NHS
The Dudley Group
NHS Foundation Trust

Pharmacy and Medicines Management

Mandatory Training (refresher)

for Acute Hospital Ward and Department Staff (excluding Theatres)

June 2022

What is included in this self-directed learning pack?

- Key topics from the following Trust policies:
  - Medicines Management Policy
  - Controlled Drugs Policy
  - Antimicrobial Policy
- Patient Safety Alerts and implications for practice
- Learning from medication incidents
- Links to access resources e.g., videos and websites
- This pack **does not** replace reading the Medicines Management policy or any other related policy.

Learning Outcomes

On completion of this self-directed learning pack you should be able to:

- Understand the contents of this pack
- Know how to access information about Medicines Management issues and obtain further information if required
- Understand that there are supporting policies and guidelines available on the Trust HUB and from the Royal Pharmaceutical Society (RPS), Royal College of Nursing (RCN) and national safety alerts
- Understand your responsibility to report medicines management incidents on the Trust incident reporting system (Datix®) in line with the Trust Policy

Why do we have a Medicines Management policy ?

- Think about some of the reasons why our Trust has a Medicines Management Policy.
- Now make a list below:
- ____________________________
- ____________________________
- ____________________________
- ____________________________

Why do we have a Medicines Management Policy?

Now review your list. How many of the following reasons did you identify?

- To define the standard(s) required
- To raise awareness of and minimise risks
- To ensure a safe and effective approach to medicines handling across the organisation
- To protect patients and staff

Where can I find information on Medicines Management?

- The NMC advise employees always check and follow their own Trust's guidance on safe and effective medicines handling
    - Our Medicines Management Policy can be accessed via the Hub: Procedural documents>Clinical Policies>Clinical Support
- The RCN has also worked with the RPS and other stakeholders to produce guidance that you should be familiar with and highlighted sources of guidance for specific areas of practice

Patient Safety Alerts

- Patient safety alerts rapidly warn the healthcare system of risks. They provide guidance on preventing potential incidents that may lead to harm or death.
- Alerts are currently issued via NHS Improvement and cascaded to our Trust via the Central Alerting System (CAS)
- The Never Events Policy and Framework incorporates key actions from previous NPSA alerts

The following slides highlight issues raised in national patient safety alerts

Ensuring safer practice with high dose ampoules of diamorphine and morphine

"There have been a number of reports of deaths and harm due to the administration of high dose (30mg or greater) diamorphine or morphine injections to patients who had not previously received doses of opiates"

Major risks are:

- **Packaging of different strengths** of diamorphine and morphine **look the same** (5mg, 10mg, 15mg, 20mg and 30mg products all look similar)
- **Labelling** on outer carton and ampoule are **unclear**
- **Higher strength** (e.g. 30mg) **ampoules** of diamorphine and morphine **stored alongside lower strength products** (e.g. 10mg) in both primary and secondary care
- **Lack of awareness of risks and precautions** when prescribing, dispensing and administering higher doses of diamorphine and morphine injections

Ensuring safer practice with high dose ampoules of diamorphine and morphine

Think about how can you reduce these risks for your patients? Write your ideas below.

- ____________________________________
- ____________________________________
- ____________________________________
- ____________________________________
- ____________________________________

