"First, do no harm"

# Medication Error Awareness

Ayesha Ali
Lead Pharmacist in Education & Development
Advance Clinical Pharmacist

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## Learning outcomes

- Be aware of medication error
- Understand factors that cause untoward medication errors
- Be familiar with some local and national common incidents
- Understand prevention and management of medication errors

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## Definition of medicine error

- "Patient safety incidents involving medicines in which there has been an error in the process of prescribing, dispensing, preparing, administering, monitoring, or providing medicine advice, regardless of whether any harm occurred" (NPSA)

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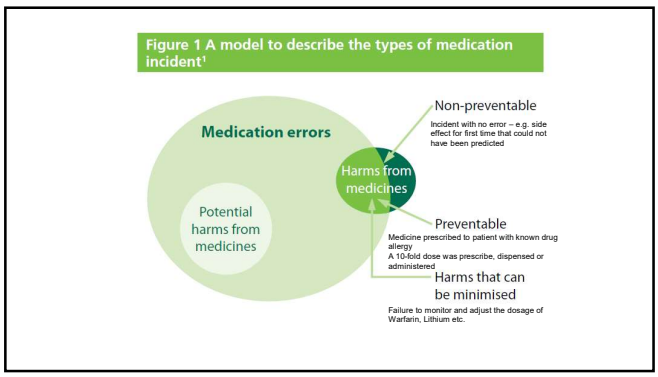


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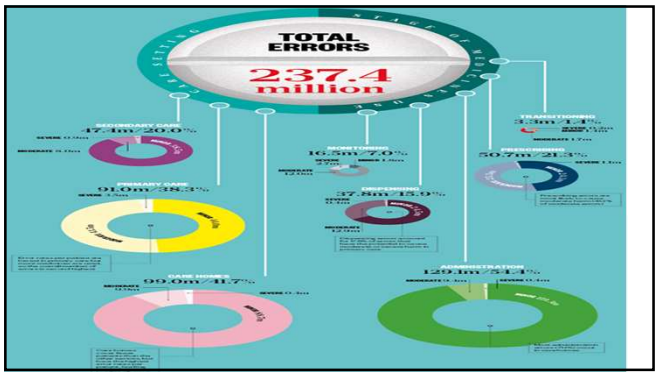


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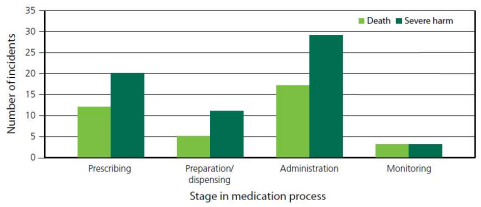
## Medication incidents that report death and severe harm

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## Patient Safety Incidents Cost in the NHS

•Around 11% of hospital admissions, or 850,000 per year

•May cost around £1 billion/year in hospital stay alone

•Average 8.5 extra bed days attributable to incidents

•More than £400 million clinical **negligence** settlements each year

•Medication related incidents account for 10 – 20% of all incidents

From April 1 2015 to 31 March 2020 NHS Resolution received 1,420 claims relating to errors in the medication process. Of those claims, 487 claims settled with damages paid, costing the NHS £35 million (excluding legal costs).

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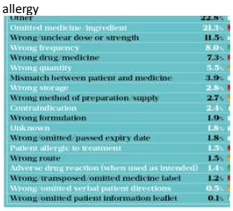
## Examples of medication errors

- Omissions/delay without a clinical rationale
- Wrong drug, dose, formulation, frequency, route, time, dose interval, advice, information
- Not following 'warning' advice when administering
- Administration of a drug to which the patient has a known allergy
- Administration without a valid prescription
- Patients administered an out of date medicine
- Medication administered to the wrong patient
- Medication incorrectly prepared / reconstituted
- Incorrect infusion rate
- Inappropriate administration of "prn" medicines
- Not monitoring
- Wrong storage

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## Top 10 errors

- An analysis of 64 prescribing incidents in 2017 that caused death and serious harm, and were reported to the NHS National Reporting and Learning Services, revealed that 24 (37.5%) of these incidents involved prescriptions for medicines that were **omitted and delayed**.
- Oral warfarin, the newer direct-acting **anticoagulants**, injected heparin and low-molecular-weight heparins have all been involved in reported prescribing error incidents that have caused death and serious harm
- **Opioid medicines** include diamorphine, morphine, codeine, fentanyl, oxycodone and methadone. More than 450 patients died after being prescribed opioid medicines unsafely at Gosport War Memorial Hospital and opioid analgesics are associated with the development of tolerance and, in some cases, dependence.

