



# KEEPING PREMIUMS LOW: Towards a sustainable private healthcare system

AUGUST 2019

This report was produced by AlphaBeta for MTAA

αlphaβeta  
strategy x economics

# αBeta

strategy x economics

This report has been commissioned by MTAA and prepared by AlphaBeta. AlphaBeta is a research firm with offices in Sydney, Singapore, Canberra and Melbourne. AlphaBeta specialises in combining advanced analytical techniques and innovative data to generate new insights and fresh perspectives on the challenges facing business and government.

For further information on this report contact [sydney@alphabeta.com](mailto:sydney@alphabeta.com)

# PRIVATE HEALTH INSURANCE SYSTEM IS UNDER PRESSURE

Premium revenue per person grew at **4.5%** from FY13 to FY18

Policies with exclusions have grown to be **>50%** of policies

Hospital coverage levels **under pressure**. Only **44.6%** are now covered

There is an opportunity to find nearly \$1B in savings to reduce pressure on premium growth in the near term. If passed to consumers these savings could reduce forecast premium growth by up to 20%.



Streamline insurer opex



Optimise models of care



Reshape the allied health offering



Premium restraint from most profitable insurers

To deliver quality, affordable care sustainably in the long term, system constraints need to be addressed



✓ Address misaligned incentives that constrain deployment of new medical technology

✓ Refine the PHI coverage & reimbursement model to support the most cost effective, quality care options

✓ Develop prostheses list reimbursement for clinical performance

✓ Implement greater public provision of data on clinical performance

✓ Manage potential unintended consequences of the 'Gold, Silver, Bronze, Basic' policy model

# Contents

<b>Executive Summary</b>	5		
<b>1 The private health insurance system is under strain</b>	7		
A range of forces are putting upward pressure on healthcare expenditure	7		
Private health insurance is becoming less affordable, and the attractiveness of the value proposition is under pressure	7		
<b>2 The largest contributors to growing PHI expenditure have been hospital benefits and allied health benefits. Fund operating expenditure and margins have also grown relative to benefit payments</b>	9		
Hospital and allied health benefits have contributed \$4 billion of the nearly \$5 billion increase in benefits since FY2013	9		
PHI fund operating expenditure and margins have grown faster than benefit payouts. Insurers have failed to extract efficiencies and have increased margins	9		
<b>3 Medical devices have not been a key driver of growing costs. They will continue to play a minor role in the PHI cost landscape</b>	10		
Medical devices have been a small contributor to premium growth, driven entirely by demand	10		
Agreed cuts to PL pricing will see benefit payments flat despite growing patient volumes through premium year 2021	11		
<b>4 There are a range of opportunities to improve system operating efficiency and begin sector reform, putting downward pressure on premium growth while underpinning quality and affordability of healthcare longer term</b>	12		
There is opportunity to reduce operational expenditure in the PHI funds sector	13		
Private hospitals should continue targeting cost efficiencies. However, this is unlikely to be able to support a reduction in the growth rate of benefit payments per admission	14		
Optimising models of care is important for short-term savings, and critical for the longer-term sustainability of the health system	15		
Reshaping the allied health offering will deliver better value for consumers while also generating savings for the private health system	18		
		Improved Prostheses List processes and a pricing transparency mechanism for surgeon costs and performance are reforms that could improve price and quality outcomes for consumers in the long term	18
		Sections of the PHI sector can further moderate premium growth directly while maintaining strong margins	19
		<b>5 Delivering identified efficiencies could reduce premium growth by up to 20% by FY2022 while maintaining industry margins</b>	20
		The opportunities identified could reduce premium growth by up to nearly \$1 billion p.a by FY2022	20
		However, without safeguards and commitment to reform, premium growth containment may come at the expense of longer term quality and affordability	20
		<b>6 Medical technologies are critical to improving quality and affordability of healthcare in the medium to long term</b>	21
		Medical technologies can improve preventative and primary care through lower cost service delivery, improved compliance and patient monitoring	21
		Medical technology advancements improve hospital care through improved procedures and hospital practices	21
		Medical technology can enable lower cost delivery of post operation treatment	22
		<b>7 Structural constraints limiting the ability to optimise quality and affordability need to be addressed to underpin sustainability</b>	23
		Misaligned system incentives	23
		PHI coverage and reimbursement model	23
		Prostheses list reimbursement for clinical performance	23
		Greater public provision of data on clinical performance	24
		Unintended consequences of the 'Gold, Silver, Bronze, Basic' policy model	24
		<b>References</b>	25

# Executive Summary

---

**Australia's private health insurance system is under strain. Despite government efforts to encourage more Australians to take up private health insurance, rising premiums and policy changes have driven the proportion of people with hospital coverage to 11-year lows.<sup>1</sup> With only 44.6% of Australians covered by private health insurance hospital cover policies as of December 2018, the system is in need of reform.<sup>2</sup> Unless private health insurance improves, Australia risks overburdening its public healthcare system, putting the quality of patient care at risk.**

Healthcare spending is growing, due predominantly to an ageing population and increased prevalence of chronic diseases, but also improved and more expensive treatments and increasing consumer demand. Whilst Australia's overall healthcare expenditure rose 4.9% per year in the last five years, costs in the private health system rose even faster, with premium revenue up 5.9% per year. Insurers have used much of the additional revenue to fund growing benefits payouts; however, profits and operational expenditure have also grown, increasing as a share of revenue.

Not only have private health insurance policies become less affordable, they appear to be devaluing. There has been a growing number of exclusionary policies that do not pay hospital or medical expenses for certain conditions. Moreover, consumers have been opting out of hospital-only coverage, and combined hospital/extras coverage levels have been flat. Only extras policies covering allied health services like dental, optometry and physiotherapy have seen membership growth.

The long-term sustainability of the private health system will depend on increasing coverage especially of younger, healthier people, keeping members well so they need fewer services, treating people as effectively as possible, and maintaining differentiation vs. the public system. Together these elements will reduce costs and maintain value, making PHI more attractive.

Hospital benefits<sup>3</sup> and allied health benefit payments have contributed \$4 billion of the nearly \$5 billion increase in benefits payments since FY2013, and now account for three quarters of

all benefits paid. Medical device benefits and surgeon benefits have driven a much smaller portion of overall growth in benefit payments. At the same time, PHI fund operating expenditure and margins have grown relative to payouts. In financial year 2018 (FY2018), insurers spent 86% of premium revenue on benefits payments and 9.2% on operational expenditure, while profits accounted for 5.0% of revenue, or \$1.2 billion. For comparison, in FY2013 87% of revenue went towards benefits, 8.9% went towards operational expenditure and 4.2% to profits.

Medical devices have not been a key driver of growing costs and will continue to play a minor role in the cost landscape. Medical devices represent only a tenth of private health insurance benefits and 9% of premium revenue growth since FY2013, with growth in device benefits driven entirely by demand. Meanwhile, the benefit paid per device declined 1% p.a over this period, due mainly to price reductions from the Government's February 2017 prostheses reforms and the Medical Technology Association of Australia's (MTAA) Affordability of Medical Devices Agreement, signed in October 2017.<sup>4</sup> These reductions plus those already agreed for February 2020 will see a significant reduction in average benefits per device representing a combined value of \$360 million p.a in FY2022.<sup>5</sup> As a consequence, total device benefit payments will grow only 2% p.a through to FY2022 despite continued robust volume growth. Moreover, it should be noted that the ability for patients to access the procedure and device of their – and their doctor's – choice is an important component of the distinctive value proposition that underpins private health insurance.

1. APRA (2019), *Private Health Insurance Statistical Trends – December 2018*. Available at: <https://www.apra.gov.au/publications/private-health-insurance-statistical-trends>

2. APRA (2019), *Private Health Insurance membership and benefits statistics*. Available at: <https://www.apra.gov.au/publications/private-health-insurance-membership-and-benefits>

3. Hospital benefits includes costs related to treatment and stay excluding device benefits and surgeon benefits – the costs include accommodation, theatre fees, nursing

4. Greg Hunt MP (2017), 'Prostheses reforms to deliver better value for private health insurance'. Available at: <http://www.health.gov.au/internet/ministers/publishing.nsf/Content/health-mediarel-yr2017-hunt043.htm> and MTAA (2017), 'Improving access to breakthrough medical technology and affordability of medical devices for privately insured Australians: Agreement between the Government and the Medical Technology Association of Australia (MTAA)'.

5 This includes the value of the sector's SCP reductions, February 18 reductions, and February 20 reductions, and relates to Premium Year 2021

## Executive summary

There are a range of opportunities to improve system operating efficiency and begin the reform needed to underpin quality and affordability of healthcare. This will require genuine reforms that improve insurer operating efficiency, reduce admissions, improve models of care, and increase the focus on evidence-based medicine. Combined these could put downward pressure on premiums of up to nearly \$1 billion by FY2022.

We estimate that \$210 million can be saved by improving the operational efficiency of private health funds. The sector has not extracted sufficient economies of scale in the wake of significant revenue growth and many funds are well above the industry average in operational expenditure.

A further \$290 million may be saved by optimising models of care, as well as reducing admissions through prevention and promoting care in the community. These levers could not only deliver short-term savings, they are also critical for the longer term sustainability of the health system. System reforms could underpin acceleration of change in this area.

Reshaping the allied health offering can deliver better value for consumers while also generating savings worth nearly \$250 million for the private health system. Recent government reforms around the private health insurance rebate for certain natural therapies are expected to deliver half this potential saving, with the remainder to come from further changes from the sector itself.<sup>6</sup>

Beyond already agreed changes to Prostheses List (PL) listing, implementation of a fit-for-purpose HTA process for PL applications and targeted reviews of current listed products that recognise innovation appropriately can ensure ongoing value for money. There is also an opportunity for a review of current PL groupings to make sure these are correct and to address anomalies.

Finally, a national database or other mechanism like the Federal Government's proposed fees website that provides transparency on surgeon costs could improve price and quality outcomes for consumers longer term.

In addition to the \$747 million in savings identified above, that could be passed through in the form of lower premiums, we estimate that \$210 million can be avoided through the top-performing funds further constraining their premium growth directly, while sustaining profitability.

Combined, these levers could see a reduction in premium growth by FY2022 of nearly \$1 billion – a nearly 20% reduction in the increase in premiums over this period.

