

Dear Colleague

MEDICINES STORAGE ON HOSPITAL IN-PATIENT WARDS

Purpose

This letter refers to building note guidance which has been published in England regarding storage facilities for medicines, including controlled drugs, on hospital in-patient wards. The guidance relates to new build and refurbishment work only but is being circulated more widely as it also serves as a reminder on arrangements which should be in place for the safe storage of medicines, including controlled drugs.

Background

The scope of the guidance is to highlight relevant legislative standards, best practice and patient safety recommendations that apply to the safe and secure storage of medicines in hospital wards. It is, however, the Director of Pharmacy of each individual Health Board who has responsibility for policies around safe storage of medicines. It is also the nurse in charge of wards who is accountable for the safe custody of medicines at operational ward level. Health Facilities Scotland staff should, therefore, consult with relevant staff when new build or refurbishment work is planned.

As the guidance highlights current recognised standards then in considering the content, Boards will wish to ensure that appropriate risk assessments are carried out by charge nurses or Department managers to identify where non compliance with the standards represent an unacceptable level of risk.

Any staff wishing further advice on the safe storage of medicines should contact their Health Board Director of Pharmacy. Advice specifically concerning storage facilities for controlled drugs can be obtained from the Board Controlled Drug Accountable Officer.

A copy of the guidance has been replicated at Annex A and has been amended slightly to reflect the position in Scotland. Copies of the original English guidance note can be found using the following link:

<https://www.gov.uk/government/publications/general-design-principles-for-health-and-community-care-buildings> .

CEL 28 (2013)

10 December 2013

Addresses

For action

Chief Executives of NHS Boards, special Health Boards and NHS National Services Scotland (Common Services Agency).
Health Facilities Scotland, National Services Scotland (Common Services Agency).

For information

Medical Directors, NHS Boards and Special Health Boards.
Directors of Pharmacy, NHS Boards and Special Health Boards.

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Action

- Boards are asked to ensure that charge nurses and/or Departmental managers are made aware of this guidance and take forward any necessary actions;
- Health Facilities Scotland are asked to ensure that consultation with relevant staff takes place when new build or refurbishment work is planned.
- The guidance is relevant for NHSScotland and NHS Boards are asked to ensure that relevant staff are made aware of the guidance as appropriate. Health Facilities Scotland will add the guidance to the design guidance on their website in due course.

Yours sincerely

Bill Scott

PROFESSOR BILL SCOTT
Chief Pharmaceutical Officer

Medicines storage on hospital in-patient wards

Scope of guidance

This section of the website provides best practice guidance on storage facilities for medicines, including Controlled Drugs (CDs), on hospital in-patient wards. The guidance may be applicable to community in-patient wards. Storage requirements for medicines on specialist mental health in-patient wards may differ significantly.

The enclosed references highlight relevant legislative standards, national best practice and patient safety recommendations that apply to the safe and secure storage of medicines in hospital wards.

Basic principles

There are important patient safety, legal, professional and security requirements to meet when providing medicines storage facilities on hospital in-patient wards. Well-designed storage can minimise overcrowding leading to reduced ordering and waste, incorrect medicine selection and missed doses of medicines.

The medicine storage capacity required for any clinical area can be calculated by inspection of the medicine stock list for the specific area or similar area held by the hospital pharmacy.

The lead or nominated pharmacist, local Security Management Specialist and lead nurse must be involved at an early stage in any plans to upgrade or build new medicines storage facilities in hospital in-patient wards and must approve final plans prior to placing orders for storage systems. Failure to do this may result in the provision of unsafe, inefficient and potentially illegal storage solutions, which may result in costly retro-fits.

Periodic review of medicines storage and risk-assessment of security arrangements should be undertaken in organisations to ensure these meet the latest published standards. These should be reflected in organisational policy and procedures and monitored to minimise risk of misuse or diversion, whilst maintaining safe and appropriate access to medicines, in order to meet clinical care requirements.

