Pharmacists' review of patients on repeat prescriptions

Clinical medication review by a pharmacist of patients on repeat prescriptions in general practice: a randomised controlled trial

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Executive summary

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Executive summary

Objectives

To determine whether a suitably trained clinical pharmacist could conduct effective clinical medication reviews of elderly patients on repeat medication in general practice, and specifically:

- to assess whether clinical medication review by a pharmacist is a cost-effective method of improving the extent, cost and quality of clinical control of repeat prescribing compared with that achieved by a practice's normal procedures
- to evaluate the effect of medication review clinics on the number of practice consultations, outpatient consultations, hospital admissions and deaths
- to identify the types of interventions.

Design

A randomised controlled trial of clinical medication review of elderly patients on repeat medication in general practice. The control group of patients received normal care from their practices.

Setting and participants

Patients were eligible for inclusion in the study if they were aged 65 years or over, on at least one repeat medication, not resident in a nursing or residential home, and not terminally ill. Patients were also excluded if specifically requested by the general practitioner (GP). Patients were recruited from four general practices in Leeds. The practices were eligible if they had four or more partners, were computerised, had close to average prescribing costs in the previous year, and had no previous or current input from a clinical pharmacist.

Intervention

Patients in the intervention group were invited for a consultation with the pharmacist at the surgery. The pharmacist assessed the patient, the illnesses and the medication regimen, and made recommendations.

Main outcome measures

The primary outcome was the number of repeat medication changes per patient over a 12-month period. The secondary outcome was the effect on the medication costs. The intervention group was compared with the control group to see whether a review had taken place, the numbers of medication changes, the numbers of repeat medications and the numbers of dosage times. The effects of the medication review clinics were considered in relation to practice consultations, outpatient consultations, hospital admissions and deaths from any cause. The number and nature of the pharmacist's interventions and recommendations were recorded, together with whether the recommendations were accepted by the GP.

Results

The mean numbers of individual medication changes per patient were 2.2 in the intervention group and 1.9 in the control group: difference = 0.31 (95% confidence interval (CI), 0.06 to 0.57); $p = 0.02$. The numbers of repeat medication items rose in both groups but the rise was significantly less in the intervention group (intervention mean 0.2, standard deviation (SD) 1.55; control mean 0.4, SD 1.53; group difference –0.2, 95% CI, –0.4 to –0.1). Medication costs rose in both groups but the rise was significantly less in the intervention group (intervention mean £1.80, control mean £6.53, group difference –£4.72 (95% CI, –7.04 to –2.41). The cost saving on medication in the intervention group compared with the control group was £4.75 per 28-day month. Extrapolated for 1 year, this is a saving of £61.75 per patient. There was no evidence of a difference between the groups for the numbers of outpatient consultations, hospital admissions or practice consultations over the 12-month period. There were fewer deaths in the intervention group (15 deaths, 2.5%) than in the control group (25 deaths, 4.3%) but the difference did not reach statistical significance ($p = 0.56$).

Over the 12-month study period, 97% of the intervention group had medication reviews

compared with 44% in the control group. A recommendation was made in 258 of the 591 (44%) patient consultations. Only 28 patients (5%) needed referral to a GP and 25 patients (4%) needed referral for a test. The pharmacist dealt with all other medication-related problems. A recommendation was made for 603 of the 2927 repeat medications (21%). The most common recommendations were 'stop the medicine' (118 medicines, 4% of all medicines) and 'technical', for example, a generic switch or removal of a 'redundant item' from repeat list (177, 6%). Of the 603 medication interventions, 395 (65%) were dealt with by the pharmacist alone, without reference to a GP. Recommendations were made to and permission was sought from the GPs for 208 interventions (34%). The pharmacist's advice was accepted and acted upon in 179 instances (86%).

Conclusions

A suitably trained pharmacist can conduct consultations with elderly patients to review them, their medicines and the conditions for which they were prescribed. This intervention resulted in a greater coverage of medication review and more interventions than if the pharmacist was not involved. The pharmacist's interventions led to reductions in the number of drugs taken by the intervention group compared with the control group, and thus to major net financial savings. There was no evidence of an adverse effect on subsequent use of health services.

Although the study demonstrates the potential of this extended role for the pharmacist, its reproducibility as a service modality needs to be tested further. Only one, very experienced, pharmacist was involved, working in four selected Leeds practices. It is important to reproduce the results with more pharmacists working in large numbers of practices over a wider geographical and socio-economic area before making fundamental changes to the service and the everyday role of the pharmacist. Nonetheless, it is not unreasonable to predict that clinical medication review will become a core role of the pharmacist and will achieve therapeutic benefits combined with neutral cost implications.

Publication

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NHS R&D HTA Programme

The NHS R&D Health Technology Assessment (HTA) Programme was set up in 1993 to ensure that high-quality research information on the costs, effectiveness and broader impact of health technologies is produced in the most efficient way for those who use, manage and provide care in the NHS.

Initially, six HTA panels (pharmaceuticals, acute sector, primary and community care, diagnostics and imaging, population screening, methodology) helped to set the research priorities for the HTA Programme. However, during the past few years there have been a number of changes in and around NHS R&D, such as the establishment of the National Institute for Clinical Excellence (NICE) and the creation of three new research programmes: Service Delivery and Organisation (SDO); New and Emerging Applications of Technology (NEAT); and the Methodology Programme.

This has meant that the HTA panels can now focus more explicitly on health technologies ('health technologies' are broadly defined to include all interventions used to promote health, prevent and treat disease, and improve rehabilitation and long-term care) rather than settings of care. Therefore the panel structure has been redefined and replaced by three new panels: Pharmaceuticals; Therapeutic Procedures (including devices and operations); and Diagnostic Technologies and Screening.

The HTA Programme continues to commission both primary and secondary research. The HTA Commissioning Board, supported by the National Coordinating Centre for Health Technology Assessment (NCCHTA), will consider and advise the Programme Director on the best research projects to pursue in order to address the research priorities identified by the three HTA panels.

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