Looking to the medium and long term, medical technologies are critical to improving quality and affordability of healthcare. Medical technologies can continue to improve preventative and primary care through lower cost service delivery, improved compliance and remote patient monitoring. Advances in medical technology are improving secondary/hospital care by improving patient outcomes and quality of life, reducing lengths of stay, improving re-operation and re-admission rates, and indirectly reducing waiting lists and workforce pressures. Furthermore, medical technologies can enable lower-cost delivery of post-operation, ongoing treatment through remote monitoring models.

A number of structural constraints limit the sector's capacity to optimise quality and affordability of care, including through deployment of medical technology. These issues need to be addressed to underpin the sustainability of the system. These constraints include:

- A medical technology may improve outcomes and reduce total system costs, but increase the cost of an initial treatment or the portion of cost borne by private health insurance, reducing incentives to support the deployment of the technology
- Constraints on coverage for procedures in non-hospital settings, PL coverage for “non-implantables”, and coverage for remote at home treatment constrain the deployment of new procedures and technologies that can improve health outcomes and reduce costs
- Within device groups on the PL, there is often no benefit differential based on relative clinical performance over time; incentives are not fully optimised to generate the best outcomes
- Outside the orthopaedic sector, there is limited information on device/surgeon performance. Development of clinical performance registers, where there is a specific data need and the cost is justified and properly shared, would enable better treatment decisions.
- The ‘Gold, Silver, Bronze, Basic’ PHI coverage model may unintentionally restrict customers’ access to the most appropriate treatment and technologies. The intent is to provide better clarity and consistency around policy inclusions and exclusions. However, it may also restrict access to appropriate treatments for customers without the means for greater coverage.

<sup>6</sup> The Government has recently announced a review of these natural therapies reforms

# 1. The private health insurance system is under strain

## A range of forces are putting upward pressure on healthcare expenditure

The amount that Australians spend on healthcare is on the rise, due largely to demographic changes and consumer demand. The population is growing and ageing, and there is an increasing prevalence of chronic disease. Seventy percent of PHI benefits are paid to people aged over 65,<sup>7</sup> and nearly half of all Australians have one or more chronic diseases.<sup>8</sup> Not only are consumers demanding more healthcare services, visiting their doctors an average of 6.1 times a year, up from an average of 5.4 times in 2010-11, some treatments are also becoming more expensive.<sup>9</sup>

## Private health insurance is becoming less affordable, and the attractiveness of the value proposition is under pressure

Costs in the private health system are rising faster than overall healthcare costs. While Australia's overall healthcare expenditure rose 4.9% p.a from 2013-2018, costs in the private health system grew faster, with premium revenue up 5.9% per year.

The biggest driver of total premium growth has been higher average premiums paid by consumers for their private health coverage. Since FY2013, private health insurance premiums have grown 4.5% a year, while the number of people with coverage has only grown 1.3% a year.

As insurer revenue has grown, so have benefits payouts; however, operational expenditure and profits have also grown, which suggests that there is an opportunity to improve operational efficiency to bring down costs.

Despite increasing premiums, insurance policies appear to be diminishing in value, with a growing proportion of exclusionary policies that do not pay any hospital or medical expenses for certain conditions. The 'Gold, Silver, Bronze, Basic' model has been designed to try and address this issue, by providing greater consistency and clarity around different levels of coverage. However, this model may have the effect of people seeing reduced access unless they upgrade coverage, reducing costs for PHI funds in the near term.<sup>10</sup> Of course, if this occurs it may represent only a short-term gain, if it leads to reduced participation rates in the longer term.

Combined hospital and extras coverage membership has grown more slowly than the population. Only extras policies that cover allied health services like dental, optometry, physiotherapy and remedial massage, have seen growth in membership levels relative to population.

These demand trends suggest the private health insurance value proposition is under pressure. Declining demand for the private health system will increase pressure on the public health system.

<sup>7</sup> APRA (2019), *Private Health Insurance membership and benefits statistics*. Available at: <https://www.apra.gov.au/publications/private-health-insurance-membership-and-benefits>

<sup>8</sup> AIHW (2018), *Australia's Health* (2018)

<sup>9</sup> AIHW (2018), *Medicare Benefits Schedule GP and specialist attendances and expenditure in 2016-17*

<sup>10</sup> Deloitte research for the Health Department found that the impact of the new categories will be to reduce costs to insurers. <https://www.smh.com.au/healthcare/health-insurance-reform-categories-deloitte-gold-20181010-p508r5.html>.

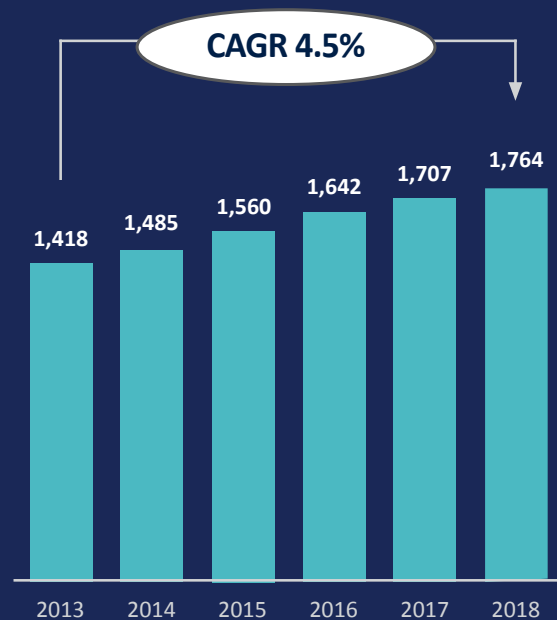


## EXHIBIT 1

### The value proposition of private health insurance is under pressure

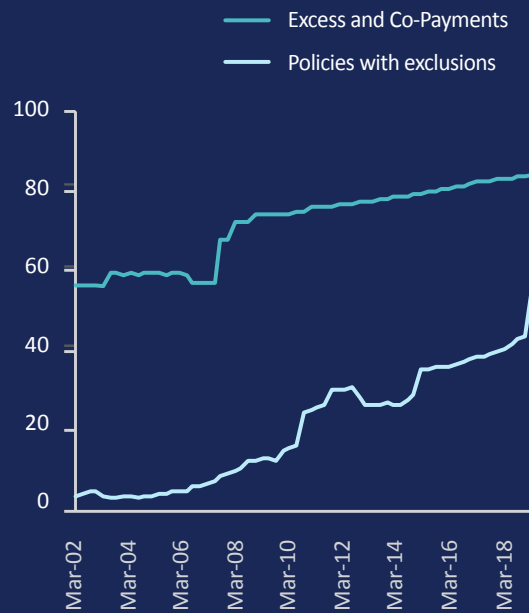
Average price of private health insurance premiums per member

\$, nominal



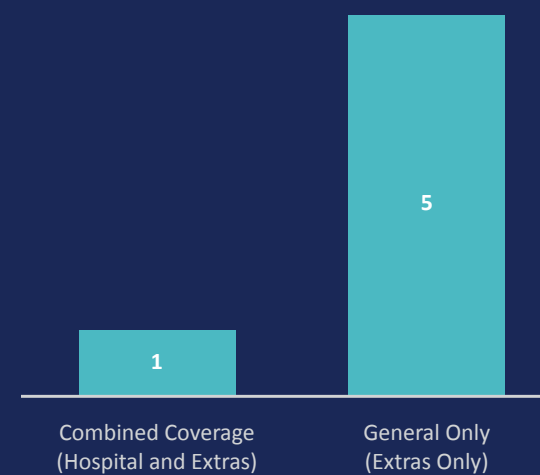
Policies with Exclusions or Excess and Co-payments

%, share of total policies



Growth of members by insurance policy type\*

%, CAGR from 2013 – 2018



\*Graph does not include growth rate for Hospital only coverage. Hospital only coverage members have decreased at 20% p.a. but represent only 0.0% of members (3,929 members in 2018)



## 2. The largest contributors to growing PHI expenditure have been hospital benefits and allied health benefits. Fund operating expenditure and margins have also grown relative to benefit payments

### Hospital and allied health benefits have contributed \$4 billion of \$5 billion increase in benefit payments since FY2013

Private health insurers collected a total of \$23.9 billion in premiums last year, of which they spent 86% on benefit payments. Over the last 5 years, total benefit payments have grown by nearly \$5 billion, representing about 81% of total growth in premium revenue.

Hospital costs account for the lion's share of benefit payments, followed by allied health expenses. Together, these two categories of spend represent 75% of all benefit payouts. Surgeon costs<sup>11</sup> represent an additional 9.5% and medical devices represent 10%.

Of the nearly \$5 billion growth in benefit payouts from FY2013-FY2018, hospital and allied health benefits have contributed \$4 billion. Hospital benefit payouts increased by \$2.7 billion, due mostly to an increase in the total volume of admissions, which grew 4.4% per year. Hospital benefits per admission grew at only 1.7% a year over that period. Allied health benefit payouts increased by \$1.3 billion. Again, volume has been the key driver, growing 4.6% a year, while average payouts grew 1.6% a year.

Growth in benefit payouts for surgeons and medical devices have been much smaller contributors to overall growth in benefit payouts (devices are discussed further in the next section).

### PHI fund operating expenditure and margins have grown faster than benefit payouts. Insurers have failed to extract efficiencies and have increased margins

Over the last 5 years, insurers have collected 50% more profit from each of their members. This has far outpaced the 21% growth in benefits paid out. Operational costs have also outpaced benefit payouts, growing by 28%.

Throughout the past decade, operational costs in the private health insurance industry have hovered around 9% of total expenses. This is despite significant growth in the industry, with premium revenue growing by 7% per year during that time. When looking at the past 5 years, operational costs have actually increased as a share of premium revenue, despite the industry growing by almost a third. This indicates that private health insurers have not extracted the efficiency benefits of scale.

Many smaller funds have operational costs well above the industry average of 9%. The large variation in operating costs, and the fact that smaller players tend to have higher operational costs, suggest that the industry could become more efficient through consolidation. Within operating expenses, claims handling accounts for around a fifth of total expenses. Health insurance business expenses, such as marketing, wages and rent, contribute almost 80%. Marketing by the funds is estimated to be \$400 million,<sup>12</sup> which represents 18% of operating expenses.

<sup>11</sup> Benefit payments for surgeons include 25% of the MBS schedule fee and any amount above the fee that insurers agree to cover. There is often an additional 'out of pocket' cost borne by patients, where the amount above the MBS fee is larger than the insurer has agreed to cover

<sup>12</sup> Morgan Stanley (2018), Point Break: Earnings crunch?

