The use of financial incentives in Australian general practice

Administrative support available to GPs appears to be an increasingly important predictor of incentive use

Abstract

Objective: To examine the uptake of financial incentive payments in general practice, and identify what types of practitioners are more likely to participate in these schemes.

Design and setting: Analysis of data on general practitioners and GP registrars from the Medicine in Australia — Balancing Employment and Life (MABEL) longitudinal panel survey of medical practitioners in Australia, from 2008 to 2011.

Main outcome measures: Income received by GPs from government incentive schemes and grants and factors associated with the likelihood of claiming such incentives.

Results: Around half of GPs reported receiving income from financial incentives in 2008, and there was a small fall in this proportion by 2011. There was considerable movement into and out of the incentives schemes, with more GPs exiting than taking up grants and payments. GPs working in larger practices with greater administrative support, GPs practising in rural areas and those who were principals or partners in practices were more likely to use grants and incentive payments.

Conclusions: Administrative support available to GPs appears to be an increasingly important predictor of incentive use, suggesting that the administrative burden of claiming incentives is large and not always worth the effort. It is, therefore, crucial to consider such costs (especially relative to the size of the payment) when designing incentive payments. As market conditions are also likely to influence participation in incentive schemes, the impact of incentives can change over time and these schemes should be reviewed regularly.

There is considerable interest in how to improve the quality and outcomes of health care by providing better incentives, including "pay-for-performance" arrangements.[1] In Australia, financial incentives in primary care were first introduced in 1996, through the Better Practice Program, which was superseded by the Practice Incentives Program (PIP) in 1998.[2] The PIP offers 10 practice-level incentives, currently for: quality prescribing; early diagnosis and effective management of diabetes; cervical screening of under-screened women; continuing care for patients with asthma; encouraging better health care of Aboriginal and Torres Strait Islander patients; adopting new eHealth technologies; operating after hours; providing teaching sessions for medical students; practising in a rural location; and performing certain non-referred services in rural locations. Within the PIP framework, the Service Incentives Payment (SIP) was introduced in 2001; this is an additional payment that is paid directly to general practitioners for completing cycles of care for patients with diabetes and asthma, as well as for cervical screening of under-screened women.[3]

Medicare data for 2011 showed that 68% of eligible practices were registered for the PIP. Various factors can influence the response to incentives, including the size of the payment, and the financial and time costs of claiming payments. A survey of 315 GPs in five Divisions of General Practice (DGPs) in metropolitan Sydney found that the perceived administrative burden was a barrier to uptake.[4] Findings were similar in a series of semi-structured interviews in one DGP in Melbourne, which suggested that any risk that patients might perceive overservicing discouraged services that required further visits.[5] Doctors also argued that they provide "cycles of care" in a range of ways, and that a systematic approach to care was more important to them than government incentives. A study that used a survey of DGPs combined with data on SIP claims by DGP, found that there was higher uptake of incentives in more disadvantaged areas, and that larger practices are associated with a higher SIP coverage (and solo practices with a lower SIP coverage).[6]

Here, we extend what is known about the use of financial incentives by Australian GPs by analysing a larger, nationally representative survey of GPs. We also investigate changes in use over the 4 years, 2008 to 2011. In addition, we explore the characteristics that predict uptake of incentives among GPs and whether this has changed in the same period.

Methods

We used data from the Medicine in Australia: Balancing Employment and Life (MABEL) longitudinal panel survey of medical practitioners in Australia, which started in 2008. Participants in the survey were drawn from the national database of doctors; all doctors undertaking clinical work were invited to participate. MABEL includes four categories of doctors: GPs and GP registrars, specialists, specialists-in-training, and hospital non-specialists. In this study, we included GPs and GP registrars, as our focus was on primary care. The baseline 2008 cohort included 10 498 doctors, of whom 3906 were GPs; in each subsequent wave of doctors added to the MABEL longitudinal panel, a new cohort was invited to participate, and a top-up sample was added.

In MABEL, respondents were asked: "In the last year, approximately what percentage of your total gross earning did you receive from ... government incentive schemes and grants?"

As incentive payments are expected to account for a small proportion of total income,[3] we treated this as a binary variable (ie, any versus no income from government incentive schemes and grants). The MABEL questionnaire also collects data on practice and GP characteristics; we

Milica Kecmanovic PhD

Jane P Hall PhD

University of Technology, Sydney, Sydney, NSW.

