, perfusion or any other extracorporeal treatment. Healthcare staff involved in the administration of these medicines in these areas must be trained and assessed as competent to undertake this role.

9.9. Topical Medicines

9.9.1. Creams and Ointments

Creams and ointments must be stored in a cool place and used for a single patient only. Mixing topical preparations on the skin should be avoided. A few minutes must be allowed between applications of different preparations.
Where the topical preparation contains a corticosteroid, apply the preparation thinly to the skin.

Fire risk with paraffin based products

Skin products containing paraffin (for example white soft paraffin, white soft paraffin plus 50% liquid paraffin, or emulsifying ointment); in contact with dressings and clothing are easily ignited with a naked flame or a cigarette.
It is vital that staff and patients do the following to minimise the risk of fire when patients are supplied with, and/or treated with paraffin based products.

- Particular care must be taken around oxygen supplies. Paraffin based products must NOT be used to lubricate equipment used for oxygen administration.
- Patients must be given information that includes advice about the potential fire risks of smoking (or being near to people who are smoking), or exposure to any open flame or other potential cause of ignition during treatment. In hospital units initiating therapy, this must be given in both verbal and written form.
- Patients and their families must be provided with safety advice about regularly changing clothing or bedding saturated with paraffin based products (preferably on a daily basis), as the paraffin soaks in to the fabrics and can potentially be a fire hazard. Chairs or seating may also have the potential to become saturated.

This information should be given on the first occasion that such treatment is prescribed, dispensed or administered by a healthcare professional. Checks should be made on subsequent occasions that the advice has been received and understood.

9.9.2. Eye Preparations

Medicines are most commonly applied to the eye by topical application as eye drops or eye ointments. Eye drops are sterile aqueous, or oily solutions, or suspensions for instillation into the eye. Eye ointments are sterile preparations for application to the conjunctival sac or the lid margin.

Preparations containing preservative for the eyes are supplied as sterile multi-application containers; however care must be taken to avoid contamination of the contents during use. Preservative-free preparations are for single-use only, and must not be used to administer more than one dose.

A **separate** container must be used for **each** patient. Where there are specific concerns about contamination e.g. where the patient has an eye infection, then a separate container must be used for each eye.

The date of first opening must be recorded on the container, and eye preparations used in an in-patient setting must be discarded after the stipulated expiry date.

When administering two different eye drop preparations at the same time of day, an interval of 5 minutes must be left between the two preparations to avoid the possibility of dilution and overflow.
In out-patient settings and the ED, single application packs should preferably be used where available.

9.9.3. Nebuliser Solutions

Nebulisers are devices used to deliver higher doses than is usual with standard inhalers. Nebuliser solutions are medicines designed for this use, and are used in the nebuliser to provide a continuous fine aerosol mist directly into the lungs.
Points to remember:

- Nebules should be diluted with 0.9% sodium chloride to a minimum volume of 4mL and a maximum of 10ml before use.
- Nebuliser solutions can be mixed, depending on their compatibility.
- On completion of treatment, check that all medication has been aerosolised then:
  - Disassemble the individual patient nebuliser kit (labelled with patient's name, date of birth, hospital number and date and time of kit assembly) and dry with a clean tissue.
  - Store covered with a clean paper towel in a clean paper tray on the patient's locker

9.10. Administration of Medicines in Operating Theatres

The potential for serious medicines administration errors is high in these clinical areas due to the number of different medicines and syringes in use at any one time, including potent medicines such as muscle relaxants, opiates and their respective antagonists. The following will reduce the potential for error:

- Medicines must be adequately stocked so that any medicines required are readily available when needed
- Medicines, including water for injection and sodium chloride, must always be stored in the manufacturer's original packaging (See section 6.2.2)
- Medicines administered during the peri-operative period must be documented. Where patients are transferred to other clinical areas on infusions then these must be prescribed on the electronic prescribing system or Trust approved documentation and the syringe labelled with details of the medicine(s), strength, date and time of preparation, details of time and date of expiry, the patient's name and signature of preparer and checker.
- Syringes of medicines intended for use in an emergency should be immediately available but stored in an area away from the immediate work area. These must be labelled with the name of the drug, dose, date and time of dispensing.
- Where it is necessary to prepare syringes in advance of immediate use, they must be prepared as units/mL and labelled using the nationally agreed colour system (line flag). The anaesthetist must double check the medicine prior to administration. They must never be left unattended.
- Single use containers must not be used as multi-dose containers (See section 9.5.3)

9.11. Storage of medicines in anaesthetic room(s)

In response to collaborated best practice guidance from the Royal College of Anaesthetists (RCoA), The Association of Anaesthetists of Great Britain and Ireland (AAGBI) and The Royal Pharmaceutical Society (RPS) recommendations have been agreed to ensure safe storage of drugs within anaesthetic rooms.

All controlled drugs must be stored in accordance with the Trust Controlled Drugs procedures.