### 3. Medical devices have not been a key driver of growing costs. They will continue to play a minor role in the PHI cost landscape

Medical devices have been a small contributor to premium growth, driven entirely by demand

The ability for patients to access the procedure and device of their or their doctor's choice is an important component of the distinctive value proposition that underpins private health insurance. If future changes reduce this choice they risk hurting membership levels.

However, medical devices represent only 10% of private health insurance benefits, and that share has stayed relatively flat over the last 5 years. Medical devices have accounted for only 9% of the total growth in premium revenue since 2013.

#### EXHIBIT 2

Overall expenditure on devices has been driven entirely by demand, and benefits paid per device has actually fallen. Cuts to the Prostheses List have accelerated this fall

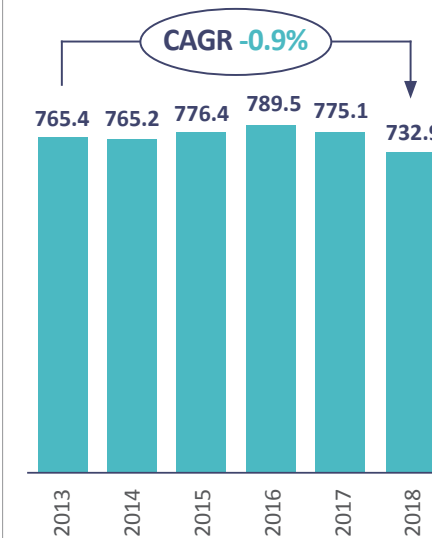
Demand for prostheses

Millions of devices



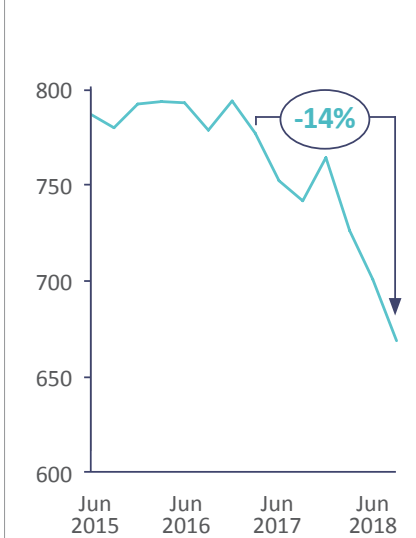
Benefits paid per device

%, CAGR 2013-2018



Benefits paid per device

\$



SOURCE: APRA, AlphaBeta analysis

The growth in device-related benefit payouts has been entirely driven by an increase in patient demand, not benefit amount per device. Due to technological improvements, demographics, disease and demand trends, demand for medical devices has grown 6.9% per year in the past five years. The payment per device fell 0.9% a year during that period, meaning that insurers now pay less per medical device than they did five years ago. This decline in payment per device since 2013 is the result of benefit decreases that have occurred in the last two years, following the Government's February 2017 prostheses reforms and the MTAA's Affordability of Medical Devices Agreement signed in October 2017 (with benefit reductions beginning in February 2018). The result of these changes has been that benefits paid per device have declined by 14% since February 2017.

### Agreed cuts to PL pricing will see benefit payments flat despite growing patient volumes through premium year 2021

As noted above, benefits per device have already begun declining due to changes agreed to PL benefits. However, the device sector has also agreed to further strategic decreases in February 2020. The full impact of the reductions implemented in February and August 2018, including the full removal of the Superior Clinical Performance premium in March 2019 and the additional reductions agreed for February 2020, is a reduction in benefits paid for devices of \$360 million p.a in FY2022 (and a net saving of an additional \$291 million p.a versus FY2018, which benefited from c. \$69 million in savings).

In the absence of the cuts, device benefit payments were expected to grow by 5.7% per year through premium year 2021, driven by continued growth in underlying demand. As a result of the cuts, growth in total benefit payments will be very modest (2% per year) despite growing patient demand for devices.

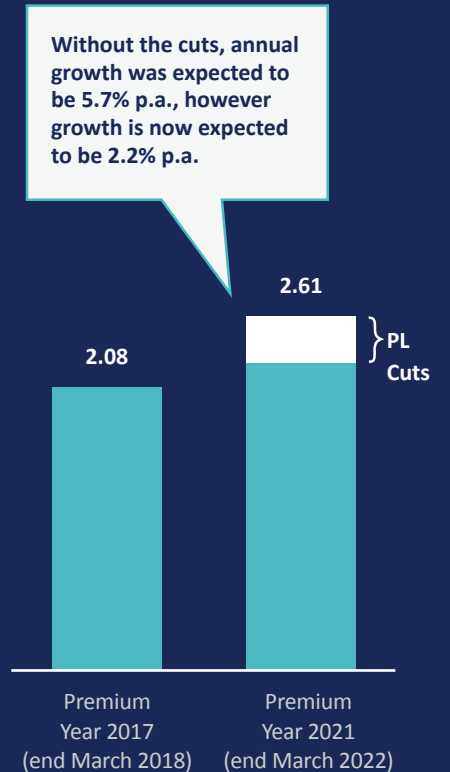
## EXHIBIT 3

Agreed cuts to benefits on the Prostheses List will mean growth in benefit payments for devices will be very modest through premium year 2021

Prostheses Category	Benefit reduction (Feb and Aug 2018)	Benefit reduction (Feb 2020)	Annual reduction in benefit payments in PY 2021 (\$M)*	Expected benefits paid PY 2021 (\$M)*
Ophthalmic	8.6%	8.6%	20.6	105
Ear, Nose & Throat	5.0%	5.0%	2.2	20
General Miscellaneous	6.6%	6.3%	47.4	331
Neurosurgical	5.0%	5.0%	8.8	81
Urogenital	5.0%	0.0%	1.6	31
Specialist Orthopaedic	6.2%	0.70%	18.0	244
Plastic and Reconstructive	2.5%	0.0%	0.7	28
Cardiac	19.9%	7.5%	125.9	360
Cardiothoracic	5.0%	0.0%	1.2	23
Vascular	6.6%	6.6%	8.8	60
Hip	5.0%	4.5%	21.9	214
Knee	3.3%	2.5%	16.0	264
Spinal	3.8%	3.8%	13.5	170
Other	8.6%	4.7%	50.1	337
<b>Total</b>	<b>8.6%</b>	<b>4.7%</b>	<b>336.8**</b>	<b>2,269</b>

Devices benefits paid

\$B



Note: \*Premium Year 2021; \*\*Excludes \$19M in SCP cuts  
SOURCE: APRA, Department of Health, AlphaBeta analysis

## 4. There are a range of opportunities to improve system operating efficiency and begin sector reform, putting downward pressure on premium growth while underpinning quality and affordability of healthcare longer term

In order to improve the attractiveness of PHI, it is critical to minimise the need for premium increases above sustainable levels. Achieving this goal will require an industry-wide effort involving insurers, private healthcare providers and suppliers to identify opportunities to streamline industry costs. In pursuing this goal, any opportunities identified must not damage the quality, value and affordability of private healthcare. The private health system should collaboratively work towards remedying the causes rather than the symptoms of current challenges in the sector.

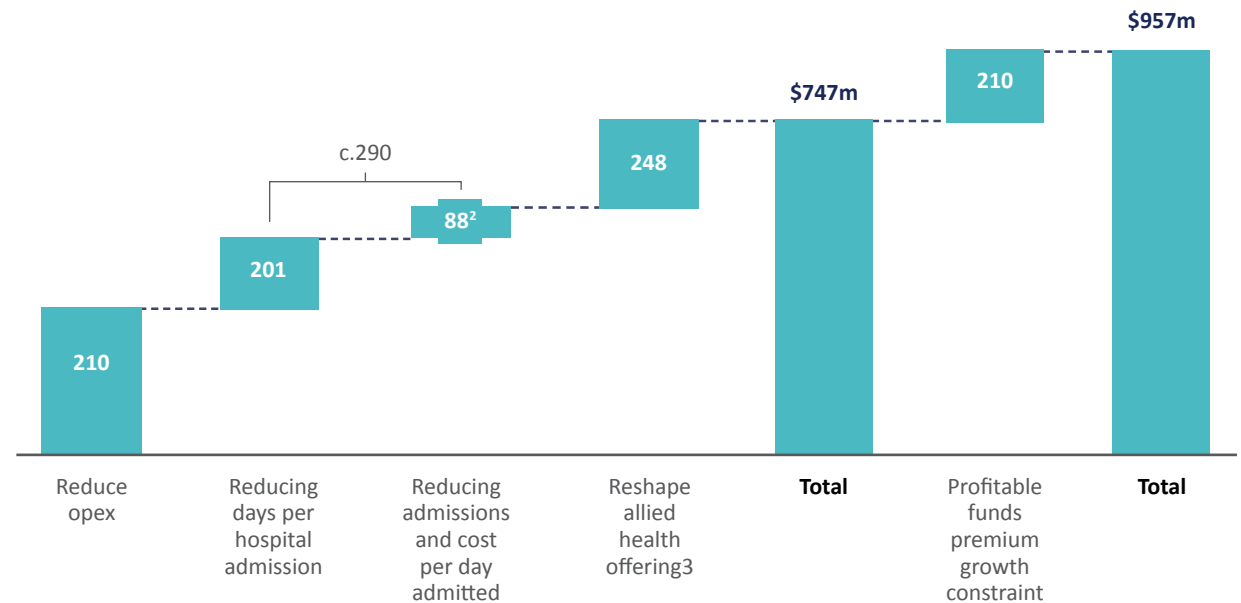
We believe that through an industry-wide effort there is the potential to deliver up to nearly \$1 billion p.a in savings by FY2022. The key elements of these savings are outlined in Exhibit 4.

### EXHIBIT 4

Identified opportunities to achieve efficiencies in the sector while minimising risk to quality, value and affordability of care could deliver nearly \$1 billion savings

#### Savings opportunities potential in FY2022

\$m, FY2022



<sup>1</sup> Estimates in this chart based on the midpoint of a range if a range of impact was estimated.

<sup>2</sup> Reducing admissions can generate \$39 million in savings, while reducing cost per day admitted yields \$49 million.