Milica.Kecmanovic@uts.edu.au

doi: 10.5694/mja14.00252

1 Transitions in the proportion of doctors receiving payments from government incentive schemes and grants, 2008–2011

Payments	Year 1/Year 2			
	2008/2009	2009/2010	2010/2011	2008/2011
Received payments in Year 1	47.7%	43.8%	44.0%	43.8%*
Received payments in Year 1, did not participate in Year 2	38.4%	34.5%	34.7%	41.1%
Did not participate in Year 1, received payments in Year 2	27.5%	25.2%	26.0%	29.4%
Changes in participation as a percentage of total participation	32.7%	29.2%	29.9%	35.0%

*Received payments in 2011. ◆

used the variables that indicate the practice size (the number of GPs and the number of administrative staff in the practice), the GP's business relationship with the practice, the geographic location of the practice and the sex of the GP.

First, we established the trend in the use of incentive payments, and disaggregated this to show entry to and exit from receiving incentive payment income. To describe the factors that influence incentive use by GPs, we estimated a probit regression model with incentive use as the outcome variable and a number of practice- and GP-level explanatory variables (eg, practice size, relationship with practice, location). We used multivariate methods to control for these multiple factors simultaneously in determining what influences incentive use by GPs. We derived average marginal effects to estimate the difference in probability that a GP with a specific characteristic (eg, inner regional practice location) will participate in the incentive scheme compared with the reference characteristic (city location). We estimated the model in each of the 4 years of the survey, 2008–2011, to determine whether these changed over time. Analyses were conducted with Stata, version 12.0 (StataCorp).

The study was part of a research program approved by the University of Technology Sydney Human Research Ethics Committee (UTS HREC REF NO. 2009-143P).

Results

Almost all GPs (90%) reported receiving 10% or less of their income from government incentive and grant schemes. Around half (47%) reported receiving some incentive or grant income in 2008, and this number fell to 43% by 2011, with most of the decline occurring between 2008 and 2009. This small change does not tell us about stability in the individuals participating in these schemes. Box 1 shows the transitions in participation in grant and incentive programs for each 2-year period. Overall, around a third of doctors changed their participation in any year, but as the rate of exit from the schemes was higher than the rate of entry, overall participation fell.

Box 2 shows the results of the regression models for each of the years. Overall, there was little change in which characteristics were significant from year to year, so we focus here on 2008 and 2011. GPs working in larger practices, particularly those with more than 10 GPs, were more likely to be using incentives. Doctors working in such practices (relative to those in solo practice) were 13.6% (95% CI, 6.9%–20.3%) and 10.8% (95% CI, 3.4%–18.2%) more likely to use incentive schemes in 2008 and 2011, respectively. The number of administrative staff in the practice was another indication of practice size. In 2008, GPs working in a practice with more than 10 administrative staff (relative to practices with no administrative staff) were 10.8% (95% CI, −0.4%–22.0%) more likely to use incentive schemes. In 2011, this effect was much larger and statistically more significant at 27.1% (95% CI, 15.8%–38.4%) more likely to use incentive schemes.

The GP's relationship with the practice was also significant. Compared with associates, principals and partners were more likely, and salaried employees, contracted employees and locums were all less likely to be using incentive schemes.

By far the largest predictor of incentive scheme use was the location of the GP's practice. Relative to GPs in city practices, those in inner regional practices were 20.2% (95% CI, 16.6%–23.7%) and 22.2% (95% CI, 18.6%–25.7%) more likely to be using incentives in 2008 and 2011, respectively. This effect was even larger for GPs in outer regional practices, who (relative to GPs in city practices) were 33.6% (95% CI, 29.4%–37.7%) more likely to use incentive schemes in 2008 and 37.2% (95% CI, 33.2%–41.2%) more likely to do so in 2011. Finally, the sex of GPs does not appear to be a significant predictor of incentive use.

Discussion

Financial incentives other than Medicare Benefits Schedule-based fees for service were first introduced in Australia in 1996. Although the program has undergone many changes since its inception, it has been stable since 2006. Our results confirm previous findings that the proportion of income derived from incentive schemes and grants in Australian primary care has not been large.[3] In the MABEL longitudinal sample, less than half of the GPs received any income from incentives in 2008 and, 3 years later, this proportion had decreased by several percentage points. This is consistent with the observed fall in PIP payments[3] although we acknowledge that these are paid to practices while our data show use of incentive and grant schemes by individual GPs. More in-depth analysis of changes across the 4 years of our study shows a more surprising trend — that there

2 Marginal effects (standard errors and 95% confidence intervals) of factors associated with an increased likelihood of general practitioners claiming any government incentive schemes and grants