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## Top 10 errors

- According to NHS Digital, almost a third of inpatients with **diabetes** experience a medication error during their hospital stay.
- Non-steroidal anti-inflammatory drugs (**NSAIDs**) are responsible for 30% of hospital admissions for ADRs, mainly owing to bleeding, heart attack, stroke and kidney damage.
- A variety of drugs, including angiotensin-converting enzyme inhibitors, clozapine, digoxin, gentamicin, lithium, loop diuretics, clozapine, methotrexate and mirtazapine, require regular blood test **monitoring**.

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## Top 10 errors

- Each year, patients with known and documented **allergies** to medicines are exposed to them and suffer preventable adverse events. Adverse reactions to penicillin have been reported in up to 5.0% of individuals on a given course of treatment
- **Drug interactions** can reduce the efficacy of a drug or increase the adverse effects of a drug. Pharmacists and healthcare professionals need to recognise and understand which drug interactions can result in significant patient harm.
- Loading doses are complex to prescribe because they require multiple-step **calculations** using information about the patient, their medicine and any frequent changes of dose, or frequency of administration. Loading doses may be miscalculated, additional doses continued in error, maintenance and loading doses prescribed at the same time, or loading or maintenance doses may not be prescribed

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## Top 10 errors

- **Oxygen** should be regarded as a drug. It is prescribed for hypoxaemic patients to increase alveolar oxygen tension and decrease the work of breathing. The concentration of oxygen required depends on the condition being treated; the administration of an inappropriate concentration of oxygen can have serious or even fatal consequences.

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# Examples of Errors at Oxleas NHS Foundation Trust

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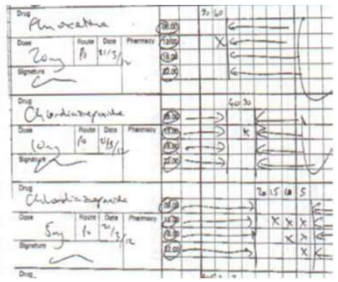
Prescribing



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Dispensing


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Dispensing


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Administration


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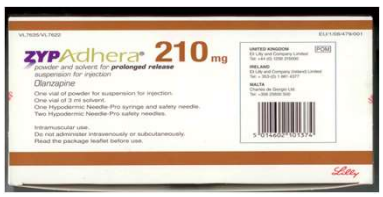
## Olanzapine depot 105mg two weekly

- What was available:-
  - Olanzapine depot 210mg which contains one vial of powder for suspension + one vial of 3ml solvent + reconstitution and administration card

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## Olanzapine depot 105mg two weekly

- What should have happened:-
  - 1.3ml of solvent should have been used to reconstitute the powder and 0.7ml of this suspension should have been administered
- What actually happened:-
  - 0.65ml of solvent was used to reconstitute the powder and 0.7ml was administered

Consequence :- patient received 210mg in 0.7ml instead of 105mg in 0.7ml

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## Some more errors

- Administration of Depixol 400mg instead of 40mg
- Administration of Depixol instead of Risperidone
- Administration Clopixol instead of Paliperidone
- Administration of 44 units of insulin instead of 4 units
- Omission of antiepileptics, steroid
- Promazine/promethazine mix up
- Chloramphenicol eye/ear drops mix up

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Patient Safety Snippets

Oxleas NHS Foundation Trust Improving lives

**Paracetamol Poisoning**

**Paracetamol is a common painkiller and is present in many cold and flu preparations. Paracetamol can be purchased over the counter.**

**It can cause harm when taken in amounts above the recommended daily dose. Taking too much is known as an overdose. An overdose can be intentional or unintentional.**

An overdose of paracetamol can cause damage to the liver and kidneys.

Symptoms include feeling sick, vomiting or abdominal pain.

The usual dose of paracetamol is one or two 500mg tablets at a time up to 4 times in 24 hours with a maximum of 8 tablets in 24 hours.

Sometimes, overdoses involve paracetamol with another medication, so it is important to check.

**Therapeutic excess** is the ingestion of a potentially toxic dose of paracetamol with intent to treat pain or fever without self-harm intent.

**A staggered overdose** involves ingestion of a potentially toxic overdose of paracetamol over more than 1 hours, with the possible intention of causing self-harm.

**It is important to seek medical advice at A&E for a suspected overdose, even if there are no obvious symptoms.**

In A&E, blood tests and observations will be performed to guide the treatment and management of the overdose.

Paracetamol is treated with a vitamin infusion which will break down the paracetamol. This is given for at least 24 hours after an overdose to prevent damage to the liver.

**In 2021, there were 4, 859 deaths related to drug poisoning in England and Wales—67% were male.**

**OVERDOSES MAY INVOLVE OTHER MEDICATIONS, PRESCRIBED OR NON PRESCRIBED. IF YOU ARE CONCERNED THAT YOUR PATIENT HAS OVERDOSED, THEY NEED IMMEDIATE MEDICAL ATTENTION.**

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Why?

