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## Assessing the impact of weight documentation on adverse drug events: A quality improvement initiative to reduce prescribing errors and improve patient safety

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**Aims:** Prescribing errors are common in the NHS, with evidence showing causation is complex and often multifactorial. Our objective was to evaluate the impact of a single variable, weight documentation, on the incidence of prescribing errors and implement a change to reduce such errors thereby improving patient safety.

**Method:** Cardiology inpatients (n=54) on 16/06/17 at a Central London hospital were included in this audit. Data was gathered from electronic records (E-noting) and from an electronic prescribing system (MedChart). Patient weight discrepancies between the two systems were analysed and the impact on weight-related medication was assessed. Recommended changes were implemented following multidisciplinary meetings between nurses, doctors and pharmacists, by a poster campaign on relevant wards and presentation at the local departmental meeting. Following implementation of recommendations, a re-audit was completed with the same inclusion criteria (n=44) on 26/06/17 and the incidence of weight-related prescribing errors reviewed.

**Results:** Post-intervention the percentage of patients with weight documented on MedChart improved from 76% to 98%, with a 10% reduction in weight discrepancy between the two systems, E-noting and MedChart. Initial audit data showed 4% of patients had a prescribing error related to incorrect dosing of weight-based medications; these errors all involved inappropriate anticoagulation with low molecular weight heparin. Following implementation of recommendations 0% of patients had a weight related prescribing error.

**Conclusion:** Accurate weight recordings are vital to reduce the incidence of prescribing errors in patients on weight-dosed medications. This is emphasized in cardiology where inpatient weight frequently fluctuates secondary to both congestive cardiac failure and administration of diuretics. In this population particularly, precise weight-based prescribing of anti-coagulants is imperative. Our findings show that updating weight documentation onto the electronic prescribing system MedChart reduced the frequency of prescribing errors to 0% thereby improving patient safety.

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