	Year			
Factors	**2008**	**2009**	**2010**	**2011**
Total observations	3906	3662	3664	3436
No. of GPs in practice (reference, 1)				
2–5	0.061* (SE, 0.028; 95% CI, 0.006 to 0.116)	0.079† (SE, 0.030; 95% CI, 0.020 to 0.138)	0.096† (SE, 0.032; 95% CI, 0.033 to 0.159)	0.086† (SE, 0.032; 95% CI, 0.023 to 0.150)
6–10	0.083† (SE, 0.030; 95% CI, 0.024 to 0.142)	0.038 (SE, 0.033; 95% CI, − 0.026 to 0.102)	0.088* (SE, 0.034; 95% CI, 0.020 to 0.155)	0.053 (SE, 0.034; 95% CI, − 0.014 to 0.121)
> 10	0.136† (SE, 0.034; 95% CI, 0.069 to 0.203)	0.067 (SE, 0.037; 95% CI, − 0.005 to 0.138)	0.093* (SE, 0.038; 95% CI, 0.019 to 0.166)	0.108† (SE, 0.038; 95% CI, 0.034 to 0.182)
No. of administrative staff in practice (reference, 0)				
1–5	0.062 (SE, 0.053; 95% CI, − 0.042 to 0.165)	0.044 (SE, 0.058; 95% CI, − 0.069 to 0.157)	0.042 (SE, 0.058; 95% CI, − 0.073 to 0.156)	0.086 (SE, 0.053; 95% CI, − 0.018 to 0.191)
6–10	0.052 (SE, 0.056; 95% CI, − 0.057 to 0.162)	0.066 (SE, 0.060; 95% CI, − 0.053 to 0.184)	0.064 (SE, 0.061; 95% CI, − 0.055 to 0.184)	0.121* (SE, 0.056; 95% CI, 0.012 to 0.231)
> 10	0.108 (SE, 0.057; 95% CI, − 0.004 to 0.220)	0.144* (SE, 0.062; 95% CI, 0.021 to 0.266)	0.157* (SE, 0.063; 95% CI, 0.035 to 0.280)	0.271† (SE, 0.058; 95% CI, 0.158 to 0.384)
GP's relationship with practice (reference, associate)				
Principal or partner	0.099† (SE, 0.023; 95% CI, 0.054 to 0.144)	0.058* (SE, 0.023; 95% CI, 0.012 to 0.103)	0.029 (SE, 0.024; 95% CI, − 0.018 to 0.075)	− 0.015 (SE, 0.025; 95% CI, − 0.064 to 0.034)
Salaried employee	− 0.109† (SE, 0.032; 95% CI, − 0.171 to − 0.047)	− 0.164† (SE, 0.031; 95% CI, − 0.225 to − 0.103)	− 0.206† (SE, 0.030; 95% CI, − 0.265 to − 0.147)	− 0.192† (SE, 0.031; 95% CI, − 0.254 to − 0.131)
Contracted employee	− 0.142† (SE, 0.022; 95% CI, − 0.184 to − 0.099)	− 0.188† (SE, 0.020; 95% CI, − 0.228 to − 0.148)	− 0.243† (SE, 0.020; 95% CI, − 0.282 to − 0.203)	− 0.216† (SE, 0.021; 95% CI, − 0.257 to − 0.174)
Locum	− 0.132* (SE, 0.053; 95% CI, − 0.236 to − 0.027)	− 0.215† (SE, 0.059; 95% CI, − 0.330 to − 0.100)	− 0.277† (SE, 0.055; 95% CI, − 0.385 to − 0.168)	− 0.147† (SE, 0.057; 95% CI, − 0.258 to − 0.036)
Practice location (reference, city)				
Inner regional	0.202† (SE, 0.018; 95% CI, 0.166 to 0.237)	0.228† (SE, 0.018; 95% CI, 0.194 to 0.263)	0.161† (SE, 0.018; 95% CI, 0.125 to 0.196)	0.222† (SE, 0.018; 95% CI, 0.186 to 0.257)
Outer regional	0.336† (SE, 0.021; 95% CI, 0.294 to 0.377)	0.288† (SE, 0.021; 95% CI, 0.247 to 0.329)	0.288† (SE, 0.020; 95% CI, 0.247 to 0.328)	0.372† (SE, 0.020; 95% CI, 0.332 to 0.412)
Sex of GP (reference, female)				
Male	0.007 (SE, 0.016; 95% CI, − 0.024 to 0.037)	0.015 (SE, 0.016; 95% CI, − 0.016 to − 0.046)	0.005 (SE, 0.016; 95% CI, − 0.025 to 0.036)	0.015 (SE, 0.016; 95% CI, − 0.016 to 0.047)

*Significant at $P \leq 0.05$. †Significant at $P \leq 0.01$. ◆

was a high rate of turnover among GPs who used these schemes, with some starting to use them, but a larger number ceasing to do so. There have been a number of changes to grants and incentives since the introduction of the Better Practice Program in 1996. However, the most recent changes — such as the Enhanced Primary Care Package, the SIPs, the increase in the GP attendance rebate to 100%, higher rebates for after-hours attendances, and new items for mental health services — had been introduced before 2008. Therefore, for the period of this study, entry and exit to the schemes would be expected to be stable.

