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LIFE CHANGING SOLUTIONS

Understanding Medication Errors in Healthcare and Social Care

Medication errors are a major challenge in the healthcare and social care sector across the globe and especially in the UK. They cause thousands of casualties and cost to the NHS, both of which to an extent are avoidable. This report aims to provide an understanding of medication errors, their impact on the healthcare and social care sector, and ways to minimise them.

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What are Medication Errors?

According to the National Coordinating Council for Medication Error Reporting and Prevention, medication error has been defined as

“Any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the healthcare professional, patient or consumer.”

NHS England and MHRA refine this definition to any Patient Safety Incidents (PSIs)

“Where there has been an error in the process of prescribing, preparing, dispensing, administering, monitoring or providing advice on medicines.”

The Impact of Medication Errors

Medication errors have become a global issue as healthcare systems continue to become more complex and new medicines continue to be developed. As per ABPI data, around 40 new medicines are approved for use each year. Medication errors continue to have a substantial socio-economic impact.

The World Health Organization (WHO) reports medication errors to cost approximately $42 billion annually on a global scale.

If we look at the UK, **England alone encounters over 237million medication errors on an annual basis** as per The British Medical Journal (BMJ), costing the NHS £98.5 million per year as per the University of York.

34%

of potentially harmful medication errors are made during prescribing in primary care

66 million

potentially clinically significant errors occur on an annual basis

Primary care adverse drug reactions leading to a hospital admission cost the NHS

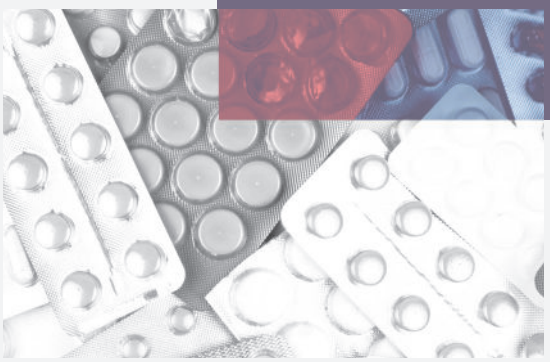
£83.7 million per year; causing 627 deaths

Secondary care adverse drug reactions leading to a longer hospital stay cost the NHS

£14.8 million per year; causing 85 deaths and contributing to 1081 deaths

Sources: University of York & BMJ

According to the NHS, £300 million worth of prescribed medicines are wasted in the UK every year. This includes an estimated £90 million worth of unused prescription medicines that are retained in people's homes at any one time.



Not only is this cost to the NHS significant, but also the risk of associated future errors from these stockpiles (for instance, taking expired medicines) is worthy of consideration. With medicines acting as the most common intervention point in healthcare, error rates will continue to be high until we can tackle all aspects of the process and fully integrate health and social care systems, including managing workforce pressures.

Types of Medication Errors

The data alone paints the picture of medication errors being a daily occurrence. Integrated care systems, digitalisation and robust reporting will potentially have a positive effect and support improvements in theory, but the reality of these being fully embedded is still years away. Additionally, workforce challenges across the healthcare and social care sector cannot be ignored.

Types of Medication Errors

Administration error

"Administration errors include the incorrect route of administration, giving the drug to the wrong patient, extra dose or wrong rate."

Source: National Library of Medicine,

Prescribing error

"The incorrect drug selection for a patient."

Source: Royal College of Physicians of Edinburgh

Dispensing error

"Any unintended deviation from an interpretable written prescription or medication order."

Source: Journal of Pharmaceutical Policy and Practice

Monitoring error

"When a prescribed medicine is not monitored in the way which would be considered acceptable in routine general practice."