Hospital in-patient wards require distinct storage facilities for:

1. CDs
2. epidural and intrathecal infusions and other high risk medicines
3. oral solid medicines
4. injectable medicines
5. oral liquid medicines and rectal medicines
6. medicines to take home
7. flammable medicines
8. medicines requiring refrigerated storage
9. external medicines and dressings
10. IV fluids
11. patients' own medicines
12. Medical Gases

Location of Medicines cupboards

For increased security, etc. it is important to consider the following when siting medicines cupboards, medicines trolley's etc: They should:

- be in a clean utility room with no free access by patients – in areas which do not have a 24 hour presence the room must be lockable;
- not be visible from an outside window at ground level;
- be fixed to a solid wall where possible. Where this is not possible it should be ensured that access cannot be made through the back of the cupboard;
- have running water and a sink nearby; and
- The height of the top shelf of the cupboard should be safely accessible by staff.

The room or space where medicines are stored should be provided with Internet and intranet access (physical or Wi-Fi) and power where activities may require this, for example, electronic recording of medicines administration, access to electronic references on medicines preparation, barcode scanning and electronic CD register entry.

Construction of medicines cupboards

Metal cupboards are recommended for the storage of medicines to ensure compliance with BS 2881. 'The safe and secure handling of medicines: A team approach' which was approved by all four countries in the United Kingdom, states that medicines storage systems should comply with BS 2881. The Scottish Government advises all hospitals to take this report into consideration.

Trays and baskets are considered unsuitable for storing medicines (except external medicines and dressings and IV fluids) because they do not allow medicines to be adequately segregated and clearly displayed and hence may increase the risk of incorrect medicines selection.

Locks on medicines cupboards and fridges

All cupboards, closed storage units (i.e. with doors) and fridges in which medicines are stored must be lockable and should be locked when not being accessed. Locks for metal cupboards (except patients' medicines cabinets) must comply with BS 3621 as a minimum.

All stock medicines cupboards (except CD cupboards) on a single in-patient ward should have locks that use identical keys. Multiple key copies may be available, to reduce the time needed for authorised staff to unlock the cupboards. This is a decision for the Registered Nurse or Midwife in charge who should risk assess and decide the numbers of key copies which should be available in each ward and should recognise that the more copies which are available, the greater the risk of loss. Each patient should have a key to their own bedside medicines cabinet or the cabinet should be fitted with key code entry, swipe card facility or similar mechanism to facilitate self-administration of medicines where this is appropriate. Each bedside medicines cabinet should have a unique, suited key within that ward, with a master key for that ward suite required for nursing (and pharmacy) staff.

Electronic locking systems are now commercially available and may be considered for medicine cupboards other than CD cupboards. CD cupboards must be locked using a key and locking mechanism that complies with BS 3621. Electronic locking systems use electronic keys or swipe cards which open the lock (BS3621) and then lock automatically on closing the door. Such systems can be designed to allow cards or keys to be allocated to each authorised person and hence allow access to medicine cupboards to be monitored.

Use of standard keypads, where the number is shared with a number of users, are not considered secure and is not recommended.

Storage requirements for specific categories of medicines

The following sections provide guidelines for the storage of specific categories of medicines. It is generally recommended that each category of medicine is stored in a dedicated or designated cupboard. This is to ensure appropriate segregation of medicines and reduce the risk of incorrect medicines being selected. 'The safe and secure handling of medicines: A team approach' supports this approach.

The cupboard sizes given are baseline recommendations for a general 24-bed in-patient ward. However, exact requirements should be determined locally, based on the agreed stock of medicines required within each area. All sizes shown are in mm and represent height x width x depth of the storage cupboard or unit.

1. Controlled drugs:

In recent years the range and amount of controlled drugs required to be stored in clinical area has increased. Traditional designs of quarter size cupboards within full sized cupboards are too small to provide suitable controlled drug storage.