## Why do administration errors occur?

- Distractions
- Tiredness
- Inattention
- Time pressure
- Illegible prescription
- Prescribing error
- Failure to check patient identity
- Miscalculation of dose
- Lack of knowledge
- Unsuitable or untidy equipment
- Drugs with similar names
- Drugs with similar packaging
- Medication labels or packaging are poor quality or damaged
- Understaffing/inexperience
- Poor systems

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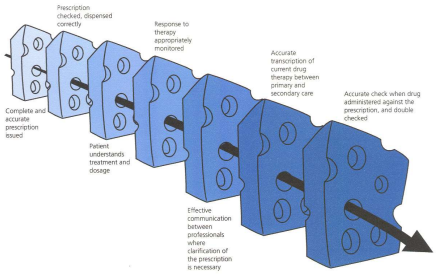
Why?

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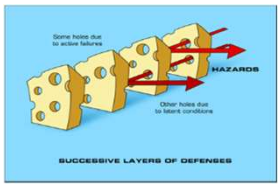
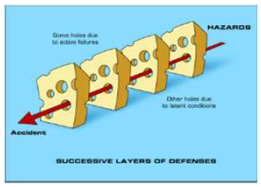
Why?

## The Swiss cheese model

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Why?

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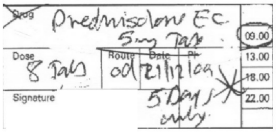
Why?

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Why?


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Why?


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# How to manage errors and reduce rate

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## Immediate Actions when Medication Error/Near Miss Identified

**PATIENT'S SAFETY IS PARAMOUNT**

- SPEAK TO A DOCTOR IMMEDIATELY – review, assess, manage
- Inform senior nurse, manager, pharmacist/pharmacist on-call/ Medicines Information
- Document the error in RiO
- Ensure that an incident form is completed on Datix
- Call 999 if concerned about patients safety and unable to source medical assistance
- Inform Patient/Carer – Duty of Candour

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## Reducing medication errors

**As a team/trust**

- **Review processes**
  - Standardise procedures
  - Ensure procedures are easy to follow
  - Ensure staff have the correct tools for the job
- **Provide adequate training – all**
- **Improve environmental factors**
  - Maintain a storage system and keep clinical areas clear
  - Reduce distractions
- **Improve communication**
  - Between patients, ward staff, and other teams
  - Listen to feedback
- **Build a safety culture**
  - No blame
  - Encourage error reporting
  - Open and fair
  - Incident decision tree

**Individually**

- **Reducing environmental factors**
  - Distractions
  - Tiredness
- **Keep clinical areas & storage tidy**
- **An individual checklist**
  - The 5 'rights' is only the start
  - Be systematic & follow a routine
  - Have a BNF & notebook readily available
- **Follow procedures**
  - Understand implications of errors
- **Work within own capabilities**
  - Competency training/assessed
- **Communication**
  - Between patients, other staff and other teams
- **Reporting errors**
  - Including near misses and omissions
- **CPD**

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## Reporting errors

Benefits include:
- Learning from incidents
- Transparency
- Support of the organisation
- Improvement of practice
- Increased safety

Barriers include:
- No feedback
- Incident form is too long (only one page long now)
- Incident was trivial
- Ward to busy – forgot
- Don't want to get into trouble
- Worried about disciplinary action
- Was a near miss so don't see the point
- Incident reporting unlikely to lead to system changes
- Not confident form will be kept anonymous
- Not my responsibility to report somebody else's mistakes

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## Tidy cupboard

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## NPSA alerts involving medicines generated because of incident reports

- Anticoagulants
- Opiates
- Injectables
- Methotrexate
- Lithium
- Omitted and Delayed medicines
- Insulin administration
- LMWH (clexane etc.)
- Cancer chemotherapy

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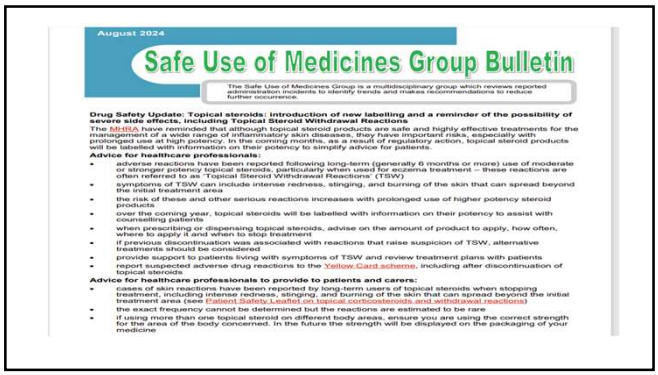

August 2024

**Safe Use of Medicines Group Bulletin**

The Safe Use of Medicines Group is a multidisciplinary group which reviews reported administration incidents to identify trends and makes recommendations to reduce further occurrence.

