Health Economics, Policy and Law (2024), page 1 of 16
doi:10.1017/S1744133123000336

HEALTH ECONOMICS, POLICY and LAW

ARTICLE

Preconditions for efficiency and affordability in mixed health systems: are they fulfilled in the Australian public–private mix?

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(Received 10 November 2023; accepted 18 November 2023)

Abstract
The Australian health system is characterised by high quality care by international standards, produced by a mix of public and private provision and funding of healthcare services. Despite good overall results, three issues are of concern. The first issue relates to the public procurement of healthcare, whose flaws have impacted individuals' access to care, and the high out-of-pocket spending. The second issue concerns the sustainability of the private health insurance market, given the government's goal of relieving cost and capacity from the public scheme, incentivising participation. Third, there are existing inefficiencies and inequities related to the duplication resulting from the interaction between public and private schemes. To ensure a sustainable, efficient and equitable health system, structural reforms are necessary to achieve long-term performance improvements. Using a framework for mixed public–private health systems, we assess the extent to which the Australian healthcare system achieves preconditions for efficiency and affordability in competitive healthcare markets.

Keywords: health policy; health reform; health system; Private Health Insurance; Healthcare market

1. Introduction

The Australian healthcare system is perceived to achieve high performance by international standards (Henriquez *et al.*, 2019). Confronting global challenges common to high-income countries' health systems, such as ageing, chronic disease burden and costs of technological innovation, the country has been able to maintain a high health budget (NSW Health, 2021). Nevertheless, budgeting lacks the inherent capacity to tackle the long-term challenges and prevailing structural issues that impact access, equity and efficiency.

The proliferation of governmental commissions in recent decades, including the Special Commission of Inquiry in NSW announced in August 2023, underscores an indication of the inherent structural problems within the system. Current health system challenges, such as a surge in out-of-pocket (OOP) expenses, shortages in the healthcare workforce and an increase in waiting times for elective and specialist care, necessitate the formulation of solutions to address underlying concerns.

A public–private mix in terms of funding and provision characterises the Australian health system. While Medicare is the universal public scheme, roughly half of the population is enrolled in voluntary private health insurance (PHI) subsidised by the government. Three main issues are a cause for concern. The first issue relates to public procurement of health services, specifically

the absence of active purchasing. A salient example pertains to primary care, where GPs have freedom to charge above rates set by the Government, resulting in increased OOP payments by patients, presentation to emergency department and delayed care (Biggs, 2016). Furthermore, in relation to in-hospital care, an increase in waiting times for elective procedures has been observed (AIHW, 2022a).

The second issue pertains to the sustainability of the PHI market. The underlying PHI regulatory framework, as well as the 'carrots and sticks' in place to encourage participation (e.g. premium rebate, Medicare Levy surcharge (MLS), Lifetime Health Coverage (LHC)), have reached their limits of effectiveness. A primary concern relates to the adverse selection spiral which has affected private hospital insurance.

Thirdly, in terms of hospital coverage, there are two possible purchasers of care at the point of use: PHI or the public scheme. Several inefficiencies arise due to this duplication. For instance, one in four PHI holders chose to use public instead of private hospitals (Rana *et al.*, 2020). There is no unequivocal evidence that the government subsidies to PHI premiums, that amount to $6.7 billion per year, offset public sector costs and capacity, and are the best use of public resources (Duckett, 2018). Furthermore, as financial responsibility and purchasing power are diluted among the public and private schemes, individuals become less aware of their purchasing behaviours, and competition is hindered.

The degree to which efficiency and equity are achieved in the current mix is being questioned. Various reform approaches have been proposed in the last decade, envisioning revised structures to address these problems, ranging from single-payer NHS-type structures (e.g. McAuley, 2008) and multi-payer SHI-type environments as in the 'Medicare Select' (NHHRC, 2009) and Private Health Ministerial Advisory Committee proposals (PC, 2017). Despite these efforts, reforms to addressing these issues have not materialised.

In this paper, we explore the potential of the model of managed competition to overcome current structural deficiencies. This model has the appeal of accommodating the current mixed system through a redefinition of roles and an integration of the existing actors into a coherent system of competing insurers and providers within a regulated environment. However, a number of complex technical and institutional preconditions must be fulfilled to successfully introduce and reap the benefits of such a system (Bevan and van de Ven, 2010; van de Ven *et al.*, 2013). To our knowledge, no previous research has assessed the preconditions for this model in Australia.

The aim of this case study is to assess the extent to which the Australian health system satisfies the preconditions for affordability and efficiency derived from the theoretical framework of managed competition for mixed public–private health systems (Henriquez *et al.*, 2024). The study primarily focuses on the technical aspects, while considering the country's specific contextual factors.

