

Results of a 12-month quality-circle prescribing improvement programme for GPs

Françoise Riou, Christine Piette, Gérard Durand and Jacques Chaperon

ABSTRACT

Background

The impact of a quality-circle GP prescribing improvement programme, implemented in France in 2001–2002, was assessed by a controlled study. The study involved all 27 GPs of three semi-rural areas of Brittany, France. Practice data (overall prescribing cost and markers of prescribing efficiency) were collated in an intention-to-treat analysis, using the Mann–Whitney *U* test. Twenty-four GPs attended the meetings regularly. The reduction in drug expenditure exceeded the cost of the programme, although variations in size effects were observed among the settings.

Keywords

cost analysis; drug prescription; family practice; health care quality; quality circles.

INTRODUCTION

Quality circles are working groups that meet to discuss workplace issues. The concept is used in several European countries,¹ and has been shown to provide cost-saving benefits among GPs in Germany with high prescribing costs,² and in the UK in primary care groups.³ The current study assessed the economic impact of a quality-circle pilot programme in France, where the annual cost of drugs prescribed by GPs has increased by 6% per year during the last 5 years.⁴ A nationwide study demonstrated that the increasing level of prescription needs to be managed.⁵ Most GPs work in a fee-for-service system, and the information they receive about drugs is largely supplied by pharmaceutical representatives. Local pharmacists deliver pre-packaged drugs (when prescribing a psychotropic drug, the size of the box was stipulated as part of the study). Until 2005, patients were free to consult any doctor, and therefore free to change their doctor if the visited practitioner did not issue them with the desired prescription.

METHOD

A controlled study, before and after the implementation of the programme, was conducted in three semi-rural areas of Brittany, France (areas A, B, and C). The population across the three areas ranged from 7500 to 15 000 inhabitants; the number of GPs ranged from seven to 11; and there were three to six local pharmacists in each area.

All GPs in these areas were invited to join the programme which took place from December 2001 to December 2002. Two public health consultants met all GPs in each area every 2.5 months to introduce independent information about polymedications, generic name prescribing, antibiotics, vasodilators for peripheral arterial disease, venotonic drugs, psychoactive agents, gastric protective drugs, and non-steroidal anti-inflammatory drugs. During these meetings, public health consultants also provided feedback information about prescribing patterns and cost. Quality circles (two in each area) met every 6 weeks

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and some GPs were trained and given documentation. Local pharmacists were informed of the process. A meeting attendance fee was paid to the GPs, €70/hour for a plenary meeting (with the consultants), €45/hour for a quality circle meeting.

For each intervention area, the remainder of the 'département' (an administrative area with 312 000–867 000 inhabitants, GP density 1.06 to 1.12 per thousand) was used as a control group. The study focused on inhabitants of the participating areas who had health insurance with the CNAMTS (which covers about two-thirds of the population) and who claimed for reimbursement for a drug prescribed by a GP from February 2001 to January 2002 (baseline), and from February 2002 to January 2003 (post-intervention).

Outcome measures included all GPs' annual prescription costs per patient and markers of prescribing efficiency related to the documentary supports.

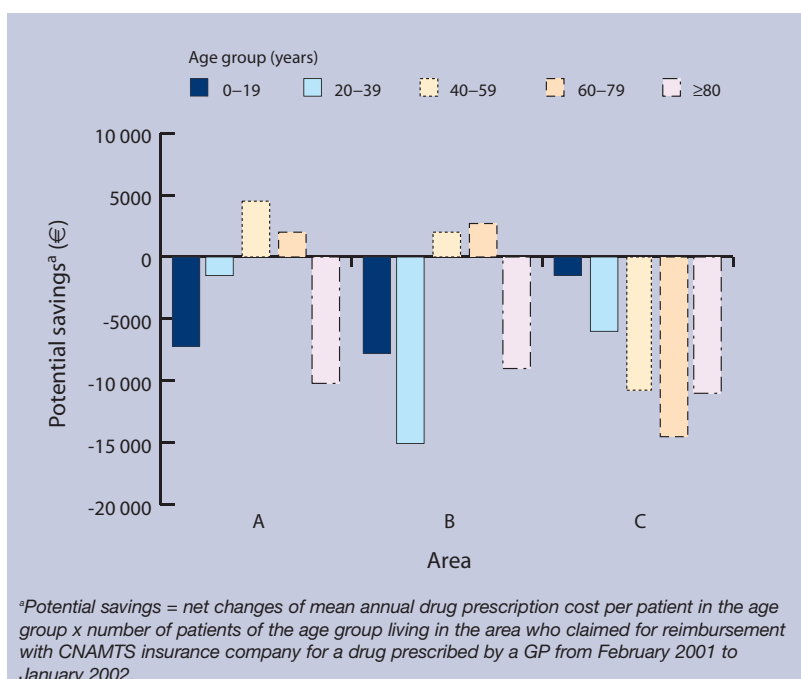
Indicators were adjusted on age and sex, using the regional population as reference. Costs were calculated per quarter, per half-year, and per year. Differences were defined as net changes, that is, pre-post changes of the intervention area minus those of control areas. Differences were analysed conservatively (as all GPs working in the intervention areas were included, whether they participated or not), using the Mann–Whitney *U* test. The economic impact of the programme was estimated by extrapolating the results to the whole population and comparing this to the programme cost (including design, coordination, sending of documents, and assessment).