<sup>3</sup> This includes the effect of expected reductions in benefit payouts from removal of certain sub-categories of natural therapies according to changes announced by the Federal Government. It should be noted that the announced changes are being reviewed by the Government. These changes take effect from April 2019.

## There is opportunity to reduce operational expenditure in the PHI funds sector

Private health funds can look internally for some material cost savings by reducing operating costs. Cuts in this area have the potential to deliver \$46-\$380 million in savings, though a saving in the order of \$210 million is assumed to be the most likely achievable outcome.<sup>13</sup>

Operating costs are a logical candidate for savings for two reasons. Firstly, private health funds have grappled with inefficiencies for some time. Operating costs increased from 8.9% to 9.2% of revenue between FY2013 and FY2018, despite the industry growing by a third during that time, indicating that private health insurers have not been able to scale up efficiently.

Secondly, there is a large variation in the operational expenditure reported by individual health funds, suggesting that there is scope to bring costs down to an industry benchmark. Some funds spend as little as 7% of revenue on operational expenditure, while others spend more than 30%.

<sup>13</sup> AlphaBeta's analysis considered four estimates. The lowest estimate of the range was based on examining how costs have grown over the last 10 years, and comparing these to what they should have grown to given an assumed mix of fixed and variable costs, to identify excess costs – this approach gives an estimate of \$48 million. A second estimate assumes funds with higher than average opex spend could achieve the industry level of 9.2% - this yields \$180 million in savings. A third estimate is based on examining how costs have grown over the last 5 years, and comparing these to what they should have grown to given an assumed mix of fixed and variable costs, to identify excess costs – this approach gives an estimate of \$224 million (significantly higher than the first -approach due to the fact that opex as a percent of revenue has grown over the last 5 years). The highest estimate of the range assumes funds can achieve the opex spend of the 10 best performing funds on this metric, 8%. This yields \$380 million. In our savings estimates we use the mid-point of these estimates, \$210 million.

## EXHIBIT 5

Despite growth in overall size, private health insurers have not been able to extract the efficiency benefits of scale

Operating costs<sup>1</sup> as a share of premium revenue



<sup>1</sup> Operating costs is referred to as « management expenses » in APRA data. These are only the expenses within the Health Benefits Fund. A private health insurer may have expenses that sit outside of the Health Benefits Fund, and are therefore not reported to APRA.  
SOURCE: APRA, AlphaBeta analysis

Insurers looking to reduce their operational expenditure may start with the large sums currently spent on marketing and commissions. Private health funds spend almost \$400 million on marketing p.a, with little or no benefit to the consumer. However, insurers may be reluctant to cut their marketing budgets because they rely heavily on this to attract new customers.

There is a risk that cuts to operational expenditure in areas other than marketing, including claims handling, may lead to a degradation in customer service quality. Regulation might be required to mitigate this risk.

**Private hospitals should continue targeting cost efficiencies. However, this is unlikely to be able to support a reduction in the growth rate of benefit payments per admission**

Our estimate of private hospitals' fixed costs suggests that as a share of income they have been relatively flat for the last 5 years, despite sector growth. In isolation this could suggest potential for further efficiency.

However, at the same time, expenditure per patient day has grown on average 3.1% p.a. over the last five years.<sup>14</sup>

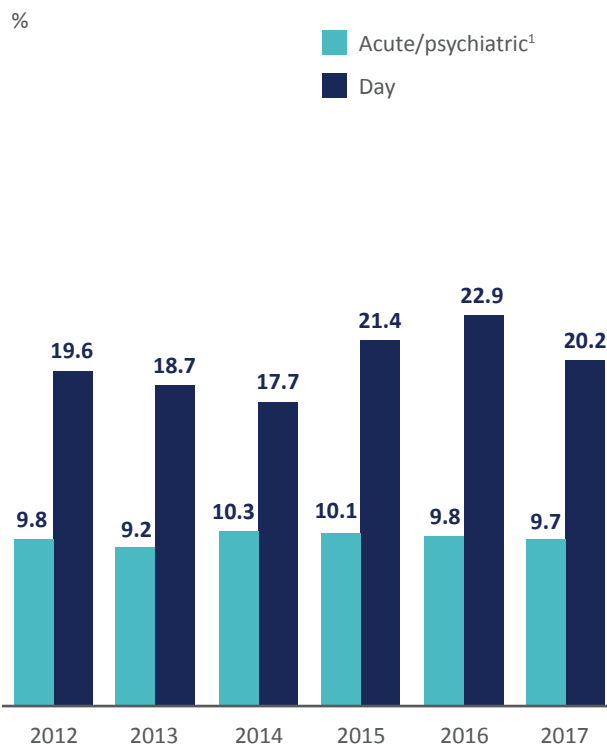
This needs to be framed against underlying inflation (c.2% p.a over this period), and the impact of ageing and increased complexity on health costs. As a measure of costs per patient day, this already takes into account the impact of additional admissions or longer stays due to ageing and complexity. However, increased complexity could also result in higher costs on a per day basis, due to more intensive interventions. Given this, and underlying inflation, growth in cost per patient day of 3.1% p.a does not appear to be provide evidence of a savings opportunity. Moreover, from 2014-2017, acute private hospital net operating margins declined (though they were flat compared to 2012). Reducing operating costs is also a challenge, given nearly 50% of the cost base is wages.

14 ABS, Private Hospitals (2016-17)

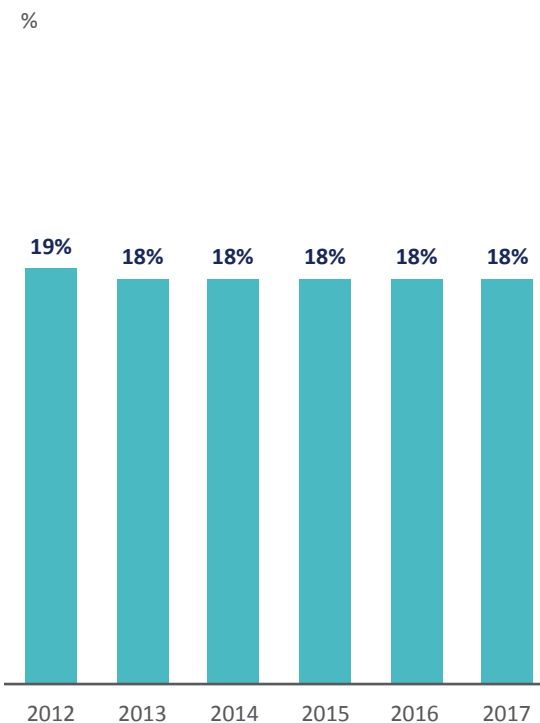
**EXHIBIT 6**

**Acute private hospital margins declined from 2014-2017 (though they were flat compared to 2012)**

**Private hospital net operating margins**



**Fixed costs as a share of total income for private acute/psychiatric hospitals<sup>2</sup>**



1. Acute/psychiatric hospitals make up almost 50% of hospitals, but see 75% of admissions and 89% of patient days  
 2. Fixed costs are an estimate based on cost categories. The estimate assumes and includes the following categories as fixed expenses: repair and maintenance, fuel and power, depreciation and amortisation, interest and non-labour contract expenses. Wages and salaries were assumed to be a mix of fixed and variable expenses, with 20% of wages and salaries assumed to be fixed.

SOURCE: ABS, AlphaBeta analysis

Whilst the sector should continue to target cost efficiencies, there does not appear to be potential to deliver cost savings that could support further reduction in the rate of growth of benefits per admission. As noted earlier in this report, benefits per admission have been growing at only 1.7% p.a. Any cost efficiencies delivered are likely to be needed to sustain this level.

### Optimising models of care is important for short-term savings, and critical for the longer-term sustainability of the health system

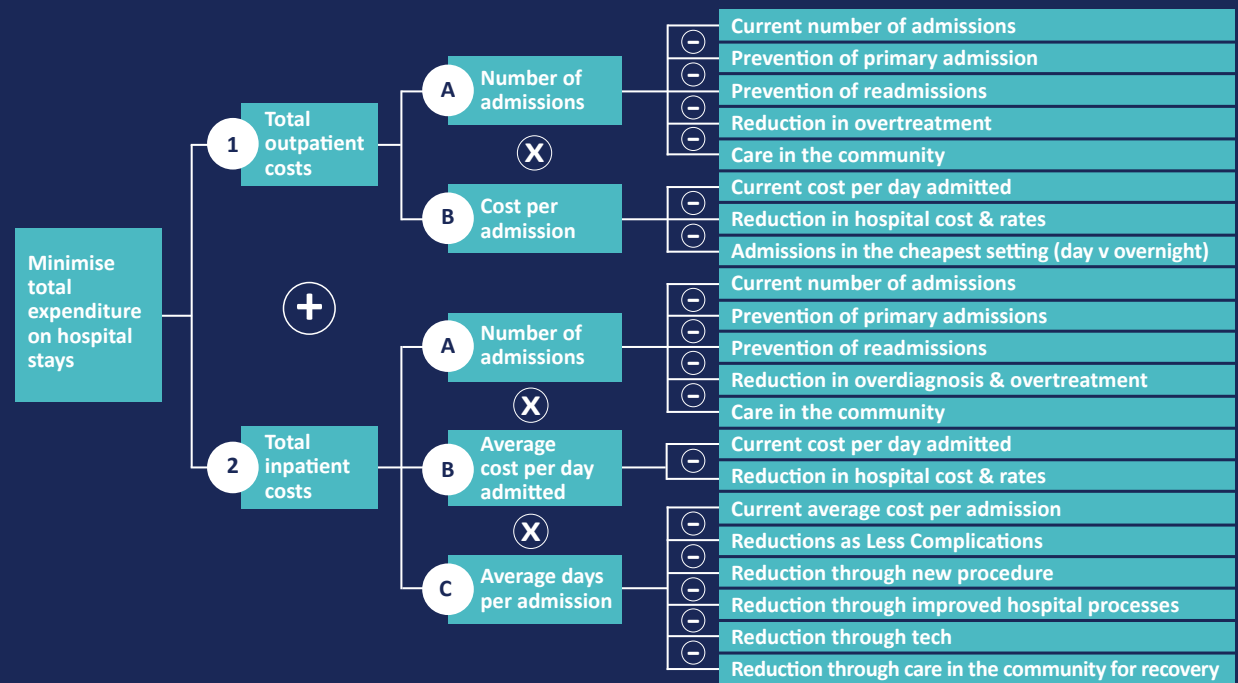
Hospital admissions account for the bulk of costs in the private health system and will continue to underpin rising costs in the future. Given this reality, policymakers and the private health system as a whole should look to drive changes that not only can deliver savings in the short-term, but also ensure the sustainability of private hospitals.

