

# How are primary care organizations using financial incentives to influence prescribing?

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## Summary

Primary care organizations (PCOs) in England are required to run a prescribing incentive scheme. The average payment received by general practitioners (GPs) under these schemes is not known. We conducted a longitudinal (2 year) questionnaire study of all PCOs in London and the south east of England aiming to explore the relationship between the financial incentives, the selection of prescribing indicators and success at remaining within budget. In the second year, the average reward per GP amounted to £1220 (range £470–£4330). Underspent PCOs made larger incentive scheme payments to their practices as did PCOs that had successfully overturned a first year overspend into a second year underspend. The size of rewards was unrelated to the selection of any particular cost- or quality-based prescribing indicator. We conclude that larger prescribing incentive scheme payments may have contributed to prescribing cost control but their effect on prescribing quality is uncertain.

**Keywords:** prescribing indicators, prescribing change, primary care organizations

## Introduction

Before the formation of primary care groups (PCGs) in 1999, fundholding practices, motivated by the opportunity to hold their own budgets and retain prescribing savings, were able to control prescribing costs more successfully than non-fundholding practices.<sup>1</sup> Incentives, albeit smaller, were soon made available to non-fundholding practices. Operating through a prescribing incentive scheme, practices were rewarded for both cost containment and the achievement of a variety of locally determined quality targets.<sup>2</sup> These too had their successes, as judged by financial criteria.<sup>3</sup> Quality improvements proved harder to demonstrate and no direct evaluations of prescribing quality changes were ever conducted between fundholding and non-fundholding practices.

Since the demise of fundholding, each PCG and its successor PCT (primary care trust), has been required to manage a prescribing incentive scheme applied to all its practices. The form of the scheme is not centrally determined and each primary care organization (PCO) is able to place different weights on cost

saving and quality. The only constraint on the scheme is that the reward for a practice cannot exceed £45 000.<sup>5</sup>

In a previous survey, we had obtained information on the maximum payments made to general practitioners (GPs) successfully fulfilling specified prescribing targets set during the first year under PCO management.<sup>6</sup> But information about the average level of reward per GP was unavailable. Was either the maximum or the average reward linked to eventual success at controlling prescribing spend? And was the generosity of the reward linked to success at achieving particular prescribing indicators? Finally, were rewards greater in PCOs that withheld incentives from overspent practices?

## Methods

### Study design

We conducted a longitudinal, 2 year survey of all PCO-based prescribing advisers in the London and South East NHS Regions. Questionnaires were sent in autumn 2000 (covering the 1999–2000 incentive scheme) and autumn 2001 (covering the 2000–2001 scheme). The methods and instruments used in the

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two surveys were similar and detailed results of the first survey have been described elsewhere.<sup>6,7</sup> Changes in the prescribing indicators and their increased emphasis on promoting prescribing quality improvements have already been reported.<sup>8</sup>

### Data analysis

Data were analysed using SPSS for Windows Version 11. Average values are given as medians unless otherwise stated.

## Results

### Response rates

One hundred and twenty-nine out of 145 (89 per cent) PCOs provided financial information to the 1999–2000 survey. In the following year, 103 out of 113 (91 per cent) PCOs responded.

### Financial incentives

The average reward per GP was calculated by dividing the total sum spent on incentive scheme payments in each PCO by the number of GP principals in that PCO. In the second year, the average available incentive per GP amounted to £1220 (range £470–£4330; inter-quartile range £960–£1960).

The maximum sum awarded for achieving prescribing targets averaged £1800 per GP in the first year (inter-quartile range £600–£3400) and £3000 in the second year (range £250–£18 000; inter-quartile range £2000–£5000).

PCO prescribing budgets were, on average, overspent by 4.5 per cent in the first year<sup>6</sup> and marginally underspent by 0.6 per cent in the second year. The proportions of practices receiving reward payments increased substantially – from 48 per cent to 80 per cent in the second year. Some PCOs (9 per cent) had not made any payment to their practices in the first year<sup>6</sup> but all made at least some payment in the second year.

Comparisons between underspent and overspent PCOs in the second year of the survey are summarized in the Table. The maximum reward payment, average payment and proportion of

the total prescribing budget allocated to incentive scheme payments were all significantly higher in underspent PCOs.

Many PCOs had successfully turned a first year prescribing overspend into a second year underspend. PCOs that successfully reversed their overspend (49 out of 84; 58 per cent) had larger average second year incentive payments (£1330 compared with £1050; Mann–Whitney  $U = 472.5$ ;  $p = 0.02$ ) and invested a larger proportion of their prescribing budget as incentives (0.8 per cent compared with 0.6 per cent; Mann–Whitney  $U = 547.0$ ;  $p = 0.007$ ); the maximum payments and proportion of practices receiving payments were not significantly greater.

Reward payments were available even to practices that had overspent their prescribing budget in 86 per cent of PCOs. The maximum payment, average payment and proportion of practices receiving payments were no different regardless of whether the PCO chose to restrict rewards to underspent practices or whether even the overspent practices were eligible.