Patient safety must be the paramount consideration, ensuring rapid access to emergency drugs and fluids. Nevertheless, the security and access of medicines must also be considered. Accordingly, it is imperative that anaesthetic room drugs and fluids are stored safely and securely but without hindrance for those who require them without delay. This may mean that in the interests of patient safety, drug cupboards (excluding those containing Controlled Drugs) may remain unlocked when the anaesthetic room is temporarily unoccupied and the operating theatre is in use. To minimise the medicines security risks that this imposes, the following practices must be followed:

- Staff-only restricted swipe access for all entry routes into theatres in order to limit access to only those with legitimate reasons for access.
- Anaesthetic room entry doors (from main corridor/thoroughfares) must have the bottom 3 quarters of windows fitted with frosted glass or covered with an opaque film for both patient privacy and to minimise any unwarranted, opportunistic sight of any drugs and fluids stored inside. The top quarter panel can be left uncovered for purposes of observation of trainees from a distance without causing disruption.
- It is common practice to prepare a selection of ‘emergency drugs’ that should be immediately available during the course of an anaesthetic. These will often accompany the patient from the anaesthetic room into the operating theatre. If this is not possible, they should be stored in the anaesthetic room in a manner that maintains their immediate availability yet preserves security whilst the anaesthetic room is unoccupied during the procedure, e.g. a closed, unlocked cupboard. They must be adequately labelled, and disposed of appropriately if not used. This should be a standardised, agreed location across all theatres. All staff involved in the procedure must be aware of this location to ensure rapid retrieval in the event of an emergency (it is recommended to include such communication at the World Health Organisation (WHO) checklist stage).
- Other non-emergency drugs and fluids must not be visible and must be kept in closed (not necessarily locked) cupboards.
- An unoccupied anaesthetic room should ideally remain visible at all times to those in the operating theatre, usually through windows in the theatre entry door.
- Anaesthetic room drug cupboards must be locked when the operating theatre is unoccupied.
- Certain rarely-used emergency drugs may be stored in a central location, such as the out-of-hours emergency drug cupboards serving the entire theatre suite, e.g. dantrolene and intralipid.

9.12. Medication Administration Errors

All errors or incidents observed or discovered in the administration of medicines must be reported using the online risk reporting system.
Immediate actions to take following a medication administration error are:

- Immediately ensure patient safety;
- Report the error to medical staff who can review the patient;
- Record the error against the drug prescription in the electronic prescribing system Document the error in the patient's medical records;
- Complete a medication incident form (Datix) detailing the error and actions taken;
- Report the error and actions taken to the individual's line manager, as per normal escalation process.

10. Clinical Trial Medicines (Investigational Medicinal Products - IMPs)

The guidance provided here applies to all interventional trials involving medicines within the Trust.

The role of the Pharmacy Department in relation to clinical trials is to safeguard the patients, prescribers and the Trust by ensuring that medicines used in clinical trials are appropriate for use and are procured, handled, stored, used safely and correctly and disposed of appropriately, in accordance with the trial protocol.

On 1st May 2004, the Medicines for Human Use (Clinical Trials) Regulations came into force in the UK. These impose legal standards on the conduct of all interventional clinical trials involving medicines. Pharmacy will ensure that procedures are in place to comply with these regulations and other relevant guidelines and directives e.g. Good Clinical Practice (GCP) for clinical trials.

Whilst some clinical trials will involve the use of existing marketed products used within their licensed indications, others will use new medicines, formulations or methods of administration unfamiliar to staff handling them. The clinical trial medicines may also be coded to prevent ready identification by investigator or patient (blinded medication) and extra precautions will need to be taken to ensure safety and security in their use.

The use of medicines in interventional trials must be covered by a Clinical Trial Authorisation (CTA) issued by the Medicines and Healthcare products Regulatory Agency (MHRA) and there must be a favourable ethical opinion from a Research Ethics Committee before Trust Research and Development approval will be granted.

All clinical trial medicines, which include Investigational Medicinal Products (IMPs), non-Investigational Medicinal Products (nIMPs), and placebos must be under the control of the Pharmacy Department until dispensed by the Pharmacy Department. All organisations supplying medicines and related products for use in clinical trials must supply these products through the Pharmacy Service. Clinical trial medicines must **not** be stored in offices, clinics or ward areas unless prior agreement with Pharmacy. Other arrangements may be permitted after Pharmacy have reviewed suitability of storage and record keeping arrangements relevant to the nature of the IMP, and ensured appropriate risk management processes and standard operating procedures are in place.

Clinical trial investigators must delegate responsibilities to the Clinical Trial Pharmacy Services for:

- correct receipt and recording of deliveries of trial medicines
- safe handling, storage and dispensing of trial medicines
- maintenance of accurate accountability records for all clinical trial medicines
- return of unused medicines to the trial sponsor or disposal if authorised
- reconciliation of delivery records with usage and return of unused stock
- safe keeping of randomisation information including emergency code breaks
- provision of information to trial subjects on how to take study medication
- where necessary, the aseptic manipulation of study medication

If a clinician is interested in undertaking an interventional trial involving a medicine within the Trust, the Pharmacy Clinical Trials Team must be approached as soon as possible to ensure any issues relating to the clinical trial medicines are resolved early on in the process.

11. Medicines Governance

11.1. Other Medicines Policies and Procedures

A number of policies, procedures and guidelines exist (Trust-wide and restricted to specialised areas) which relate to the safe handling of medicines (Appendix 5). It is important that all practitioners are aware of, and comply with, such policies/procedures that relate to their areas of work.

Always refer to the current, up to date version of any policy, procedure or guidance on medicines which are available on the Trust intranet.
Summary of Product Characteristics (SPC) for medicines can be viewed in the electronic medicines compendium (eMC) which is available on the Internet. http://emc.medicines.org.uk/

11.2. Management of Medication Related Incidents

Medication related incidents (actual events or near-misses) must be reported through the Trust incident reporting scheme in accordance with the Trust Policy and associated Procedure for Prevention and Management of Incidents Including Serious Incidents Reporting is in addition to, and not a substitute for, timely and appropriate action to manage the incident.

11.3. Management of Adverse Drug Reactions

Certain categories of suspected adverse drug reactions (ADRs) must be reported to the Medicines and Healthcare products Regulatory Agency (MHRA) using yellow cards which are available as detachable sheets at the rear of the BNF (copies available on all wards), online using the electronic form at www.yellowcard.gov.uk, or via the Yellow Card App

An adverse drug reaction is defined as a response to a medicine which is harmful and unintended and which occurs at doses normally used in humans (or at any dose where the therapeutic dose has not been established). The following should be reported:

- All suspected adverse reactions occurring during use of an unlicensed medicine,

or a licensed medicine used in an unlicensed indication.
- All suspected reactions to vaccines or medicines indicated by a black triangle in the BNF.
- All **serious** suspected reactions to established medicines, vaccine, herbal or complementary remedy, device or e-cigarette, even if the effect is well known.

