9. SECURITY AND STORAGE OF MEDICINES

9.1 Responsibility

The registered nurse-in-charge is responsible at all times for all medicines stored in the Ward/Department.

In certain departments where nurses are not present, this responsibility can be assigned to the senior professional in charge of that area (e.g. Radiographer, Operating Department Practitioner (ODP), Medical Physicist, and Medical Technical Officer (MTO)). The Chief Pharmacist, together with senior managers from the divisions must agree authorised individuals to be given responsibility to fulfil this function if the professional is not a registered nurse or a pharmacist.

It is the responsibility of the service lead to ensure that there is a system in place to ensure the monitoring of expiry dates of stock medicines, appropriate stock rotation and removal of expired medicines from use

9.2 Containers

All medicines must be stored in their containers as supplied by pharmacy. They should not be transferred from one container to another or left loose including strips of tablets. Large vials (50ml or above) where the box may be bulky and there is limited storage space may be stored out of the box if only 1 or 2 vials remain but must remain with other boxes containing the same medicines.

Medicines which have a limited shelf life once opened must be clearly marked with the date opened on the container. Liquids once opened must be given a 6 month expiry unless the manufacturer specifies less than 6 months.

Cardboard boxes must not be used in cupboards to help with segregation. Plastic cleanable containers may be used. The only cardboard allowed is that from original manufacturer packaging.

9.3 Storage accommodation:

Storage accommodation should be sited in a locked room or in a position to allow surveillance and maximum security against unauthorised entry. It should not be near major sources of heat (such as radiators) and must be locked when not in use.

General considerations for storage and preparation areas:

- Temperature – many medicines are temperature sensitive and require storage below 25^{o}C. Air cooling installations must be considered for new buildings or when refurbishment is undertaken. Treatment rooms where medicines are kept must have daily temperature readings which must be documented. Where temperatures are consistently high advice can be sought from the pharmacy department.
- Lighting – adequate lighting is required to reduce selection and preparation errors.
- Working space – adequate space for preparation of medicines, clean and uncluttered.

- Space for IT equipment to access prescription charts, parenteral drug monographs and other reference material available online
- Where possible storage should not be visible from an outside window at ground level. The use of blinds may assist with this and temperature management.
- Shelving to suit the size of medicine containers used.
- Shelving for tablets and small items is best positioned at eye level. It can be difficult to see small boxes in cupboards low down unless drawers are used.
- Returns bin installed and consideration of a drop off bin for medicines

The medicines storage capacity and preparation areas required for a clinical area should be calculated based on:

- Nature of the clinical area for example things to consider:
  - Number of beds and type of clinical specialty to anticipate type and volume of medication to be used
  - Number of injectables to prepare
  - Number of fridge items required
  - Use of bedside lockers or not
  - Regulatory & legislative requirements

9.4 Storage cupboards / cabinets

All pharmaceuticals must be stored in **locked** cupboards which should comply with the current British Standard for medicines storage (BS 2881). For Controlled Drugs, the Misuse of Drugs (Safe Custody) Regulations applies.

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Medicines store rooms within Departments such as Theatres can remain open in hours as long as these areas have controlled monitored access with no public access available, but must be locked at the end of each working day/weekends.

9.4.1 Controlled Drug Cupboard

Must be reserved solely for the storage of Controlled Drugs. The cupboard must be secured to the wall and comply with the Misuse of Drugs (Safe Custody) Regulations 1973.

9.4.2 Medicines Cupboard

This may take the form of one large or several small cupboards for tablets, liquids, injections, etc. and should ideally be in the same room or location if more than one cupboard is required. The Medicines Cupboard should only contain medicines as defined under the Medicines Act, 1968 and must be kept locked when not in use.

Metal cupboards must be installed for all new builds or during refurbishment work.

9.4.3 Automated electronic Cupboards

Electronic medicines storage cabinets may be used for storing medicines. Locks to the system should comply with BS3621

Access rights and access privileges must be agreed and set when installed in an area.

There must be a clear process for overriding the system and keys used to do this must be securely stored, preferably with the ability for an audit trail.

9.4.4 Refrigerator

A specifically designed pharmaceutical refrigerator must be used which is lockable. It may have a glass front to assist with product selection, reducing the time for the door to be open.

It must have a temperature recording device for recording maximum and minimum temperatures within the range of 2-8^{o}C

Refrigerators must not be overloaded and not located next to direct heat sources

9.4.5 Medicine Trolleys

These may be used for storage of medicines in current use on the medicine round. The trolley must not be left unattended during the medicine round and when not in use should be locked and secured to the wall. Medicines no longer in use must be removed from the trolley and re-used / disposed of according to local policy.

9.5 Storage requirements for specific categories of medicines

Medicines with differing routes / methods of administration or which look alike / sound alike should be stored separately or segregated clearly to minimise selection errors. Please see individual categories of medicines in sections below.

If there is sufficient space it is good practice to segregate penicillins from other antibiotics to help highlight which ones should be avoid in patients with a penicillin allergy. Posters are available for antibiotic cupboards.