**Drug Safety Update: Topical steroids: introduction of new labelling and a reminder of the possibility of severe side effects, including Topical Steroid Withdrawal Reactions**

The MHRA have reminded that although topical steroid products are safe and highly effective treatments for the management of a wide range of inflammatory skin diseases, they have important risks, especially with prolonged use at high potency. In the coming months, as a result of regulatory action, topical steroid products will be labelled with information on their potency to simplify advice for patients.

**Advice for healthcare professionals:**

- adverse reactions have been reported following long-term (generally 6 months or more) use of moderate or stronger potency topical steroids, particularly when used for eczema treatment – these reactions are often referred to as 'Topical Steroid Withdrawal Reactions' (TSW)
- symptoms of TSW can include intense redness, stinging, and burning of the skin that can spread beyond the initial treatment area
- the risk of these and other serious reactions increases with prolonged use of higher potency steroid products
- over the coming year, topical steroids will be labelled with information on their potency to assist with counselling patients
- when prescribing or dispensing topical steroids, advise on the amount of product to apply, how often, where to apply it and when to stop treatment
- if previous discontinuation was associated with reactions that raise suspicion of TSW, alternative treatments should be considered
- provide support to patients living with symptoms of TSW and review treatment plans with patients
- report suspected adverse drug reactions to the Yellow Card scheme, including after discontinuation of topical steroids

**Advice for healthcare professionals to provide to patients and carers:**

- cases of skin reactions have been reported by long-term users of topical steroids when stopping treatment, including intense redness, stinging, and burning of the skin that can spread beyond the initial treatment area (see Patient Safety Leaflet on topical corticosteroids and withdrawal reactions)
- the exact frequency cannot be determined but the reactions are estimated to be rare
- if using more than one topical steroid on different body areas, ensure you are using the correct strength for the area of the body concerned. In the future the strength will be displayed on the packaging of your medicine

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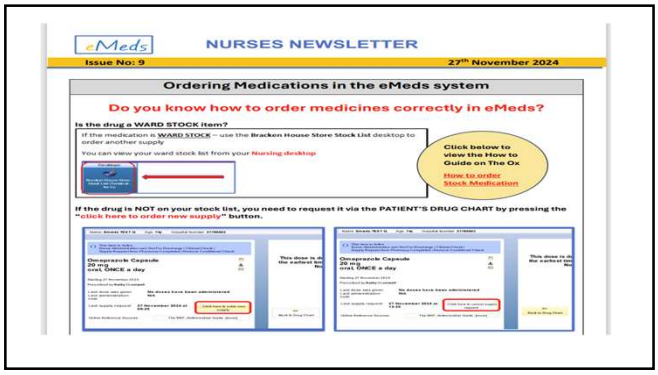

eMeds **NURSES NEWSLETTER**

Issue No: 9 — 27th November 2024

**Ordering Medications in the eMeds system**

**Do you know how to order medicines correctly in eMeds?**

**Is the drug a WARD STOCK item?**

If the medication is **WARD STOCK** – use the **Bracken House Store Stock List** desktop to order another supply

You can view your ward stock list from your **Nursing desktop**

Click below to view the How to Guide on The Ox

How to order Stock Medication

If the drug is NOT on your stock list, you need to request it via the PATIENT'S DRUG CHART by pressing the **"click here to order new supply"** button.

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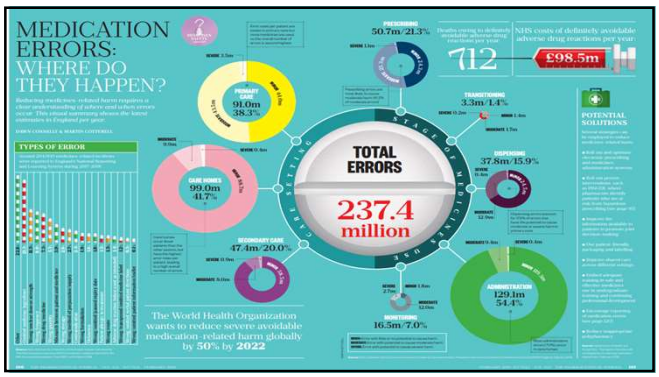


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## Summary

- To err is human
  - Medication errors are common
  - The greater number of smaller errors that occur, the greater the chance of an error that causes severe harm
- Minimise errors by
  - Maintaining clinical areas and storage system
  - Minimise distractions
  - Always working within competence
  - Work in a systematic way – develop a safe system and follow it
  - Be in the know

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## References


- The safe and secure medicines report (2005)
- CQC Fundamental Standards (2015) Regulation 12
- DoH
- NHS England
- NPSA
- WHO
- Nursing & Midwifery Council (NMC).
- General Pharmaceutical Council (GPhC).
- General Medical Council (GMC).


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