Three key levers are: the number of hospital admissions; the cost per admission; and the number of days per admission.

## EXHIBIT 7

### Savings can be achieved in the private health system by reducing expenditure on hospital in- and out-patient stays through multiple levers

Levers explored in this study to reduce total expenditure on hospital stays



## Number of admissions

This report suggests several key strategies to alleviate the patient burden on private hospitals: reducing the number of potentially preventable hospitalisations (PPH); reducing overtreatment of patients; promoting care in the community; and reducing readmissions.

In the long term the potential savings from these levers could be substantial. Achievable change in the near term is likely to be more modest. However, we estimate potential savings from reduced admissions of \$39 million in FY2022.

In 2017, over 161,000 separations in private hospitals could have been prevented.<sup>15</sup> These admissions accounted for \$278 million in accommodation costs alone. A conservative target of 10% reduction in these PPH by FY2022 would generate \$28 million in savings. Longer term, the savings could be larger.

This does not account for the potential costs associated with implementing preventative measures – however, often preventative interventions are simple and cost little enough that the savings far outweigh the cost. For example, there are a range of measures that have been proven to substantially reduce the incidence of falls in the elderly, which are a significant contributor to PPH. These include modifications to a person's home (including the removal of rugs), regular exercise programs, and vitamin and calcium supplements.<sup>16</sup> Medical technology has the potential to bring about further high-impact interventions to reduce preventable admissions, through devices that improve patient compliance to treatments and patient monitoring.

However, there are a number of challenges associated with the uptake of preventative health measures. One key difficulty is that insurers may have limited appetite for reimbursing preventative measures, given the risk of members switching health funds, and taking an insurer's investment in their health with them. Although insurers have begun to dip their toes in this area – many provide preventative wellness benefits to help members stay healthy as part of extras cover – they have stopped short of reimbursing specific preventions for specific conditions or causes of admission. Given this reluctance, reforms will be needed to improve incentives for cost-effective investment by insurers in preventative health. For example, changes to risk equalisation may support further investment in preventative health services.

The overtreatment of patients also contributes to a large number of unnecessary admissions, often with costs accruing beyond the initial procedure. Overtreatment has the potential to create new costs for patients through complications arising during the procedure. For example, 25% of cases of low risk prostate cancer are overtreated, with the average cost of surgery alone being up to \$30,000.<sup>17</sup> Eliminating the overtreatment of low risk cancer patients, could result in a saving of \$6 million for insurers through avoided hospital accommodation costs. Knee arthroscopy procedures are another good example of procedures where there is a high rate of overtreatment, and high costs associated with this overtreatment.<sup>18</sup> In sum, overtreatment of knee arthroscopies cost the private health system \$105 million. It will be challenging to deliver a significant reduction in overtreatment in a short timeframe. Re-education of the population around the range of options for treatment as well as

a cultural change among medical practitioners is an important first step. Reform of the fee-for-service model, that is no doubt incentivising unnecessary hospital admissions, is the more challenging but also essential change that is required to address the incidence of overtreatment in private hospitals. However, a concerted campaign with the support of private health insurers, hospitals and government could potentially begin to see some meaningful change within several years. Nevertheless, we have not assumed any savings from this lever in FY2022.

Care in the community is another solution that not only can significantly reduce admission costs while also promoting better patient outcomes but is also scalable. Hospital in the Home (HITH) programs have been widely adopted by Australian public hospitals, as well as by health systems overseas. There are a range of conditions that may be treated from the comfort of a patient's home, that present a material admission burden to the private health system. By moving 10% of admissions for conditions that are suited to HITH programs into private patients' homes, insurers could save \$8 million by FY2022.<sup>19</sup> Likewise, an increase in the uptake of home dialysis programs could lead to a \$2.6 million saving by FY2022.

As well as the cost of unnecessary admissions, there is the cost of readmissions. Prior research by the Grattan Institute suggests these costs are substantial.<sup>20</sup> Readmission for re-operation can be particularly costly. Incentivising the best clinically performing designs would serve to ameliorate these costs. However, this will require reforms, and is a longer-term lever, and not assumed to contribute to savings in FY2022.

15 AIHW, *Admitted Patient Care 2016-17: Australian hospital statistics*

16 Prevention of falls in the elderly (PROFET): a randomised controlled trial, Close et al., *The Lancet* (1999); Multi-target Stepping Program, Yamada, et al. (2013), Three-Year Study of Vitamin D (Cholecalciferol) Plus Calcium, Bischoff-Ferrari, et al. (2006)

17 Cancer Australia, *Prostate Cancer Statistics*, (2018). Available at: <https://prostate-cancer.canceraustralia.gov.au/statistics>

18 Prahlan Sports Medicine, *Suffering from a Meniscus Tear? Why Arthroscopic Knee Surgery Isn't always the answer!*, 2016. Available at: <https://www.prahransportsmedicine.com.au/news/2016/5/9/suffering-from-a-meniscus-tear-why-arthroscopic-knee-surgery-isnt-always-the-answer>

19 10% of relevant admissions represents 12,825 admissions. The average cost difference for HITH treatment is \$606 (22% saving), giving a saving of \$7.8 million; 22% saving estimate is based on Deloitte Access Economics, *Economic Analysis of Hospital in the Home (HITH)*, Barton, 2011 Economic Analysis of Hospital in the Home (HITH), Barton, 2011

20 "All complications should count - Using our data to make hospitals safer." Grattan Institute Report No. 2018-01, February 2018. Stephen Duckett et al).





---

### Cost per admission

An important consideration is the role of specialist day hospitals for day procedures. Our analysis suggests that for an equivalent mix of day procedures, a day hospital costs almost a third less (32%) than an overnight hospital.<sup>21</sup> Overnight hospitals are often more expensive due to large and more resource-intensive facilities. There can be significant and unexplained variation between procedures completed in day hospitals versus overnight hospitals – for example, certain bariatric procedures are three times more expensive in an overnight hospital. On this basis, if a share of day procedures could be transitioned from overnight hospitals to day hospitals, there could be significant savings. We estimate that this could deliver savings in the order of \$49 million in FY22<sup>22</sup>. This is certainly an area that would benefit from further investigation. Of course, insurers have no control over the choice of a day hospital vs. an overnight hospital. This is ultimately a patient’s choice, guided by their doctor, so realising savings is dependent on doctor and patient decisions.

### Average length of stay

The private health system can achieve large savings from small reductions in the length of time for which patients stay in hospital. However, achieving meaningful reductions in LOS is challenging against the backdrop of an ageing population and increasing complexity in patients. Over the last 5 years the average length of stay for overnight separations has remained at 5.2 days.<sup>23</sup> If a reduction of 2.5% in the average length of stay can be achieved by FY2022, this would yield annual savings of \$201 million p.a.<sup>24</sup> Longer term, the savings potential is even more significant. Savings could come both from moving some overnight admissions to day only, as well as reducing the average length of overnight stays. For example, if 10% of overnight (but not multi-night) procedures could be transitioned to day procedures, this could produce a saving of \$25 million.

More broadly, pursuing a few key strategies can help the health system achieve this \$201 million reduction.

Savings in the order of \$106 million can accrue to the private health system by marginally improving safety practices to minimise in-hospital complications.<sup>25</sup> Hospital-acquired diagnoses have almost doubled from 3.9% to 7.0% of separations over the last 5 years.<sup>26</sup> The impact of these diagnoses is material – on average, they lengthen hospital stays by 5 days.

Piecemeal changes to medical treatments and administrative processes also can reduce the length of stay, while improving the

21 Estimate used data from the Private Hospital Data Bureau Annual Report 2016/17, comparing cost per day for c.75 DRGs that are completed in both acute hospitals and day hospitals. To estimate an average cost difference, a weighted average for the DRGs in day hospitals was developed with the same mix as exists in acute hospitals

22 10% of relevant days represents 192,569 days (number of days is from PHDB Annual Report 2016/17). The average cost difference estimated for acute vs. day hospital is \$258 (32% difference, calculated by examining 75 DRGs performed in both acute and day hospitals), giving a value of \$49 million.

23 AIHW, *Admitted Patient Care 2016-17: Australian hospital statistics*

24 Total cost of stays is estimated to be \$8.0B, based on total separations of 4.6 million, average length of stay of 5.2 days, and cost per day of \$331 (2022 estimates have been projected from 2017 values based on historical trajectory. 2017 cost values are from PHDB Annual Report 2016/17. 2017 separations and length of stay is from AIHW)

25 Private hospital separations with a hospital acquired diagnosis are estimated to be 644K (projected from 2017 values from AIHW). Additional days associated with these diagnoses average 5 days (AIHW). Cost per patient day of \$331. Assuming a 10% reduction provides a savings value of \$106 million

26 AIHW, *Admitted Patient Care 2016-17: Australian hospital statistics*

---

overall efficiency of hospitals. We estimated the impact of a 10 percentage point increase in uptake of three treatment redesigns that reduce the length of stay: early mobilisation of hip or knee replacement; the use of a dedicated stroke ward; and the use of surgical mesh in certain hernia procedures. These three interventions alone, with a small increase in uptake, can deliver \$13.5 million in savings in FY2022.<sup>27</sup> Given the depth of clinical evidence supporting a range of treatment redesigns, there is likely to be significant untapped potential in making small changes to treatments.

Advances in treatment design are often underpinned by medical technology that has the potential to significantly reduce the length of stay for procedures by reducing procedure and recovery time. For example, TAVI (transcatheter aortic valve implantation) has reduced the length of stay for cardiac valve procedures from 13 days to a maximum of 3 days.<sup>28</sup> Mechanical thrombectomy and robotic arm-joint replacement are further examples (see page 25).

One of the potential barriers that could constrain the uptake of advances in treatment design is that often these types of changes require agreement from multiple parties – surgeons, nurses, hospital management and staff. Resistance from surgeons in particular could present a challenge to implementing changes.