To report an adverse reaction any member of Trust staff must complete a Trust on-line incident report and complete a yellow card. For further advice on when a yellow card is warranted contact the clinical pharmacists or Medicines Information Service.

Within the Trust additional specific guidelines for the reporting of adverse drug reactions relating to research activities exist. These are detailed in the Research Governance Policy on Safety Reporting in Biomedical Research involving human subjects.

11.4. Audit

A programme of audits will be carried out to establish the effectiveness, implementation of, and the extent of compliance with this procedure. The audit programme will provide assurance that an appropriate and effective system of medicines management is in place. The ,Safe Medication Practice Group will be responsible for:

- receiving audit reports and proposed action plans.
- agreeing action plans and monitoring these action plans on a regular basis.
- reporting exceptions to the MMAG.

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APPENDIX 1

GLOSSARY OF TERMS

Adverse Drug Reaction
A response to a medicine which is harmful and unintended and which occurs at doses normally used in humans (or at any dose where the therapeutic dose has not been established).

Clinical Perfusionists
An individual registered with the College of Clinical Perfusion Scientists of Great Britain and Ireland as a Clinical Perfusion Scientist. A clinical perfusionist is a blood circulation specialist who operates the heart and lung bypass equipment during cardiothoracic surgery.

Clinical Technologists
Registered (voluntary) healthcare scientists providing services in Medical Physics and Clinical Engineering.

Clinical Trial Material
Investigational products being used within the Trust as part of a research study approved by the Trust Research and Development Department and the Local Research Ethics Committee.

Consultant
A fully trained specialist in a branch of medicine who accepts total responsibility for patient care.

Controlled Drugs (CDs)
Medicines regulated by the Misuse of Drugs Regulations 2001 and amendments. Other medicines may be managed using CD procedures as part of Trust risk minimisation procedures.

Controlled Drugs Register
Book containing records of all the Controlled Drug transactions on the ward or department including the CDs that have been received, administered or supplied to patients, and those stored on the ward or department.

Controlled Drug Order Book
Book consisting of consecutively numbered requisitions, which are completed by authorised ward signatories in order to present written orders for CDs to the Pharmacy Department.

Dentist
An individual fully registered with the General Dental Council (GDC).

Dispense
To prepare a clinically appropriate medicine for a patient - this will be self-administered or administered to the patient by another individual. Dispensing is performed under the supervision of a pharmacist, and will include such activities as checking the validity of the prescription, the appropriateness of the medicines for an individual patient,

assembly of the product, labelling in accordance with legal requirements and providing information leaflets for the patient.

Enteral feeding
Enteral feeding tubes are used to provide nutritional support and to prevent or treat malnutrition. Feeding tubes may be placed into the stomach or the small intestine in either the distal duodenum or proximal jejunum.

Non-registered Healthcare Staff
Non-registered professionals who are employed by the Trust in a healthcare role but are not registered with a recognised UK regulatory body.

Illicit Substance
A substance covered by the Misuse of Drugs Act, 1971 or other legislation, which is not lawfully held in accordance with the relevant legislation.

IRMER
The Ionising Radiation (Medical Exposure) Regulations (2000) - this legislation is designed to minimise individual's exposure to ionising radiation and therefore reduce risk.

JAC
EPMA system in use at BHH, GHH and SH. The system also provides elements of clinical decision support for users.

Licensed Medicines
Medicines which have current UK Marketing Authorisation

Matron
A registered senior nurse who has management responsibility for a specific clinical area.

Medical Practitioner
An individual registered with the UK General Medical Council (GMC).

Medical Prescriber
An individual fully qualified and registered with the GMC or GDC, or a provisionally registered medical/dental practitioner carrying out prescribing activities relating to their duties as junior medical or dental staff

Medication Related Incident
A distinct or definite occurrence/or near miss which involves a medication.

Medicine
Any substance used for treating, preventing or diagnosing disease, for contraception, for inducing anaesthesia or otherwise affecting any normal physiological function.

MMAG
Medicines Management Advisory Group. Ensure medicines safety, effectiveness and cost effectiveness across the Trust; supporting implementation of advice for best use of medicines.

MMEP
Medicines Management Expert Panel. Divisional sub-groups of MMAG that provide each division a forum to discuss any issues relating to the use of medicines and introduction of new medicines.

Non-Medical Prescriber
An individual, other than a doctor or dentist, who is qualified to prescribe under specified conditions and is registered to do so with their regulating professional body.

Nursing Associates (Nursing - Band 4s)
Individuals providing direct and indirect care for patients in support of, and supervised by registered nurses. This can include the administration of medicines as per agreed job description.

Off-label
Medicines used for an indication for which they do not have an UK Marketing Authorisation but have evidence available for its efficacy for that indication.

Operating Department Practitioner (ODP)
An individual holding City and Guilds 752 or NVQ level 3 in Operating Department Practice or a Diploma in Operating Department Practice, and who has been assessed competent in the administration and security of medicines by the registered nurse in charge of the theatre They must also be registered with the Health and Care Professions Council.

Parenteral
Method of administering medication via any route other than the mouth and alimentary canal, i.e. subcutaneous, intravenous, intramuscular.

Patients
Persons who are for the time being under the care of University Hospitals Birmingham NHS Foundation Trust.