2. Methods

We used five-stage approach for the case study (Crowe *et al.*, 2011): (1) defining the case; (2) selecting the case; (3) collecting and analysing the data; (4) interpreting data; and (5) reporting the findings to understand to what extent the framework's preconditions are fulfilled in Australia. We selected the Australian health system because of its unique mixed design, characterised by duplication between the public and private schemes. The literature review was developed in PubMed, Scopus and Web of Science, including qualitative and quantitative sources limited to English language studies (appendix Table 1A). To minimise the risk of missing relevant literature, forward and backward snowballing of included studies was performed, and other evidence was added manually (appendix Table 2A). Studies were selected if they were relevant to the Australian health system and discussed the relevant preconditions of the theoretical framework. Screening, selection and synthesis of relevant studies were independently conducted by two authors, and any conflict was solved by consensus with a third author. Following the framework

https://doi.org/10.1017/S1744133123000336 Published online by Cambridge University Press

of preconditions, findings from different sources including peer-reviewed articles, government reports and international organisation databases (e.g. OECD) were integrated for risk of bias, data triangulation and internal validity purposes (appendix Table 3A), and findings were discussed narratively.

3. The public–private mix in the Australian health system

The Australian health system is organised into three political and administrative tiers: the Commonwealth (federal), state and local governments. Table 1 shows the responsibilities of these three levels. A notable overlap exists in the shared funding of public hospitals, with the Commonwealth contributing 40.4 per cent, and the States and local governments 52.5 per cent (AIHW, 2022b).

The Australian health system is characterised by a public–private mix in terms of funding and provision. Two main schemes exist, as described below.

3.1 The public scheme: Medicare

Medicare, the public scheme, is a universal, subsidy-based scheme funded by the Commonwealth through general taxation and a 2 per cent Medicare Levy on taxable income. It provides subsidies for a comprehensive package of benefits, including in-hospital, emergency and out-of-hospital services (e.g. GPs and specialists, diagnostic imaging and radiology), and pharmaceuticals. The

Table 1. Overview of responsibilities of Commonwealth, States and Local governments

Commonwealth	States and territories	Local governments
• National health policy plan • Medicare (including subsidising MBS, PBS) • Joint funding of public hospitals with States • Funding of community controlled indigenous primary health care • Funding of National Health and Medical Research Council • Regulation of medicines and devices	• Management of public hospitals • Funding of public hospitals • Licensing private hospitals • Delivery of public community based and primary health services (incl. mental and dental health, drug and alcohol) • Ambulance services	• Environmental health-related services • Provision of some community and home-based services • Delivery of public health and promotion activities
Shared		
• Regulation of health workforce • Education and training of workforce • Improvements in safety and quality • Funding of public health programmes and services • Regulation of pharmaceuticals and pharmacies		

Source: Own elaboration based on (Duckett and Willcox, 2015; Biggs, 2016; AIHW, 2018).

https://doi.org/10.1017/S1744133123000336 Published online by Cambridge University Press

fees are set in the Medicare Benefits Schedule (MBS), and listed prescription drugs are subsidised via the Pharmaceutical Benefits Schedule (PBS).

GPs act as gatekeepers, requiring a prescription for accessing pharmaceuticals, diagnostic imaging and radiology, as well as referrals for specialist care. Most GPs operate in private practice and are paid on a fee-for-service basis. If Medicare is billed directly ('bulk billing'), then patients do not face OOP, meaning that practitioners accept the fees as a full remuneration. Specialists are also paid on a fee-for-service basis and are free to set their own fees. Subsidies for referred out-of-hospital services come to 85 per cent of the MBS fees.

To ensure the coordination of primary health in the regions, the federal government funds Primary Health Networks (PHN). In terms of in-hospital care, individuals can access public hospital services free of charge at the point of use. This applies also to emergency department presentations. The Independent Health and Age Care Pricing Authority (IHACPA) is responsible for implementing Activity Based Funding (ABF) for public hospitals and determining the services included in the benefit package. Block funding is also provided for certain services, which are more common in rural and remote hospitals.

Included services are appraised through Health Technology Assessment performed by the Medical Services Advisory Committee (MSAC), and drugs are appraised by the Pharmaceutical Benefits Advisory Committee (PBAC), under clinical- and cost-effectiveness guidelines. Safety nets exist and allow patients to receive the full MBS fee rebate, a refund of OOP expenses or benefit caps, depending on total accumulated expenditure. The PBS safety net protects patients against high expenditure but is not integrated with the MBS safety nets and uses separate thresholds.

3.2 Private health insurance

PHI in Australia provides coverage for private treatment in public or private hospitals and for general treatment, which includes services not covered by Medicare (e.g. dental). Roughly 45 and 55 per cent of the population hold hospital and general treatment policies, respectively (APRA, 2021). The attractiveness of PHI to consumers lies in its ability to offer increased choice, bypass public waiting times for elective surgery and provide a higher perceived quality of inpatient services that are already covered under Medicare.