Source: British Journal of General Practice

While it is difficult of eliminate medication errors entirely, there are many common administration errors that are avoidable, which include:

- Omissions – any prescribed dose not given
- Wrong dose administered, too much or too little
- Extra dose given
- Unprescribed medicine – the administration of medication which has not been prescribed
- Wrong dose interval
- Wrong administration route
- Wrong time for administration
- Not following 'warning' advice when administering, e.g., take with or after food
- Administration of a drug to which the patient has a known allergy
- Administration of a drug past its expiry date or which has been stored incorrectly

Causes of Medication Errors

A 2012 study by the General Medical Council found that 1 in 20 prescription items contained either a prescribing or monitoring error, which affected 1 in 8 patients. 1 billion prescription items are dispensed each year as per the NHS so by volume alone medication errors are a daily occurrence.
In general terms, factors that result in medication errors in healthcare and care homes can be grouped as follows:

- **Factors related to healthcare and social care professionals** - Inadequate drug knowledge and experience, inadequate knowledge of the patient, poor communication between the professionals and patients, the effects of being over worked and fatigued
- **Factors related to patients** - Patients suffering from multiple health conditions, polypharmacy (taking several medications), high risk medications and language barriers
- **Factors related to the work environment** – Excess workload and time constraints, distractions and interruptions, lack of standardised procedures and external environmental factors like lighting, temperature and ventilation issues . A consistent approach towards training, observing and recording skills and competencies are also often lacking
- **Factors related to medications** - Medicine names, labelling and packaging can often cause a problem. Although computerised information systems can be helpful in some ways, their designs are not always conducive to simple processes for generating prescriptions or communicating between care settings

The human factor behind medication errors will always remain, affected yet more by the pressures of staff shortages and burnout. When medication management systems are not robust, and human factors such as low staffing levels, worker fatigue and unsuitable environmental conditions enter, there will be a higher likelihood of medication errors occurring.

A 2022 BMJ study shows a significant relation between physician burnout and patient care.

"Many countries including the US and UK have described levels of physician burnout as the highest in the history of health and care systems. Our findings affirm that physician burnout can be a catalyst for the career disengagement of physicians and burnout is associated with unsafe patient care, which costs billions to healthcare systems annually."

A 2023 report from Organise seem to echo a similar sentiment with 78.5% of NHS staff contemplating leaving the profession amidst burnout and with a majority of them witnessing patients experiencing medication errors, delays in procedures and a compromised quality of care.

This situation is reflected in social care as well. The UK government's February 2023 report titled 'Delayed Hospital Discharges and Adult Social Care' states that in December 2022, an average of 13,440 patients per day remained in hospital despite being ready to leave, which was 30% higher than the December 2021 daily average of 9,150. In the January 2023 Delivery Plan for Recovering Urgent and Emergency Care Services report, the government recommended increasing capacity in intermediate care and social care (particularly homecare) to improve discharge. But those in social care seem to disagree with the narrative about them causing all the delays in discharge, considering they have never been the primary reason.

Reporting of Medication Errors

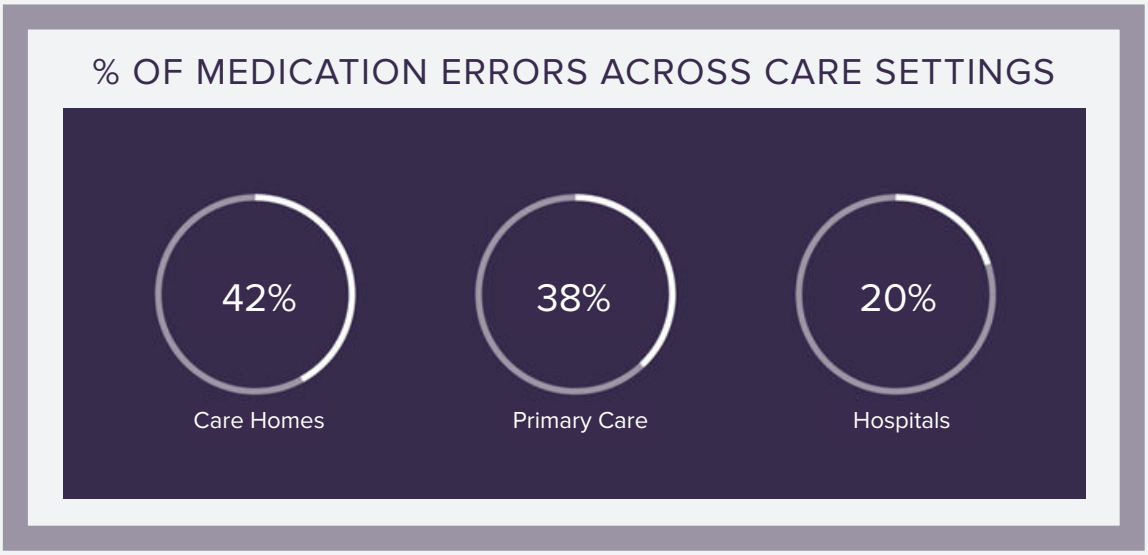
Although the National Reporting and Learning System (NRLS) is in place for NHS reporting, the rate and consistency of reporting remains subjective. In social care, there is a lot of reliance on establishing robust recording procedures, which often aren't uniform or integrated properly within organisations. **There is no universal requirement to report errors to the regulator**.