Patient Group Direction (PGD)
A specific written instruction for the supply and/or administration of named medicines in an identified clinical situation, and which applies to a group of patients or other service users who may not be individually identified before presentation for treatment.

Patient Specific Direction (PSD)
A specific written instruction for a competent practitioner to administer a medicine to a list of individually named patients where each patient on the list has been individually assessed by that prescriber. The prescriber must have adequate knowledge of the patient's health, and be satisfied that the medicine to be administered serves the individual needs of each patient on that list.

Patient Safety Group
Group that reviews, advises on, and promotes patient safety; including reporting of incidents, serious incident reviews, patient safety alerts.

Pharmacist
A pharmaceutical chemist, with a current registration with the General Pharmaceutical Council

Pharmacy Staff
Individuals employed by University Hospitals Birmingham NHS Foundation Trust to work within the Pharmacy Service.

Pharmacy Technician
A person who holds a Pharmacy Services/Scottish/National vocational qualification (S/NVQ) Level 3 and who has current registration with the General Pharmaceutical Council.

Pharmacy Clinical Pharmacy Technician (CPT)
A person who holds a Pharmacy Services/Scottish/National vocational qualification (S/NVQ) Level 3 and who has current registration with the General Pharmaceutical Council. Employed in a ward based role that includes preparation and administration of medicines.

Physicians' Associate
Physician Associates support doctors in the diagnosis and management of patients. They are trained to perform a number of roles including: taking medical histories, performing examinations, analysing test results, and diagnosing illnesses under the direct supervision of a doctor. Physician Associates are required to register under the voluntary register held by the Faculty of Physicians Associates.

Physicians' Assistant (Anaesthetics)
Highly trained and skilled practitioners that work within an anaesthetic team under the direction and supervision of a Consultant Anaesthetist. PA(A)s are fully trained professionals that have completed a Physicians' Associate (Anaesthesia) Postgraduate Diploma.

PICS (Prescribing and Information Communication System)
The QE EPMA system. The system also provides elements of clinical decision support for users.

Prescribe
To authorise with legal authority in writing the supply or administration of a medicine for a patient.

PRN
Abbreviation for '*pro re nata*' – as required, when necessary.

Prescriber
A registered healthcare professional who is legally entitled to prescribe medicines within University Hospitals Birmingham NHS Foundation Trust.

Qualified Practitioner
Any healthcare professional who has a nationally recognised qualification in their specific area of practice e.g. clinical technologist, sonographer; and who is listed on their profession's register (mandatory or voluntary).

Radiographer
A diagnostic or therapeutic radiographer is an individual who is registered with the Health Professions Council and qualified to undertake examinations of patients using

ionising radiation and radioisotopes in accordance Ionizing Radiation Medical Exposure Regulations 2000 (IRMER).

Registered Nurse
An individual with a current registration with the Nursing and Midwifery Council (NMC).

Registered Practitioner
A qualified healthcare professional, registered with their relevant UK regulatory and professional body, who is expected to practice in accordance with the accepted standards of practice and conduct of these bodies. A registered practitioner is personally and professionally accountable for their practice.

Department Manager or Senior Sister/Charge Nurse
A registered nurse in charge of a ward or department who carries 24 hour continuing responsibility for the effective and efficient management of the ward or department, providing management and professional leadership for the nursing team, and who is accountable for the safe keeping of medicines in that area.

Sonographer
An individual holding a post-graduate ultrasound qualification and practicing solely in ultrasound.

Student
An individual undergoing profession specific training with the intended outcome of becoming a registered/qualified healthcare practitioner.

Supplementary Prescriber
A recognised healthcare professional who is registered with their regulating professional body as being qualified to prescribe medicines and appliances as a supplementary prescriber, in line with a patient specific clinical management plan.

Unlicensed Medicines
Medicines which do not have a UK Marketing Authorisation

APPENDIX 2
Healthcare staff who prescribe or administer medicines within UHBFT

Staff Group	Prescribing	Administration against a prescription[%]	Administration against a PGD
Advanced Critical Care Practitioners	✓ (only if qualified as a NMP)	✓	*See comment below
Advanced Practitioners	✓ (only if qualified as a NMP)	✓	*See comment below
Assistant Practitioners Nursing (Band 4)		✓ – trained to act as a second check and assist patients to take oral medicines	
Cardiac Physiologists		✓	
Clinical Perfusionists		✓	
Clinical Technologists		✓	
Dentists	✓	✓	n/a
Dietitian	✓ (only if qualified as a NMP)	✓	✓
Emergency department practitioners		✓	
Non-Medical Prescribers (NMP)	✓	✓	n/a
Nursing Associates (band 4)		✓	
Physicians Associate	Propose medicines - subject to approval by MMAG ** See comment below	✓	
Physicians' Assistant (Anaesthesia) (PA(A))	** See comment below	✓	
Physiotherapist	✓ (only if qualified as a NMP)	✓	✓
Podiatrists	✓ (only if qualified as a NMP)	✓	✓
Medical Staff	✓	✓	n/a
Nurses	✓ (only if qualified as a NMP)	✓	✓
Operating Department Practitioners (ODPs)		✓	
Pharmacists	✓ (only if qualified as a NMP)	✓	✓
Pharmacy Technicians		✓ (only where trained)	
Radiographers (Diagnostic and Therapeutic)	✓ (only if qualified as a NMP)	✓	✓
Speech and Language therapists		✓	✓

*ACCPs may only administer against a PGD if they maintain their respective qualification listed under the Human Order Act 1999 as an appropriate person and they are annotated accordingly under the respective register.

**PAs and PA(A)s may prescribe only if they maintain their respective qualification listed under the Human Order Act 1999 as an appropriate person and they are annotated as a NMP under the respective register.

