

High rate of medication errors in paediatrics

Prescribing and medication administration errors are common in paediatric inpatient settings in the UK, according to a recent study (*Archives of Disease in Childhood* 2010;95:113–8). The study was carried out across five hospitals in the London area by researchers at The School of Pharmacy, University of London and Imperial College Healthcare NHS Trust.

A prospective review of drug charts on 11 wards was carried out to identify prescribing errors. Prescribing errors were identified by the ward pharmacists who were experienced in paediatric medicine, and a data collector documented any errors that were identified.

A total of 444 paediatric inpatients and 2,955 medication orders were studied over 22 weeks. A total of 391 prescribing errors were identified, which is a 13.2% prescribing error rate (95% CI 12.0–14.5). Incomplete prescriptions were the most common error (41.2% of errors). Use of abbreviations accounted for 24.0% of the errors and dosing errors accounted for 11.3%.

A prospective, undisguised observation of nurses preparing and administering drugs on 10 wards was carried out to identify medication administration errors. A total of 161 nurses were observed preparing and



administering 1,554 doses to 265 paediatric inpatients over the study period. A total of 429 medication administration errors were identified, which is a medication administration error rate of 19.1% (95% CI 17.5–20.7). The most common medication administration error was incorrect preparation (20.7%), followed by incorrect rate of intravenous administrations (19.8%). The observer intervened to prevent an administration error reaching a patient on five occasions.

The authors acknowledge that the clinical significance of the errors was not assessed and that inter-observer reliability between the pharmacists was not tested. They suggest that electronic prescribing, which is becoming increasingly common, will aid a reduction in errors of missing information and could reduce dosing errors.

Bryony Dean Franklin, director of the centre of medication safety and service quality at The School of Pharmacy, University of London and Imperial College Healthcare NHS Trust, who was one of the researchers, told *The British Journal of Clinical Pharmacy* that the high medication administration error rate is of concern because there is no pharmacist check at this stage. “Pharmacists can help by identifying any areas where purchasing, packaging and labelling can be improved to make it easier to identify the correct medication and measure the correct dose.”

She added that the two main prescribing errors — incomplete prescriptions and the use of abbreviations — are relatively easy to prevent using electronic prescribing. This has been introduced in some paediatric hospital settings, including Imperial College Healthcare NHS Trust, where it is currently being piloted.

Patient access schemes not working in the NHS

Patient access schemes, in which the cost of the drug is shared between the pharmaceutical industry and the NHS, are not working properly in the NHS, according to a recent study (*Lancet Oncology* 2010;11:111–2). The questionnaire-based study was conducted by the British Oncology Pharmacy Association to assess the effect of patient access schemes for anticancer medicines on frontline NHS staff.

Data was collected from 31 hospitals in the UK, and included 756 patients who had been entered into patient access schemes for at least 12 months between 2007 and 2009. The schemes examined included erlotinib (Tarceva; Roche Products) for lung cancer, sunitinib (Sutent; Pfizer) for renal cell cancer and bortezomib (Velcade; Janssen-Cilag) for multiple myeloma.

The work showed that in 47% of cases, refunds received by hospitals for the two most common patient access schemes (sunitinib and bortezomib) were not passed on to the primary care trust. To put this into context, in the case of bortezomib, if a patient does not respond to the treatment after four cycles they are taken off the drug and the PCT is refunded by the manufacturer; this is usually a sum of about £12,000.

Poor communication between the clinician managing the patient and the pharmacist managing the scheme was also highlighted as a problem for the bortezomib scheme — this could lead to loss of money through missed claims.

A total of 73% of respondents reported that they did not have the capacity to manage patient access schemes without funding staff to manage, coordinate and track the schemes.

The author, Steve Williamson, consultant oncology pharmacist at Northumbria Healthcare NHS Foundation Trust, suggests that organisations should consider investing in staff to implement and manage patient access schemes.

Mr Williamson told *The British Journal of Clinical Pharmacy*: “The cancer network pharmacists forum recognised that there were many issues with implementation of patient access schemes. However, there is a lack of evidence about how they work in the NHS. The group also believed that the schemes lead to many problems for the NHS, but there was no published evidence about their impact. Therefore, the network pharmacists agreed to support this research, which is hopefully the first of many pieces of work examining the use of these schemes in the NHS.”