

Improving Medicine Management in Intensive Care Unit

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Background

Medication management is of utmost importance within the healthcare field, guaranteeing the safe and efficient utilisation of drugs for patients. Nurses, as essential participants in the healthcare team, hold a substantial role in this aspect (Caring For Care, 2023).

Unsafe handling of medications and mistakes can result in severe harm to patients, including issues like side effects, adverse reactions, improper use, and errors in prescribing, dispensing, administration, or monitoring (World Health Organisation, 2019). Additionally, these problems can impose financial strains on the healthcare system.

The Nursing and Midwifery Council (NMC), the regulatory authority overseeing nurses in the United Kingdom, establishes standards that offer guidance to nurses in their professional duties, which encompass the management of medications (NMC, 2018). The NMC guidelines emphasise that nurses are responsible for their actions and omissions when it comes to medication administration. They must exercise professional judgment, apply their knowledge and skills, and prioritise patient safety.

The NMC standards concerning medication management establish a framework for nurses to provide secure care pertaining to medications. One of the key focal points stressed by the NMC involves the necessity for nurses to possess a comprehensive grasp of medication safety principles. These encompass the principles governing medication administration, storage, and handling. This entails verifying the accurate dosage, confirming the correct patient, and employing appropriate administration routes.

Moreover, the NMC underscores the significance of effective communication and cooperation among healthcare professionals during the medication management process. Nurses are actively encouraged to engage in dialogues with patients, pharmacists, and other members of the healthcare team to ensure the accuracy and currency of medication-related information. This collaborative approach fosters a holistic comprehension of the patient's medication regimen and diminishes the risk of errors.

DERBY ICU

We are initiating a comprehensive project aimed at improving the organisation and compliance within our medicine storage facilities. Recognising the need for change and acknowledging imperfections in our current practices, this initiative focuses on enhancing the medicine management in our unit. We have commenced on improving the storage of medications both in the central storage area and at the patients' bedside. The current state of our primary medicine room is characterised by disarray and a lack of organisation, which necessitates immediate attention.

Aims and Objectives

The primary objective of the medicine management project is to optimize the entire process of handling medications to ensure their safe and effective administration to patients. This includes streamlining medication distribution, reducing errors, and ultimately enhancing patient safety. Additionally, it seeks to improve the working experience and satisfaction of healthcare staff involved in medication management by making the process more efficient and less prone to mistakes.



Research and Rationale

Patient Safety and Medication Errors

Studies in the UK, such as the National Institute for Health and Care Excellence (NICE) guidelines on medication errors, highlight that the ICU is particularly vulnerable to medication errors due to the complexity of critical care medications and the high-risk nature of the environment (NICE, 2015). Improving medicine management can significantly reduce these errors, thereby enhancing patient safety (Manias et al., 2017).

ICU Medication Costs

Research by the UK Department of Health and Social Care emphasizes the substantial costs associated with managing medications in the ICU (UK Government, 2021). By optimizing medicine management, healthcare institutions can reduce wastage, which is crucial for a cost-effective healthcare system.