PCOs awarding incentive payments to a larger proportion of practices in the first year were more likely to have rewarded a larger proportion in the second year as well (Spearman's rho 0.47;  $p < 0.001$ ). However, there was no significant relationship between the maximum payments in the two years. Indeed, most PCOs making high payments in the first year scaled these back substantially in the following year – one PCO reduced its maximum payment from £24 100 in the first year to £3350 in the second year.

### Prescribing indicators

Larger rewards (either as higher percentages of the PCO prescribing budget or as higher average or maximum amounts available to GPs) were not significantly associated with any of the therapeutic categories of indicators such as lipid-lowering drugs, gastro-intestinal preparations or antibiotics. Less financial information was available in the first year but the pattern was similar with no significant relationship between rewards and indicator categories.

**Table** Comparison between PCOs that had overspent or underspent their second year prescribing budget

Second year value	Overspent PCOs ( $n = 38/100$ )*	Underspent PCOs ( $n = 62/100$ )*	Significance of difference between underspent and overspent PCOs
Prescribing budget uplift between year 1 and year 2 of PCO	10.4%	8.2%	$p = 0.35$
Proportion (mean) of total prescribing budget invested in incentive scheme payments	0.65%	0.98%	$p < 0.001$ †
Proportion of practices receiving payments under the incentive scheme	77%	82%	$p = 0.23$
Median payment available per GP under the incentive scheme (total payment/total number of GPs)	£1050	£1550	$p = 0.001$ †
Maximum payment available per GP under the incentive scheme (median value)	£2497	£3000	$p = 0.048$ †

\*Data available for only 100 out of the sample of 113 PCOs.

†Statistically significant difference,  $p < 0.05$ .

## Discussion

Payments made to GPs in 2000–2001 under the prescribing incentive scheme averaged £1220 per GP. Some GPs will have received nothing because they failed to achieve specified prescribing targets, but, on average, GPs in 80 per cent of practices received a payment. Payments of this size are likely to have had a considerable influence on prescribing activity. This sum amounted to slightly more than was available to GPs achieving lower cervical smear or vaccine targets. Furthermore, incentive payments did not form part of the national pay formula for general practice and as such, constituted an additional payment that was likely to have boosted the gross income of those GPs receiving payments. Although payments had to be invested in schemes that improved patient care in the practice,<sup>5</sup> practices may have made similar investments even if reward payments had been unavailable, effectively converting the reward payment into a subsidy.

Our results link incentive payments with prescribing change. Larger rewards were associated with PCO prescribing underspends in the second year. The rewards may have encouraged GPs to make savings. Equally, underspent PCOs may simply have been more generous in their distribution of reward payments. But PCOs that successfully changed a first year overspend into a second year underspend had larger incentive scheme payments than PCOs that remained overspent. The association of larger rewards with improved budgetary control over time implies that larger rewards may have contributed to this success. Clearer proof of a causal relationship would require further observation over time and an exploration of whether savings were made in the same prescribing categories that had been rewarded in the incentive scheme.

A group of more financially driven PCOs can be identified. These are the 14 per cent of PCOs that restricted rewards to underspent practices, excluding high prescribing quality practices from a reward if they were overspent. In spite of this strict interpretation of the guidance these PCOs did not offer larger rewards nor have more success at budgetary control. The relative ineffectiveness of these schemes may have arisen because GPs found schemes failing to reward quality attracted less support from the profession or, alternatively, these PCOs may have selected such strict schemes because they already knew that their budget was projected to overspend.

Other published surveys have found similar maximum levels of financial rewards offered by PCOs for the achievement of prescribing goals.<sup>9,10</sup> None of these surveys calculated the average sum available to GPs within the PCO. Yet we have found that it was the higher average rather than higher maximum payments that was more closely associated with PCO budgetary success. If the relationship is causal, then it would appear that GPs are more influenced by achievable moderate financial gains (the average payments) rather than by 'jackpot' type gains (the maximum payments) available to only a few.

During the time of the survey, external influences on pre-

scribing shifted the emphasis toward quality improvement.<sup>9</sup> Our survey contained measures of cost outcomes but was unable to measure quality outcomes. We are therefore unable to draw conclusions about the size of prescribing incentives and their influence on quality. More generous incentives were not linked to any particular prescribing indicators, regardless of whether they were predominantly quality or cost indicators. New rewards for improved prescribing quality are about to be made available. From April 2004, prescribing incentive schemes will run in parallel with the new GP contract, which will reward GPs for achieving a series of quality markers, several of which relate to prescribing indicators.

The financial incentives used by prescribing incentive schemes may have contributed to overall control of the PCO budget. Our study found no link between the size of reward payments and the selection of quality indicators. Whether financial incentives influence prescribing quality improvements can only be determined by additional research; for example, by studies comparing changes in prescribing quality indicators with corresponding changes in Prescribing Analysis and Cost (PACT) data.

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