Intravenous fluids, contrast media and sterile topical fluids are stored securely locked in a cupboard or clean area acceptable to the Pharmacy Department.

9.5.1 External Medicines, Disinfectants and Antiseptics

External medicines must not be stored next to internal liquids or injectables to avoid confusion and incorrect routes, preferably in a separate cupboard which is kept locked at all times.

Disinfectants, diagnostic reagents including those for urine testing, non medicated dressings and dietary supplements which may be accessed by staff who would not otherwise access medicines must be stored in a separate cupboard from medicines with a different digicode (if digilock is used) from any other codes in use within a department.

9.5.2 Fluids

- Fluids should be kept in their original container where possible. 1-2 loose bags of the same fluid may sit on boxes.
- Lockable closed storage units with trays or baskets may be used but must be clearly labelled.
- 1-2 bags of differing fluids may be mixed in a single container as long as it is labelled with the different bags present.
- Open shelving where used must be in a locked room
- All fluid boxes must be stored off the ground.
- Potassium containing fluids must be segregated from other fluids and clearly labelled in Red stating that they contain potassium.
- Irrigation fluids may be stored in the same area as IVs but kept separate
- Direct managed fluid order delivery solutions from suppliers are allowed.

9.5.3 Epidurals

Epidural infusions and ampoules must be kept separate from injectable medicines, preferably in a different cupboard but where there is limited space on a separate shelf clearly labelled 'For epidural use only'.

9.5.4 Oral medicines

Consider separation of medicines which look alike / sound alike to reduce the error of miss selection.

Oral liquids medicines must be able to stand upright within the cupboard. Opening dates must be written.

9.5.5 Flammable medicines

Flammable medicines must be stored in a locked metal cupboard. A risk assessment should be undertaken to decide whether a fire-resisting cupboard is required based on quantity and flammability of the medicine. Obtain advice from the health and safety team within the Trust.

The cupboard must be clearly labelled with flammable warning labels.

9.5.6 Medical Gases

Small size medical gases in cylinders must be stored in appropriate racking. Larger cylinders must be stored in a cage or secured to a fixed structure by a safety chain at all times.

Areas where oxygen is stored must display appropriate signage.

9.5.7 'Fridge' medicines

Medicines requiring storage in refrigerator will be marked 'Store in a refrigerator' or state the exact temperature range suitable for storage. **Food and pathological specimens must never be stored in the Medicines Refrigerator**. The refrigerator

must be locked when not in use. Fridge temperature must be checked daily, documented and signed. Additionally the fridge temperature reset button should be pressed following reading of the temperature. Excursions outside appropriate temperatures must be acted upon, see Trust Guidance.

9.5.8 Patient Own Medicines

Individual medicine cabinets often known as bedside lockers have replaced the medicine trolley on many wards and are used for the storage of patients' own medicines and supplied medicines for either self or nurse administration. They are installed either on the wall near the bed or are attached to bedside lockers. Each lockable cabinet will have an individual and a master key or digilock.
Where patients assume responsibility for their medicines under self-administration schemes, information about keeping their medicines secure should be provided.

9.5.9 Cardiac Arrest Drugs and other emergency boxes

For clinical emergencies all wards and departments must keep a supply of medicines on the cardiac arrest trolley, in line with local cardiopulmonary resuscitation guidelines.

Other emergency boxes may be available in Trusts, for example hypoglycaemia or sepsis boxes. These must be kept in a secure area either a locked treatment room or trolley.

9.5.10 Emergency Department only (UHL)

Certain authorised medicines are kept in special boxes for emergency situations (anaesthetic medicines, medicines for seizures and anaphylaxis) and are stored on the arrest trolley. The Medicines are filled and checked by nursing and ODPs .

9.6 Keys / locks to medicines

Access to cupboards, trolleys and rooms where medicines are stored must be controlled by a key or other means with locks conforming to the standards described in 9.4.

Digilocks are not suitable for use on stock medicine cupboards, drug trolleys or medicine refrigerators. It is acknowledged that many areas in UHL have digilocks and these will not be changed immediately. They must be changed when the treatment room undergoes a refurbishment. New areas must have a key or electronic system installed. The number used must not be the same as a treatment room door.

The preferred system is the use of a fully traceable electronic system using a swipe card or fingerprint that opens the lock and locks immediately on closing the door. Cards or keys used are allocated to individual authorised staff enabling audit of access

Digilocks may be used for patient own medicine lockers and doors to treatment rooms only but must not be used for controlled drug cupboards or access to controlled drug keys. If patient own lockers are used for self administration then the code must be changed for individual patients so that they are not the same as other lockers on the ward. A key or electronic fob system would be the preferred option for this.

9.6.1 Keys to the Medicines Cupboards, Medicines Trolley, Medicines Refrigerator

Keys are the responsibility of the practitioner in charge of the ward or department as described in section 9.1.

At shift changes the keys must be personally handed to the health professional taking over as health professional or authorised nurse in charge

For controlled drug keys refer to section 9.6.4

All keys giving access to medications must be kept separate from “housekeeping” keys.