Patient Outcomes

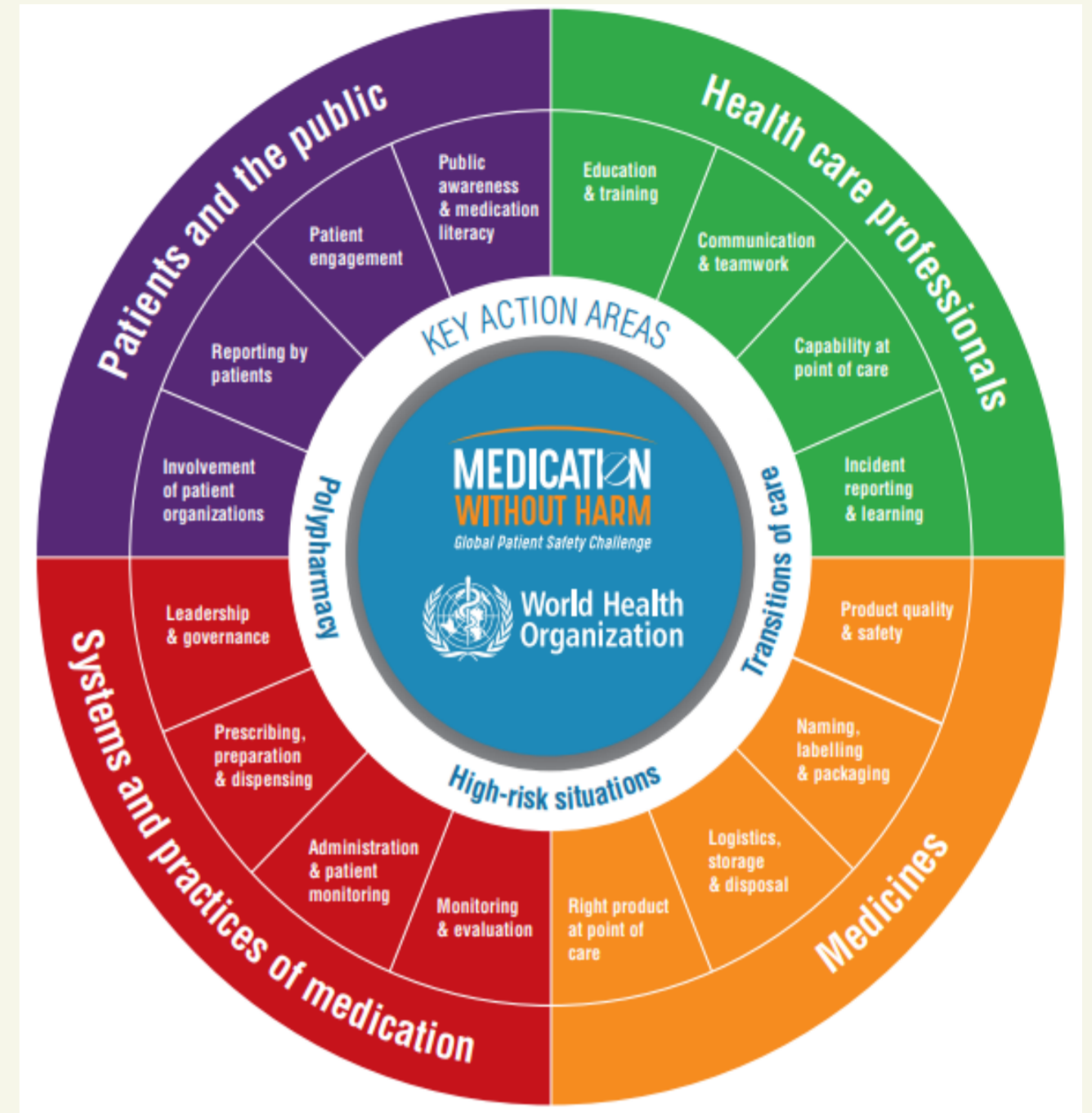
Studies like the Intensive Care National Audit and Research Centre (ICNARC) report that timely and accurate administration of medications is directly linked to improved patient outcomes in ICUs in the UK (ICNARC, 2020). This serves as a strong rationale for enhancing medicine management practices.

Workforce Wellbeing

The well-being of healthcare staff, as reported by the Royal College of Nursing (RCN), is an area of concern, with the high-stress environment of ICUs contributing to burnout and staff turnover (RCN, 2019). Improving medicine management processes can reduce the stress associated with administering medications, thus enhancing the working experience for healthcare professionals.

Regulatory Compliance

The Medicines and Healthcare products Regulatory Agency (MHRA) in the UK regularly updates guidelines and regulations for safe and effective medication management (MHRA, 2020). Compliance with these regulations is essential for avoiding penalties and maintaining the quality of care in ICUs.



Project Plan

Assessment and Planning:

- MDT formed comprising nurses, pharmacists, and administrators.
- Assessment conducted of the current state of the medicine room, including storage areas, bedside lockers, medicine trolleys, and documentation practices.

Introduction of New Prescription Charts

- These are being introduced to enhance the safe administration and prescription of medications.
- Pharmacists are now actively participating in ward rounds, where they review doses, verify prescription charts, and provide their sign-off.