RESULTS

Attendance at quality-circle meetings was between 70 and 100%. Baseline values and changes for the age- and sex-adjusted GP prescription annual costs per patient are shown in Table 1. As expected, a net decrease, ranging from –3 to –16 €/patient, was observed in all areas. The potential local savings according to age groups are shown in Figure 1. Decreases were shown in all age groups in area C, which had the highest net decrease and the lowest

How this fits in

Implementation of the quality-circles concept has been effective in several European countries. It has been moderately effective in changing prescribing patterns of GPs with high volume and cost of prescribing in Germany. In the UK, quality circles in a group of practices were shown to help control costs while accommodating diverse individual practices. The quality-circle programme examined in the current study appeared to be effective in controlling the costs of GP prescribing in an area of the French fee-for-service system. The size effect was the largest in the area which had the lowest baseline cost.



cost per patient at baseline. Quarterly and biannual data showed similar trends. The programme increased generic prescription rates, and decreased the prescription of drugs with no evidence-based efficacy. The potential annual cost reduction (€144 250) slightly exceeded the cost of the programme (€136 000).

Figure 1. Potential savings in GP annual drug prescription cost according to age group.

DISCUSSION

The programme appeared to be cost-effective in a

Table 1. Changes in GPs' drug prescription annual cost per patient.

	Intervention areas			Control departments			Mann–Whitney <i>U</i> test	
	Baseline, €	Post-intervention, €	Difference, € (evolution rate, %)	Baseline, €	Post-intervention, €	Difference, € (evolution rate, %)	<i>U</i>	Two-tailed <i>P</i> -value
Age-sex adjusted annual cost per patient								
A	307	312	+ 5 (+ 1.8)	311	319	+ 8 (+ 2.8)	0.000	0.05
B	301	303	+ 2 (+ 0.5)	296	301	+ 5 (+ 1.9)		
C	298	290	– 8 (– 2.4)	307	315	+ 8 (+ 2.7)		

context characterised by competition between care providers, but showed large variations in size effects between the three settings. The GPs of area C may have differed in some way from GPs in groups A and B because of their lower baseline figures. Nevertheless, the results for group C demonstrate that in France even low prescribers can decrease prescription costs. Most of the drugs studied could not be bought over the counter, nor could they be switched for a drug available over the counter.

Evaluations of the impact of small group work, audits, and models of quality management in general practice reveal ambiguous effects.^{1,2} The current programme was multifaceted and included expert input, voluntary feedback, peer review, and specific recommendations for changes: all features generally associated with the successful implementation of changes in general practice.³ The net effects may be perceived as small, but the conditions of this study tended to reflect reality rather than being a 'best-case scenario'. The study involved all GPs in a chosen area, and each group was free to decide on which topic they would work. Absolute effects of

multifaceted interventions tended to be between 5 and 10% in controlled trials⁴ and lower in actual practice.⁵ Even if doctors are willing to change, altering a well-established pattern of care is difficult, especially if the clinical environment is not conducive to change.^{6,7}

The costs of the programme were important as they included an investment (the design and assessment of the project) and due to the small number of settings involved. In addition, the Social Insurance Fund organised national information campaigns for the reduction of antibiotic prescriptions during the study period. Despite some methodological limitations (no random sample comparison, no control for the differential case mix between areas), the performance of group C is consistent with the level of its involvement in the programme in terms of attendance, critical reading, not receiving pharmaceutical representatives, and work with the pharmacists. Whether the positive results can be maintained and extended to most areas is an important question for future research, as the quality-circle concept requires inner motivation of doctors to improve their professional performance through interactive learning activities with colleagues.

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Ethics committee

Not applicable

Competing interests

The authors have stated that there are none

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