GMC report on prescribing errors in general practice

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The PRACtICe study, a report for the General Medical Council (GMC) found that prescribing and monitoring errors were detected for 1 in 8 general practice patients’ medication records. The vast majority of these were classed as ‘mild to moderate’ severity but 1 in 500 prescription items had a potentially ‘severe’ error. A wide range of factors increased the risk of error including inadequate training in prescribing, distractions and failure to fully utilise information technology. The study also highlighted issues with the transfer of medicines information between primary and secondary care.

Overview and current advice

In 2009, the GMC published the EQUIP study which investigated prescribing errors made by foundation trainees (doctors in the first 2 years after leaving medical school) in secondary care, and compared them with errors made by more senior doctors. The error rate in foundation year 1 doctors was 8.4%, but all grades of doctor (including consultants) made errors (overall rate 8.9%). The study showed that the causes of the errors were complex, but very few caused harm to patients because almost all were intercepted and corrected before reaching them.

The GMC also commissioned and has now published the PRACtICe study. This aimed to determine the prevalence and nature of prescribing (and monitoring) errors in general practice, and to explore the causes of, and identify potential defences against, these errors.

New evidence

The PRACtICe study assessed a random sample of 2% of patient records from 15 general practices across 3 Primary Care Trusts in England for prescribing and monitoring errors. The severity of the errors was judged on a validated 10 point scale (0=no risk of harm; 10=death) by a panel of two GPs, two pharmacists and one clinical pharmacologist. Errors were detected for 1 in 8 (12%) patients, involving around 1 in 20 of all prescription items. Severe errors (with a score of 7 or above) were found in 1 in 550 prescription items. The most common types of prescribing error were incomplete information, dose/strength errors and incorrect timing of doses. The most common type of monitoring
error was a failure to request monitoring. Errors were not associated with the grade of GP or whether prescriptions were acute or repeat items.

The report included qualitative data from interviews with 34 prescribers regarding 70 potential errors, to identify error-producing conditions. A wide range of causes of error were identified. These related to:

- the prescriber (including their therapeutic training, knowledge and experience, knowledge of the patient, perception of risk, and own health)
- the patient (including complexity of their condition, engagement with health services, literacy and language issues)
- the team (including communication problems, interruptions, and the ‘quasi-autonomous’ role of nurses)
- the task (focusing on repeat prescribing systems and patient monitoring)
- the work environment (including high workload, time pressures, distractions and interruptions)
- the computer system
- the primary/secondary care interface.

Significant problems were highlighted concerning correspondence about medications, particularly at the time of hospital discharge.

A wide range of defences against error were identified in the multiple stages of the medicines management process. These included strategies for individual prescribers as well as practices, and the effective use of health information technology.

Commentary

Commentary provided by Clare Howard, MRPharmS, QIPP National Lead Medicines Use and Procurement:

This was a large, comprehensive study in an area where there is a lack of published evidence. Overall, the prevalence of prescriptions with prescribing or monitoring errors found in the study was 4.9%. Although errors occurred in 1 in 8 patients in general practice, the majority were judged to be of mild or moderate severity. While a small random sample of patients (2%) from 15 general practices was studied, the sample was reasonably representative of England, and these figures give a reasonable estimate of the likely prevalence of prescribing and monitoring errors.

The prevalence of errors was much higher in certain groups of patients. In patients aged 75 years and older receiving at least one medicine, the prevalence was 38%, and in patients of any age receiving ten or more medicines it was 46.5%. While it is likely that patients receiving more medicines would have a higher prevalence of error, analysis found an additional 16% increased risk for each medication received, over and above the risk associated with each item independently. This suggests that greater attention needs to be paid to the elderly and those on multiple medications to prevent (or detect and correct) errors. In keeping with other studies, the error rate was also higher in children aged under 14.

Many of the types of error identified could have been prevented. Strategies for reducing errors should focus on five key areas: GP training; continuing professional development for GPs; clinical governance; effective use of clinical computer systems; and improving safety systems.
At GP practice level, procedures for repeat prescribing, medication monitoring, medication review and communication at interfaces in healthcare should be reviewed. The ‘quasi-autonomous role’ of nurses managing patients with chronic disease, who are not trained prescribers, was associated with an increased risk of prescribing errors. This is because GPs were signing prescriptions for patients they had not assessed, and because the consequent interruption to their consultation could cause a prescribing error. The further development of non-medical prescribing programmes may reduce these types of errors.

At a healthcare organisation level, GP training on therapeutics and skills and attitudes for safe prescribing are important, as is continuing professional development. Appropriate clinical governance procedures should be in place; prescribing safety and significant event audits should be conducted, and adverse prescribing events (and near misses) reported through national reporting systems. This would promote wider learning and actions to reduce prescribing errors.

The research suggests that pharmacists can play a greater role in reducing errors, through reviewing patients with complex medicines regimens and in identifying and informing the GP of errors at the point of dispensing.

Resources are available on the NICE website as well as the NPC legacy website to support GP practices and organisations in reducing prescribing and monitoring errors. These include:

- NPC (2012). A single competency framework for all prescribers
- NPC (2011). 10 Top tips for GPs – Strategies for safer prescribing (written by one of the authors of the PRACtICe study, Professor Tony Avery)
- NPC (2008). A guide to medication review
- NPC (2004). Saving time, helping patients: A good practice guide to quality repeat prescribing

References

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