- a. For the legal position on facilities requirements for storage of controlled drugs, see Misuse of Drugs (Safe Custody) Regulations 1973 and 'Safer management of controlled drugs: a guide to good practice in secondary care (Scotland)'. The Home Office also issued guidance in September 2013 entitled "Security guidance for all existing or prospective Home Office Controlled Drug Licensees and/or Precursor Chemical Licensees or Registrants" which can be accessed using the following [link - https://whitehall-admin.production.alpha.gov.co.uk/government/uploads/system/uploads/attachment_data/file/239201/security-guidance-businesses-92013.pdf](https://whitehall-admin.production.alpha.gov.co.uk/government/uploads/system/uploads/attachment_data/file/239201/security-guidance-businesses-92013.pdf) The fixing of CD cupboards is stipulated within the Home Office guidance and the Misuse of Drugs (Safe Custody) Regulations 1973.
- b. A 24-bed ward area will generally only have one CD cupboard.
- c. Nominal cupboard size: 550 x 500 x 300. A cupboard within a cupboard is not required.
- d. The National Patient Safety Agency (NPSA) recommends that high doses (30 mg or greater) of morphine and diamorphine are stored on a separate shelf in cupboards used to store CDs. See Safer Practice Notice – 'High dose morphine and diamorphine injections' (NPSA, 2006).
- e. On in-patient wards that use large quantities of CDs (e.g. surgical wards) a larger CD cupboard is required.
- f. All CD cupboards should meet the Sold Secure Standard (SS) 314 - 'Specification for security cabinets' standard - silver level, which exceeds BS 2881 level 2 security or the specification within the Misuse of drugs (Safe Custody) Regulations 1973. Where local discussions identify additional risks it may be necessary to consider further precautions to the surrounding environment where the CD cupboard is located. This can include placing the CD cupboard in an access-controlled room or an area that is monitored by CCTV. The access control system used should be auditable.

g. Following local risk assessment CD cupboards may be linked to an alarm/indicator system that shows when the door to the cupboard is open. Where fitted the alarm should display at the staff communication base, or if the ward is not operational, at an alternative suitable location e.g. 24-hour security desk.

2. Epidural and intrathecal infusions and other high risk medicines

- a. Arrangements for the safe handling and storage for intrathecal infusions are contained in [HDL \(2006\) 11](#) – “*Guidance on the Safe Handling of Intrathecal and Intraventricular Injections*”. Regarding intrathecal chemotherapy, guidance is contained in [CEL 21 \(2009\)](#) – “*Safe Administration of Intrathecal Cytotoxic Chemotherapy*”.
- b. In line with [CEL 30 \(2012\)](#), cytotoxic systemic anti-cancer therapy (SACT) must be stored securely and safely in locations separate from other medicines and clearly marked for the storage of cytotoxic SACT only. This includes cytotoxic SACT requiring refrigerated storage.

3. Oral solid medicines

- a. It should be possible to adjust the position of the shelves within these cupboards to allow for the wide range of product sizes. Physical barriers (dividers) should be used to separate products with similar names.
- b. Nominal cupboard size: 600x1000x300.

4. Injectable medicines

- a. It should be possible to adjust the position of the shelves within these cupboards to allow for the wide range of product sizes. Physical barriers (dividers) should be used to separate products with similar names or packaging.
- b. Nominal cupboard size: 600x1000x300. Two cupboards needed.
- c. Some in-patient wards may benefit from a tall cupboard for injectable medicines due to the bulky nature of these products. Nominal size of tall cupboard: 1850x500x550.

5. Oral liquid medicines and rectal medicines

- a. It should be possible to adjust the position of the shelves within these cupboards to allow for the wide range of product sizes. Physical barriers (dividers) should be used to separate products with similar names or packaging.
- b. Nominal cupboard size: 600x500x300.