It is not surprising that GPs' practice location was associated with incentive use, as a number of additional incentives are available for GPs in rural areas. Two PIPs are aimed exclusively at rural practices; one for practising in a rural location and one for performing certain non-referred services in rural locations. The effect of rural (this includes both inner and outer regional) locations did not change very much over the 4 years, which again is in line with the fact that the relevant policies have largely remained unchanged over this period, but in contrast to the retention of urban GPs.

Practice size, measured both by the number of GPs and the number of administrative staff in the practice, was a significant factor in incentive use in both 2008 and 2011. However, the effect of having more than 10 GPs in the practice diminished in magnitude from 2008 to 2011 while the effect of having a large number of administrative staff increased about 2.5 times in this period. This is consistent with there being a large administrative burden associated with claiming incentives.

The relationship of the GP with the practice was also important. Principals were more likely to claim incentive payments, and this may be due largely to payments being made to the practice. The Australian National Audit Office estimated that about two-thirds of general practices participated in the PIP,[3] a somewhat larger proportion than of individual practitioners. The effects of GPs' different relationships with the practice seemed to increase in magnitude over the 4 years, but the MABEL data had no further information on the

conditions of contract and salaried GPs, so we were unable to explore this further. Although these GPs may claim incentives, these may be paid to the practice rather than the individual practitioners, and thus do not affect individual income.

Although the MABEL dataset covers many aspects of medical practice, there is a lack of detail on aspects of employment and income. The data simply do not distinguish different types of payments, such as PIPs, from service-related payments, such as SIPs. A major potential limitation of our study is the representativeness of the MABEL sample. Generalisability in terms of age, sex and location is ensured. However, it is much more difficult to understand and compare sizes and styles of practice (including the effects of increasing corporatisation), which are likely to be relevant in our analysis.

Nonetheless, there are several implications for continuing or extending the use of financial incentives in Australian general practice. It is important to consider the administrative cost of claiming any incentive, as well as the cost of providing the service relative to the reward. The decreasing participation of urban GPs may reflect some blunting of the incentive effects of relatively small payments, as they become less effective over time. The higher retention of rural practitioners in claiming incentives may reflect a higher reward relative to effort for rural incentives, or the characteristics of rural practice. The response to incentives depends not just on the design of the incentive, but also on other conditions, such as levels of demand for, or changes in approaches to treatment. For example, faced with increasing demand. it may involve less effort to increase the number of consultations than to claim additional payments. This also applies to disincentives, such as reduced rebates and/or higher patient copayments. For these reasons, financial incentives should be reviewed and evaluated regularly. Finally, this and similar studies only show the use of incentives by providers. The impact on patients, their care and their health also warrants investigation in any evaluation of the role of financial incentives.

Acknowledgements: This research used data from the MABEL longitudinal survey of doctors conducted by the University of Melbourne and Monash University (the MABEL research team). Funding for MABEL comes from the National Health and Medical Research Council (Health Services Research Grant: 2008–2011; and Centre for Research Excellence in Medical Workforce Dynamics: 2012–2016) with additional support from the Department of Health (in 2008) and Health Workforce Australia (in 2013). The MABEL research team bears no responsibility for how the data has been analysed, used or summarised in this research.

Competing interests: No relevant disclosures.

Received 24 Feb 2014, accepted 17 Feb 2015. ■

References are available online at www.mja.com.au.

1 Campbell SM, Scott A, Parker RM, et al. Implementing pay-for-performance in Australian primary care: lessons from the United Kingdom and the United States. *Med J Aust* 2010; 193: 408-411.

2 Russell LM. Primary care and general practice in Australia 1990–2012: a chronology of federal government strategies, policies, programs and funding. Canberra: Australian National University, 2013.

3 Australian National Audit Office. Practice Incentives Program. Audit report no.5, 2010–11. Canberra: Commonwealth of Australia, 2010.

4 Zwar NA, Comino EJ, Hasan I, Harris MF; Primary Health Care Research Network. General practitioner views on barriers and facilitators to implementation of the asthma 3+ visit plan. *Med J Aust* 2005; 183: 64-67.

5 Saunders M, Schattner P, Mathews M. Diabetes 'cycles of care' in general practice - do government incentives help? *Aust Fam Physician* 2008; 37: 781-784.

6 Georgiou A, Burns J, Harris M. GP claims for completing diabetes 'cycle of care'. *Aust Fam Physician* 2004; 33: 755-757. ■