Storage Solutions:

- Bedside lockers were fitted with functioning locks and keys.
- Implement a secure and organised medication storage system, such as shelves, bins, and labelled containers.
- Ensure that medications are stored in their original packaging to maintain proper identification and reduce the risk of medication errors.
- Storing look-alike drugs in separate locations to prevent confusion.
- Separate storage of epidural medications, local anesthetics, and IV drugs to avoid any potential mix-up.
- Emphasising the importance of storing minimal drugs at every bedside, particularly in isolated rooms.

Regular Inspections and Stocking:

- Develop a schedule for regular inspections and restocking of the medicine trolley and bedside lockers.
- Assign specific responsibilities to healthcare staff for these tasks.
- Implement a system for tracking medication expiration dates and removing expired medications promptly.

Labelling and Documentation:

- Implement a labelling system for all medications, including liquids, with opening dates and expiration dates clearly marked.
- Ensure that all documentation related to medication administration is accurate, up-to-date, and easily accessible.

Monitoring and Continuous Improvement:

- Establish a system for ongoing monitoring and auditing of the medicine room to ensure compliance with the new practices.
- Encourage feedback from staff and make necessary adjustments based on their input.
- Continuously monitoring refrigerator temperatures to ensure the integrity of stored medications.
- Daily stock checks and regular auditing of controlled drugs.

Double Medication Checks

- Enforcing a procedure of double-checking all medication.

Documentation and Communication of Changes:

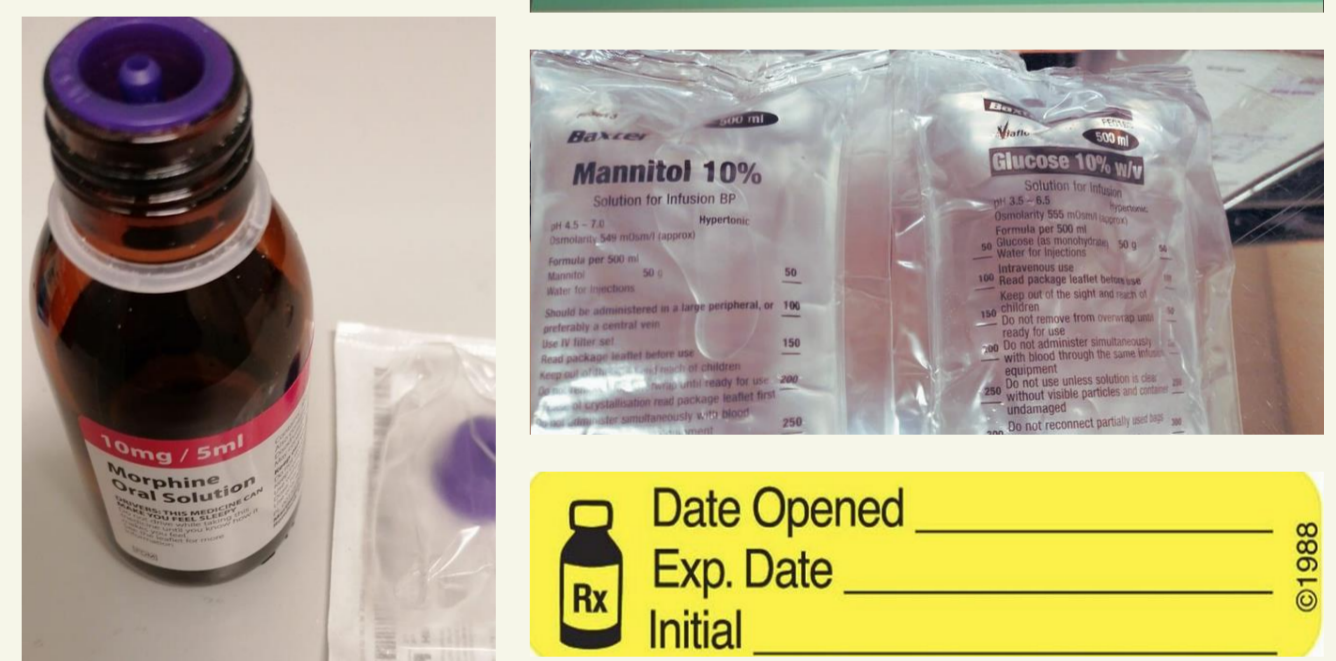
- Keep detailed records of the changes made, including before-and-after photos, documentation templates, and audit reports.
- Communicate the changes and improvements to all relevant staff members.