Ensuring safer practice with high dose ampoules of diamorphine and morphine

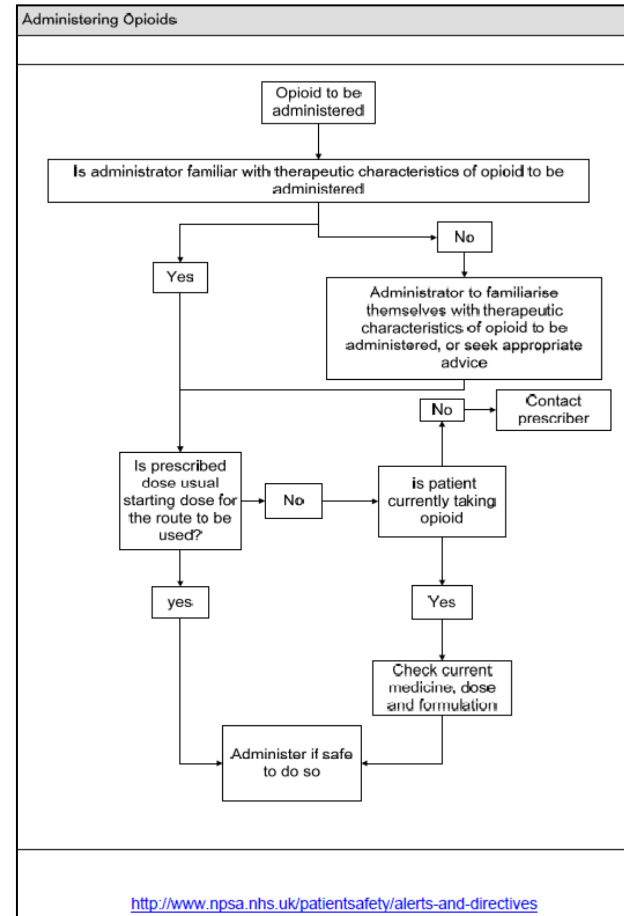
- Your list should have included the following:
  - Ensure that you are aware of appropriate starting doses and dose titration as well as safe systems for product selection, preparation, administration and monitoring
  - A single individual administration system is used by healthcare professionals who are not medical doctors unless administration involves:
    - an intravenous medicine
    - an oral cytotoxic medicine
    - calculation of a dose (except numbers of capsules/tablets)
    - administration to children under 16 years of age
    - doses expressed by weight or surface area
    - administration of controlled drugs

    (Qualified medical doctors must have a second check when administering to children)
  - Ensure ampoules are always kept in a well-labelled outer carton or box
  - Provide information to patient/carer on post administration side effects
  - Ensure that you know how to access a supply of naloxone injection, an antidote to opiate-induced respiratory depression
  - Advising patients/clients and/or their relatives or carers on security and safe storage of medicines to be administered at home

Reducing Dosing Errors with Opioid Medicines

"Opioid medicines are invaluable for the treatment of acute and chronic pain. There are risks if members of the healthcare team who prescribe, dispense or administer opioid medicines have insufficient knowledge of dosage and the requirements of the patient concerned. Every member of the team has responsibility to check that the intended dose is safe for the individual patient (e.g. for oral Morphine or Oxycodone in adult patients, not normally more than 50% higher than the previous dose)"

- The NPSA produced some possible algorithms which may be helpful for staff in reducing risks of dosing errors with opioid medicines. These are included in the Trust Controlled Drug Policy.



Risk of severe and fatal burns with paraffin-containing and paraffin-free emollients

- Click on the link to watch a video that has been produced for medical professionals and carers, which highlights the potential fire hazards associated with paraffin-based skin products
- As you watch the video think about how you can minimise the risk of harm

"Warnings about the risk of severe and fatal burns have been extended to all paraffin-based emollients regardless of paraffin concentration. Data suggest there is also a risk for paraffin-free emollients." MHRA, 2018

- Now read the latest MHRA advice for healthcare professionals by clicking the link

The Safer Use of Insulin

"Errors in the administration of insulin by clinical staff are common. In certain cases they may be severe and can cause death. Two common errors have been identified:
• the inappropriate use of non-insulin (IV) syringes, which are marked in ml and not in insulin units;
• the use of abbreviations such as 'U' or 'IU' for units. When abbreviations are added to the intended dose, the dose may be misread, e.g. 10U is read as 100.
Some of these errors have resulted from insufficient training in the use of insulin by healthcare professionals."

"Overdose of insulin due to abbreviations or incorrect device is a never event in all settings providing NHS Care Overdose refers to when:
• a patient is given a 10-fold or greater overdose of insulin because the words 'unit' or 'international units' are abbreviated; such an overdose was given in a care setting with an electronic prescribing system
• a healthcare professional fails to use a specific insulin administration device – that is, an insulin syringe or pen is not used to measure the insulin
• a healthcare professional withdraws insulin from an insulin pen or pen refill and then administers this using a syringe and needle." (NHS Improvement, 2018)

- Check now to make sure that you have completed your Diabetes Management mandatory training
- If it is due/overdue you should complete this via the e-learning for Healthcare™ portal

Insulin- it's a risky business!