Patient recovery and rehabilitation time can be a large contributor to the overall length of stay, particularly in private hospitals. Research shows there is high variation between private hospitals in the inpatient rehabilitation rate for certain procedures. This suggests some private hospitals are over-servicing patients with inpatient rehabilitation. Transitioning some patients from the hospital to the home earlier for rehabilitation, not only has been proven to deliver better patient outcomes, but will deliver savings. Transitioning 10% of relevant separations by FY2022 would save insurers \$15 million p.a.<sup>29</sup> The potential for homebased rehabilitation for some categories of total knee arthroplasty (eg. uncomplicated) instead of inpatient rehabilitation is an important example of this sort of opportunity.<sup>30</sup>

### Reshaping the allied health offering will deliver better value for consumers while also generating savings for the private health system

The Federal Government announced reforms which exclude a range of “natural” therapies from private health insurance general treatment, for which there is no evidence of medical benefit.<sup>31</sup> Overall, we estimate that these exclusions should deliver a c.50% reduction in the benefit payouts for “natural” therapies. Accordingly, insurers should be able to expect to see

\$133 million in savings in this area.<sup>32</sup> It should be noted though that the Government is reviewing these changes. In light of the announced policy changes around natural therapies, insurers could also continue to tighten the rules around benefit payouts for applications of alternative therapies for which there is no evidence base. Further restrictions around reimbursement for applications of treatments to only those applications where there is an evidence base could lead to a significant reduction in benefit payouts for these treatments. However, insurers are likely to be reluctant to pursue the full scope of possible restrictions given consumer preferences. Accordingly, we assume only a 20% reduction is achievable, which would deliver an additional \$80 million in savings.<sup>33</sup>

Industry consolidation in the allied health industry, particularly in dental practices but also potentially applying to other providers including physiotherapy, could enable more cost-effective delivery of treatment. There is scope for industry consolidation in the dental industry, given the current under-utilisation of practices and high fixed cost structure of dental practices. There are real efficiency gains from industry consolidation, that can lead to lower cost per service. We estimate that consolidation could deliver \$44 million in savings by FY2022.

27 Estimate for each operation type was developed by taking the number of separations (PHDB data), assumed increase in uptake of the improved procedure of 10%, multiplied by the decrease in LOS from the new procedure (eg. 1.8 day reduction for knee/hip, 36% reduction) x cost per day. Improvements in LOS for the three procedures were sourced from various papers: *Early mobilization of patients who have had a hip or knee joint replacement reduces length of stay in hospital: a systemic review*, Guerra et al, *Clinical Rehabilitation* (2015); *Organisational interventions to reduce length of stay in hospital: a rapid evidence assessment*, (2014), Health Services and Delivery Research; *Same-day surgery for femoral, inguinal and umbilical hernia repair in adults*, February 2017, Royal Australasian College of Surgeons.

28 Medical Journal of Australia (MJA), *Transcatheter aortic valve implantation: a new standard of care*, 2018; Department of Health, *Private Hospital Data Bureau*, 2016-17

29 Number of elective separations with rehabilitation is estimated to be 503K, average LOS is 3.9 days, average cost per day is \$331. Cost associated with 10% of these separations is \$58 million. Meta-analysis of savings potential from rehabilitation in the home suggests 25% cost reduction is achievable, which yields \$15 million.

30 JAMA. 2017 Mar 14;317(10):1037-1046. doi: 10.1001/jama.2017.1224. *Effect of Inpatient Rehabilitation vs a Monitored Home-Based Program on Mobility in Patients With Total Knee Arthroplasty: The HIHO Randomized Clinical Trial*. Naylor, J.M et al (2017) *The value of inpatient rehabilitation after uncomplicated knee arthroplasty: a propensity score analysis*. MJA 207 (6) 18 September 2017.

31 <http://www.health.gov.au/internet/main/publishing.nsf/Content/private-health-insurance-reforms-fact-sheet-removing-coverage-for-some-natural-therapies>

32 Benefit payments associated with natural therapies totalled \$266 million in 2018. Based on the inclusions in this category, and the range of therapies addressed in the government’s reforms, we estimate the government’s reforms will cover c.50% of the \$266 million spend

33 Benefit payments associated with alternative treatments (not including natural therapies) totalled \$400 million in 2018.

---

## Improved Prostheses List processes and a pricing transparency mechanism for surgeon costs and performance are reforms that could improve price and quality outcomes for consumers in the long term

There is potential to improve the current Prostheses List processes. Implementation of a fit-for-purpose HTA process for PL applications (ie. for setting benefits) and targeted reviews of currently listed products in appropriate circumstances (eg. emergence of new data) that recognise innovation appropriately can ensure ongoing value for money through the PL. However, the application of HTA should not undermine the intent of the PL or the value proposition of PHI. HTA principles used for other schemes such as the PBS and MBS need to be applied with caution, as there are differences in the objectives of these schemes and those of PHI, as well as prostheses and the prostheses marketplace compared to pharmaceuticals for example. Prostheses markets frequently operate with short innovation cycles, resulting in reduced opportunities to generate extensive evidence, therefore it is important not to create hurdles that make it more difficult for innovation to be recognised. Beyond the HTA process, there is also an opportunity for a review of current PL groupings to make sure these are correct and to address anomalies, which may lead to benefit changes for individual items (after the Medical Technology Association of Australia's (MTAA) Affordability of Medical Devices Agreement expires in January 2022).

There is significant variation in the average cost for equivalent procedures by surgeon. For example, the most costly gastroscopy procedure costs 11 times the lowest amount charged for the same procedure.<sup>34</sup> In addition, out-of-pocket costs for patients are often substantial. Given the significant information asymmetry between consumers and surgeons, consumers are unable to make fully informed costly decisions about their healthcare.

A national database that compares surgeons on cost and quality outcomes not only can bridge this information asymmetry, but also improve the quality, safety and affordability of healthcare. In the US and UK, there is public reporting of individual clinician performance to varying degrees. A national database could involve objective measures assessing quality and safety, including an analysis of cost, volume and outcomes of procedures.

The Federal Government has proposed a fee website that would contain different specialists' fees and allow both GPs and patients to consider costs when deciding on their recommended specialist and choice of specialist.<sup>35</sup>

This approach has received support from the Australian Medical Association (AMA), with some caveats. The AMA has indicated that to be effective in arming patients with information about their likely out-of-pocket costs a fee website would also need to include information as to the value patients could be reimbursed from Medicare via the MBS rebate and their private health fund.

It is very important that any database or pricing transparency mechanism like the fee website for surgeons is fair and transparent. Comparisons should be as like-for-like as possible: this could be achieved by comparing procedures and patient populations at a micro level to account for the differing mix of procedures and patient types across surgeons, while also accounting for additional surgeons involved in a procedure and the level of seniority of additional surgeons.

Development of this type of mechanism is likely to be a resource-intensive exercise. Apart from gathering data, meaningful performance assessment requires development of guidelines and standards against which performance is to be measured. These also need to be standardised to account for volatility in individual case-mix and adequately risk adjusted.

These are worthwhile initiatives to deliver value in the longer term, but are not believed to represent opportunities for near term savings that can put downward pressure on premium growth.

## Sections of the PHI sector can further moderate premium growth directly while maintaining strong margins

While profitability varies significantly across the PHI sector, a number of private health funds representing a substantial portion of total industry premiums are profitable enough to further moderate premium growth while maintaining strong margins.

Under a business-as-usual scenario, we expect that industry net margins will grow from 5.1% in FY2018 to 5.8% by FY2022, in part due to the additional \$291 million in savings that will come from agreed benefit decreases on the PL. Within this context, we estimate that the most profitable 10 funds would enjoy average margins of 10.2% (increasing from 8% today). These funds would have seen annual premium growth of 3.6% p.a through FY2022.

If the sector delivers the efficiencies discussed in this section, this will allow premium growth to be reduced. If these funds were to further moderate premium growth, by an additional 0.3% p.a, this would equate to \$210 million in further annual premium reduction by FY2022 (discussed further in the section below). These funds would still have an average margin of 9.9%.

<sup>34</sup> RACS, *Surgical variation reports (2016, 2017)*

<sup>35</sup> <https://www.gregghunt.com.au/national-strategy-to-tackle-specialist-out-of-pocket-costs/>

## 5. Delivering identified efficiencies could reduce premium growth by up to 20% by FY2022 while maintaining industry margins

### The opportunities identified could reduce premium growth by up to nearly \$1 billion p.a by FY2022

To establish a baseline we estimate FY2019 premium per member, then use the average growth rate from FY2013-2019 to estimate through to FY2022 (this results in an average premium per member growth of 3.8% p.a from FY2018 to FY2022). Assuming membership trends continue at historical rates, under a business-as-usual scenario, we estimate that industry net margins would grow from 5.1% in FY2018 to 5.8% by FY2022, in part due to the additional \$291 million in savings that will come from agreed benefit decreases on the PL.<sup>36, 37</sup> Over this time, total premiums paid will have grown from \$23.9 billion to \$28.7 billion (this estimate also assumes that benefit payouts per member continue at their historical trajectory, adjusted for the net additional impact of benefit decreases on the PL, and opex spend remains constant as a percent of revenue).

Achieving the efficiencies identified in Chapter 4 (excluding reduced premium growth for the most profitable funds), would see costs reduced by \$747 million. If this were all translated to a reduction in premiums, this would reduce growth in premium per member to 3.1% p.a through FY2022 while maintaining industry margins (margins would be slightly higher, at 6.0%).

If in addition, the most profitable funds restrained their premium growth further (from 2.95% p.a to 2.65% p.a), this would deliver a further reduction in premiums of \$210 million, while leaving an industry average margin of 5.2% (slightly higher than today).

In total, the opportunities identified could translate to a reduction in the total increase in premiums paid of up to nearly 20 percent by FY2022, producing a saving of nearly \$1 billion for consumers.

### However, without safeguards and commitment to reform, premium growth containment may come at the expense of longer term quality and affordability

PHIs may look to continue to downgrade policies to compensate for lower premium growth by reducing benefit payouts. The government's reforms that began in April 2019 already aim to address this sort of behaviour, by clarifying the requirements for different coverage levels. However, it will be important to scrutinise developments to ensure that policies don't deviate from the agreement, and to identify any unintended consequences in terms of coverage levels that need to be addressed.

Funds could also look to defer spending on operational expenses rather than engage in the process of extracting genuine operating efficiency. Similarly, health funds may look to squeeze providers (hospitals, allied health) without a process of underlying reform that supports health outcomes. Sector stakeholders need to ensure that premium growth containment is delivered through genuine improvements in the system's efficiency and cost base.