Funding of products comes from community-rated premiums paid by individuals (i.e. the same premium for the same product regardless of individuals' characteristics). Open enrolment regulation exists, meaning that individuals cannot be excluded because of pre-existing conditions. Due to these regulatory tools, a risk equalisation scheme is in place, consisting of two components: an age-based pool (ABP) that equalises actual claims based on predetermined age weights, and a high-cost claimants pool (HCCP), that shares 82 per cent of the costs above $50,000 AUD discounted from the ABP (Paolucci *et al.*, 2018).

Although enrolment is voluntary, the government encourages participation through a combination of 'sticks and carrots', aiming to reduce capacity and cost pressure on the public scheme. Premium rebates, subsidised by the government, offer a percentage discount on the premium, which varies based on age and income. The MLS imposes a levy on those high-income individuals, which do not hold appropriate PHI coverage. The LHC charges a 2 per cent loading fee for every year of missed enrolment for those who join after 31 years of age (Paolucci et al, 2018).

The product design of hospital treatment coverage has two broad components: included services, divided into basic, bronze, silver and gold tiers, defined by clinical categories; and cost-sharing, where policies can contain co-payments, excess (deductibles) and exclusions. Moreover, Medicare covers 75 per cent of the MBS for private patients, while private hospital insurance the remaining 25 per cent. Any amount charged on top of the listed fees might be covered partially or fully by PHI. The overall OOP payments for private patients depend on: (1) product excess, caps

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or hospital co-payment; (2) insurer agreement with the hospital; (3) gap cover agreements with doctors; and (4) hospital eligibility for a second-tier default benefit (DHAC, 2021).

3.3 Provision of services

Public and private hospitals account for a significant share of the total health funding, approximately 41 per cent (AIHW, 2022b).

3.4 Public hospitals

Australian public hospitals provide a comprehensive range of services, including emergency, day-surgery and elective surgeries. Public hospitals are part of and managed by Local Hospital Networks (LHN), funded through the Commonwealth's contribution to State and Territories. Cases are classified using the Australian Refined Diagnosis Related Groups (AR-DRGs). The IHACPA calculates the National Efficient Price (NEP). For private patients, public hospitals can only charge fixed rates. Between 2019 and 2020, a total of $83.5 billion was spent on hospitals (AIHW, 2022b), marking a 2.9 per cent increase in real terms compared to the previous period, possibly due to COVID-19 measures.

3.5 Private hospitals

Private hospitals coexist with public hospitals, but they are not perfect substitutes. While public ones provide a comprehensive range of services, private ones tend to specialise in elective care, accounting for about two-thirds of all elective surgeries (AIHW, 2018). About 80 per cent of private hospitals are in major cities and wealthier metropolitan areas, where PHI is more prevalent (Duckett and Willcox, 2015). Private hospitals primarily serve PHI-insured. Indeed, the majority (71 per cent) of the $16.3 billion spent on private hospitals was funded by PHI ($8.2) and patients ($2.2) (AIHW, 2018). The Commonwealth and States also contribute to funding, with $3.8 billion (23 per cent) and $1 billion (6 per cent) respectively, largely through the 75 per cent MBS fee contribution for private patients.

3.6 Stewardship

Many federal agencies are involved in healthcare, with responsibilities for funding, technology assessment and providers' quality (see Table 2). For instance, the Department of Health and Age Care oversees national policies and programmes, including the MBS and PBS. Other bodies are responsible for regulating various aspects of the PHI (Table 3), including prudential regulation and consumer protection.

4. The model of managed competition

Managed competition is often defined as a third way between the public and a free market in healthcare systems. This model organises and integrates healthcare financing and provision through competitive health plans, involving three main actors: consumers, health plans and regulators. This model should allow consumers to make cost-conscious choices among health plans offered by private health insurers that compete on price and quality (Enthoven, 1978, 1988).

However, without regulation, competitive health insurance markets are subject to several market failures such as imperfect information, risk selection, free riding, etc. (Enthoven, 1978, 1988). Therefore, the regulator, usually the government, introduces a number of regulatory tools to achieve equity and efficiency (van Kleef and McGuire, 2018). The theoretical model of managed

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Table 2. Federal governance and stewardship agencies

Australian Commission on Safety and Quality in Health Care (ACSQHC) • Lead and coordinate improvements in healthcare safety and quality
National Health Performance Authority (NHPA) • Report on the comparable performance of Local Hospital Networks, public and private hospitals and other key health service providers
Pharmaceutical Benefits Advisory Committee (PBAC) • Provide advice to the Minister for Health on the cost-effectiveness of new pharmaceuticals
Medical Services Advisory Committee (MSAC) • Appraise new medical services proposed for public funding, and provide advice to Government on whether a new medical service should be publicly funded
Therapeutic Goods Administration (TGA) • Oversee supply, imports, exports, manufacturing, medical devices, pharmaceutical safety and advertisement
Australian Health Practitioner Regulation Agency (AHPRA) • Ensure registration and accreditation of the workforce in partnership with national boards
Local Hospital Networks (LHN) • Manage public hospital services and funding • Accountable for hospital performance

competition entails 13 preconditions that need to be fulfilled in both the insurance and provision markets (van de Ven *et al.*, 2013; Henriquez *et al.*, 2024).

