Psychiatric Bulletin (2007), **31**, 293–294. doi: 10.1192/pb.bp.106.012963

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PRITI VED AND TIM COUPE

Improving prescription quality in an in-patient mental health unit: three cycles of clinical audit

AIMS AND METHOD

We undertook three cycles of clinical audit of prescription charts to improve the quality of the prescriptions written in an in-patient unit. Pharmacy and medical staff reviewed a total of 1466 prescriptions on 242 prescription charts against local guidelines and provided feedback to medical staff. The pharmacist also regularly reviewed prescription charts on the wards between audits.

RESULTS

After three cycles of audit, 99.5% of prescriptions written were legible. The recording of drug allergies, section 58 status and patient age remained poor.

CLINICAL IMPLICATIONS

A combination of clinical audit and continual pharmacist review of prescription charts can improve the quality of prescriptions written by medical staff in an in-patient unit.

Prescription writing is a basic clinical skill for all doctors, but errors in prescriptions are believed to be one of the most common forms of medical error. Prescription errors may lead to harm in a number of ways, including sub-therapeutic dosage, potential overdose or unintended polypharmacy. This type of error may occur for a number of reasons: some relatively complex, such as shortcomings in medical training, and others more mundane, such as fatigue, interruptions, or being asked to cover unfamiliar patients (Dean *et al*, 2000). One study of prescriptions in a psychiatric unit for older people found that 20% were illegible and one-third contained missing information (Nirodi & Mitchell, 2002). Clinical audit is a commonly used quality improvement process which measures clinical practice against agreed standards and introduces change where this is indicated (National Institute for Clinical Excellence, 2002). Coventry Teaching Primary Care Trust published guidelines for the completion of prescriptions in May 2001. We used a series of clinical audits in the period June 2001 to February 2006 in an attempt to improve the quality of prescriptions written at the Caludon Centre, a 70-bed in-patient unit in Coventry.

Method

A prospective clinical audit was based on the trust prescription writing guidelines. This was then used by the pharmacist and junior medical staff to conduct three cycles of prospective clinical audit of the prescription records of patients admitted to adult wards at the Caludon Centre. The first audit was completed in June 2001, the second in March 2004 and the third in February 2006. Minor adjustments were made to the audit tool in 2004 and the size of the 2006 audit was increased by the inclusion of a newly opened ward. Results were fed back to trust staff at postgraduate medical education meetings. The pharmacist also conducted regular review of the prescription charts on the wards between the audits and highlighted errors to the appropriate medical team.

Results

A total of 1466 prescriptions on 242 prescription charts were reviewed during the three cycles of audit, 67 records in 2001, 57 in 2004 and 118 in 2006. The recording of patient information on prescription charts improved after the first cycle of audit but declined after the second (Table 1). Although overall legibility improved, the recording of drug allergies, section 58 status and age remained especially poor throughout the audit period.

The quality of regular prescriptions showed a consistent improvement over the audit period (Table 2). Prescription cancellations improved over the audit period, but the recording of frequency to be given remained poor.

The overall quality of 'as required' prescriptions also showed consistent improvement (Table 3). Recording of reason for administration improved, as did prescription cancellations.

Discussion

The results of this study suggest that clinical audit and feedback combined with pharmacist intervention at ward level can improve the quality of prescriptions in an in-patient setting. The overall legibility of prescriptions reviewed improved to a point where 99.5% of all prescriptions reviewed were considered legible. Specific aspects of prescription writing that had been poor in 2001 also showed improvement, most noticeably the proper cancelling of 'as required' and regular prescriptions. However, some basic aspects of prescription writing, such as using block capitals for drug names, only improved slightly and the recording of drug allergies remained very poor throughout the audit period. This is a cause for concern, although the actual risk it represents is difficult to assess. Although drug allergies are believed to occur in 14–17% of all patients, the most common are to antibiotics and non-steroidal anti-inflammatory drugs (Vervloet & Durham, 1998), both of which are not widely prescribed in our unit. However, recording drug allergies remains the responsibility of the prescriber and other

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Table 1. Recording of patient information on drug records

	Percentage recorded		
	2001 (*n*=67)	2004 (*n*=57)	2006 (*n*=118)
Written in indelible ink		96	97
Full name		96	98
Ward	55	26	29
Date of birth		98	94
Consultant	60	26	31
Hospital number	79	93	88
Legal status	55	63	42
Date of admission	36	9	16
Age	21	17	10
Section 58 status	5	2	3
Allergies box completed	15	19	10
Legible	93	95	98

Table 2. Completeness of regular prescriptions

	Percentage recorded		
	2001 (*n*=199)	2004 (*n*=238)	2006 (*n*=495)
Written in indelible ink	98	98	96
Generic drug name used	96	92	95
Printed in block capitals	48	42	65
Drug name in full	98	99	99
Dose in acceptable abbreviations	90	95	98
Frequency given	41	47	57
Route in acceptable abbreviations	97	98	90
Start date given	100	99	100
Signed for by prescriber	100	100	100
Administration times circled	97	100	99
Alterations rewritten	90	66	100
Cancellations completed correctly	21	75	92
Legible	93	99	99

Table 3. Completeness of 'as required' prescriptions

	Percentage recorded		
	2001 (*n*=119)	2004 (*n*=141)	2006 (*n*=274)
Written in indelible ink	93	96	95
Generic drug name used	96	96	96
Printed in block capitals	53	40	56
Drug name in full	99	100	100
Dose in acceptable abbreviations	95	95	99
Frequency given	87	90	81
Route in acceptable abbreviations	94	99	96
Start date given	99	99	99
Signed for by prescriber	98	99	100
Reason for administration	52	64	74
Alterations rewritten	93	100	100
Cancellations completed correctly	40	50	73
Legible	95	97	100

audits have shown allergy recording rates of 75% or more are achievable (Tuthill *et al*, 2004).

Continuous quality assurance requires ongoing data collection, review of that data and action. Various strategies have been suggested to improve the quality and safety of hospital prescribing, including systems analysis (Hronek & Bleich, 2002), electronic prescribing systems (Fowlie *et al*, 2000) and applying human error theory (Dean *et al*, 2000). Barber *et al* (2003) advocate a three-part strategy aimed at reducing prescribing errors. This is based on improving individual prescriber's competence, controlling the prescribing environment and changing organisational culture to allow open discussion of errors. Clinical pharmacists can have a positive impact on prescribing practice, outcomes and resource use (Finley *et al*, 2003), and we believe that clinical pharmacist review on the wards was the most effective element of this audit. Medicines are given because it is believed that the benefits will outweigh any associated risks, but trusts need appropriate controls to ensure that these risks are minimised (Healthcare Commission, 2007). The involvement of clinical pharmacy staff in caring for in-patients is a service that provides such controls and safety measures.

Declaration of interest

None.

Acknowledgements

We thank Drs Padmapriya Musunuri and Karthik Modem for help with data collection.

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https://doi.org/10.1192/pb.bp.106.012963 Published online by Cambridge University Press