- There may be confusion between insulin that look-alike and/or sound-alike e.g. **NovoRAPID and NovoMIX 30**
- General insulins comparison (not exhaustive)

Release profile	Characteristics
Rapid-acting	• Absorbed very rapidly • Lasts only a few hours • Aim to control glucose following a meal e.g. NovoRapid®, Humalog®, Apidra®
Long-acting	• More slowly absorbed • Designed to provide a low level of insuliun throughout day and night e.g. Levemir®, Lantus®
Premixed	• Mixture of rapid- and intermediate-acting insulin • e.g. Novomix® 30, Humalog® Mix 25

Valproate contraindicated in women of childbearing potential unless there is a Pregnancy Prevention Programme

- Valproate-based medicines (sodium valproate, valproic acid, valproate semisodium) are effective medicines for treating epilepsy and bipolar disorder
- Valproate can cause serious harm to an unborn child when taken during pregnancy and should not be taken by women and girls unless nothing else works
- Valproate is not recommended for new initiations and where ever possible an alternative should be used first line.
- Women taking valproate should always use effective contraception to avoid an unplanned pregnancy
- Women prescribed valproate should not stop taking it unless advised by a doctor

What to do:

Watch this short video highlighting the latest safety information

- Be vigilant and ensure any women of child bearing potential on valproate have been counselled about the extra risk and are enrolled on the Pregnancy Prevention Programme
- Be vigilant for children who are stabilised on valproate but may soon be entering child bearing age and thus ensure the prescriber or a nurse has counselled them and their parents effectively.

Valproate ▼ (Epilim, Depakote, Convulex, Episenta, Epival, Kentlim, Orlept, Sodium Valproate, Syonell & Valpal)

Contraception and Pregnancy Prevention – Important information to know

- Valproate is an effective medicine for epilepsy and bipolar disorder.
- Valproate can seriously harm an unborn baby when taken during pregnancy.
- Always use effective contraception at all times during your treatment with valproate.
- It is important to visit your specialist to review your treatment at least once each year.

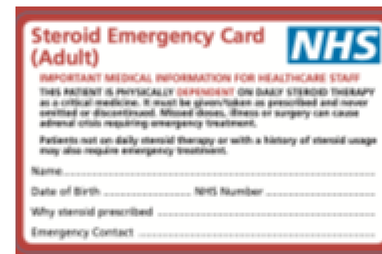
▼ These medicines are subject to additional monitoring. Report any side effects to www.mhra.gov.uk/yellowcard

Keep this card safe so you always know what to do.

National Patient Safety Alert: Safer Use of Steroids

- 'A search of the National Reporting and Learning System (NRLS) for a recent two-year period identified four deaths, four patients admitted to critical care, and around 320 other incidents describing issues with steroid replacement therapy for patients with adrenal insufficiency or emergency treatment for adrenal crisis'
- All patients with primary adrenal insufficiency, such as those with Addison's disease are steroid dependent.
- Some patients who take oral, inhaled or topical steroids for other medical conditions may develop secondary adrenal insufficiency and be steroid dependent.
- Omission of steroids for patients with adrenal insufficiency can lead to adrenal crisis; a medical emergency, which can be fatal if left untreated.
- Patients with adrenal insufficiency require higher doses of steroids if they become acutely ill or are subject to major body stressors,

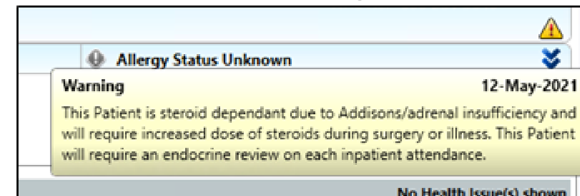
- A new patient held NHS Steroid Emergency Card has been launched to prompt healthcare professionals when patients are admitted in adrenal crisis/as an emergency or when undergoing surgery/procedure, to ensure steroid treatment is given appropriately and promptly. The card clearly outlines first management steps in an emergency. The adult card is for patients age 16+. A paediatric version is also available.
- Prescribers should ensure that all eligible patients prescribed steroids have been assessed, and **where necessary issue a Steroid Emergency Card.**



