Value-Based Procurement in Australia

Executive Summary

Healthcare systems globally are facing critical financial and operational challenges. Australia is no exception. If left untreated, these challenges will significantly impact delivery, access, and quality of Australian healthcare. Globally, and within Australia, the funding and financing of healthcare systems has emerged as one of the greatest public health risks.

With a relatively strong healthcare system, Australia has the opportunity of addressing these challenges. Australia's healthcare system is ranked high globally. The average life expectancy is 83.2 years and health spending is approximately 10.2% of gross domestic product (GDP). This places Australia 11 out of 38 of the Organisation for Economic Co-operation and Development (OECD) countries and above the median healthcare spend of 8.05% GDP. [2,3,4,5,6] However, despite ranking near the top of global comparisons, Australian healthcare is at risk of sleepwalking into a major funding, access, and healthcare delivery challenge.[17]

Australia had an estimated gross debit of AUD 885.5 billion in April 2022 and nearly 60% of GDP.[4] Debt levels will be compounded by worsening economic conditions including rising interest rates, and the highest level of inflation in generations.[4] At the state level, this dynamic is arguably most acute in Victoria, with a larger debt level in June 2022 than the combined total of NSW, Queensland and Tasmania in both nominal terms and as a share of gross state product. However, the gap is larger now than it is projected to be in June 2026.[7]

The immense financial pressures are further compounded by alarming demographic factors, including an aging population, an increased prevalence of chronic disease, both leading to significant increases in healthcare consumption. Inefficiencies in Australian healthcare are also an area for concern. [8] There is also the fragmented funding between hospital and general practice restricting the integration of care. Healthcare spending accounts for approximately 10.2% of overall GDP. With a strong demographic case for increasing healthcare spending, and with major inefficiencies within the existing spend, healthcare can be both a potential source of positive change if managed well, but also exacerbate the problem if left unaddressed.

Value-based healthcare presents a viable solution to this dynamic. Value-based healthcare is a care-delivery model that measures health outcomes versus the total costs of delivering healthcare: it aims to improve both patient outcomes and healthcare efficiency. Value-based healthcare ensures the entire patient pathway is considered, with the patient at the centre of the equation.[1]

More specifically, across the patient pathway, procurement and purchasing decisions are made for services and medical technologies. Value-based procurement ensures health outcomes are the primary determinants for these purchasing and procurement decisions. If this happens, VBP can be a significant enabler to VBHC.[9,10] However, VBP is not holistically happening across Australia. This needs to change, and Australia needs to follow the lead of other countries/regions that are already experiencing success in VBHC and VBP. Examples include Canada, the European Union (EU), England and Wales. In these countries, and others, there are examples of how health outcomes have been improved, and total costs reduced.[9,10,11,12,13,14,15]

This White Paper brings all of these themes together and makes 5 clear recommendations on VBP and VBHC implementation. This White Paper is substantiated by extensive desk research, and expert interviews with multiple stakeholder groups and Australian healthcare leaders. Both the research and expert opinions clearly see VBHC and VBP as an essential solution to rectify the Australian healthcare.

The 5 recommendations are:

Recommendation 1: Build a supportive ecosystem and form a VBP Community of Practice.

Recommendation 2: Build clinical engagement and leadership.

Recommendation 3: RWE to support procurement decisions.

Recommendation 4: Innovative Funding Models and Risk Sharing.

Recommendation 5: Expert Advisory Committee.

This White Paper will discuss the current state of Australian healthcare, why VBHC and VBP are solutions to a robust healthcare system, offer international examples and best practices, and set forth clear recommendations for implementation. Above all, this White Paper aims to ensure the medical technology sector are a part of the solution and seen as a collaborative partner with the massive headwinds facing Australian healthcare.

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Section 1: Introduction

This report is the narrative behind a 9-month program and research report written by Alira Health and commissioned by the Medical Technology Association of Australia (MTAA) Value-Based Procurement Group to understand and map the Australian VBHC landscape.

This report has a double purpose regarding the procurement of medical technologies in Australia. It aims to set the foundations for a policy change towards VBP for medical technologies (“top-down approach”), while setting the foundations for a Community of Practice in VBP implementation (“bottom-up approach”). For more information on this report, please contact the MTAA and/or Alira Health.

VBHC VS VBP: AN IMPORTANT NOTE AND CONTEXT

The reader will notice we have used the terms “Value Based Healthcare” (VBHC), and “Value Based Procurement” (VBP) somewhat interchangeably throughout this report. The rationale is due to the nature of the context in which they are used. Indeed, VBHC and VBP are intricately linked.

VBHC: this is defined as **the improved health outcomes for patients versus the total costs of delivering care**. Importantly, this is a patient-centric measurement, that spans the entire care pathway for a patient: from the time a patient enters a care pathway to the point at which they exit the care pathway.

VBP: across a VBHC care pathway, purchasing decisions need to be made. VBP represents the purchasing decisions across a VBHC care pathway. Spending may be determined by Policy Makers through a holistic budget or Payers who determine funding, coverage, and access in accordance with stakeholder input, and procurement purchases the items to actually deliver the care. All three are intricately linked, with the procurement decision often being the most critical decision points for the health technology the patient receives. Therefore, **VBP represents the purchasing decisions that consider the same health outcomes and total cost considerations as the VBHC care pathway**.