Keys giving access to medications must not be given to non nursing staff, with the exception of:

- operating departments (**see Chapter 15**)
- Pharmacy staff who are checking ward stock holding of medicines
- Departments where nurses are not usually present and another senior professional is in charge as described in section 9.1.

UHL only:

At the discretion of the ward manager, healthcare assistants/nursery nurses are permitted access to medication keys **BUT** only for the purpose of restocking supplies. They are not permitted access to controlled drug keys.

Student healthcare professionals (nurses/midwifes/ODPs/Advanced Health Care Assistants) must not be responsible for holding any keys giving access to medication.

9.6.2 Individual medicine cabinet keys -

Each ward should agree with their ward pharmacist the maximum number of master keys required to enable different nursing teams to administer medicines concurrently. A suggested maximum is 3. Master keys should be accounted for at the beginning of each shift. When not in use, the keys must be stored safely and appropriately in a designated secure area.

Where agreed with the ward manager Pharmacy staff may keep a master key for individual medicines cabinets for their own use on the wards.

9.6.3 Duplicate Keys

These must be clearly labelled ‘duplicate’ and held in a locked cupboard in a central place, e.g. by security or nurse administration. They must not normally be held on the Ward.

9.6.4 Controlled drug keys

Controlled drug cupboard keys must be kept separately to the other medication keys. Within the theatre environment due to the locality and potential emergency access to drug storage areas and fridges the keys remain within one bunch.

No duplicates of controlled drug keys must be made. Any spare keys which arrive with new cabinets must be handed into estates for destruction

9.6.5 Digilock codes

Digilock codes must never be written down and the number must be changed every 3 months or earlier if there is any concern over medicines security. It is the responsibility of the ward/departmental manager to organise the change of number.

The code number for the treatment room doors for a ward/ department must be different to patient lockers codes .

Where new Digilocks are installed, the code must be changed from the master code immediately after installation.

Legal responsibility for the keys and access to medicines rest with the registered nurse, midwife or ODP in charge.of the area. Whilst the task can be delegated, the responsibility cannot. They can delegate control of access (i.e. key holding) to the CD cupboard to another registered nurse /ODP/Pharmacist. .

For the purpose of stock checking or quarterly controlled drug audits, the key may be handed to a pharmacist or Pharmacy technician

9.7 Procedure for lost Medicine Keys

Every effort must be made to find the keys or retrieve them from off duty staff as a matter of urgency:

- If unsuccessful, the ward Manager or duty manager must be informed or designated deputy, who will obtain duplicate keys if available;
- The date and time of issue of duplicate keys must be recorded, together with the names of the persons handing over and receiving them;
- When the original keys are found, the duplicates must be returned and a record of the date and time of return made;
- If duplicate keys are not available or if the lost keys are not found, the registered nurse-in-charge of the ward/department will arrange for new locks to be fitted and for the cupboard to be effectively secured immediately.
- An incident form must be completed if the keys are not found or have left the site.
- A record should be kept when master keys to individual medicines cabinets are lost and have to be replaced. If more than three master keys are lost, all cabinet locks must be changed
- If Controlled drug keys are lost please refer to local policy.

9.8 Access to Cupboards Other than Medicine Cupboards

Since children and suicidal patients may be at particular risk, the registered nurse/senior practitioner in charge must be satisfied with security arrangements for cleaning materials in addition to medicines.

9.9 Sample Medicines, Dressings, Equipment, etc

These must not be accepted on the ward unless by prior arrangement with the relevant pharmacy, supplies or medical equipment department.

9.10 Medicines allowed to be kept unlocked on wards.

This section only applies to UHL where there is an agreed list of medicines which can be stored unlocked on wards (see table below).

Medicines left out for patient use can only be done so where the patient has capacity to use the medicine safely, understands their responsibilities in keeping them safe, reporting to nursing staff when the medicine has been used and the nurse has undertaken responsibility to explain the medicines to the patient.

Where	Medicine
With patient if in use	Salbutamol - reliever inhaler
	Inhalers if on the Smart or MART regimens - Fostair 100/6 MDI - DuoResp Spiromax 160/4.5 - Symbicort Turbohaler 100/6 and 200/6 - Fobumix 160/4.5 easyhaler
	Mouth wash
	Eye Drops used as lubricants
	Creams used as emollients and anusol
	GTN spray
	Nicotine replacement treatments
	Oral saliva replacement treatments eg Bioxtra®
	Creon or Pancrex V
In treatment rooms	Sodium Chloride 0.9% / Water for injection ampoules - 1 box of each on side or pre-filled sodium chloride 0.9% syringes
	Pour bottles used for irrigation
	Dressings
Ward arrest trolley	Cardiac arrest boxes

Insulin may be kept out of the individual medicines cabinet when the patient has been assessed for self administration and has signed an agreement or it is documented on an electronic system where available taking responsibility for their insulin. It must be kept out of sight at all times when not being used.

There may be occasion for other medicines to be kept unlocked. In individual cases this must be discussed and risk assessed with the lead CMG pharmacist.