<sup>36</sup> To forecast the number of members in 2022, we calculated the share of the population with private health insurance from 2013 – 2019. Using this, we estimated the historical 5-year CAGR of membership as a share of the population, and used this to forecast members as a share of the population in 2022. Using projected population numbers (ABS), we derived the total number of members expected in 2022.

<sup>37</sup> This is only an estimate, and industry margins are sensitive to the growth in premium rates that the government permits. If the government were to permit lower average increases than seen from FY2013-FY2019, which they could do in light of the savings expected from the PL cuts, then margins in FY2022 could be lower than estimated.

## 6. Medical technologies are critical to improving quality and affordability of healthcare in the medium to long term

### Medical technologies can improve preventative and primary care through lower cost service delivery, improved compliance and patient monitoring

Technologies like telehealth, remote diagnosis and patient monitoring apps have been designed to greatly improve healthcare outcomes while reducing costs. Development and deployment of these and other technologies should be encouraged to improve the quality and affordability of healthcare in the medium to long term.

Telehealth is the internet-based provision of health care services and can increase accessibility while reducing costs of care. The key beneficiaries will include chronic disease sufferers, rural and regional patients, and disabled patients. These patients will benefit from being able to see a greater range of doctors and specialists from home, or from smaller, rural clinics.

Similarly, developments like remote analysis of diagnostic imaging will provide both cost and time savings to Australia's health system. Broader adoption of remote monitoring technologies combined with telehealth care models could particularly help to address inequalities in access to specialist care in rural and remote regions of Australia.

The continued development and improvement of mobile apps that encourage compliance in taking prescribed medicines can also improve outcomes. These apps allow patients to effectively manage their medication regimes via smartphone, improving adherence to prescribed treatments (eg. MedicineWise, MediSafe).

Advances in in-home movement monitoring for 'at risk' patients is another example. For patients prone to falling, remote patient monitoring promotes safety through continuous surveillance. Sensors can be affixed to an individual's assistive mobility devices, and monitor location, gait, linear acceleration and angular velocity, predict likelihood of falls, and alert caregivers if the individual has fallen.

Another example is the development of continuous blood glucose monitoring devices - consumer products that measure and monitor glucose on an ongoing basis. These in turn mean fewer hypo/hyper-glycaemic events, which are a significant cost to the system.

It should be noted that many of the devices above are not able to be covered by private health insurance and there is often no consistent, equitable public funding pathway to facilitate adoption that would accrue the benefits.

### Medical technology advancements improve hospital care through improved procedures and hospital practices

Advances in medical technology are also improving secondary/hospital care by improving outcomes and quality of life for patients, reducing lengths of stay, improving re-operation and re-admission rates, and also indirectly reducing waiting lists and workforce pressures.

Medical technologies have driven and will continue to drive significant improvements in health outcomes. Consider the following examples:

- **Mechanical thrombectomy:** This procedure for addressing blood clots related to stroke has almost doubled the prospects of recovery for patients, even beyond the critical 3-4 hour window for those treated with blood thinners.<sup>38</sup>
- **Cardiac catheter ablation:** This procedure is improving outcomes for patients with abnormal heartbeats. A catheter is inserted through the groin and up to the heart, then the device applies energy to remove small areas of heart tissue that cause abnormally fast heartbeats.
- **Multi-focal lens in ophthalmic surgery:** Improvements in cataract treatments / lens technology are providing improved quality of life outcomes. Advances in multi-focal lens technology mean cataract treatment can also deliver the patient 'spectacle free' living.
- **Robotic-assisted surgery:** Robotic surgery can eliminate human technical error in orthopaedic surgery, leading to better patient outcomes, reduced stays and fewer re-operations and re-admissions.<sup>39</sup>
- **Radiotherapy in oncology:** Advances in radiotherapy mean it can be used in an expanding proportion of cancer patient treatment situations, avoiding the negative side effects and complications of chemotherapy.

<sup>38</sup> Thrombectomy 6 to 24 Hours after Stroke with a Mismatch between Deficit and Infarct. Nogueira RG et al. NEJM, Nov 2017.

<sup>39</sup> Cool, C.L., et al (2019) "A 90 day episode-of-care cost analysis of robotic-arm assisted total knee arthroplasty", journal of comparative effectiveness research January 2019

---

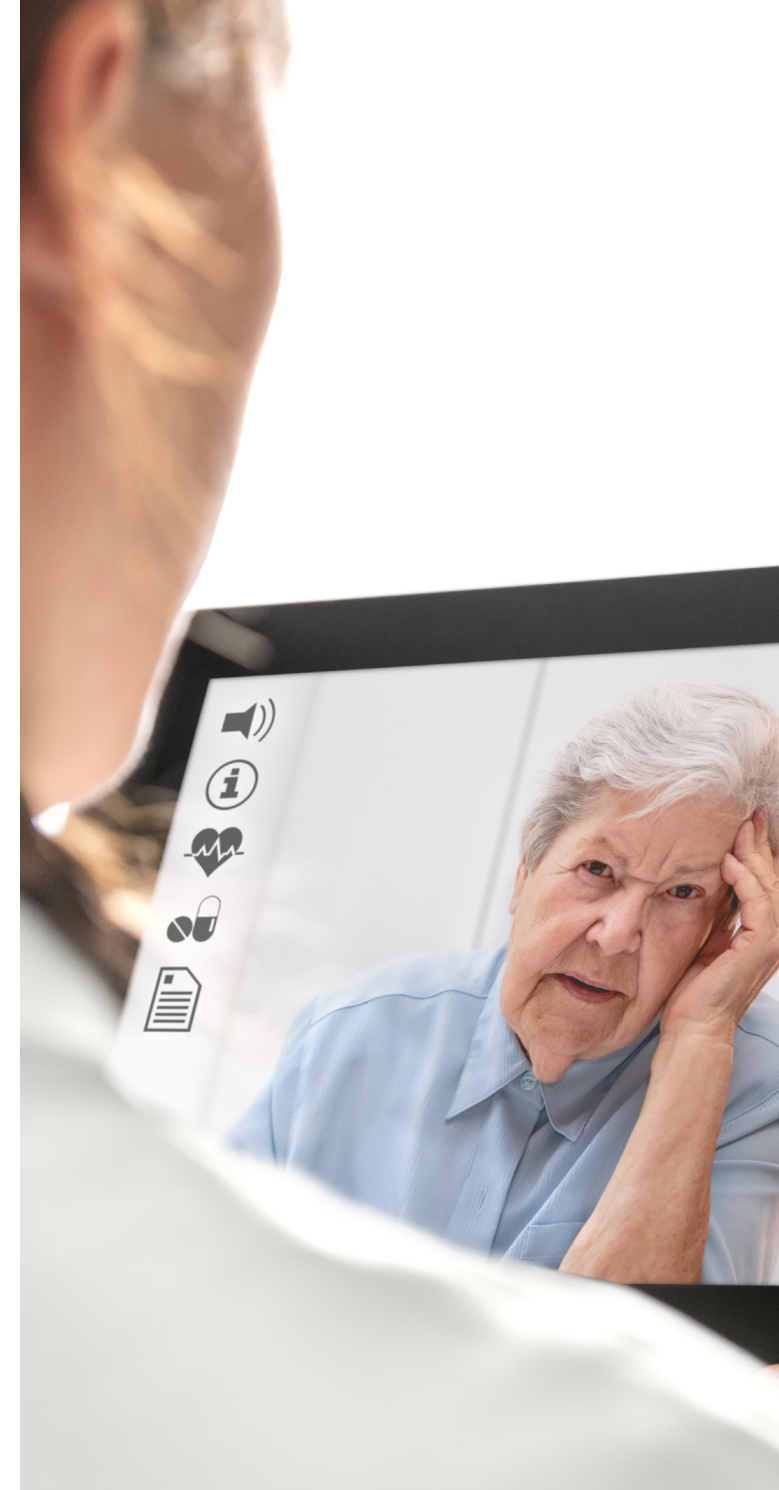
Medical technologies can also have the effect of improving procedures and treatments in a way that reduces typical length of stay. For example, a new treatment for an enlarged prostate (transurethral prostate) has reduced what was historically an overnight procedure to be a day-only procedure, that is typically relatively short, in the order of 30 minutes. Similarly, transcatheter aortic valve implementation (TAVI), a minimally invasive alternative to open heart surgery where the valve is replaced via a catheter, is less invasive and risky, has much lower typical length of stay, and lower re-admission rates.

Medical technologies can also reduce error rates in operations. For example, inter-operative imaging technology can ensure the optimal placement of spinal screws in spinal surgery. This may actually increase length of stay, but leads to reduced error rates and re-operation prevalence.

Finally, technological developments (including medical devices) will continue to increase the potential for out of hospital and outpatient treatments, as well as reducing length of stay. These impacts have the direct effect of reducing waiting lists for procedures in public hospitals, and could also reduce the demands on medical staff, which is critical given forecast workforce shortages.

### Medical technology can enable lower cost delivery of post operation treatment

Medical technologies can enable lower-cost delivery of post-operation / ongoing treatment, particularly through remote monitoring models. A clear example is post treatment remote monitoring for cardiac issues. When a patient with heart failure has a pacemaker or other device inserted, technology now exists to review the relevant information and implications remotely. These software applications for implanted cardiac devices securely deliver data to the cardiologist, and support earlier detection of heart rate abnormalities, without the patient needing to visit the cardiologist as frequently (eg. Merlin.net). For some devices this approach is well adopted because coverage has been secured on the PL. However, uptake has been limited by the lack of incentives for cardiologists – remote monitoring means fewer consultations for cardiologists, so fewer service fees. The fee-for-service model militates against the deployment of this technology. In addition, remote monitoring involves a practice change, and it takes times for practitioners to trust and adopt it.



## 7. Structural constraints limiting the ability to optimise quality and affordability need to be addressed to underpin sustainability

A number of structural constraints are limiting the sector's capacity to optimise quality and affordability of care, including through the appropriate development and deployment of medical technology. These issues need to be addressed to underpin the long-term sustainability of the system.

