HSIB

HEALTHCARE SAFETY INVESTIGATION BRANCH

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INTERIM BULLETIN

IDENTIFYING AND REDUCING HIGH-RISK PRESCRIBING ERRORS IN HOSPITAL

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IDENTIFICATION OF EVENT AND DECISION TO INVESTIGATE

The Healthcare Safety Investigation Branch (HSIB) identified incidents relating to the incorrect prescribing of warfarin (an anticoagulant) via ongoing monitoring of NHS incident reporting systems. The incidents highlighted the complexity associated with prescribing medicines.

When errors occur in prescribing high-risk medications (such as warfarin) for older patients with multiple medical problems there is a significant risk of serious harm. High-risk medicines are those which risk significant patient harm or death when used in error.

The incidents also identified the need for the healthcare system to proactively identify risks. Although the role of the ward based clinical pharmacist is traditionally viewed as a safety-net, they can also improve capacity to proactively monitor more complex patients who are receiving medicines that are known to be high-risk.

The Chief Investigator authorised a full investigation as it met the following criteria:

Outcome Impact – What impact has a safety issue has had, or is having, on people and services across the healthcare system?

People in England are living longer and the number of older people in England is growing significantly. Risks associated with medicine prescription are present in all care settings where medicines are prescribed to older people. The average age of patients admitted to hospital is increasing and operational and clinical pressures within acute hospital care may create additional factors that lead to drug errors not being identified in older patient groups. The range of co-morbidities and medicines taken by older people increases the complexity of medication prescription and the risk of patient harm when medication errors occur.

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Systemic Risk - How widespread and how common a safety issue is this across the healthcare system?
Information from NHS England suggests that medicine prescribing errors in hospital occur in around 7% of all prescriptions issued[1]. Most drug prescribing errors are identified by clinical staff. However, this requires resources that may be degraded by other clinical and operational activities. The increased complexity of medicine use in older people can further stretch these resources and increase the risks that these errors may be missed.

Learning Potential – What is the potential for an HSIB investigation to lead to positive changes and improvements to patient safety across the healthcare system?
There is a need to understand how the risks of incorrect drug prescribing are mitigated by staff and the systems in which care is provided to older people. There is the potential for an HSIB investigation to provide further insight into the specific risks and needs associated with older persons care in hospital and identify appropriate interventions.

HISTORY OF THE REFERENCE EVENT

The patient, a 79-year-old man, had a fall at home on Day 1. On Day 3, he attended the Trust's emergency department. The patient reported significant pain in his hip and a number of comorbidities, including chronic kidney disease and hypertension. The patient was transferred from the emergency department to a medical assessment unit and was clerked at 04:00 hours on Day 4. The family reported that he was alert and orientated at the time of his admission. Whilst on the medical assessment unit, medicines reconciliation was completed by a clinical pharmacist. Medication reconciliation involves checking the medications a patient is taking against the medications prescribed to ensure that the correct medications are provided.

[1] NHS England. (2014). Patient safety alert: Improving medication error incident reporting and learning.

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This process confirmed that the patient was not prescribed or using warfarin at the time of his admission to hospital.

The patient was transferred to the Trust's care of the elderly ward at 04:06 hours on Day 5. Whilst on the ward, the patient was now noted to be prescribed warfarin and a warfarin medication chart was present in his records. It appears that one of the patient's identification stickers had been incorrectly attached to another patient's warfarin chart.

The patient received four or five doses of warfarin before a potential error was questioned by a clinical pharmacist on Day 11. The patient subsequently developed bleeding and his condition deteriorated for multifactorial reasons. The patient died on Day 21. An inquest concluded that the bleeding he developed subsequent to the warfarin error was a contributing factor in his death.

NATIONAL CONTEXT

Academic research suggests that over 200 million medication errors occur within the NHS in England every year[2]. Errors were more likely to be noted in older people, or in the presence of co-morbidity and polypharmacy. Older people were also more likely to be at risk from an adverse drug reaction. Where adverse drug reactions occur this has led to increased hospital lengths of stay, costs of hospital care and patient mortality. Warfarin is more frequently prescribed in older patient groups and is frequently associated with medication errors.

[2] Elliott, R., Camacho, E., Campbell, F., Jankovic, D., St James, M., Kaltenthaler, E., Wong, R., Sculpher, M., and Faria, R. (2018). Prevalence and Economic Burden of Medication Errors in The NHS in England. Rapid evidence synthesis and economic analysis of the prevalence and burden of medication error in the UK. Policy Research Unit in Economic Evaluation of Health and Care Interventions. Universities of Sheffield and York.

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IDENTIFIED SAFETY ISSUES

The initial investigation considered that there may be a specific risk related to the administration of high-risk medicines to frail, elderly patients in hospital. Further investigation has identified specific risks associated with medication prescription and that these risks are not limited to the prescription of high-risk medications in isolation.

The following safety issues will form the basis of the wider investigation:

- The systems and processes which underpin the prescribing of medication for older people admitted to hospital.
- The main patient safety risks arising from the prescribing of warfarin and the safety defences in place.
- The common pressures that may impact on clinical practice and the identification of drug prescribing errors.

NEXT STEPS

The HSIB investigation will continue to explore the identified safety issues and welcomes further information that may be relevant, regardless of source. The HSIB will report any significant developments as the investigation progresses.