Performance-based pharmacy payment models: the case for change

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Abstract. In response to rising healthcare costs, healthcare payers across the globe have been experimenting with performance-based payment models that link payments to providers with the quality of care that they provide. Community pharmacy in Australia has yet to be significantly affected by these changes. Initial steps have been taken to fund quality-linked interventions by pharmacists, such as the provision of medicines in dose administration aids, but funding for dispensing prescriptions remains solely based on a fee-for-service model. At the foundation of any performance-based payment model are measures that, in aggregate, reflect the quality of care that is provided. Patient adherence to prescription regimens can be correlated with the counselling provided by pharmacists and, as such, can serve as the measure on which a performance-based payment model for dispensing can be constructed. Experience in the US suggests per-prescription payments to a pharmacy can be increased or decreased by a small, yet meaningful, amount based on a measure of the level of adherence of patients of the pharmacy. The current dispensing payment model in the Australian Pharmaceutical Benefits Scheme may be able to be modified in a similar manner to support provision by pharmacists of improved quality of care.

What is known about the topic? Dispensing in community pharmacy in Australia is currently remunerated on a fee-for-service basis that carries no incentive to deliver an enhanced performance that could lead to improved quality of care.

What does this paper add? Several countries have introduced alternative payment models that link the level of funding to the quality of services provided by healthcare practitioners, and potentially to patient outcomes. Counselling is an integral aspect of pharmacists’ dispensing and, based on the principle that counselling improves adherence, which improves outcomes, remuneration paid to a pharmacy for dispensing could be adjusted in relation to the level of adherence demonstrated by patients of the pharmacy.

What are the implications for practitioners? Pharmacists would be incentivised through quality-linked dispensing remuneration to provide enhanced counselling and other inputs that lead to improved patient outcomes and health system benefits.

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Introduction

Across industrialised nations, healthcare spending is rising faster than inflation, consuming a growing share of the gross domestic product (GDP) of respective countries. Australia’s expenditure on health care grew 4.7% per annum over the 10 years to 2015–16,1 outstripping inflation of 2.6% per annum (https://www.rba.gov.au/calculator/annualDecimal.html, accessed 18 June 2019), and now consumes 10% of its GDP.1 Although some healthcare programs incorporate cost-effectiveness evaluation,2 when measured using a standardised set of metrics, spending more on health care does not ensure improved health outcomes.3 Stated simply, nations struggle to ensure they receive value for the increasing amount of money they spend on health care.4 At its most basic, value is the ratio of quality to costs. Measuring and managing these variables in health care is not a simple process,3,6 particularly as the traditional fee-for-service payment models such as those used in pharmacy are not linked to quality or outcomes and have the potential perverse effect of over-serving and inflating costs.7

To enhance value, policy makers in several countries have developed alternative payment models whereby funding is linked to the function of the healthcare practitioner or facility, and potentially to patient outcomes. For example, a voluntary...
Pay-for-performance program was introduced to general medical practitioners in the UK in 2004 based on a range of clinical, organisational, patient experience and other targets. At the same time, financial incentives were introduced to reward primary care physicians in Germany for better quality of care. In New Zealand (NZ), a performance-based payment system was introduced for primary health organisation in 2006 to improve health outcomes and reduce inequalities, whereas a focus in the US has been to provide financial incentives to improve the quality of hospital-based care.

Performance-based funding primarily aims to drive improvements in safety and efficacy of care, whereas timeliness, efficiency and equitable access are further objectives. The term ‘performance-based funding’ is used to describe a range of funding models ranging from payment for quality-linked inputs to more complicated outcome-based models that link the level of remuneration with outcome measures.

**Healthcare payment models: from volume to value**

All payment models for healthcare services have the potential to distort performance, despite the high ethical standards to which health professionals normally aspire. Fee-for-service only results in income if a service is provided, and so has the potential for more service to be delivered than genuinely necessary. Capitation-based models result in income based on levels of enrolment rather than service and have the potential for as little service as possible being delivered to the enrolled cohort. Salary payments lack an incentive to perform, whereas a pay-for-performance model has the potential for services to be limited to just those for which payment is allocated. In recognition of the weaknesses that exists in all models, many developed countries have investigated blended payment models for health services incorporating basic fee-for-service or capitation payments supplemented by performance-based payments linked to input or outcome measures.

Well-designed performance-based payment models have the potential to create meritocratic systems wherein providers delivering exceptional care are rewarded and providers failing to do so are incentivised to improve. Theoretically, a performance-based system can be implemented as a cost-neutral change, with payments to high performers offset by reductions in payments to low performers. In the US, healthcare providers have responded positively to these systems, and payers have used them to incentivise the delivery of higher-quality services without additional fee-for-service payments.