- **Pharmacy teams** should supply Steroid Emergency Cards to **replace lost or damaged cards**. Supplies of cards for adult patients are available in the dispensary at Russells Hall, Corbett and Guest Hospitals

National Patient Safety Alert: Safer Use of Steroids

- **<u>The blue Steroid Treatment Card is unaffected</u>** by the introduction of the NHS Steroid Emergency Card and should continue to be issued by the pharmacy department to all eligible patients.
- Check for risk of adrenal crisis and establish if the patient has an Emergency Steroid Card for all patients who present with acute physical illness or trauma, require emergency or elective surgical or other invasive procedures including day patients.
- Ensure an appropriate dose of steroid has been prescribed and dispensed for all patients with known adrenal insufficiency.
- Remember that steroid replacement needs to be increased during undercurrent illness and must be given parenterally if it can't be taken orally.
- Ensure steroid treatment is given appropriately and promptly. Patients known to be at greatest risk of adrenal insufficiency, who are known to our Endocrine team, will have an alert message displayed in the patient information banner on Sunrise EPMA (see image below)



- Ensure that you are familiar with the management of adrenal crisis see guidance at: https://www.endocrinology.org/clinical-practice/clinical-guidance/adrenal-crisis/
- Check that patients who are issued an emergency steroid card have been counselled on steroid sick day rules by the prescriber and/or endocrine team or nurse.
- If you or your team need advice, then then you can contact the Endocrine Team:
  - Nurse Specialist Bleep: 7820; Extension: 3672; Email: dgft.endonurseteam@nhs.net
  - Registrar (SPR) on Bleep number: 7335
  - Consultant via switchboard

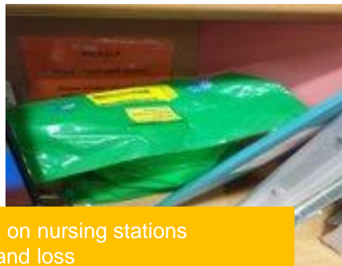
The following slides highlight common themes identified through Datix (internal incident reporting and management system)

Safe and Secure Handling of Medication

Everyone involved in medicines management has a responsibility to:
- reduce medication waste and increase
cost effectiveness
- reduce unnecessary medicines resupplies for patients during their hospital stay.
- reduce omissions and delays of doses
- improve compliance with all 'Safe and Secure Handling of Medicines' audit standards on the ward.

Examples of Good Practice

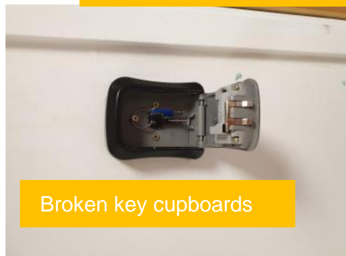
Examples of unnacceptabe Practice



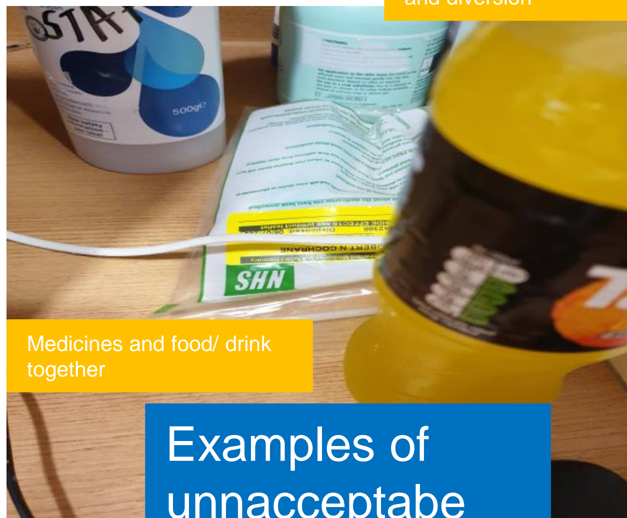
Medicines left unsupervised on nursing stations increasing risk of diversion and loss

Medicine cupboards unlocked increasing risk of loss and diversion

Failure to refrigerate temperature sensitive medicines leading to missed doses and unnecessary waste



Broken key cupboards



Medicines and food/ drink together

Failure to transfer medication with patients leading to missed doses and unnecessary waste

