

Medication errors: a baseline survey of interventions recorded during the dispensing process in community pharmacies

P. QUINLAN, D. M. ASHCROFT and A. BLENKINSOPP

Introduction The Government white paper "An organisation with a memory" set a target that 'serious medication errors' should be reduced by 40 per cent by 2005.¹ Error reduction is a key goal in the clinical governance agenda. Although this target is important, there is little published evidence relating to prescribing error rates and interventions in community pharmacies and thus no clear baseline.

The research reported here formed part of a wider study of medication errors. The aim of the study was to record the interventions that occurred in a sample of independent and multiple pharmacies to assess the frequency and rates of intervention and the reasons why these interventions were made.

Method A local pharmacy multiple with 28 branches agreed to take part. A further 10 independent pharmacies were also recruited. The Royal Pharmaceutical Society's audit documentation for recording interventions was used.² Data were collected during the first two weeks of October 2001. A "no-blame" culture was adopted and all respondents were guaranteed complete anonymity.

The data collection forms were distributed to the 38 pharmacies with two covering letters. The multiple's head office co-ordinated the delivery of the data collection documentation to its branches. Each pharmacist was telephoned by one of the authors (PQ) to enable any queries to be answered. Independent pharmacies were visited to distribute and collect forms and answer any questions.

Results Returns were made by 34 pharmacies (89.5 per cent). During the two-week study period, 60,525 items were dispensed and 419 interventions (0.69 per cent) were made on 378 prescriptions. Forty-six interventions (0.08 per cent) were classified by the pharmacists as potentially serious and 76 (0.13 per cent) as a major nuisance. The intervention rate differed greatly among the community pharmacies (range 0.13 to 2.77 per cent). Table 1 shows the range of interventions. The most common reasons for an intervention were the quantity of

FOCAL POINTS

* The results of a baseline survey of prescribing interventions made by community pharmacists are presented

* The mean prescription intervention rate in this study was 0.69 per cent; however, there were wide variations in the results between individual community pharmacies

* Forty-six interventions (0.08 per cent) were classified by the contributing pharmacist as potentially serious to the patient

prescribed medication (12.7 per cent of interventions), lack of a GP signature (12.4 per cent) and the prescribed dose (9.5 per cent). In terms of potentially serious errors, possible adverse drug reactions were the most common reason for an intervention (21.8 per cent), followed by the dose prescribed (15.2 per cent).

Discussion This study has confirmed that a wide range of interventions is undertaken by community pharmacists. Interventions on prescriptions in primary care have previously been found to range from 0.86 to 1.86 per cent,³⁻⁵ although the use of different descriptors for an intervention makes direct comparison difficult. The reasons for the lower reported rate in this study are unknown, but could include the definitions of the types of intervention to be included, the experience and enthusiasm of participating pharmacists, and possible under-reporting.

This study has also shown that interventions differ markedly in their incidence and characteristics between community pharmacies. In considering how to manage medication errors in primary care, policy-makers and practitioners may wish to consider the characteristic profile of pharmacy interventions on prescriptions and explore the wider implications of these findings in implementing policy directives.

Department of Medicines Management, Keele University

Int J Pharm Pract 2002;10(suppl):R67

Table 1: Classification of interventions

Reason	Total interventions		Serious interventions	
	n	%	n	%
No GP signature	52	12.4	0	0
Doesn't conform with CD requirements	11	2.6	2	4.3
Queries about prescription items:				
about form	29	6.9	3	6.5
about strength	34	8.1	5	10.9
about dose	40	9.5	7	15.2
about timing for dose	24	5.7	1	2.2
about drug item/brand	32	7.6	2	4.3
about frequency	14	3.3	1	2.2
about quantity	53	12.7	0	0
illegible or incoherent	12	2.9	1	2.2
possible interaction	9	2.2	5	10.9
possible adverse drug reaction	13	3.1	10	21.8
supply or availability problem	29	7.0	1	2.2
not in Drug Tariff	14	3.4	0	0
Other	53	12.7	8	17.4
Total	419	100	46	100

References

1. Department of Health. An organisation with a memory: a report from an expert working group on learning from adverse events in the NHS. London: Department of Health; 2000.
2. Royal Pharmaceutical Society. Interventions audit: prescriptions. London: The Society; 1998.
3. Kayne S. Dispensing and prescribing errors. *Pharm J* 1996;257:32-5.
4. Hawksworth GM, Corlett AJ, Wright DJ, Chrystyn H. Clinical pharmacy interventions by community pharmacists during the dispensing process. *Br J Clin Pharmacol* 1999;47:695-700.
5. Westein MPD, Herings RMC, Leufkens HGM. Determinants of pharmacists' interventions linked to prescription processing. *Pharm World Sci* 2001;23:98-101.