Reforms based on the model of managed competition have been proposed in Australia, such as 'Medicare Select' (NHHRC, 2009). This proposal aimed at establishing consumer choice between government and private non-profit 'health and hospital plans', expanding the role of Medicare as the sole funder of a government-mandated universal set of health services and pharmaceuticals. The plans are funded through risk adjustment subsidies and strategically purchase services through contracting arrangements with competing public and private providers. Moving towards this model would require substantial changes, including redefining the current role of PHI and the subsidy-based Medicare scheme, as discussed in the next section.

https://doi.org/10.1017/S1744133123000336 Published online by Cambridge University Press

Table 3. Government bodies responsible for overseeing PHI

Department of Health and Age Care • Administer PHI under the Private Health Insurance Act 2007 • Health and Aged Care Ministry, approving private health insurance premiums
Australian Prudential Regulation Authority (APRA) • Prudential supervision with a focus on solvency and capital adequacy • Management of the risk equalisation cash flows
PHI Ombudsman (PHIO) • Protect the interests of private health insurance consumers (e.g. complaints)
Competition and Consumer Commission (ACCC) • Deal with competition and consumer issues

5. Preconditions for efficiency and affordability in competitive healthcare markets: to what extent are they fulfilled in Australia?

Following the theoretical framework of managed competition for mixed public–private health systems (Henriquez *et al.*, 2024), we assess the extent to which the 13 preconditions are met in the Australian healthcare system.

5.1 Basic benefit package

A comprehensive benefit package exists in the universal public scheme. The scenario differs for PHI. Insurers cannot cover certain services such as GP care and primary care, consultations with specialists, diagnostic imaging and tests, or the PBS. Therefore, PHI coverage cannot perfectly substitute the public scheme (Paolucci *et al.*, 2018). This imperfect duplication causes inefficiencies as the two systems interact.

A move towards managed competition would require a single benefit package, which may include what is currently funded under the MBS and PBS, to be offered by all market participants. Arguably, any gaps in service coverage would have to be dealt with overtime with the appropriate assessment. This would overcome part of the current inefficiencies caused by duplication, through a less ambiguous role of PHI, which could be redefined as a primary source of coverage. Coverage linked to general treatment policies currently offered by PHI could remain, while the role of the current subsidies it attracts would require revaluation as the justification is less clear cut.

The definition of the benefit package is a key factor. Currently, the Australian Health Technology Assessment (HTA) is led by two independent statutory bodies: MSAC for MBS and PBAC for PBS. The primary strength of current federal HTA arrangements is the independent nature of the process that could be maintained. However, improvements are advocated in terms of (1) timing due to multiple submissions required for a medicine approval that cause delays; (2) expansion of current priority setting criteria to consider social values along with clinical and economic evidence; (3) enhanced transparency of the process and public stakeholder engagement (Whitty and Littlejohns, 2015; Kim *et al.*, 2021).

https://doi.org/10.1017/S1744133123000336 Published online by Cambridge University Press

5.2 Affordable out-of-pocket payments

Overall, OOP represents roughly 18 per cent of total health spending in Australia, which is 2 percentage points below the OECD average (OECD, 2022). Despite the relatively low importance of OOP in healthcare financing compared to international standards, it has become an increasing issue for households. For example, 17.6, 7.7 and 3.4 per cent of people did not see a dentist, specialist or GP, due to cost (ABS, 2019).

Cost-sharing structures, which define how much and for what services, contribute to determining the level of OOP spending. While public patients in a public hospital receive free care, out-of-hospital services might attract OOP for GP or specialists, diagnostic imagining, pathology, radiation or chemotherapy, dialysis, rehabilitation, pharmaceuticals. A prominent situation relates to GP care and how it is funded. While a significant portion of Australians are bulk-billed for GP care, which means patients do not incur in OOP expenses, Medicare quarterly statistics reveal bulk-billed rates are at a 10-year low (76.8 per cent) (DHAC, 2023). As a result, the average patient contribution per service has reached $75.3 (DHAC, 2023). Some underlying reasons include an extended freeze on MBS fees and the increasing costs of running a GP practice. Moreover, the voluntary nature of fee setting, and the adoption of bulk-bill payments have led GP practices to pass costs onto patients as a funding source.

In the case of PHI, policies can contain excess, co-payment and exclusions. These types of policies now constitute a significant proportion of the products in the market, such as 86.8 per cent of hospital and 61.8 per cent of general treatment policies (APRA, 2022a). On top, due to differences between financial coverage and fees, gap payments can exist. The average gap payments have consistently increased to a current all-time high of $226 dollars (APRA, 2022b).