Continuous Staff Education

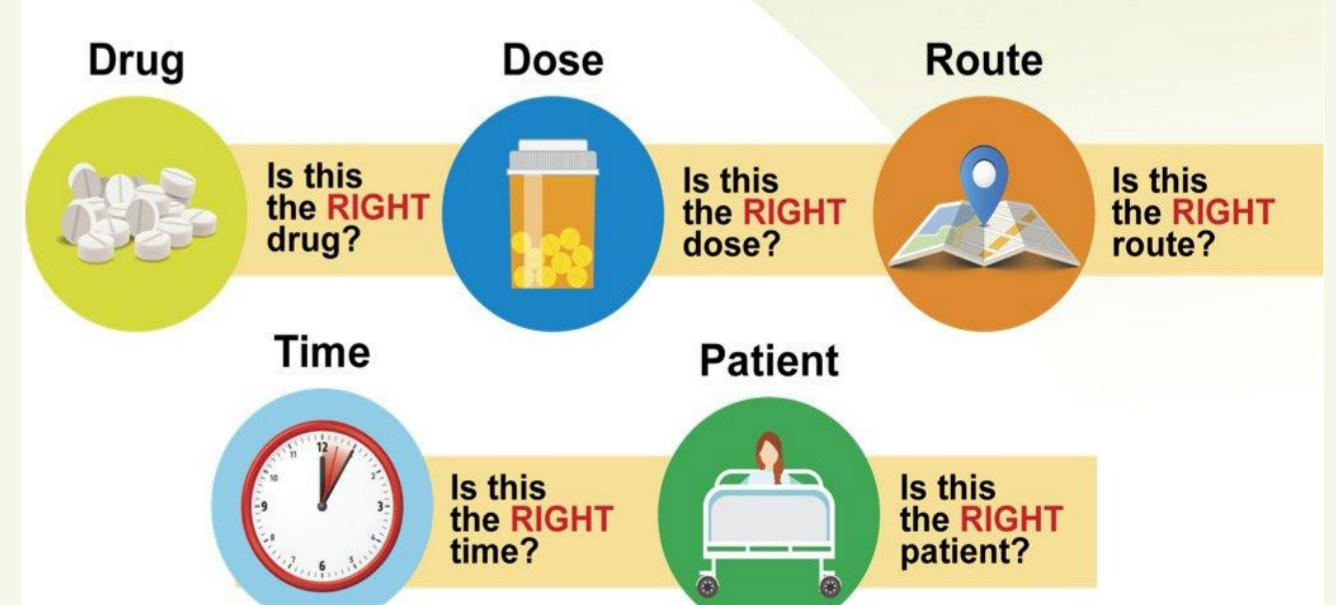
- With staff turnover on the rise, there's a focus on ongoing education and training for the team. This includes yearly medicine management and Aseptic Non-Touch Technique (ANTT) training and competency assessments for new team members.
- Ensuring that all team members are well-informed and aware of current policies related to medication management.

Datix for Learning

- Implementing Datix as a platform to learn from mistakes and improve medication management processes.



"The Five Rights"



Conclusion

In ensuring the success of our Medicine Management Project in the ICU, we will employ a multi-faceted approach to monitor its effectiveness. This includes active collaboration with doctors and pharmacists for continuous assessment, regular audits to uphold standards, and soliciting feedback from our dedicated staff.

The future of Medicine Management in the ICU is bright as we embrace these changes. By engaging healthcare professionals, adhering to rigorous auditing practices, and valuing staff insights, we are forging a safer and more efficient path forward. Together, we aim to set new benchmarks in patient care and medication safety.

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