What is important is that VBHC, VBP and all the stakeholders involved are collaborating and engaging in a patient-centric manner, across the care continuum, and measuring consistent health outcomes and measurement of total costs. Currently this not happening in a structured way, but we are seeing a groundswell of initiatives to move towards a VBHC approach. Australia is no exception, the question is not whether VBHC, and by definition VBP, is appropriate, the question is how do we accelerate this.

One final note: many discussions have been had on whether procurement should define care pathway decisions, or care pathway decisions should define procurement. This somewhat misses the key point of VBHC and VBP: they should both be in collaborative dialogue to inform each other. Physicians and providers define the care pathway, payers, providers and procurement define the total costs associated with care. All stakeholders then define the appropriate value for their health ecosystem: how to improve health outcomes and how to balance the total costs of delivering care for patients.

VBHC represents the entire care pathway, VBP represents the purchasing decision across that care pathway. VBP is therefore a subset of VBHC, both are interlinked, and both require multistakeholder collaboration to fully deliver healthcare to Australians.

The report embeds five key themes, summarised below:

1. Healthcare systems are on the brink of a financial and operational crisis

Healthcare systems globally are on the brink of financial and operational unsustainability [1,36] The demand for healthcare is rapidly outpacing supply and the resilience to withstand future critical demand spikes (e.g., COVID) is uncertain. The Australian healthcare system is not immune to these pressures as demonstrated by increasingly limited access to care by underserved populations, high out-of-pocket costs, delays in accessing urgent care after hours, delayed information sharing across care settings, and long waiting lists for elective care. One of the primary causes are the extreme financial pressures on the healthcare system due to increased debt, worsening economic conditions, changing demographic factors and non-demographic factors. A systemic approach to addressing these challenges needs to be adopted. Pricing cutting and "quick-wins" will not solve the issues.

In April 2022, Australia had an estimated gross debt of $885.5 billion, the highest level since the 1950s and these debt levels are only being compounded by worsening economic conditions, including rising interest rates, and the highest level of inflation witnessed in generations.[4] At the state level, this dynamic is arguably most acute in Victoria, with a larger debt level in June 2022 than the combined total of NSW, Queensland and Tasmania in both nominal terms and as a share of gross state product. However, the gap is larger now than it is projected to be in June 2026.[7]

It is estimated that 5.1% of Australian healthcare spending is on medical technologies.[16] The remaining 94.9% is spent on the provision of care (hospitals, staff, and operational elements of healthcare), and pharmaceuticals. Cost containment measures set up in place by healthcare systems to combat the challenges described above only add to price pressures for medical technologies. Even with the most aggressive cost containment and cost-cutting measures on medical technologies, it will not come anywhere near to solving the issues. Rather, the estimated 5.1% of spending on medical technologies should be seen as an enabler to drive the efficiency gains in the remaining 94.9%. The move towards VBHC and VBP supports this. Alira Health, in collaboration with the MTAA has prepared a dedicated report that quantifies the difference the medical technology sector makes to the lives of Australian patients, the healthcare workers, the healthcare system and overall economy. The report is can also be considered in the context of the "Value of MedTech" report also produced by the MTAA. This report brings to light the significant value and contribution of medical technologies in Australia, particularly to Australia's healthcare system, industry development, employment and the wider economy.[22]

2. Medical technologies and value-based healthcare can be solutions to healthcare challenges

Value-based healthcare, and medical technologies present a viable solution to this dynamic. Value-based healthcare is a care-delivery model that measures health outcomes versus the total cost of delivering healthcare: it aims to improve both patient outcomes and healthcare efficiency. Value-based healthcare ensures the entire patient pathway is considered, with the patient at the centre of the equation.[1] Medical technologies often have benefit that continues to occur long after it is used, for example diagnostics, which impact up to 60 - 70% of all downstream decision making, or robotic surgery which can be seen as a platform that can concurrently serve multiple interventions and uses.

More specifically, across the patient pathway, procurement and purchasing decisions are made for services and medical technologies. Value-based procurement ensures health outcomes are the primary determinants for these purchasing and procurement decisions. If this happens, VBP and medical technologies can be a significant enabler to VBHC.[9,10] However, VBP is not holistically happening across Australia. This needs to change, and Australia needs to follow the lead of other countries/regions that are already experiencing success in VBHC and VBP. Examples include Canada, the European Union, England and Wales. [9,10,11,12,13,14,15] In these countries, and others, there are examples of how health outcomes have been improved, and total costs reduced. Given that approximately 70% of all medical technologies reach patients through some form of procurement decision, ensuring the correct procurement evaluation criteria is vital for the medical technologies sector.[9,10] There are challenges that emerge, including payment and funding risks, timeframes, outcomes measurement, cost calculations, and determining incremental improvement and savings associated with VBP. However, these challenges can be overcome through collaborative dialogue with all stakeholders.