To fully fulfil this precondition, reform options include reducing the financial risk that is shifted towards patients and establishing an efficient mechanism to control moral hazard. Avenues for change include a basic package with a pre-defined amount of cost-sharing (e.g. deductible), that could also be a more straightforward way of including the current safety net provisions. To ensure affordability in access to primary care, GP services could be exempted from cost-sharing arrangements altogether. However, this may be defined by the regulator and not left to practitioners' voluntary choice, providing them with the appropriate economic incentives.

5.3 No conflict of interest by the regulator

The Australian healthcare system is characterised by a complex division and overlap of funding and governance responsibilities between federal, state and territory, and local governments. Currently, this precondition is not met given the Commonwealth is the governing body of the health system but also finances part of public hospitals, although the introduction of ABF has reduced the politicisation of federal funding (IHACPA, 2022). In addition, states finance and manage public hospitals. This creates an overlap in responsibilities which leads to diminished ability to prudent purchasing, affecting the precondition of *freedom to contract and integrate* and *risk bearing buyers and sellers*, and consequently also *guarantee access to basic care*.

An option to overcome the overlaps and conflicts could be for the Commonwealth government to be solely responsible for enforcing regulation, pooling and distributing funding according to the risk equalisation formula, while the States and Territories would ensure the provision of services.

5.4 Free consumer choice of insurer

Choice of insurer is not allowed in Australia, as it is mandatory to contribute towards the public scheme and opting out is not an option. Voluntary PHI hospital treatment coverage, characterised by open enrolment, duplicates Medicare hospital coverage. Barriers to free consumer

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choice of PHI among the 37 insurers in the market, mainly monetary, are implicit due to its voluntary nature (see *Cross-subsidies without incentives for risk selection*). Moreover, currently in the PHI market, there are few barriers to switching insurers. For instance, waiting periods exist but are waived when switching policies (Hall, 2010). There are no contract periods or terms of notice for disenrollment, which complicates premium calculations for funds and decreases incentives to engage in prevention (Hall, 2010).

Some policies relevant to this precondition such as open enrolment, and ease of the administrative process for enrolment are already in place. However, other issues such as waiting periods and free periodic choice of insurer, every 12 or 18 months, need to be addressed. To overcome the current 'imperfect' duplication, options include the introduction of opting out and/or a mandate to purchase insurance, meeting *Cross-subsidies without opportunities for free riding*. Additional dispositions may need to consider the precondition of *Cross-subsidies without incentives for risk selection*, ensuring that all income and risk groups could afford premiums.

5.5 Consumer information and market transparency

Effective competition requires the ability to judge the quality of products offered by insurers and providers. The PHI market is quite opaque. Despite the introduction of product tiers for hospital coverage, Gold, Silver, Bronze and Basic, in 2019, the absence of a standardised benefit package and the freedom in product design has led to a high number of incomparable products. Before the reform, the number of products was estimated at 27,281, including those offered by restricted funds (Biggs, 2017).

In contrast, product variation does not exist in the public scheme. In Medicare, transparency concerns arise at the provision level, particularly related to consumer OOP payments. The underlying reasons vary depending on the level of care. For GP care, there is the unknown gap fees between the bulk-billing rate and the doctors' set fee. For non-GP medical specialist services, the 'Medical Cost Finder' was implemented to provide consumer information, but the same issues of unknown gap fees persist. Similar issues arise in PHI due to product complexity.

To foster effective competition, greater information and market transparency are needed, which could be achieved through a limited and comparable set of options offered in the market when designing the benefit package.

5.6 Risk-bearing buyers and sellers

Insurers, providers and consumers should bear the risk. The situation for these three actors in Australia varies. In the case of insurers, the risk equalisation mechanism shared 33.4 per cent of total benefits and 45.19 per cent of benefits eligible for equalisation in 2019 (APRA, 2020). The extent of eligible benefits that are retrospectively shared reduces insurers' incentives to control costs. In addition, insurers can increase premiums annually with Ministerial approval.

Regarding providers, there is a distinction between private and public hospitals. Private hospitals are mostly financed by PHI on a fee-for-service basis and receive the MBS contribution from the Commonwealth for private patients. While they are responsible for their own financial viability, payment mechanisms do not encourage risk-bearing behaviours.

On the other hand, public hospitals are largely owned and operated by state governments and do not fully bear the risk. Funding is divided between states (56 per cent) and the Commonwealth (40 per cent) through activity-based funding, which improves cost-control behaviour, and block funding, which could potentially serve as a vehicle for subsidisation. The National Health Reform Agreement 2020–25 capped financing growth at 6.5 per cent per annum for the Commonwealth, but States and Territories are required to fund all public hospital expenditure beyond this amount (AMA, 2021), resulting in increased budget pressure on States and Territories. Freestanding providers of care, such as GPs, specialists or allied health largely operate as private practices. In terms

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of GPs, those who participate in bulk billing, by accepting pre-defined fees, are more cost-sensitive compared to those that set discretionary fees.