6. Medicines to take home

- a. This cupboard will be used for prepared discharge medication, which may be bulky. Local processes might allow medicines in bedside lockers to be released at discharge reducing the requirement for cupboards of this type.
- b. Nominal cupboard size: 850x500x550.

7. Flammable medicines

- a. Flammable medicines should be stored in lockable metal cupboards. A risk assessment should be undertaken to ascertain whether a fire-resisting cabinet is required. This will depend on the quantity and flammability of the medicines.
- b. Nominal cupboard size: 400x400x300.

8. Medicines requiring refrigerated storage

- a. A specially designed medicines fridge should be used. It should be fitted with a lock and fan-assisted cooling and have a temperature range of 2-8 C.
- b. Nominal size for under-counter fridge: 900x500x500.
- c. For large use areas e.g. surgical wards which make use of 3 litre total parenteral nutrition bags or renal wards, a larger fridge would be more suitable. Nominal size: 1900x600x650.
- d. Must have an integrated digital thermometer with maximum and minimum recording and audible alarm. Consideration should be given to providing temperature logging capability, especially where high value stocks are held. This may be achieved via removable data loggers or Wi-Fi/hard wired network monitoring devices.
- e. Must be hard wired into a fused spur.
- f. Glass doors can improve efficiency in product selection and reduce time the door is open in areas that have large stocks.
- g. Must have ongoing maintenance and repair contracts available.

9. External medicines and dressings

- a. Lockable closed storage units with trays or baskets may be used for these lower risk medicines.

10. IV fluids

- a. Lockable closed storage units with trays or baskets or open shelving can be used for bulk storage of IV fluids (e.g. boxes of 20 or 50 bags). Where open shelving is used, it should be located in a locked room.
- b. Nominal storage unit size: 1850x450x600. Two units needed.
- c. Some products require protection from light.

11. Patients' own medicines

- a. Patients' own medicines should be stored in medicines cabinets beside the patients' beds. Nominal cabinet size: 300x400x150.
- b. Medicines cabinets may be permanently attached to a wall, or to a detachable wall plate to allow them to be transferred with patients.
- c. Following local risk assessment, medicines may be stored in locked bedside cabinets to facilitate access e.g. for self-administration by patients who are unable to reach wall-mounted cabinets.

Note: Care is needed if medicines cabinets are integrated into bedside lockers to ensure transposition of lockers between patients doesn't occur. In this situation, the patient's name must be clearly visible on the bedside locker.

Other considerations

Temperature

Most medicines require storage below 25 degrees centigrade and medicine storage areas must be mechanically temperature controlled to ensure this is provided. Medicines storage must not be located near to sources of direct heat e.g. radiators.

Lighting

A lighting level of 1460 Lux has been shown to reduce the incidence of errors when selecting and preparing medicines. Medicine storage and preparation areas require this level of lighting. Appropriate switching should be provided to allow this to be operated "standalone" e.g. at night.

Working space

Medicines may be prepared in wards. Sufficient space to allow safe working is required especially for the safe preparation of injectable medicines. Work surfaces must be easily cleaned and not cluttered. At least 2 metres of such worktop is required for medicine preparation in each 24-bed ward area.

Medicines trolleys

Where medicines trolleys are used on in-patient wards, anchor points (i.e. to secure the trolleys to the floor or wall) should be provided for these trolleys when not in use, or they should be secured in a locked room

Electronic medicines storage and issuing systems

Automated electronic medicines storage and issuing systems are now available for all types of medicines, including CDs. Local discussions are essential regarding such requirements. Note: power and data connectivity will be required for these systems.

Other clinical areas requiring medicines storage

A wide range of other clinical areas in acute hospitals require medicines storage facilities. All the above principles apply although space requirements in the following areas are likely to be significantly different from in-patient wards:

- day case units
- out-patient departments
- A&E departments
- operating theatre departments
- cardiac catheter laboratory suites
- chemotherapy units
- dialysis units

Clear dialogue with NHS staff, including the local pharmacy team, is essential for specialised areas.