### Misaligned system incentives

Lack of alignment between the incidence of cost savings provided by technology and the cost impact for a purchaser can reduce the incentive for deployment of technologies that could reduce system costs and improve health outcomes. For example, a new technology (including a medical device) may result in a procedure that delivers benefits to the system as a whole in terms of health outcomes and costs. However, this benefit may not be accrued by the payer or funder. PHI coverage typically bears only a small portion of surgeon/anaesthetist costs, but bears the bulk of the cost of medical devices. For example, the TAVI procedure provides a system cost saving compared to open heart surgery (which has significant surgeon / anaesthetist cost and longer LOS), plus reduced risk and recovery time. However, because PHI pays only a small portion of surgeon costs but the bulk of device cost, they have a disincentive to promote use of the procedure even though benefits accrue to the wider health system.

### PHI coverage and reimbursement model

The current PHI coverage and reimbursement model constrains the deployment of new procedures and technologies that can improve health outcomes and reduce costs, because of the constraints on coverage for procedures in non-hospital settings, PL coverage for "non-implantables" (products that are

not surgically implanted), and coverage and reimbursement for remote 'at home' treatment (eg. post operative care and monitoring).

The fact that PHI coverage does not extend to non-hospital settings produces an incentive for many procedures to be done in more expensive settings than necessary. For example, dialysis treatment could mostly be done outside hospital, but is done in hospital due to the reimbursement model (c. 14m hospitalisations, 1.4m dialysis treatments p.a). Similarly, implantable loop recorders are mostly inserted in hospital. This is a simple procedure that could be done in other settings. However, the reimbursement model incentivises a hospital admission. Another example is orthopaedic rehabilitation (including for total knee arthroplasty discussed above) - most of this occurs in hospital at greater cost, despite there being no evidence of improved health outcomes from that model. The coverage model incentivises this more costly approach.

The current limited approach to reimbursement for "non-implantables" also acts as a constraint on optimising health outcomes and system costs. "Non-implantables", with some limited exceptions, are not listed on the PL and therefore not required to be covered by private insurance. This causes various ill-desired effects. A patient may opt for an inferior process, because they can go to a private hospital (no waiting time) and get reimbursement. Alternatively, a patient may use the public system, accepting a waiting list. Treatment delay can have adverse outcomes, and additional burden is placed on the public system. Finally, a patient may opt to use the private system and pay out of pocket for the procedure, increasing patient costs. This coverage model acts to constrain the deployment of a range of beneficial technologies, including for example surgical catheter

ablation for arrhythmias other than atrial fibrillation, mechanical thrombectomy, ablation for the treatment of Barrett's oesophagus (pre-cancerous condition affecting the lining of the oesophagus), drug coated balloons, and fractional flow reserve wires.

The PHI coverage model does not generally extend to non-consultation situations. This is a disincentive to the uptake of treatment methods involving remote monitoring that can lower cost and improve health outcomes but reduce GP / specialist visitations

This is particularly relevant for cardiac interventions and devices, and post-operation monitoring of the patient's condition. Remote monitoring technology for devices means earlier warning for patients and reduced need for cardiologist consultations. However, the fee for service model militates against the deployment of this technology.

Addressing these constraints would help facilitate deployment of procedures and technologies that would provide the best health and cost outcomes for the system as a whole.

### Prostheses list reimbursement for clinical performance

For several groups of devices on the Prostheses List there is no price reward for long-term evidence of superior clinical performance. This means the PL does not fully optimise incentives to generate the best health (and cost) outcomes. In the case of orthopaedic devices the difference between a 92% and 98% survival rate for the device through 10 years is a failure rate 4x as high, which in turn implies more re-operations, which

---

tend to have more complications, and quality of life impact. However, these proven high-performing devices will not have differentiated pricing.

The original Superior Clinical Performance (SCP) benefit was removed as part of the recent MTAA Agreement. The SCP incentivises the continuation of best-performing orthopaedic implants beyond the ten-year mark, which requires companies to bear the expense of continually replacing costly instrumentation sets over many years, but pays off clinically and economically for patients and the health system overall, including insurance funds, by minimising expensive revisions. There are also examples where PL reimbursement is arguably too restrictive in terms of patient categories. For example, TAVI reimbursement is restricted to high risk and inoperable events (or disease): a definition which is arguably outdated and results in too narrow an application of the procedure.

Finally, there are reimbursement anomalies that result in higher cost. One example is the use of spinal stimulators in neuromodulation to treat chronic pain. The process is to use trial leads, then if there is success, move to permanent implants. However, reimbursement for trial leads is too low relative to permanent implants, so some sponsors don't list trial leads on the PL, resulting in frequent use of permanent leads from the start of the process, leading to higher costs. Another example is the reimbursement of bone cement and bone graft substitute products with product sizes 5cc/5ml or less (ie. 1,2,5 ml). These have been given the same benefit amount, which incentivises use of the 1ml product, which adds unnecessary cost and waste.

### Greater public provision of data on clinical performance

The orthopaedic sector has a longstanding register, the NJRR, with 15 years of clinical results. Data is provided at device and surgeon level, and the data in this register can and does shape treatment decisions. It has been estimated that the existence of the register has saved more than \$600 million through this behaviour shaping effect.<sup>40</sup> However, outside the orthopaedic sector, there is limited public information on device and surgeon level performance. It is acknowledged that the establishment and maintenance of registers is time consuming and costly. However, greater provision of information would almost certainly shape treatment decisions and improve quality and affordability of care. Accordingly, the prospect of developing registers or other mechanisms to improve transparency, where the circumstances warrant it, should be considered. Appropriate cost sharing mechanisms between governments and other benefiting parties would need to be developed. Direction of government research funding to the development and maintenance of clinical registries would make pertinent use of research spending and achieve the dual goals of traceability and improved clinical outcomes. The draft National Clinical Quality Registry Strategy recently released for consultation is welcome in this regard as it can benefit private as well as public healthcare.

### Unintended consequences of the 'Gold, Silver, Bronze, Basic' policy model

The 'Gold, Silver, Bronze, Basic' model has been developed to help standardise coverage and provide prospective PHI customers with clarity. However, the design of the model has seen various treatments previously included in standard coverage limited to Gold. A consequence is that patients of less means may not have the coverage they need to access the best treatment. For example, spinal cord stimulators, inserted into the epidural space in the spine to target chronic pain, will only be universally accessible with Gold coverage. If a patient can't access this procedure because they don't have Gold coverage they must rely on the medical therapy approach, opioids. The treatment of chronic pain using the device approach has a significant cost upfront but could save the system money and improve the customer's quality of life.

40 "The economic impact of clinical quality registries - Do they pay their way?" 2017. Research conducted jointly by Monash University and Quantum Health Outcomes with support from the Australian Commission for Safety & Quality in Healthcare.



# References

---

- ABS, *Private Hospitals (2016-17)*
- AIHW, *Admitted Patient Care 2016-17: Australian hospital statistics*
- AIHW (2018), *Medicare Benefits Schedule GP and specialist attendances and expenditure in 2016-17*
- AIHW (2018), *Australia's Health (2018)*
- APRA (2019), *Private Health Insurance Statistical Trends – December 2018*
- APRA (2019), *Private Health Insurance membership and benefits statistics*
- Bischoff-Ferrari, et al. (2006) *Effect of cholecalciferol plus calcium on falling in ambulatory older men and women: a 3-year randomized controlled trial.* [Arch Intern Med.](#) 2006 Feb 27;166(4):424-30.
- Buhagiar et al. (2017) *Effect of Inpatient Rehabilitation vs a Monitored Home-Based Program on Mobility in Patients With Total Knee Arthroplasty: The HIHO Randomized Clinical Trial.* *JAMA.* Mar 14;317(10):1037-1046. doi: 10.1001/jama.2017.1224.
- Cancer Australia, *Prostate Cancer Statistics*, (2018)
- Close et al., (1999) *Prevention of falls in the elderly (PROFET): a randomised controlled trial*, *The Lancet*
- Cool, C.L., et al (2019) *A 90 day episode-of-care cost analysis of robotic-arm assisted total knee arthroplasty*, *Journal of Comparative Effectiveness Research*, January 2019
- Duckett, Stephen et al, "All complications should count - Using our data to make hospitals safer." Grattan Institute Report No. 2018-01, February 2018.
- Deloitte Access Economics, *Economic Analysis of Hospital in the Home (HITH)*, Barton, 2011
- Greg Hunt MP (2017), 'Prostheses reforms to deliver better value for private health insurance'. Available at: <http://www.health.gov.au/internet/ministers/publishing.nsf/Content/health-mediarel-yr2017-hunt043.htm>
- Guerra et al, (2015) *Early mobilization of patients who have had a hip or knee joint replacement reduces length of stay in hospital: a systemic review*, *Clinical Rehabilitation*.
- "The economic impact of clinical quality registries - Do they pay their way?" 2017. Research conducted jointly by Monash University and Quantum Health Outcomes with support from the Australian Commission for Safety & Quality in Healthcare
- Morgan Stanley (2018), *Point Break: Earnings crunch?*
- MTAA (2017), 'Improving access to breakthrough medical technology and affordability of medical devices for privately insured Australians: Agreement between the Government and the Medical Technology Association of Australia (MTAA)'
- Naylor, J.M et al (2017) *The value of inpatient rehabilitation after uncomplicated knee arthroplasty: a propensity score analysis.* *MJA* 207 (6) 18 September 2017
- Nogueira RG et al., *Thrombectomy 6 to 24 Hours after Stroke with a Mismatch between Deficit and Infarct.* *NEJM*, Nov 2017.
- Organisational interventions to reduce length of stay in hospital: a rapid evidence assessment*, (2014), Health Services and Delivery Research
- Private Hospital Data Bureau (PHDB), *Annual Report 2016/17*, Department of Health.
- RACS, *Surgical variation reports (2016, 2017)*
- Royal Australasian College of Surgeons (February 2017), *Same-day surgery for femoral, inguinal and umbilical hernia repair in adults*
- Suffering from a Meniscus Tear? Why Arthroscopic Knee Surgery Isn't always the answer!*, *Prahran Sports Medicine*, 2016.
- Nelson et al. (2018), *Transcatheter aortic valve implantation: a new standard of care*, *Medical Journal of Australia (MJA)* 209 (3)
- Yamada, et al. (2013), *Multitarget stepping program in combination with a standardized multicomponent exercise program can prevent falls in community-dwelling older adults: a randomized, controlled trial.* [Journal of the American Geriatric Society.](#) Oct;61(10):1669-75. doi: 10.1111/jgs.12453. Epub

produced by

αlphaβeta  
strategy x economics