Regarding consumers, in the public system, different arrangements such as co-payments, GP gatekeeping for MBS specialist care are in place. However, due to issues related to *market transparency* and *affordable* OOP *payment*, there is a phenomenon of service shifting, where consumers may opt to visit the free emergency department instead of paying co-payments at a GP's office. The literature has found little moral hazard induced by PHI (Eldridge, Onur and Velamuri, 2017; Doiron and Kettlewell, 2018). However, there are notable issues related to the functioning of the subsidy scheme. Consumers receive income and age-tested subsidies in the form of premium discounts, which reduce their cost sensitivity towards different plans.

To enhance competition, it might be necessary to provide greater incentives for health insurers to act as prudent buyers of care. Modifying provider payment mechanisms can be a tool in this regard, particularly for GPs, to promote risk-bearing behaviour and care integration.

5.7 Contestable markets

Prudential barriers to entering the PHI market exist, and approval is required for termination. Market contestability is reduced due to decreasing number of insurers and concentration of enrolment. Since 1991, the number of PHIs has declined from 71 to 27 (Shamsullah, 2011). Moreover, 80 per cent of consumers are enrolled in five insurers: BUPA, Medibank, where the two latter gather more than half of the market share, HCF, NIB and HBF (Commonwealth Ombudsman, 2021). However, the combination of banned risk rating and insufficient risk equalisation may restrict the entry of insurers specialised in care for certain groups (Fouda *et al.*, 2017).

In the provider market, while private and public entities must be accredited by the National Safety and Quality Health Services Standards, barriers to entering the market differ. As public hospitals' planning and budgeting are a state responsibility, it is unlikely that low barriers to exit exist. On the other hand, 29 per cent of private hospital funding comes from the Commonwealth and States through MBS subsidies for private patients, which does not constitute a major barrier. The number of private hospitals has increased by 18 per cent from 2006 to 2017 (AIHW, 2019). During this time, various foreign operators have entered and left, indicating a contestable market.

There are few barriers to entering or exiting the market for free-standing providers. Healthcare professionals require certification by AHPRA and their respective boards. Entry to medical school is restricted and highly competitive (Duckett and Willcox, 2015), but study places have been expanded (Palmer and Short, 2014). The location of private practices is not regulated (OECD, 2016), except for overseas-trained doctors.

5.8 Freedom to contract and integrate

In Australia, contracting and integration operate differently in the public and private schemes. In the public scheme, despite Commonwealth involvement in funding medical services (42 per cent MBS and 40 per cent PBS), states dominate financing of public hospital activity (52 per cent), including direct payment to hospital providers. This takes place in a vertically integrated organisation of financing agents and providers, where purchasing and provision partly coincide. Public hospital services are not contracted selectively. At the same time, LHNs can contract private hospitals to provide additional public services.

Medicare payment models have led to significant gaps and fragmentation in funding, quality and continuity of care, particularly for high-cost specialties and patients with complex needs (Street *et al.*, 2007; Vaikuntam *et al.*, 2020). The Commonwealth funds GP and specialist care primarily on a fee-for-service basis, hindering innovation in chronic disease management and

https://doi.org/10.1017/S1744133123000336 Published online by Cambridge University Press

the establishment of links between services at the local level. Therefore, there are restricted incentives and structural approaches to integration (Garcia-Goñi *et al.*, 2018).

In the private sector, PHI's freedom to contract and integrate is restricted and contingent on the service type and regulatory complexity. Selective contracting is more prevalent, and funds have greater freedom to contract for ancillary services (Paolucci *et al.*, 2018). PHI can contract with hospitals, albeit they are required to pay second-tier or default benefits, which limits their capacity to contract selectively and weakens their incentives for value-based contracting, as allocating higher payments for outcomes affects the average price (PHA, 2019). In the absence of agreements with public hospitals, funds fully cover hospital costs for treatment excluding extras (PHIO, 2020). Furthermore, funds are unable to negotiate benefits for prostheses, which constitute a substantial part (14.1 per cent) of their overall expenditure (Donato and Onur, 2018).

Despite the Hospital Purchaser Provider Agreement, which outlines prices for hospital treatments and provides a flexible vehicle for contracting, the regulatory complexity of claiming practices limits insurers' contractual power and inhibits new funding models. The growing concentration in the private hospital market has led to some groups becoming 'too big to not be contracted' (PHA, 2019).

Freedom to contract would be a major change to the current landscape in two main areas: public hospitals would no longer only be financed by the government but also by any competing insurer. In addition, current PHI limitations in the contracting of services (e.g. exclusion of GP services) could be removed, as funds could buy the complete package of services. Vertical integration might be challenging if most of the hospitals remain public, as these public providers might have limited scope for vertical integration with insurers or outpatient providers.