3. An international movement towards value-based healthcare is well underway

Many countries have already initiated the shift towards value-based healthcare, AND, value-based procurement. There are numerous case studies, examples, and organisations to share knowledge on these pilot programs. Through the selection of five case studies on VBP from around the globe, we have highlighted how other countries have enjoyed success, which can be translated to the Australian context. [9,10,11,12,13,14,15]

Case Study 1 discusses the Value-Based Procurement Community of Practice in Europe. This was initiated in 2017 and designed to provide a networking platform for the exchange of expertise, experience, and initiatives. In fact, this is the thinking behind the recommendation for an Australian VBP Community of Practice. Founding members include leading procurement organisations, such as the European Health Public Procurement Alliance (EHPPA), and the European trade association; MedTech Europe. Several successful pilots have been undertaken and continue to be scaled up.[9,10]

Case Study 2 shows an infusion pump tender from the University Hospital in Sweden that clearly highlights how a technology with superior outcomes costs significantly less than a lower-priced alternative. It showcases with numbers how in VBP the most economically advantageous supplier can win a tender.[12]

Case Study 3 focusses on the journey and the learnings from a VBP tender for a faecal incontinence sacral nerve stimulation implant in Wales.[13]

Case Study 4 shows an overview of results obtained with VBP in cardiac care in Canada.[14]

Case Study 5 is an example from the National Health Service (NHS) in England regarding trays to avoid catheter-associated urinary tract infections. These trays were rolled out NHS-wide after a successful pilot in one hospital group.[15]

Levering an international example set, Australia could rapidly deploy value-based initiatives; however, the coalition of the willing partners needs to be established.

4. Collaborative dialogue and a multi-stakeholder approach is a requirement for success

Globally, and within Australia, financial and operational silos and hierarchies are one of the greatest challenges to healthcare reform. In order to successfully implement change, all stakeholders, including the medical technology sector, need to be included. Internationally, and within Australia, all stakeholders can be grouped into the categories shown in Figure 1. There are numerous sub-categories, but it is vital that the following groups are engaged in discussions on healthcare improvement:

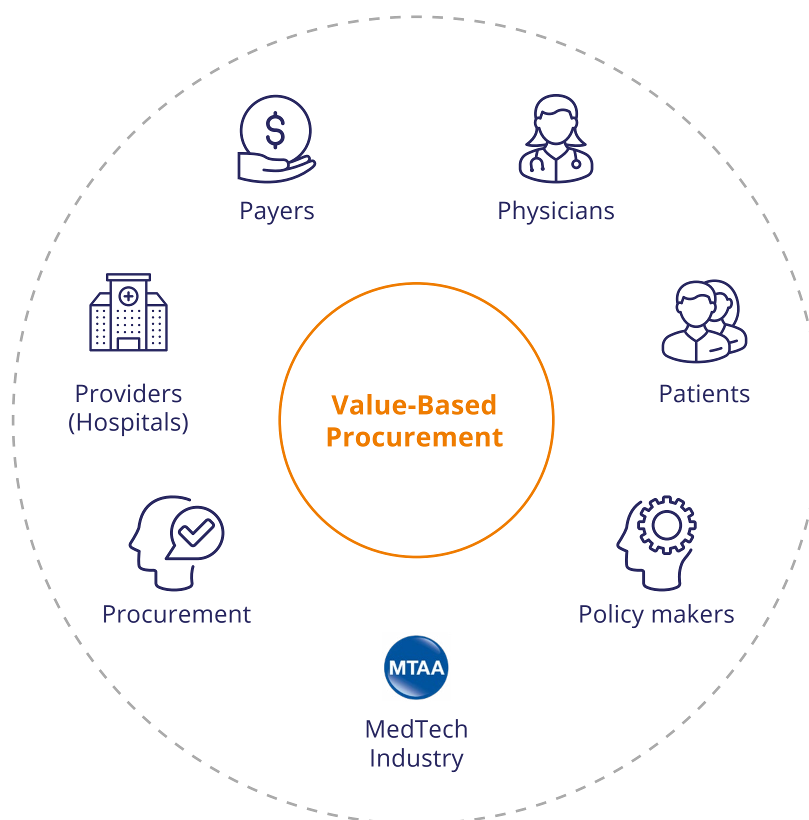


Figure 1. Stakeholder Groups Engaged in Discussions on Healthcare Improvement

1. **Policymakers:** VBHC and VBP can help to achieve policy goals, such as improved population health and reducing costs.
2. **Physicians:** Focus on outcomes in VBHC/VBP is aligned with how healthcare should be organised and helps physicians to focus on what matters most. Physician choice in technology selection is essential.
3. **Providers:** VBHC/VBP looks at the care continuum addressing care fragmentation. Opportunity to reduce costs, reduce waiting times, readmission rates and enhance manufacturer relations.
4. **Patients:** VBHC/VBP helps to increase high-quality, patient-centred care by aligning incentives with patient outcomes.
5. **Procurement:** Complicated procurement process with various criteria each with their values in different units.
6. **Payers:** Only pay for true value and outcomes, while reducing the spending on unnecessary or less effective care. Complicated role in translating requirements from all stakeholders in fair and transparent criteria.

This research report incorporates this multi-stakeholder approach.

An extensive deep dive, state-by-state, and stakeholder-by-stakeholder, to understand the VBHC and VBP landscape in Australia was undertaken through primary interviews and desk research. The willingness and readiness of Australian federal and state stakeholders to move forward on VBHC and VBP were assessed. Overall, the interviewees from the different stakeholder groups were broadly aligned on the following three items:

- **Long-term financial sustainability of the Australian healthcare system is at stake.**
- **There was broad alignment in VBHC as a solution.**
- **There was agreement on the strategic importance of the Medical Technology Sector.**

At the national level, the NHRA 2020-25, embeds language consistent with value-based healthcare. The NHRA 2020-2025 introduced six long-term health reform principles, of which two relate directly to value (Nationally Cohesive Health Technology Assessment and Paying for Value and Outcomes). Given the similarities, the role that VBP plays in purchasing decisions across a VBHC continuum, VBP would be highly supportive of the National Health Reform Agreement (NHRA) policy.[18]

Key findings from the research suggest that at the state level, the frontrunner regarding VBHC initiatives is New South Wales (NSW). However, concerns have been raised about the lack of medical technology sector input to NSW initiatives. Victoria has a globally renown VBHC approach with the Dental Health Services Program. In addition, VBHC is included in the Transport Accident Commission Strategy 2025, that has actively called for pilot programs. As well, Queensland has several initiatives regarding VBHC and a publicly shared example of VBP (see section 4). Interestingly, the disconnect between acute (public and private) and primary care systems and a lack of trust between stakeholders are critical barriers to VBHC implementation.