Medicines unattended on treatment room surfaces

Allergy Status

- All staff are responsible for:
- Complying with the Patient Identification Policy and ensuring that no procedure, investigation or provision of care is undertaken without checking the identification of the patient and the identification band and a patient’s allergy/ADR status to prevent the occurrence of adverse incidents or near misses arising from misidentification.
- Taking a comprehensive history to include allergy status, nature of the allergy ADRs and document in the patient record.
- Ensuring that a red alert band is applied as appropriate.
- Monitoring all patients for ADRs and completing a yellow card as appropriate.
- Ensuring that medicines or products contraindicated because of an allergy or ADR are not administered (***please also remember to contact the prescriber for an alternative***)

Antibiotics

- All staff should support **antimicrobial stewardship** (the systematic effort to educate prescribers of antimicrobials to follow evidence-based prescribing in order to stem antibiotic overuse and thus anti-mircobial resistance)
- Encourage prescribers to adhere to the guidance which supports the safe, effective and rational use of antibiotics
- Duration/review date of all antibiotics must be documented
- Most infections only require 5-7 days treatment
- All IV antibiotics must be reviewed within 72 hours- is an oral switch appropriate?
- Check if there are any drug interactions, cautions or contraindications e.g. pregnancy

Dosing and monitoring (TDM)- Vancomycin/ Gentamicin/ Teicoplanin

- Vancomycin, gentamicin and teicoplanin are effective antibiotics however they have a **narrow therapeutic index** meaning that **small differences in dose or blood concentration may lead to serious therapeutic failures and/or adverse drug reactions that are life-threatening or result in persistent or significant disability or incapacity**
- Patients actual body weight (recorded in Sunrise) and/or ideal body weight, and serum levels are essential for ensuring the correct dose is prescribed and preventing toxicity
- See the Trust Antibiotics Guidelines on the Hub (also available as a smartphone app (search 'Microguide') for guidance
- Further advice should be sought from a Consultant Microbiologist (via switch) or Antimicrobial Phar macist (bleep 8009)

Measuring liquid medicines

- Deaths have occurred when oral medications have been intravenously injected
- How can we reduce this risk?
- DO:
  - Use an appropriate oral/enteral syringe to measure oral liquid medication if a medicine spoon or graduated measure cannot be used
  - Only use well labelled oral/enteral syringes that do not allow connection to intravenous catheters or ports
- DON'T:
  - Use ports in enteral feedings systems that allow connection to intravenous
  - Use three-way taps and syringe tip adapters in enteral feeding systems
  - Use catheter tip syringes to measure oral liquids (not sufficiently accurate to measure or administer small volumes)
- Watch this short training video which highlights the human factors involved in the medication being administered by the wrong route

Other sources of error

- Inadequate supervision of students (nurses and medics)
  - Undergraduate medical and nursing students are not employed by the Trust and are not permitted to administer or prescribed medication to patients unsupervised
- Failure to witness administration
  - A single individual administration system is used unless administration involves:
    - intravenous medicine
    - oral cytotoxic medicine
    - calculation of a dose (except numbers of capsules/tablets)
    - administration to children under 16 years of age
    - doses expressed by weight or surface area
    - controlled drugs
- Failure to follow discharge process- click here for the Checking Medicines to Take Home (TTO) by nursing staff SOP

Medical Gases

- Medical gases are regarded as drugs and as such must be prescribed
- Only Oxygen may be administered in an emergency (cardiac arrest or respiratory distress) without a prescription. See link:- Prescribing, Administration & Monitoring Oxygen Policy
- All staff handling and administering medical gases must only do so after they have completed medical gas safety training.
- See the Medical Gases Page for further information

Incident Reporting and Learning

- All healthcare professionals are responsible for reporting incidents/errors/near misses relating to the use of medicines using The Dudley Group NHS FT Incident Reporting System & Serious Incident Reporting Policy.
- The Trust incident reporting system (Datix®) and policies are available via the Hub.
- Examples of situations that should be reported as patient safety incidents are included in the Medicines Management Policy
- All medication incidents reported via Datix® are automatically sent to the pharmacy team and reviewed by the Medication Safety Officer (MSO). The Safe Medicines Practice (SMP) Group will identify trends and ensure reported incidents are used to reduce the likelihood of recurrence and minimise the risk of patient harm.
- Changes in practice and lessons learnt are shared across the organisation through mandatory and ward based training, communication through medicines link nurses in each clinical area and through senior and junior medical communication channels, providing the opportunity for individual practitioners to review their practice, improving it in line with the outcome of incident reviews.
  - If you or a colleague are interested in joining SMP Group then please contact the Pharmacy via switchboard and ask to speak with the MSO

Test your Knowledge

- The following questions are based on our Trust’s Medicines Management Policy. You should attempt all questions before checking your answers on slides 32-33. If you are a unsure of any answers you can refer to the Policy on the Hub or discuss with your line manager.