5.9 Effective competition regulation

Actors in the Australian health system are subject to the Competition and Consumer Act 2010, which prohibits anticompetitive practices (e.g. price-fixing, collusion) and is enforced by the ACCC. Mergers and collaborations involving private hospitals are scrutinised by the ACCC. The same applies to free-standing providers (e.g. doctors in private practice), who, for example, require an exemption from the ACCC to negotiate collectively (ACCC, 2020). Moreover, protecting and promoting competition is part of APRA's statutory objective in regulating PHI. The PHI Ombudsman acts as a contact point for consumers.

Monitoring competition will be essential as a change of that magnitude could force some actors to exit the market, while others might opt to merge or modify their business model. A robust framework exists in this regard to confront future challenges.

5.10 Cross-subsidies without incentives for risk selection

In the public scheme, cross-subsidies are achieved through funding via taxation and the Medicare levy. The public scheme has no incentives to select risks. In PHI, this is not the case. Cross-subsidies between high and low risk are achieved through product-level community rating, supported by crude risk equalisation (Paolucci *et al.*, 2018). While direct selection is avoided through open enrolment, indirect selection is observed in product differentiation, as described in *Consumer information and market transparency*.

A key component of moving towards managed competition is that, for implementing effective choice between competing insurers, a risk adjusted payment to finance the basic package of services is needed. The funding of such payment could come from a pool of existing funding (i.e. taxation, Medicare Levy, premium rebates).

The current risk equalisation scheme, which applies only to PHI, consists of retrospective risk sharing based on predetermined age weights (i.e. the ABP) along with a HCCP. Although this

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could be used as an initial foundation for potential reforms, current arrangements based on actual costs do not provide insurers with adequate incentives to control costs (Henriquez *et al.*, 2023).

Taking into consideration initial data limitations, changes include the implementation of a hybrid risk equalisation system that combines two components. This could provide prospective risk adjustment formula including additional risk adjustors to predict expected health spending (e.g. sex, diagnostic information, coverage tiers) and targeted risk sharing (e.g. reinsurance, stop-loss mechanism). This has the potential to achieve better efficiency in the distribution of subsidies, provide incentives to control costs and reduce risk selection due to community rating regulations (van de Ven *et al.*, 2022).

5.11 Cross-subsidies without opportunities for free riding

As a universal tax-financed scheme without an opt-out option, individuals cannot free ride in the public scheme. PHI is voluntary, therefore free riding is not possible by definition. Despite PHI's voluntary nature, several 'carrot and stick' policies are in place to incentivise participation (i.e. premium rebate, MLS and LHC). However, 'junk' policies, which are cheaper than the MLS penalty, still draw subsidies but are often not utilised (Duckett, 2018), resulting in free-riding-like behaviour.

While some cross-subsidy measures (e.g. Medicare levy and tax financing) should be maintained, other options require consideration to fulfil this precondition. A mandate to purchase a basic package offered by competing insurers could eliminate the need for the existing 'carrot and stick' approach. Further measures to help address the issue of adverse selection among individuals in plan sorting, in terms of over or underinsurance, involve allowing premium rating, with the noted trade-off between potentially unwanted large premium ranges and increased efficiency.

5.12 Effective quality supervision

In terms of quality supervision, APRA operates prudential supervision for PHI and publishes quarterly statistics, including membership, coverage, services, OOP payments and other financial information. However, these reports do not mention the quality of plans. On the other hand, PHIO protects the interests of PHI consumers and may also handle quality complaints (APRA, 2022c).

Quality accreditation procedures apply uniformly to public and private providers. Different regulatory agencies operate as supervisors for them: AHPRA handles complaints about providers, and ACSQHC sets out NSQHS accreditation standards for hospitals, dental practices, primary and community care. These accreditation standards are reviewed on an ongoing basis every three years (ACSQHC, 2021).

5.13 Guaranteed access to basic care

Access to care is a multidimensional concept which includes service and financial coverage. This precondition addressed timely and geographical access such as waiting and travelling times. In Australia, three distinct demographics require attention: (1) public patients; (2) Aboriginal and Torres Strait Islander population; and (3) those living in rural and remote Australia.

For public patients, waiting times for elective surgeries in public hospitals have become a persistent feature and are higher than the OECD average[1] (OECD, 2021). In aggregate terms, around 6.3 per cent of patients waited for more than a year for surgery (AIHW, 2022c). Equity concerns arise as marked differences exist in median waiting times between public and private patients treated in public hospitals (42 vs 20 days) (AIHW, 2017). Aboriginal and Torres Strait Islander people wait longer on average than other Australians for elective surgeries (57 vs 48 days) (AIHW, 2022c).

[1]Waiting for specialist assessment for treatment leading to Cataract surgery, hip and knee replacement.

https://doi.org/10.1017/S1744133123000336 Published online by Cambridge University Press

Regarding specific services such as mental care, waiting times are more than one year on average for this group (AIHW, 2021). People living very remotely had poorer access than those living in regional areas and major cities. 20 vs 3 per cent of people reported not having seen a GP and 58 vs 6 per cent did not visit a specialist as there was none nearby (AHIW, 2018).