From a stakeholder perspective, VBHC is a frequent topic of discussion among those willing to move this forward, but despite the policy language at the national level there is no system-wide leadership commitment to a VBHC or VBP transformation. Moreover, VBP is significantly less well-known among the interviewees, and many felt VBHC initiatives were not related to VBP.

Regardless, Australia is well-placed for the shift towards VBP because it has mature procurement processes and frameworks. Where procurement in Australia, and many other developed countries, is significantly lacking is embedding improved health outcomes into the primary criteria for successful tenders. It is these health outcomes that should be the primary metric for health system performance. The majority of stakeholder interviewed agree with this approach, but a more robust tactical implementation ecosystem is needed.

5. Experts agree on VBHC and VBP implementation, although a strong "call to action" is needed

Experts interviewed have identified how the global healthcare challenges are relevant to Australia, and they generally agree that a more systemic measurement of improvement in health outcomes and total costs are essential going forward.

Alira Health has conducted interviews and found that Australian health stakeholders want to see VBHC implemented more in Australia, and that the Australian healthcare system has the systems and processes required to adopt VBHC and VBP but is currently missing critical pieces. Some key enablers, based on the desk research and validated by the expert interviews suggest the following for a way forward:

1. Establishing a Community of Practice to enable a knowledge transfer in VBP implementation.
2. Ensure a strong clinical input and alignment with VBP initiatives.
3. Enable a robust RWE environment and decision-making process.

4. Link VBP initiatives to innovative payment models to appropriately incentivise stakeholders.

5. Establish an Expert Committee consisting of Australian and International thought leaders.

Other themes that emerged included the rapidly increasing role of environmental sustainability in healthcare procurement decisions. The linking of value-based initiatives to the health technology assessment (HTA) agenda and ensuring the considerations of Aboriginal and Torres Strait Islander populations in the prioritisation of healthcare reform.

Australia has a very strong HTA process, and is regarded alongside Canada and England in terms of robust methodologies. Therefore, there is a valid question about the role of HTA and VBHC in healthcare decision making. HTA can be defined as “a multidisciplinary process that uses explicit methods to determine the value of a health technology at different points of the lifecycle. The purpose is to inform decision making in order to promote an equitable, efficient, and high-quality health system.[35] Given this definition, HTA and VBHC can guide each other, but there are material differences that should be emphasised. HTA often provides an ”economic” assessment, not an ”accounting” driven one. HTA often looks at cost effectiveness and opportunity cost at a discrete point of the patient pathway or product lifecycle, and not the costs across the entire patient pathway as is the case for VBHC. However, where the two can support each other is in the similarities. Both VBHC and HTA attempt to measure some form of health outcome or cost, and both extend that measurement beyond just health outcomes and costs, to include societal value and lever physician input. Where healthcare arguably needs the most support, is across the silos and hierarchies of healthcare ”accounting” and costing not the ”economics” and opportunity costs of healthcare. By definition, procurement operates as a form of multi-criteria decision analysis (MCDA), levering concepts from more from an accounting perspective than an economic one. This makes procurement an ideal place to address healthcare costing challenges. Overall having some contribution of both perspectives certainly help in healthcare decision making.

To enable these strategic agendas, it is the strong recommendation of the MTAA and of organisations globally, that all stakeholder groups have a seat at the table. Ensuring patient outcomes are at the heart of healthcare decision making, with procurement included, would represent a major step forward in enabling these themes.

Section 2: Methodology for the Assessment of the Australian Value-Based Procurement Landscape

In January 2023, the MTAA commissioned Alira Health, a healthcare advisory firm, to conduct an extensive assessment of the Australian value-based procurement landscape. This project consisted of four modules. This project was initiated through the Procurement Working Group and had the two-fold objective of:

i. **VBHC & VBP Readiness:** Undertake a quantitative and qualitative assessment at the state and territory level that can provide a baseline assessment to engage in VBHC and VBP initiatives.

ii. **Solution-driven Recommendations:** Lever the quantitative and qualitative research as a foundation for the creation of strategic recommendations on how to expand the implementation of VBHC and VBP initiatives. These recommendations have the higher purpose of ensuring industry participants are part of the solution in rectifying the challenges facing Australian healthcare and represent a call to action for collaborative dialogue across all stakeholder groups.

Module 1 aligned all participants of the MTAA Value Based Procurement Working Group on the objectives and direction of the research and to aggregate the existing knowledge base on VBHC and VBP across Australia. Module 2 expanded this knowledge base through extensive desk research, and included a more robust assessment across each of the six stakeholder groups. Module 3 conducted expert interviews that followed a structured interview guide and validated both the member input and desk research. Module 4 synthesised the desk research and expert interviews into a set of strategic recommendations, background research report, and this White Paper. It is intended that the findings of this assessment be presented and shared at external conferences and meetings.