There is also a resignation on behalf of the social care operator that medication errors will always occur as it's one of the top reported incidents, however, it's al-

most certain that many errors go unreported too in fear of what it would look like in front of the regulator.
The reporting per se is less indicative of the extent of the errors than the data itself. Low reporting may represent under-reporting while a high reporting rate may not indicate an 'unsafe' organisation, it may simply represent a culture of greater openness.

Medication Errors in Different Settings

The prevalence of medication errors varies across care settings with care homes accounting for the most number of errors despite them covering fewer patients as per The Pharmaceutical Journal. This is because people living in care homes are often frail with multiple health conditions and take multiple medications.



Source: The Pharmaceutical Journal

Recent research for the Department of Health shows that 7 out of 10 care home residents are exposed to at least one medication error per day.

The Pharmaceutical Journal revealed that while overall medication errors were widespread, prescribing and administration related errors were the most common. The causes behind these errors were identified to be polypharmacy (taking

multiple medicines), inappropriate use of antipsychotics (a type of psychiatric medication) in patients with dementia and the lack of appropriate knowledge among staff administering medication to patients with dysphagia (those having difficulty in swallowing).

Organisational factors have also been identified to cause medication errors in care homes. Several studies like The Pharmaceutical Journal found that care staff were often interrupted and distracted while administering medicines, sometimes resulting in staff administering a double dose or omitting a medication. In addition, medication administration rounds were often delayed, and care homes suffered from staff shortages. Carers also seemed to lack appropriate knowledge about medications, including monitoring requirements, and did not always have effective communication with the general physicians (GP).

That being said, while gaps in the safety culture in UK care homes have been previously reported, most research about medication errors has been conducted in hospitals. Although care homes (used here as an umbrella term for care facilities for people who cannot take care of their health and wellbeing independently at home) must satisfy the regulator's requirements and have their own system of monitoring and responding to medication errors, there is no standard requirement that all must be centrally reported. Hence, publicly available data remains limited.

Preventing Medication Errors

Reducing medication errors and improving medication safety requires a systems approach along with multicomponent interventions (MCIs), including improvements in:

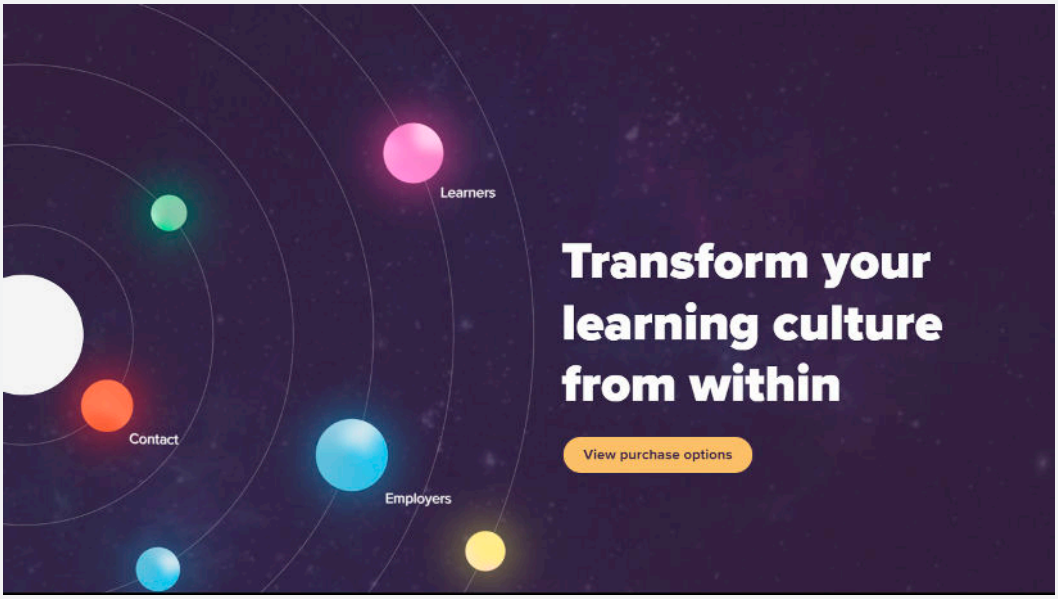
- Medication reviews and reconciliation
- Automated information systems
- Training
- Computerised systems
- Prescribing tools and alert systems
- Communication and information sharing with integrated systems

Although whole system issue will take time to resolve, there is much that can be done on a day-to-day basis that can reduce the level of medication errors. Included in the whole system issue is recognising burnout triggers and being mindful of the hours we are asking the staff to work in demanding situations and supporting them as part of the wider and necessary engagement piece.

As evidenced by studies mentioned earlier, there is a close relation between burnouts and medication errors. A great way to alleviate this problem would be for leaders to engage their staff in patient safety initiatives, training and other activities that would motivate them to perform better. A 2023 study published in CMAJ Open, showed how the feeling of being supported in the workplace helped healthcare professionals against burnout. As per the study, healthcare professionals who felt supported had a reduced risk of depression, anxiety, insomnia, emotional exhaustion, and a three-fold increase in good mental wellbeing.

To ensure that there is proper reporting of medication related adverse events, organisations also need to foster a feeling of trust among their staff and eliminate the fear of punishment. When a just culture is built within an organisation, the staff become more open to reporting errors and unsafe work conditions, since they feel they are contributing towards better patient safety, rather than being condemned for their actions. A report on ‘The Essential Role of Leadership in Developing A Safety Culture’ gives a detailed approach to fostering safety cultures in healthcare and social care settings.

Feaniks Approach to Medication Errors



Source: Feaniks.com

In response to the problem of staff burnout to help minimise medication errors, Feaniks has developed a comprehensive online curriculum to help drive improvement and share further advice for improvement that pays particular emphasis to what medication errors are, the danger zones of when they might happen and how to avoid them. We also focus on competencies with work-based medication administration assessments and other resources that managers can review and improve. To encourage a safe open culture, we offer forums where teams and their managers can share ideas and best practices particularly in relation to medication errors, along with monthly online webinars specially for managers to measure the impact of the training.

Conclusion

An important intervention point, to minimise medication errors and improve patient safety, would be to let your staff know that they matter and so do their efforts. Healthcare and social care staff are often overworked, overstressed, and burned out while working amidst a challenging work environment. By understanding and addressing their needs, healthcare and social care leaders will be able to create and nurture a positive work environment where workers and patients feel safe and happy.

If this report has piqued your interest in medication errors and ways to reduce them in your organisation, then get in touch with us!

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FEANIKS LTD
167-169 GREAT PORTLAND STREET | FIFTH FLOOR | LONDON | W1W 5PF
TEL: +44 (0)20 3137 2491 E-MAIL: hello@feaniks.com
WWW.FEANIKS.COM