Although Australia spends significantly less, proportionally, on health care than in the US, there is still a benefit in supporting quality and value, and the practice incentive payment (PIP) model in general medical practice is an example of a performance-based funding model that has been introduced. As a supplement to fee-for-service payments to general practitioners (GPs), the Federal government provides PIP payments to general medical practices to encourage improvements in services in areas such as asthma, cervical screening, diabetes and Indigenous health. As a means of improving access, medical practices can also receive incentive payments for the provision of services outside of normal business hours. These activities appear to influence the behaviour of GPs, but the evidence of impact on health outcomes remains limited at this stage. Concerns regarding the administrative burden, lack of targeting of payments and gaming by practitioners to maximise revenue mean that questions remain whether the current model provides value for money.

Results from some prominent performance-based funding models in the US have been variable. A major policy making board recently voted to repeal a flagship performance-based physician model because ‘the system is too burdensome for physicians and won’t push them to improve care’. Experience has shown that designing performance-based payment models takes concerted effort and deliberation, and that unless models are well constructed, payments to high performers could be unfairly withheld and patients’ health disparities could be worsened. Nevertheless, if designed appropriately, these models have the potential to improve quality while reducing overall costs and are viewed more favourably than traditional cost-reduction strategies.

**Performance-based community pharmacy payment models**

The only financial incentive for a pharmacist funded for dispensing on a fee-for-service basis is to dispense as many prescriptions as they can, as quickly as possible. The pharmacist is financially disadvantaged if he/she increases the time spent counselling a patient or advising them to delay having a prescription dispensed when it appears that they should still have an adequate amount of medication.

Historic funding models have rewarded volume over quality and despite this, performance-based payment models for community pharmacy have been slower to emerge than for other parts of the health system. France has introduced performance payments linked to the percentage of prescription items pharmacists dispense as generics and for a reduction in the use of benzodiazepines by elderly people. In 2016, NHS England introduced a Quality Payments Scheme as part of its contractual framework with community pharmacies. The scheme incorporates seven payment criteria addressing clinical effectiveness, patient safety and patient experience. Examples of criteria that can be linked to funding include utilisation review of anti-inflammatory drugs, prevention of look-alike, sound-alike drug errors, patient satisfaction surveys and risk-management training of staff.

However, in the US, over the past 5 years performance-based pharmacy payments have evolved from a one-off oddity to a feature in the majority of prescription reimbursement plans serving elderly patients. Uptake of these models has been slower in the private sector, but there is widespread acknowledgement that performance-based payment models are now a permanent feature of the US pharmacy payment landscape.

In Australia, the Federal government’s Pharmaceutical Benefits Scheme (PBS) is the arm of the National Medicines Policy that ‘provides timely, reliable and affordable access to necessary medicines for Australians’. PBS dispensing remuneration has historically included a percentage of the cost of the drug to cover commercial costs relating to supply plus a fixed dispensing fee covering professional activities. Based on socioeconomic parameters, patients pay a copayment towards the cost of the prescription, and the Federal government pays the pharmacy the balance (Fig. 1). The growing recognition that pharmacy
profitability should not be reliant upon the value of the products dispensed has resulted in the introduction of a payment model in which the mark-up on drug costs has been reduced and the dispensing fee has been supplemented by an administration, handling and infrastructure fee.28

However, this change is still driven by a fee-for-service mindset instead of a quality or value mindset, and continues to rely upon an episodic payment linked to the supply of a medicine rather than the pharmacist’s contribution to enhancing the patient’s understanding or the outcome of their treatment. The funding does not vary with the therapeutic margin or the toxicity of the drug or the complexity of the dose regimen, all of which may influence the level of professional expertise or duration or nature of counselling required to promote the quality use of the medicine. Prescription funding in Australia is not currently linked with any direct or indirect outcome measure aligned with the pharmacist’s service.

Pharmacists’ quality-improvement services, such as the provision of in-pharmacy medication reviews (MedsCheck) or packing dispensed medicines into dose administration aids, augment this traditional prescription payment model. The Federal government provides separate fee-for-service payments for each episode of these services (Fig. 2).28 The NZ Community Pharmacy Long Term Conditions Service, which funds pharmacists to provide support to patients with chronic conditions experiencing medication adherence issues, is a further example of an outcome-focused performance payment for pharmacist.29,30

It is unlikely that pharmacy in Australia can continue to rely on an episodic, fee-for-service model of remuneration for dispensing and enhanced service delivery while healthcare funding agencies globally consider performance-based remuneration. In recognition of variations in the level of the pharmacists’ input and to deliver greater value, prescriptions could be funded using a blended model that combines a basic fee-for-service payment with a performance-based adjustment linked to quality-related inputs, or preferably improvement in outcomes (Fig. 3).

In the US, performance-based pharmacy payment models typically assign a score to pharmacies and use this score to determine upwards or downwards adjustment to payments, such as for prescriptions. The score is normally a composite of several component measures, but there has not been a published study on the validity of composite pharmacy performance measures. Given the pharmacy profession’s minimal experience in performance measures in Australia, it would be wise to begin with a simple set of input and outcome measures.