Alira Health has conducted this research by levering a proprietary value framework that incorporates the findings of expert interviews to share perspectives of the key stakeholder groups. Specifically, these stakeholder groups can be further sub-divided, but can be aggregated as the 6 P's:

1. **Physicians:** Doctors, nurses, clinicians and experts delivering individual care to patients.
2. **Providers** (hospitals and hospital groups): the facilities providing the place of care.
3. **Payers:** individuals and organisations paying for the care.
4. **Policy Makers:** individuals providing the policy frameworks to enable the decision frameworks for access.
5. **Procurement:** individuals determining what services and solutions are paid for based on tender criteria, often with a provider- or payer-defined budget.
6. **Patients:** individuals for whom healthcare systems are designed for and benefit from care.

An important consideration for the methodology of this project, and forming the proposed recommendations, is that it is broadly acknowledged that healthcare systems globally are broken. Systems need a rethink. The recurring challenges of organisational hierarchies and silos, both clinically and financially, represent a material challenge to improving healthcare. They are a recurring challenge.

A major goal of this assessment is to ensure that industry is seen to be part of the solution to resolving Australian healthcare. Being part of the solution includes seeking objective input from all key stakeholder groups, across all states and territories, and the modus operandi moving forward is collaborative dialogue. This is an essential foundation for all stakeholders to consider if Australian healthcare is to be rectified. No single stakeholder can do this alone, and industry representatives are prepared to play an active role. Therefore, a core methodology embedded in this White Paper is that all stakeholders across all participating states and territories have a voice and are included. This White Paper aims to foster a culture of trust and collaboration to ensure all stakeholders are focused on improving health outcomes for patients and improving the efficiency of healthcare delivery.

Section 3: Statement of Issues and Solution (Global and Australia)

Healthcare systems globally are under immense pressure to deliver on their mandate of ensuring the health of the populations they serve. Demographics and morbidity criteria alone have led to a massive imbalance between healthcare demand and supply. Factor in the legacy stress and burnout placed on healthcare workers and health systems due to the COVID 19 pandemic, and there is a supply-demand imbalance that could have consequences far beyond the healthcare sector. The great challenge for healthcare systems is to meet the increased demands of healthcare consumers in a fiscally constrained environment. This worsening supply and demand imbalance is the core of the issue. The result are healthcare systems globally that are on the brink of financial and operational unsustainability. Australia is no exception to this dynamic.

The Australian healthcare system is generally recognised as one of the best in the world. It is based on the Beveridge model which emphasises tax-funded healthcare and equality for citizens. From a funding perspective, the Australian healthcare system is based on a complex structure of funding arrangements through the national, state, and territory governments . National and state government funding supports the majority of healthcare, including 80% of hospitals and 62% of primary health expenditures.[3] In Australia, the private healthcare system is very robust and serves a large portion of the population. According to APRA figures, as of December 2022, 45.1% of Australians (11.86 million people) have private hospital cover. 55.1% of Australians (14.41 million people) have private extras cover. An estimated total of $19.1 billion was spent on private hospitals in 2020-2021.[19]

From an outcomes and expenditure perspective, the average life expectancy is 83.2 years, with health spending equating to 10.2% of the GDP. This places Australia 11 out of 38 of the OECD countries and above the median healthcare spend of 8.05% GDP.[2,3,6] Australia achieves these outcomes cost-effectively when compared with many of its counterparts. An overview of the health spending flows can be seen in Figure 2.

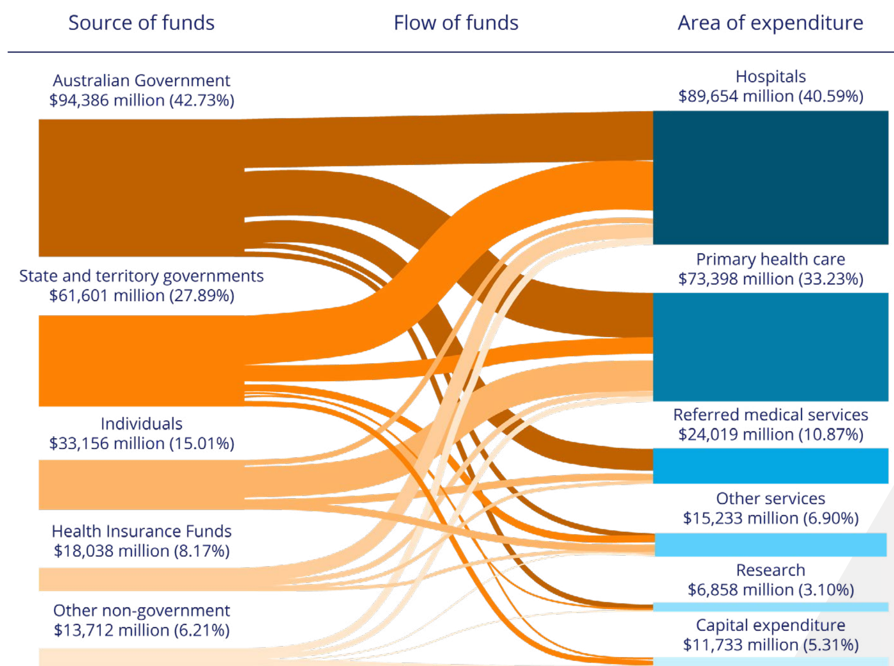


Figure 2. Broad Health Spending Flows (2020-2021) – AIHW Health Expenditure Database[6]

Despite this high OECD ranking, the Australian healthcare system is not immune to the fundamental supply and demand pressures experienced globally. These pressures materialise as limited access to healthcare, high out-of-pocket costs, delays in accessing urgent care after hours, delayed information sharing and long waiting lists for elective care.[17]

Funding levels and financial pressures on healthcare are exasperated by increased debt (Australia had an estimated gross debit of AUD885.5 billion in April 2022, the highest level since the 1950s)[4], worsening economic conditions (e.g. growing interest rates, an 11-year high was reached in June 2023[20], and 7% inflation[21]), and changing demographic factors (e.g. aging population, increased prevalence of chronic disease) and non-demographic factors (e.g. increased healthcare consumption).