Options for closing the existing gaps in access to care include a joint effort in terms of the *conflicts of interest by the regulator*, *freedom to contract and integrate* and *risk-bearing buyers and sellers*, which are essential to address the root causes of the problem. Adequate prudent purchasing, allowing for accountability mechanisms, is not possible if funding does not address the existing inequities, which could be dealt with in the precondition of *cross-subsidies without incentives for risk selection*.

6. Conclusion and discussion

In this paper, we assessed the extent to which the Australian healthcare system satisfies the theoretical framework's preconditions for efficiency and affordability in mixed public–private systems. Overall, the analysis revealed that foundational structures for managed competition are partially present in the current public–private mix, such as a standardised benefit package in the public scheme, and a risk equalisation scheme in PHI.

Nevertheless, several existing gaps could be closed for such a model to be implemented. The most prominent ones include removing the existing overlap of PHI and public hospital coverage, allowing free consumer choice of insurer, and overcoming the current financing fragmentation. This includes transiting to a centralised pool that collects and distributes revenues to competing insurers, according to enrolees health needs, enhancing the current risk equalisation model. This would ultimately improve efficiency, aligning incentives through prudent purchasing. In addition, a revision of the basic package cost sharing structures, and regulation on waiting times for elective surgery and specialist care could improve affordability in terms of geographical and racial access of vulnerable population groups.

Furthermore, the identified preconditions, although necessary, are not sufficient for attaining equity and efficiency in competitive healthcare markets. Achieving such reforms also requires evaluating the institutional requisites that extend beyond the technical aspects assessed in this study. For instance, border institutional challenges associated may be related to Australian political federalism, as well as stakeholders' support, such as medical professionals, etc. This study provides an outline of the necessary reforms to sustain a managed competition model. However, 'big bang' reforms are rarely successful due to several technical, political and institutional challenges (Tuohy, 2010). Nevertheless, addressing many of the identified deficiencies in the current system, even without full implementation of such a model, may improve health system performance.

The findings of this study can be worthwhile for other countries with two-tier healthcare systems, including those where private coverage covers a significant portion of the population (e.g. Ireland, US), or where its role is growing (e.g. UK, Italy). For instance, the COVID-19 pandemic has intensified the pressure on countries that have historically relied on NHS systems, due to underfunding and waiting times, creating favourable conditions for PHI uptake (Anderson and Mossialos, 2022; Freguja, 2023). Moreover, by highlighting the equity and efficiency issues that arise from the interaction between the public and private system in Australia, policy insights could be drawn for countries characterised by duplication, such as South Africa, Ireland, New Zealand, or those that have considered it as an option for design, such as Chile.

The study contributes to the ongoing debate, providing a comprehensive overview of the current issues in the system and laying out one of the pathway for reform to address the unresolved issues of the Australian system. However, alternative reforms include diminishing the role of PHI to supplementary coverage and establishing a single-payer system. Therefore, the references underpinning this article have been chosen not for their comprehensive articulation of reform solutions, but for their utility in terms of developing one strand of reform proposals.

https://doi.org/10.1017/S1744133123000336 Published online by Cambridge University Press

In theory, the advantages of the managed competition model include increased choice for patients, strategic purchasing to meet consumer preferences, bottom-up innovation in terms of service utilisation and workforce productivity, and reduced politicisation of health financing (NHHRC, 2009; Stoelwinder, 2019). On the other hand, a single-payer model might provide more incentives to contain moral hazard, improve allocative efficiency, reduce administrative and macroeconomic costs and ensure equal access, reducing segmentation among income groups (McAuley and Menadue, 2007; Doggett and McAuley, 2013).

Whether regulated competition is the best model to achieve efficiency and affordability is beyond the scope of this paper. Balancing the trade-off between equity and efficiency among alternative models is a matter of political and societal preferences. Australians generally express satisfaction with both their public and private systems (Roy Morgan, 2021; CHF, 2022). Since the 1970s, both Conservative and Labor governments, while having different perspectives on the role of PHI, have maintained a historical commitment to tripartite funding, including taxes, PHI and OOP (Tuohy, 2010). The model of regulated competition aims to leverage the strengths and mitigate the weaknesses of pure public or market systems, integrating the hybrid structure of the Australian health system. Additional analysis is needed to explore alternative reform models.

Supplementary material. The supplementary material for this article can be found at https://doi.org/10.1017/S1744133123000336

Acknowledgements. Jan Willem Peters.

Author contributions. C. B. and P. A.: conceptualisation, formal analysis, methodology, writing original draft, and writing review and editing. J. H.: conceptualisation, writing review and editing. F. P.: supervision.

Competing interest. All authors have no competing interests to declare and have approved the manuscript for submission.

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Cite this article: Berardi C, Arija Prieto P, Henríquez J, Paolucci F (2024). Preconditions for efficiency and affordability in mixed health systems: are they fulfilled in the Australian public–private mix? *Health Economics, Policy and Law* 1–16. https://doi.org/10.1017/S1744133123000336