NB. Prescribing and administration of medicines must only be undertaken by the individual who has evidence of competence.

[%]Any competent practitioner may administer against an approved Patient Specific Direction following authorisation by Medicines Management Advisory Group

APPENDIX 3
RETENTION OF RECORDS

Document	Retained	Duration
1. Pharmacy requisition forms /ward pharmacist supply sheets/PICS printouts	In clinical area and in Pharmacy	2 years
2. Computer generated drug supply issue advice notes	In clinical area	2 years
3. Controlled Drug order books and registers	In clinical area	2 years after the last entry, however where a record of destruction is included then retain for 7 years
4. Record of Controlled Drug destruction books	In Pharmacy	7 years after date of last entry
5. Record of medication transferred between clinical areas sheets	In clinical area	2 years
6. Portering delivery/collection sheets	In Pharmacy	2 years
7. Collection of drugs from Pharmacy sheets	In Pharmacy	2 years
8. ED prescriptions	In Pharmacy	10 years
9. Clinical trials documents	in Pharmacy	15 years
10. In-patient prescription charts/PICS or EPMA printouts	In medical notes	10 years
11. Prescriptions generated on the EPMA system	Archived on system	Permanent record
12. Paper records of drug prescription/administration generated from the EPMA system when patient transfers/leaves clinical area	In medical notes	10 years
13. Out-patient prescriptions	In medical notes	10 years
14. Records of drugs supplied under Patient Group Directions (Appendices)	In clinical area	10 years
15. Unlicensed medicines dispensing records	In Pharmacy	5 years
16. Drug fridge temperature logs	In Pharmacy	2 years

APPENDIX 4

AUDIT OF MEDICINES MANAGEMENT PRACTICES

Compliance with the Medicines Code will be audited by the following methods:

- Datix records reported to each Safe Medication Practice Group meeting
- Missed Dose audits – every 6 months
- Controlled Drug audits in clinical areas – every 3 months
- Controlled Drug stock checking audits by clinical areas- monthly
- Introduction of New Medicines to the Trust reported to MMAG
- Safe Handling and Storage audits in Clinical Areas bi-annually

APPENDIX 5

ASSOCIATED MEDICINES POLICIES AND PROCEDURES

UHB Wide Supporting Policies and Procedures
Hospitality, Gifts and Sponsorship policy UHB (62)
Medicines Policy (85)
Controlled Drugs Procedure (816)

QEH and BHH, GHH and SH Equivalent Supporting Policies and Procedures

QEH Supporting Policies and Procedures	**BHH, GHH and SH Supporting Policies and Procedures**
Title (Controlled document number)	**Title**
Non-Medical Prescribing Guidelines (351)	Non-Medical Prescribing Procedure V1.0
Business Continuity Plan (573)	Electronic Prescribing System Disruption Procedure v1.0
Expanded Practice Protocol for the Administration of Intravenous Drugs and Infusions by Registered Practitioners (232) Expanded Practice Protocol for the Performance of Peripheral Venous Cannulation (229) Guidelines for the Insertion, Care and Removal of Peripheral Venous Cannula (225) Guidelines for the Care of Central Venous Access Devices (42) Guidance Notes for the Use of Invasive Line Flags (215)	Intravenous Infusions and Intravenous Medicines Administration procedure v1.0
Expanded Practice Protocol for the Administration of Systemic Anti-Cancer Therapy by Registered Nurses (249) Procedure for the Safe Prescribing, Handling and Administration of Cytotoxic and Chemotherapeutic Agents (504) Guidelines for the Management of Spillage of Cytotoxics (593)	Procedure for the safe prescribing, handling and administration of systemic anti-cancer therapy (SACT) V2.6 Procedure for the prescribing, dispensing and administration of vinca alkaloids V1.0 Network Guidance for Handling the Spillage of Cytotoxic and Anti-Cancer Drugs (West Midlands Expert Advisory Group for Systemic

Guidelines for the Prevention, Recognition and Management of Extravasation and Infiltration (46) Policy for the Safe Prescribing, Handling and Administration of Intrathecal Chemotherapy (840)	Anti-Cancer Therapy (SACT)) Guidelines for the management of extravasation Procedure for Intrathecal Chemotherapy Procedure for the Administration of Intra-Vesical Chemotherapy (Mitomycin-C 40mg / Epirubicin 50mg) V1.0 Procedure for Administration of Intra-Vesical Bacillus Calmette-Guerin (BCG) v1.0
Guidelines for Self-Administration of Medicines (578)	Patient Self-Administration of Medicines in Adults Procedure v1.0
Homecare Medicines Procedure	Homecare Medicines Procedure v1.0
Policy for the Reporting and Management of Incidents including Serious Incidents Requiring Investigation (181) Procedure for the Reporting and Management of Incidents including Serious Incidents Requiring Investigation(685)	Incident Reporting and Management Policy and Procedure v8.1
Procedure for Medicines Reconciliation (575)	Medicines Reconciliation Procedure v1.0 (collating, checking and communicating of a patient medication history on admission)
Procedure for Prescribing, Procurement, Dispensing, Supply and Administration of Unlicensed Medicines (350)	Unlicensed And “Off Label" Medicinal Products For Adults & Children V1.0 Procedure
Procedure for the Supply of Pre-packed Medication (349)	Issue of Prepacked Medicines Procedure(1.0)
Policy on Alcohol and Substance Abuse (33)	Clinical Guidelines for the Management of Alcohol Withdrawal BHH, GHH AND SH Opioid and Sedative Hypnotic Drug Addiction BHH, GHH AND SH
Parenteral Nutrition Procedure(657)	Adult Parenteral Nutrition guidelines v3.0

QEH only Supporting Policies and Procedures

Guidelines for the Assessment and Care of Patients with Known or Suspected Dementia or Delirium (205)

