

# Characterising the Type and Impact of Prescribing Errors in a University Health Board

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## Abstract

Medication incidents result in global economic burden and cause avoidable patient harm. Prescribing errors constitute 18.5% of all medication incidents. Aim: Establish incidence, types, potential harm and medicines involved in prescribing errors in Welsh University Hospital Health Board. Medication chart review by medical student undertaken to identify prescribing errors highlighted by pharmacists. Pilot study conducted to ensure student was adequately trained. Data collected on wards representing medicine, surgery, mental health and specialist services. All in-patient prescriptions included. Potential harm to patients categorised via consensus panel using WHO definitions. 366 prescribing errors identified in 2161 prescriptions (16.9%). Of 206 patient charts, 148 charts contained [?]1 prescribing errors (71.8%). Three most common errors were ‘No maximum 24-hour dose specified’ (n=59), ‘Wrong dose of drug’ (n=53) and ‘No indication’ (n=37). 110 medications implicated but ten medications constituted 43.2% of all errors (n=158). Morphine (n=38), enoxaparin (n=30) and paracetamol (n=22) were most erroneously prescribed medications. 244(66.7%) errors had potential for no patient harm, 56(15.3%) mild, 47(12.8%) moderate, 17(4.6%) severe, and 2(0.5%) had potential for death. Decision-making errors (34.5%, n=130) less common than prescription-writing errors (65.5%, n=236) but had greater harm potential; 70.0%(n=85) of all errors with harm potential were decision-making errors. Error rate (16.9%) comparable to previous research (7.5-14.7%). ‘Wrong dose of drug’ was a harmful error which may be ameliorated by electronic prescribing systems incorporating ‘clinical decision support’. Prevalence of ‘No indication’ errors makes strong case for indication-based prescribing. Future studies should employ this methodology to collect data post implementation of electronic prescribing.

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