A mix of annual spending caps that is lower for low-income individuals intended to address income-related equity has resulted in cost-related access problems for higher-income residents.[34] Informational asymmetry between patients and health service providers has also made coordinating patient care difficult and hampered efficiency. With a strong demographic case for increasing healthcare spending, but hampered by widespread inefficiencies, maintaining the current level of healthcare and improving it over the next decade will present major obstacles.

Another cause is the inefficiencies in the healthcare system. The ACQSHC, for example, found over 330,000 potentially preventable hospitalisations from 2017 to 2018, with massive variations in rates across Australian regions.[8] Inefficiencies arise from limited integration of pathways of care and are exacerbated by fragmented funding between primary and secondary care. There is growing concern among policy makers, providers, and academia that the Australian healthcare system in its present form is unsustainable. This is even more extreme in the underserved indigenous communities. As discussed by Prof. Cutler et. Al., there is a concern among policymakers, providers, and academia that the Australian healthcare system as it currently runs is not sustainable.[17]

Despite the universal health system in Australia, there are a lot of inequities in access and outcomes, particularly for the indigenous population."

Christobel Saunders,
Professor, Head of the Department of Surgery

Medical technologies have a key role to play in managing these inefficiencies. Medical technologies play a vital role among all stages of disease: prevention, screening, diagnosis, treatment/intervention and follow-up. Medical technologies bring value in the organisation of care and provide broad social benefits (e.g., patient advocacy, environment and sustainability initiatives, etc.). In Australia, 17,000 people are employed directly for medical technology-related work and the contribution of the industry to the GDP was AUD5.4 billion (in 2021 and 2022).[22]

In 2020 and 2021, Australia spent a total of AUD220.9 billion on healthcare.[3] It is estimated that approximately 5.1% of healthcare spending goes to medical technologies.[6] The remaining 94.9% is spent on other areas of healthcare, including basic operational provision of care, including hospitals, staff, pharmaceuticals and service provision. The spending on medical technologies is a relatively small percentage of the entire equation and yet, receives immense price pressure from procurement bodies. Given that a significant portion of healthcare innovation comes from medical technologies, such price pressure can begin to impact innovation. The NHS in England has clearly articulated that prices can only go so low before the savings are not material, and innovation for patients suffers. Even with the most aggressive cost containment, cost cutting on medical technologies will not solve the issues. Rather, the narrative should be that the right spending in the 5.1 % medical device budget can help drive efficiency gains in the remaining 94.9%. The move towards VBP aims to help procurement identify this right spending.

When we look outside of Australia there are some significant VBHC and VBP learnings that can be gleaned. Levering the international experience highlights examples that Australia can use to mitigate the extreme risks healthcare is facing. Some examples are listed below.

Five International Examples of Value-Based Procurement:

Case Study 1: The VBP in CoP In Europe[9,10]

In 2017, MedTech Europe initiated a VBP CoP that was designed to embed clinical and economic outcomes more fully into the healthcare procurement process.[9,10] This community of practice provides a networking platform for an exchange of expertise, experience, and initiatives. Along with leading procurement organisations, such as the EHPPA, MedTech Europe are founding members. Several successful pilots have been undertaken and continue to be scaled. Some systems, such as the NHS in England have mandated that their entire supply chain include health-related outcomes and employ non-price driven tenders.[11] Other health systems such as the Hospital Clinic in Barcelona, the NHS in Wales, the Charité in Germany, and L'Assistance publique-hôpitaux de Paris (AP-HP) in France, all have dedicated multi-stakeholder teams to enable VBHC delivery models.

Similar to the NHRA and Commonwealth Procurement Rules (CPRs) in Australia, the European Directive 2014/24/EU was introduced in 2014. This provided the Most Economically Advantageous Tender (MEAT) policy framework to enable procurement decisions that were considered across the produce life cycle, and not price only. Australia, using its own policy language, can enable a similar approach. The MedTech Europe CoP used this as a foundation for ensuring a VBP approach.

Using this policy foundation, the VBP CoP members and the partner organizations conduct various activities detailed further in Figure 3:

