Do clinical pharmacists really improve the quality of patient care?

By S. Dhillon, PhD, MRPharmS

The contribution that clinical pharmacists make to better clinical use of medicines have been demonstrated on many occasions. Pharmacists routinely monitor all prescriptions for patients in hospitals and identify problems or interventions, which need to be resolved before the prescription can be dispensed. Such interventions are undervalued, because they are not routinely evaluated or used by hospital trusts.

A key component of pharmaceutical care is the minimisation of drug-related problems. Drug-related problems can be defined from a narrow perspective of adverse drug reactions and undesirable interactions, or more broadly as any problem which results in an event which does not optimise drug therapy.

Clinical governance provides a clear opportunity for the pharmacy profession to share and use intervention data in acute trusts. The strength of the data lies in the fact that they can show how pharmacists improve prescribing, reduce medication errors and contribute to education and training on common prescribing issues. Clinical pharmacists can use the clinical governance framework to ensure that they help in providing safe, rational and evidence-based drug therapy. The concept of pharmaceutical care and the application of the principles of medicines management to individual patients are at the heart of prescription review. In the United Kingdom, prescription review is routinely carried out on most wards and in the dispensary.

But do clinical pharmacists really make a difference? Do they add value to the prescribing process? Will electronic prescribing and the availability of protocols online offer a more cost-effective service?

Research clearly shows that the clinical pharmacist's role is vital. The introduction of ward pharmacy in the 1960s led to a 40 to 50 per cent reduction in errors and ambiguities in prescribing and, more recently, the effectiveness of ward pharmacy services has been demonstrated.[1,2]

A review of contributions or interventions that pharmacists make from routine prescription monitoring clearly shows the following outcomes: risk reduction, better choice of medicines, reduced morbidity, prevention of organ failure, reduced mortality and better dosage optimisation. Such information should be widely disseminated so that it forms part of trusts' approach to improving clinical quality.

Clinical pharmacists, through the prescription monitoring process, can review patients' medication for necessity of drugs, choice of therapy, appropriate dose regimen, drug handling issues, as well as monitoring and counselling points. The impact of pharmacist interventions on prescribing quality have been shown.[3,4] In addition, there is a high level of acceptance (over 95 per cent) for these interventions among medical staff.[5,6]

The North Thames (now London) regional clinical pharmacy service has routinely monitored interventions in trusts over the past six years and have clearly shown the extent of clinical pharmacist interventions. There are, however, issues regarding this monitoring. First, it provides quantitative data, which has not been validated by peer review or by a multidisciplinary group and second, it does not provide a measure of quality.

More recent work, however, has developed this annual London survey further by assigning a significance rating on contributions or interventions collected.

A recent study, which reviewed interventions of major significance only, showed that 467 interventions of major significance were identified in 33 trusts over a one-week period. The pharmacist's advice was accepted in 98 per cent of cases. The data was further validated by a panel of experienced clinical pharmacists and it showed that 325 (validated) patients had a major adverse drug event prevented. If these figures were extrapolated to provide annual rates in these 33 trusts, approximately 17,000 patients had a major adverse drug event prevented.[7]

Recent quantitative data also show that in a one-week survey across 51 sites in the London region, 65,000 prescriptions were reviewed and 7,977 interventions identified. Of these, 40 per cent were of minor significance, 50 per cent, of moderate significance, and 10 per cent, of major significance. This clearly demonstrates the effectiveness of pharmacists in identifying and preventing problems from drug treatment.

The advent of electronic prescribing will be of enormous value to clinical pharmacists, since one of the major dilemmas for the service, at the moment, is the limited time available to review all patients, especially with current staff shortages. Electronic prescribing will provide time for pharmacists to do further work on medication and administration errors, since prescription review is only one element of the prescribing process — what the patient receives is even more important. The current 2–3.5 per cent error rate in medication and administration errors needs to be reduced further. Electronic prescribing will enable clinical pharmacists to target pharmaceutical care to patients with the greatest need and will also enable them to identify, prevent and appropriately manage the small cohort of patients in whom the intervention has the potential for serious harm.

A recent survey across the London region has identified variation in what intervention data are collected, and how they are analysed and used within the pharmacy department or trust. Clinical pharmacists must recognise the opportunities for using these data in the clinical governance framework. Now is the time to change the way pharmacy is involved in prescription review and for the data to be consolidated and routinely used to show the enormous contribution clinical pharmacists make to safe and rational prescribing.

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