Test your Knowledge

1. Healthcare assistants may collect patient's CD TTOs from the Pharmacy? True/False
2. An oral/enteral syringes must be used to measure a 7.5mL dose of Sytron®oral solution. True/False
3. 'High risk' medicines include insulins, opioids, anticoagulants, drugs with a narrow therapeutic index and any that you are unfamiliar with? True/False
4. You should dispose of any schedule 2 POD controlled drugs remaining after the patient has been discharged in the yellow WIVA bins commonly found in treatment rooms? True/False
5. Bulky items (e.g. clexane pre-filled syinges, Movicol sachets) can be stored unsecured at the bottom of the medicines trolley when the trolley is full? True/False
6. All registered healthcare staff may order controlled drugs from the Pharmacy? True/False

Test your Knowledge

7. In order to correctly dose some antibiotics the patients body weight is required. True/False
8. The nurse/ midwife/ ODP in charge is responsible for ensuring that drug keys do not leave their clinical area. True/False
9. It is acceptable practice to administer medication without an allergy status on the drug chart. True/False
10. You accidentally spill a bottle of morphine sulphate 10mg/5mL solution in the treatment room. You should report this incident promptly to your team leader and make an entry in the incident management system. True/False

Answers

1. False- CD TTOs must be collected from the pharmacy by a registered nurse/midwife who has their ID badge available for inspection
2. True - Where the administration of liquid preparations involves the use of volumes other than 5ml spoonful's, then only oral/ enteral syringes must be used.
3. True- high risk medications carry an increased risk of causing significant patient harm if used in error
4. False - CDs must be destroyed by a pharmacist under the supervision of the nurse/ midwife/ ODP in charge using a destruction kit
5. False - When not in use they must be placed in a locked cupboard or trolley
6. False – only registered nurses, midwives and ODPs who are ALSO **signed off on the authorised signatory list** for the relevant ward/ clinical area are permitted to order CDs

Answers

7. True – antibiotics with a narrow therapeutic index must be dosed based on patient weight (actual or ideal depending on the antibiotic- see Trust Antimicrobial guidelines). Actual body weight must be recorded on the patient's chart (electronically on Sunrise or on a paper chart)
8. True- the nurse/ midwife/ ODP in charge is accountable for the safe and secure storage of medicines in their area.
9. False – medicines must not be administered unless allergy status information is recorded
10. True- The record should include the date, time, quantity of stock damaged or broken, the signature of the member of staff who accidentally caused this and the signature of the member of staff or other person present who witnessed the incident.

Next steps…

- If you have a question or concern about any medicines management issue please contact your line manager, team leader or Pharmacy
- Complete the declaration on the following slide that you have completed and understood the information provided in this self-directed learning package.

Medicines Management Induction and Refresher Mandatory Training
For Acute Hospital Based Staff

Please print this page (File>Print>Custom range, then insert slide number). Complete the section below and return it to:

Learning and Development 2nd Floor Clinical Offices RHH or via E-Mail Confirmation to dgft.learning@nhs.net

Hospital-based Medicines Management Declaration

- I confirm that I have read the entire Hospital-based Medicines Management self-directed learning programme (Jan 22) and understood its contents.
- I confirm that I know how and who to contact if I have issues regarding medicines management issues and obtain further information as required
- I understand that there are supporting policies and guidelines available on the Trust HUB and from the RCN and national safety alerts
- I understand that I have a responsibility to report medicines management incidents on the Trust incident reporting system (Datix®) in line with the Trust incident reporting procedure

Print full name	
Signature	
Date completed	
Position/Job Role	
Department/Directorate	