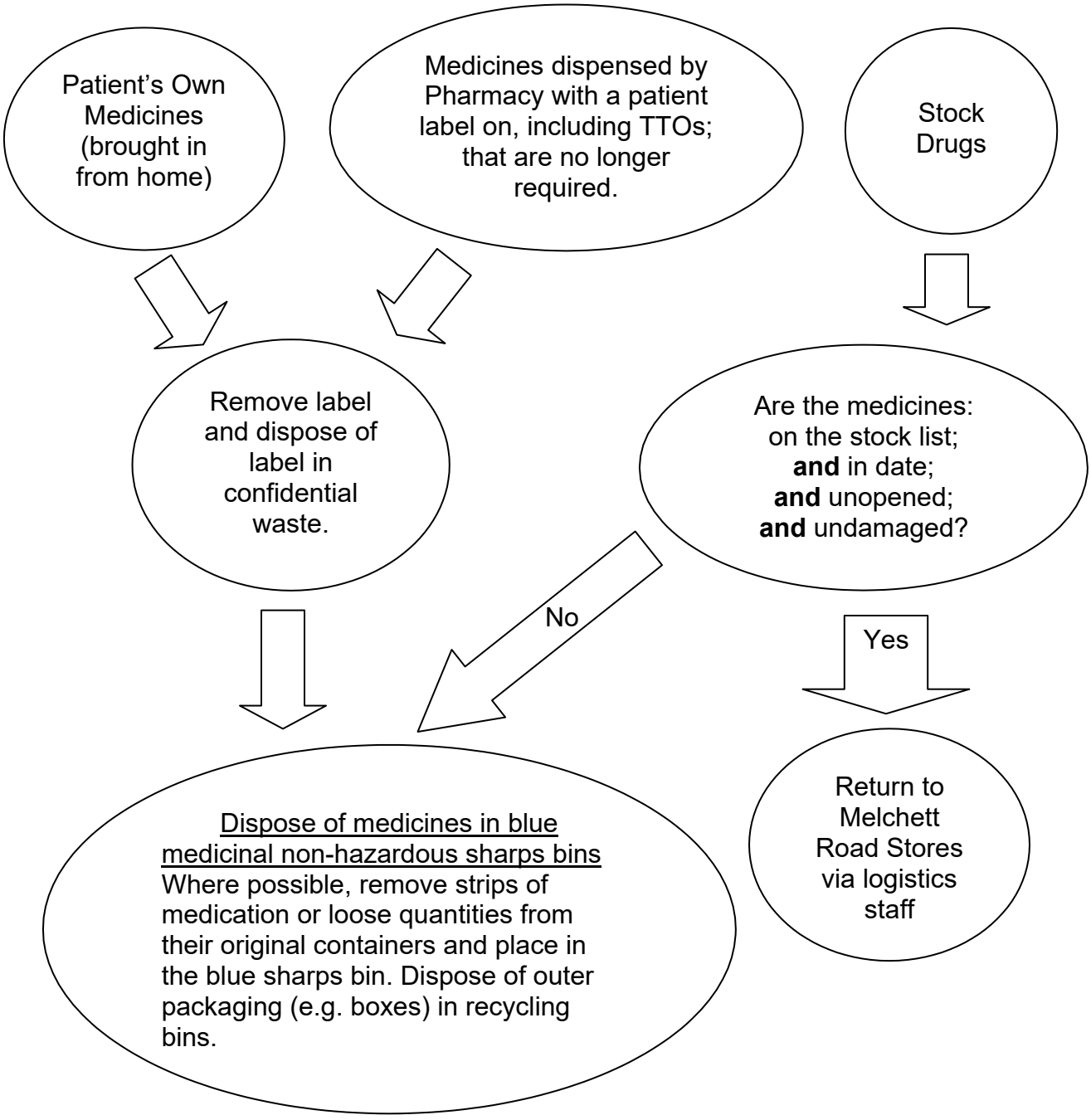
Procedure for the Introduction of New Drugs or Formulary Changes (811)
Procedure for the Safe Storage and Accurate Record Keeping for Controlled Drugs in Operating Theatre Departments (970)

BHH, GHH AND SH only Supporting Policies and Procedures

Intravenous Potassium Procedure v1.0
Medicines procedure for Nurses, midwives and AHPs practising in the community (BHH, GHH AND SH)
Non registered practitioners and medicines administration procedure v1.0
Purchasing for Safety Procedure for Medicines v2.0
Visiting Pharmaceutical Representatives Procedure V1.0
Prescribing and Dispensing Medication - Recovery at Home Procedure
Managing Patients Who May Require A Monitored Dosage System (MDS Blister Pack) On Discharge Procedure

