

in the number of bleeps in the 10 weeks post-change implementation (23). The median average response times of all three pharmacy teams were shown to be within the 15-minute time limit. Mean average response times were higher. Pharmacy team response times remained below the 15-minute limit. ANOVA ($F=7.1$ $f_{crit} = 3.3$) and T-tests showed there were no significant differences in the mean average response times of pharmacy teams ($p=0.7$).

Conclusion Data and practical use has shown that the transfer of pharmacy communications away from radio-pagers to the CareFlow notification system has been a success. We have shown pharmacy to be more accessible and efficient in their completion of tasks assigned by other members of staff. With noted benefits of receiving tasks out of hours for completion in the morning. Response times remain within the 15-minute limit, showing the majority of their tasks are responded to efficiently. However, mean responses were relatively higher. This may indicate tasks that are not responded to within these 15 minutes may have been missed, and therefore have far longer waiting periods. This is likely a contributory factor for the continued low-level use of the radio-pagers through the 10 weeks post-change implementation.

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DO PAEDIATRIC DOSING SETS FOR INTRAVENOUS (IV) PIPERACILLIN/TAZOBACTAM AND ORAL MORPHINE MAKE IT MORE LIKELY TO GET 'THE DOSE RIGHT FIRST TIME' IN AN ELECTRONIC PRESCRIBING SYSTEM?

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Aim Dosing errors are the most predominant type of paediatric medication error in a hospital setting.¹⁻³ The main aim was to investigate the effect of dosing sets, a type of clinical decision support (CDS) software, on paediatric prescribing safety in an electronic prescribing system. The secondary aim was to determine the impact of dose range checking (DRC) software on erroneous prescribing.

Method A retrospective observational clinical audit was conducted in a large tertiary paediatric hospital. The dosing sets and DRC software were fully integrated within the hospitals existing electronic prescribing system, namely MeditechV6. Data from before and after the introduction of dosing sets and DRC alert data from IV Piperacillin/Tazobactam and oral morphine prescriptions was extracted from MeditechV6 and analysed. The main outcome measures included the proportion of prescriptions with dosing errors, the type of errors and the level, and appropriateness of alert overrides.

Results The error rate did not significantly reduce following the introduction of either dosing sets. In the pre-intervention period 7/180 (3.9%) IV Piperacillin/Tazobactam prescriptions resulted in error and in the post-intervention period there were 5/180 (2.8%) prescription dosing errors ($n=12$, Pearson χ^2 value=0.345, $p=0.557$). All detected errors comprised of sub-therapeutic doses and prescribing inaccuracies were more prevalent in patients over 12 years and less than 50 kilograms (kg). A total of 54/180 (30%) orders did not apply the dosing sets following implementation and 2/54 (3.7%) orders were subsequently erroneous. There was 1/120 (0.8%) prescribing error following accurate dosing set selection and 2/6 (33.3%) prescribing errors following inaccurate selection.

After the introduction of dosing sets, 23/50 (46%) oral morphine to take out (TTO) prescriptions contained a dosing inaccuracy versus 11/50 (22%) prescriptions pre-introduction ($p=0.011$). Inpatient oral morphine prescribing inaccuracies decreased following dosing set introduction from 14/50 (28%) to 9/50 (18%) respectively ($p=0.235$).

A total of 36/45 (80%) IV Piperacillin/Tazobactam DRC alerts were overridden at the point of prescribing and such actions were deemed clinically inappropriate for 6/36 (16.7%) prescriptions. Similarly, 6/20 (30.0%) of overridden oral morphine DRC alerts were deemed clinically inappropriate when audited against hospital guidelines.

Conclusion The introduction of drug-specific dosing sets did not significantly reduce the incidence or nature of prescribing errors for neither IV Piperacillin/Tazobactam nor oral morphine. In addition, the generation of DRC alerts did not prevent the submission of all erroneous prescriptions.

REFERENCES

- Ghaleb MA, Barber N, Franklin BD, *et al*. The incidence and nature of prescribing and medication administration errors in paediatric inpatients. *Archives of Disease in Childhood* 2010;**95**:113–118.
- Wong ICK, Ghaleb MA, Franklin BD, *et al*. Incidence and nature of dosing errors in paediatric medications: a systematic review. *Drug Safety* 2004;**27**:661–670.
- Wong ICK, Wong LYL, Cranswick NE. Minimising medication errors in children. *Archives of Disease in Childhood* 2009;**94**:161–164.

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VITAMIN D PREPARATIONS: WHAT'S IN THE BOTTLE?

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Aim The UK incidence of vitamin D prescribing in children has increased by 26-fold in recent years.¹ Public Health England recommends that children over 1 year take a daily vitamin D supplement.² But the availability of over 200 different vitamin D products can be confusing for parents and clinicians. Our study aimed to assess the usage of licensed and unlicensed vitamin D only (VDO) preparations across primary care in England, and to compare measured and labelled vitamin D content of VDO preparations marketed in England.

Method Analysis of the vitamin D content of randomly selected VDO preparations using reversed-phase high performance liquid chromatography. Retrospective trend analysis of prescription reimbursement data for VDO prescriptions from 2008 to 2018.

Results Licensed and unlicensed VDO preparations were available in a wide range of dose strengths from 400 to 50,000 IU. The number of licensed VDO preparations increased from 4 to 32 between 2008 and 2018, along with an increase in the proportion of VDO prescriptions fulfilled by licensed preparations. However, prescriptions of unlicensed preparations remained high and accounted for 42% of the prescription items in 2018. The 11 unlicensed preparations analysed had vitamin D concentrations ranging from $41.2 \pm 10.6\%$ to $165.3 \pm 17.8\%$ of the declared content, with only one meeting the acceptable criteria of 90–125%. The 2 licensed preparations met the required standards. There was no association between the preparation dose strength and the magnitude of percentage difference between measured and labelled contents ($r=0.41$, $p = 0.17$). Unlicensed liquid preparations in dropper bottles showed the greatest inter-sample variability suggesting