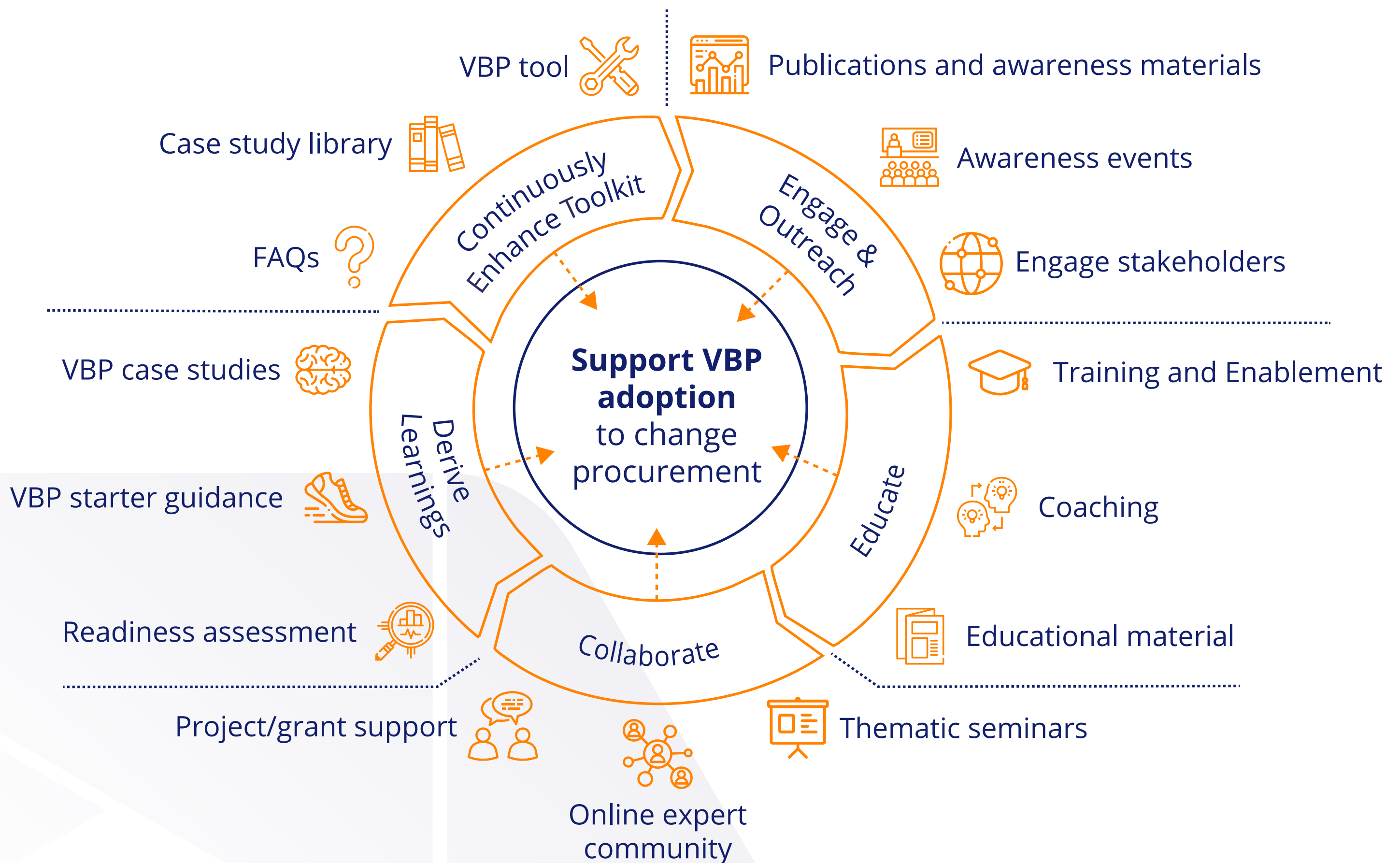


Figure 3. Activities by the VBP Community of Practice in Europe

For several years, the European Commission has been exploring the potential of VBP as a tool for increasing the financial sustainability of healthcare systems. Since the adoption of the new Guidance on Public Procurement for Europe in 2018, there have been various initiatives looking at how VBP can:

> Increase the integration of innovative solutions in healthcare systems.

> Accelerate research and innovation in areas of pressing healthcare urgency.

> Improve European regions' investments in healthcare.

> Respond to the new questions arising from the impact of healthcare on the environment.

> Initiate new healthcare opportunities through the opening of public procurement markets outside of Europe.

> Enhance small and mid-size enterprise participation in public procurement.

Through this CoP, various pilots on VBP have been undertaken. These have demonstrated that VBP can bring benefits across four domains:

1. Outcome-Driven Approach: Focus is on optimising outcomes, rather than more short-term price/ volume discussions. Data collection behind the outcomes as a backbone for continuous evaluation and improvement. An example is in a region of Southern Denmark that started risk-sharing around patient outcomes when purchasing knee replacements. This led to reduced patient hospitalisations, reduced readmissions 30 days after discharge and improved patient-reported outcome measures (PROMs) 1 year after surgery.

2. Patient-Centric: The focus is on select suppliers that prioritise patient needs and preference as measured by the impact on patients. Examples include the Netherlands where Zilveren Kruis procured fully integrated solutions for cataract care. This led to reduced total cost of care and a better patient experience. There are also regional examples across countries in Europe, including RITMOCORE, a Public Procurement of Innovation (PPI) project by the EU. This moves away from conventional purchasing of devices (pacemakers) to an innovative service provision. This has led to a significant increase in telemonitoring.

3. Cost-Effective: Pricing and cost are a critical component of VBHC and VBP. However, instead of a relentless focus on just price, pilots encompassing cost effectiveness considered the total care pathway and long-term costs. This led to optimised resource allocation through procuring the right solution for the desired outcomes across the care continuum. Examples in the United Kingdom include England, where there are multiple examples in the English NHS where reduced hospitalisation rates (cardiac), overnight stays (parotid surgery), operating and recovery time (urology), patient flow, infections, and variations were considered. Longer-term cost avoidance, not only cost minimisation, were considered in the procurement process. In addition, in NHS Wales, where anticoagulant point-of-care tests were procured through an open procedure leading to reduced emergency room admissions.