APPENDIX 6a

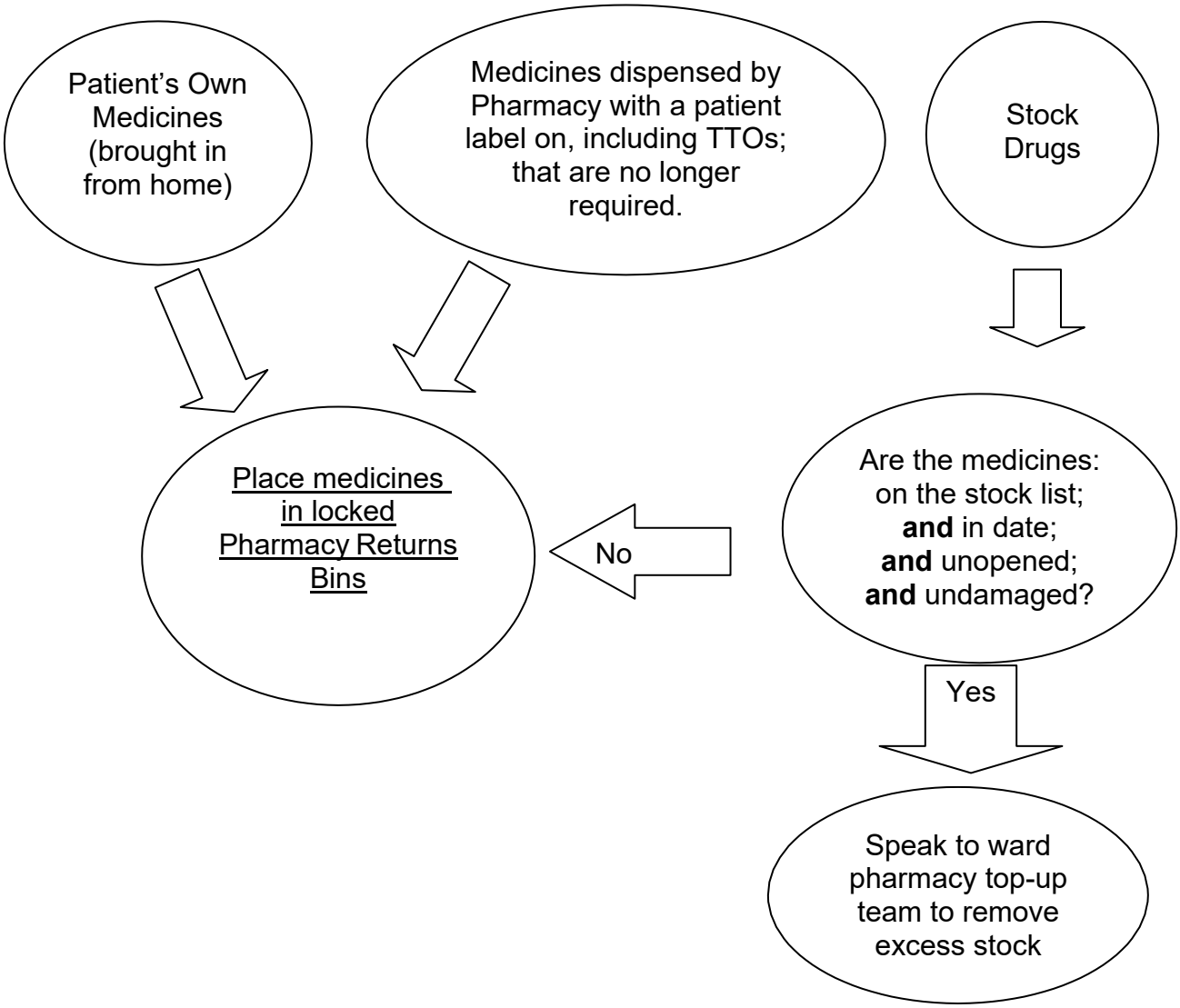
QEH: MEDICINES NO LONGER REQUIRED IN CLINICAL AREAS
N.B. Excluding Controlled Drugs – see separate Trust procedure



N.B. If medicines are known or suspected to be **high cost drugs**, please contact the Pharmacy Department for advice.
Cytotoxic drugs must be disposed of in purple lidded cytotoxic bins.

APPENDIX 6b

BHH, GHH and SH: MEDICINES NO LONGER REQUIRED IN CLINICAL AREAS
N.B. Excluding Controlled Drugs – see separate Trust procedure



N.B. If medicines are known or suspected to be **high cost drugs**, please contact the Pharmacy Department for advice.
Cytotoxic drugs must be disposed of in purple lidded cytotoxic bins.

APPENDIX 7

QEH: USE OF THE "YELLOW PRESCRIPTION SHEET" IN THE EVENT OF A TRUST WIDE EMERGENCY

Notes
The most common reasons for errors in medicines administration relate to illegible writing, ambiguous instructions or alterations in prescriptions. The following instructions are designed to minimise the possibility of errors being made:

Page 1: Registration details	It is the responsibility of the initial prescriber to complete the registration details. A full, current PAS sticker should be used. **(Where the registration number is not known: the ED number must be used)**
Communication regarding drug prescribing and administration	The communication sheet is no substitution for effective verbal communication. It should be used to communicate non-urgent matters, or to reinforce matters which have already been communicated verbally to members of the health care team and on which action is required and awaited It is the responsibility of all healthcare professionals involved in the medication process to check the communication sheet.
To Take Out Drugs (TTOs)	This is where a nurse or pharmacist can indicate that discharge drugs (to take out drugs [TTOs]) have been written and ordered for the patient.
Page 2: Known Drug Sensitivities	Any drug sensitivities/allergies must be recorded on admission and this section must be referred to whenever a new medicine is prescribed. Enter "none known" if the patient has no known sensitivities/allergies (Do not leave blank). **If a patient experiences a drug reaction during hospitalisation a reaction record, signed and dated by the practitioner, must be made in this section. This record will be in addition to the record made in the patient's medical notes and the application of the alert sticker to the notes**.
Instructions for Prescribers/ Record of Administration	There are detailed instructions advising prescribers and those administering medicines that prescriptions must comply with the Medicines Policy and procedural documents. The chart details the record of administration and states the codes to be used when medicines have not been administered.