Adherence as a performance measure

Beyond distribution services and fulfilling basic medication safety functions, one way in which pharmacists add value to the healthcare system is through improving medication adherence. In health care, adherence is usually defined as ‘the degree to which the person’s behaviour corresponds with the agreed recommendations from a health care provider.’31, p.23 In relation to prescribed medicines, this can be expressed as the ratio of the number of doses taken to the number prescribed in a given time period.31

Non-adherence is a widely recognised and global problem. Contributing factors to non-adherence include failure to have a prescription dispensed when the medication is initially prescribed (primary non-adherence) or not using a dispensed medicine as prescribed or not having a repeat dispensed (secondary non-adherence).32

The World Health Organization reports that rates of adherence in developed countries average only 50%.31 A measure of adherence drawn from the dispensing records of 732 patients of
91 Australian pharmacies and based on the number of scheduled doses patients may have missed between dispensing episodes resulted in an average score of 65.5 out of 100. This result aligns with an Australian study of compliance in 448 patients with type 2 diabetes that indicated that the prevalence of adherence, as measured by the Morisky Medication Adherence Scale score, was 64.6%. Across a diverse range of conditions, non-adherence has been associated with worse outcomes. In addition, the cost of non-adherence is enormous, with estimates of the annual cost of non-adherence in the US alone exceeding US$100 billion. Studies have generally shown that although improving adherence increases spending on prescriptions, this increase is offset by greater decreases in other healthcare spending.

Numerous well-designed studies have demonstrated that pharmacists can provide interventions (input measures) that improve adherence. Examples of such interventions include packing medications into dose administration aids, appointment-based medication synchronisation (a method of aligning the repeat dispensing of all of a patient’s prescriptions to a single date each month) and short counselling interventions designed to improve adherence at the time of prescription collection. In demonstrating improvements in adherence, the Pennsylvania Project in the US showed that brief screenings coupled with a 2- to 5-min intervention to improve adherence was successful in reducing medical costs by US$241 per annum per patient taking statins and US$341 per annum per patient taking oral antidiabetic drugs.

Not only is there a well-established link between pharmacists’ inputs to improve adherence and the result of that improvement on meaningful health outcomes, but the methodology to measure adherence is also well established and many adherence measures have been validated. Although payment models are considered proprietary information in the US and consequently the details are not public knowledge, three sets of measures used to support performance-based pharmacy payment models have been published and all use adherence measures.

Adherence can be measured for a pharmacy by comparing the consolidated data of prescribed dispensing schedules based on dose and prescription quantities for patients of the facility with their actual dispensing schedules. Although adherence is not a direct measure of the outcome of care, the relationship between adherence and health outcomes is quite strong. Therefore, using adherence as the basis for a performance-based payment model for a pharmacy is a reasonable first step.

Global developments indicate the current dispensing payment model in Australia could be modified to support provision by pharmacists of enhanced counselling and other inputs that improve the quality of care. The basis of pharmacy remuneration would transition from solely volume based to a blended volume and value basis, with increased payments to high-performing pharmacies offset by reductions in payments to low performers.

Designing a new payment system for pharmacist services

An Australian review of health system performance-based payments recommended several criteria for development, including collaboration between the funders and service providers to build on fee-for-service models that currently exist. The review identified the need for good baseline data and strong information systems and advised that performance targets should be achievable with some additional effort, and that incentives should be equitable and transparent.

In the US, the Pharmacy Quality Alliance (PQA) was founded in 2006 to develop standards for use in measuring the quality of care provided through government-sponsored prescription drug plans for elderly patients. PQA’s membership comprises pharmacies, health funding agencies, pharmaceutical industry and academia. The PQA serves as a neutral developer and tester of medication-related quality measures, and currently PQA measures are the cornerstone of performance-based pharmacy payment models (https://www.pqaalliance.org/our-story, accessed 18 June 2019). A first step for pharmacy in Australia would be to establish a similar broad-based body including professional associations, academics, regulators and funding agencies to scope and assess the application of potential performance-based measures.

Once candidate measures are identified, rigorous testing should be undertaken to assure measure reliability and validity, and economic modelling performed to estimate likely outcomes. The modelling should incorporate the principles of equity of access and affordability on which the publicly funded PBS is based, and ensure no disadvantage to subgroups of the population, including rural patients and those who receive concessional benefits based on socioeconomic need. In addition, issues,
including risk adjustment and composite measure construction, would have to be explored in the Australian context before these measures could be implemented to support a performance-based payment model.

Conclusion

The healthcare systems across industrialised nations are transitioning from fee-for-service towards blended payment models incorporating some form of performance-based remuneration. Funding for dispensing of prescriptions by community pharmacists in Australia has yet to make such a transformation. For pharmacy to demonstrate and be recognised for its perceived value in the healthcare system, the transition towards performance-based payments is necessary.

Drawing on international experience, a first step towards a new remuneration model for dispensing could be to link adjustments to payments with a performance measure such as patients’ adherence to prescribed medicines. The model proposed in this paper is based on evidence that pharmacists’ interventions, such as counselling, can improve adherence. Further evidence is provided that non-adherence is associated with worse outcomes. The combination of the two principals, namely that counselling improves adherence, which improves outcomes, forms the basis of the model. To be successful, the measure would have to be developed and validated specifically within an Australian context.

Competing interests

The authors declare no competing interests.

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