Once only and pre-medication drugs	This is for emergency treatments, pre-operative medications, and medications required before investigations such as X-ray or laboratory tests.
Oxygen therapy	This section is for prescribing oxygen therapy. The practitioner administering must date, time and sign when the oxygen is commenced and discontinued.
Page 3: As required or Post-operative Drugs	This is for medicines such as analgesics, which are given on an "as required basis". It is a legal requirement that maximum dose, frequency and total number of doses to be given MUST be stated for Controlled Drugs. NB: Prescriptions for post-operative Controlled Drugs prescribed as required are invalid after 72 hours (3 days).
Pages 4 and 5: Regular drugs	This section is for the prescription of routine medicines given at regular intervals. Single vertical columns represent one day. This is the same for all prescription blocks on page 5. • Specify a single route or dose. If a change is required re-write the prescription. • When all the columns are completed the prescription is invalid and must be rewritten. • Cancellations must be signed and dated.
Page 6: Drugs with frequent dose changes	This section is used for: (i) medicines such as warfarin where the dose may vary daily or for (ii) medicines such as insulin where dose may vary during the day.
Regular Insulin Prescription	This is for the prescription of subcutaneous insulin. The **route** and **units** are all prewritten, there is no need for the prescriber to annotate these. **All subcutaneous insulin prescriptions must be written here and nowhere else on the chart.**
Page 7: Drug Administration within the Trust	This section includes instructions on the completion of the prescription sheet in accordance with the rules set out in the Medicines Code.
Page 8: Drugs administered under a Patient Group Direction	Health professionals can only administer or supply medicines under a Patient Group Direction (PGD) as named individuals who have been assessed as competent by assessors identified in the individual PGD, and have completed a period of supervised practice prior to doing so. A record of the administration of the medicine(s) should be entered on the patients prescription chart on every occasion that the medicine is given.

Appendix 8
Intravenous medicines that have an expiry times of less than 24 hours

- Esomeprazole
  - 12 hours at room temp in 0.9% sodium chloride (from preparation time)

- Octreotide
  - Medusa guide recommends an 8 hour expiry time. There is conflicting data from manufacturers but there is support for concentrations of 1microgram/ml and 100microgram/ml being physically stable for 24 hours.
  - For Trust protocols 500microgram/500ml and 5000microgram in 50ml we support a **24 hour** expiry from the time of preparation/dilution.

- Omeprazole
  - 6 hours in 5% glucose, 12 hours in sodium chloride 0.9%

- Propofol
  - Manufacturer recommends 12 hour expiry once bottle pierced or infusion drawn into syringe.
  - Premature drawing up of infusions should be avoided unless use expected within 12 hours.

- Terbutaline
  - Within 12 hours of dilution

- Thiopental
  - Local practice supports 24 hours. Manufacturer suggests shorter expiry times. Please consult ward Pharmacist.

Appendix 9

NHS University Hospitals Birmingham NHS Foundation Trust

FRIDGE GUIDELINES FOR THE SAFE STORAGE OF MEDICINES

TEMPERATURE MONITORING

How to monitor, including maximum/minimum fridge thermometers

- Fridge temperatures **must** be maintained between 2°C and 8°C.
- All fridges storing medications or parenteral nutrition MUST be monitored.
- Where present, use the inbuilt refrigerator thermometer. Where not present, use a pharmacy approved thermometer to record the current, maximum and minimum fridge temperatures.
- Monitor and record at least ONCE a day, preferably at the same time each day
- Record and report any out-of-range observations to senior nursing personnel **as soon as possible**

How to monitor:

- Complete the fridge temperature record sheet and document information in all columns.
- Reset the thermometer immediately after completing the record by pressing and holding the minimum and maximum button together for a few seconds or refer to user manual for your specific refrigerator.
- Follow the escalation procedure below if a temperature excursion has been identified.

ESCALATION

*Minimum and/or current temperature **below 2°C** and maximum and/or current temperature **above 8°C***

- If the temperature has NOT been maintained between 2°C and 8°C, action must be taken:
  - Check that any temperature probes are intact and working and placed in the correct position away from the back and sides of the refrigerator.
  - Recheck temperature after 30 minutes, record the temperature and time in actions column .
  - Record on the fridge temperature record sheet any known reasons for out of range fluctuations in temperature (e.g. “fridge door open whilst adding stock”).
  - Inform the person in charge of the area.
  - Contact your Ward Pharmacist or Pharmacy Technician for advice.
  - Out of hours – call the on-call Pharmacist.
  - For areas without a regular ward pharmacy service contact the site inpatient pharmacy for advice :

	Pharmacy internal no.	*Estates/Engie internal no.*	*Medicines Information*
QEHB	*18740*	*777*	*18784*
Heartlands	*42470*	*42555*	*45508*
Good Hope	*47792*	*47777*	
Solihull	*44507*	*44444*	

- If advised by your ward pharmacy team or by the inpatient pharmacy, or to gain further assistance, contact your local Pharmacy Medicines Information Service for further advice on:
  - Quarantining of stock
  - Drug safety / stability data (further information will be requested to assist with this assessment)
  - To discuss a plan of action with Ward or Department

GENERAL HOUSEKEEPING

Refer to The Medicines Code:

- Refrigerate all relevant medicines immediately on receipt and secure in a locked refrigerator.
- A suitable refrigerator approved for the storage of pharmaceutical medicines must be used.
- Always keep medicines in the original packaging supplied and protect from light as appropriate.
- Ensure that ‘date opened’ or date reconstituted’ is recorded for reduced-expiry products.
- Maintain stock rotation.
- DO NOT STORE medicines in a domestic fridge.
- Never store food, drinks or clinical specimens in the medicines refrigerator

Appendix 9

Ward/Department:_____Room:_____Month/Year: _____

REFRIGERATOR TEMPERATURE RECORD SHEET

Date	Temperature reading 2°C - 8°C			Time	Thermometer Reset?	Fridge Locked?	Actions Taken for Temperature Deviations *Include temperature after initial recheck, Estates Job Reference Number and Person Escalated to*	Weekly Stock Check (Ensure no expired medications, or medicines for patients no longer on the ward)	Signature
	Current	Minimum	Maximum						
1									
2									
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