4. Discussion around holistic value including health system value: Value discussions were conducted that incorporated clinical outcomes, quality, safety, patient preference, clinician preference, sustainability, and cost, which was already a big step forward. However, this was taken even further to include system value. An example was in Norway where VBP was used to break-up a high concentration of orthopaedic suppliers. Three suppliers were selected per sub-category. This helped hospital providers keep flexibility on pricing, while enabling more suppliers to aggregate Real World Data (RWD).

Relevance for Australia

This is a clear example of where a legislative need drives a multistakeholder change in healthcare. Levering multistakeholder best practices, and supported by industry, the MEAT procurement directive in Europe was adopted and turned into a value framework for discussion with stakeholders. Health outcomes were put at the centre of the procurement process, and system-wide value was created. This is what Australia can replicate through the NHRA, possibly the CRP, and can be driven by a multistakeholder Community of Practice.

Case Study 2 in Sweden: Example of a University Hospital Infusion Pump Tender[12]

Background

In 2018, the Karolinska University Hospital in Sweden took a willingness-to-pay approach to tendering for infusion pumps. The infusion system supports optimised patient flows and working methods, and ensures high quality and patient benefit. One of the objectives was to choose a supplier as a long-term innovation partner.

Objectives with a VBP model

Karolinska University, a leader in VBHC implementation was seeking to ensure patient safety was a key outcome criterion for the procurement decisions. This included factoring elements far beyond price and included a service provision from the manufacturers and healthcare professional (HCP) usability and ergonomics. Technical specifications were added, including special functions, system settings and a power supply.

VBP Mechanism:

Three suppliers met the original screening requirements; however, only two were selected to bid due to certain technical requirements. Therefore, only two suppliers were bidding on the tender. For each technical criteria NOT met, a monetary value was ADDED to the total cost of the procurement value. The technology with the highest value was then eliminated.

VBP Outcomes:

The supplier that satisfied all the requirements was then selected. This was despite the fact the manufacturer with the highest raw equipment cost by a significant margin was selected, as the TOTAL costs were dramatically lower. This is a very clear example of how "cost" and "value" can vary materially when considering individual products instead of the entire product life cycle. This is arguably one of the clearest examples of incorporating patient outcomes and patient safety into a procurement decision.

Relevance to Australia:

Australian hospitals face similar challenges as the Karolinska University hospital and could set-up a similar procurement model. In this instance it is a clear methodology in which Australian hospitals can rapidly implement a global example of procurement that is not price only. For more information on the case study, please visit the Karolinska Institute website. [12, 38]

Case Study 3 in Wales: Journey of a Faecal Incontinence Sacral Nerve Stimulation VBP Pilot[13]

Background

Wales is a global leader in holistic VBHC implementation, and likewise for VBP. An example is in the Faecal Incontinence Sacral Nerve Stimulation technology. In Wales, a risk-sharing agreement was discussed with clinicians, the manufacturer, and procurement whereby an agreed minimum improvement in reduced episodes, and an increased quality of life (QoL) was necessary for payment. A zero payment was made if a minimum improvement level was not substantiated with evidence. If there was evidence to suggest improvement, this would trigger a payment 12 months after implant.

Results with the VBP Model

The results of this pilot led to improved health outcomes, as measured by:

i. The number of incontinence episodes per week: Following permanent implantation, 47% to 75% of participants achieved at least a 50% reduction in the number of faecal incontinence (FI) episodes per week.

ii. The International Consultation on Incontinence Questionnaire: a psychometrically robust, self-report instrument for the evaluation of faecal incontinence and its impact on QoL. The evidence suggested a mean reduction of ≥2.0 across the three domain scores.

iii. Rockwood faecal incontinence QoL questionnaire: subscales were measured including: lifestyle, coping/behaviour, depression/self-perception, and embarrassment. The evidence suggested an improvement in overall score of ≥0.4.

iv. Patient treatment satisfaction questions: Patients were asked if they would have this treatment again and if they would recommend this treatment to others. Evidence demonstrated that patients answered "yes" to both questions.

Pilot Evaluation

Success was demonstrated through patient engagement and feedback, clinical drive and support, supplier willingness to share the risk, procurement expertise and value focus. Areas for improvement included mapping and costing data being difficult to collect, a paper-based patient diary and PROMs, delays in sign-offs for the business case, and other administrative burdens. Key learnings are that the clinical and patient benefit were undoubtedly a success; however, operationally and administratively there are areas for improvement. Moreover, early clinical and financial engagement is key, investment versus cost, power and insight of patient perspective and insights.

Relevance to Australia

This example was conducted by a global leader in VBHC implementation, Wales. The pilot ensures that it is the health outcomes that are paid for, not just the technology. This is done via a form of risk-sharing agreement and value-based contract, something Australia has had a call to action to implement[37].

Case Study 4 in Canada: Cardiac Care in Ontario[14]

Background

A pilot in Canada was started in 2015 when Supply Chain Ontario was awarded funding to Southlake Hospital to implement innovative solutions to improve health outcomes while maximising value in cardiac care. Similar to the Karolinska University example, investment decisions were based on overall value to the hospital and health system, patient outcomes, increased access to the latest innovation, and innovative supplier initiatives. This is a clear contrast to the traditional costs only approach for a specific product or service.

Initiative Outcomes

The initiatives outcomes are demonstrated in Figure 4.

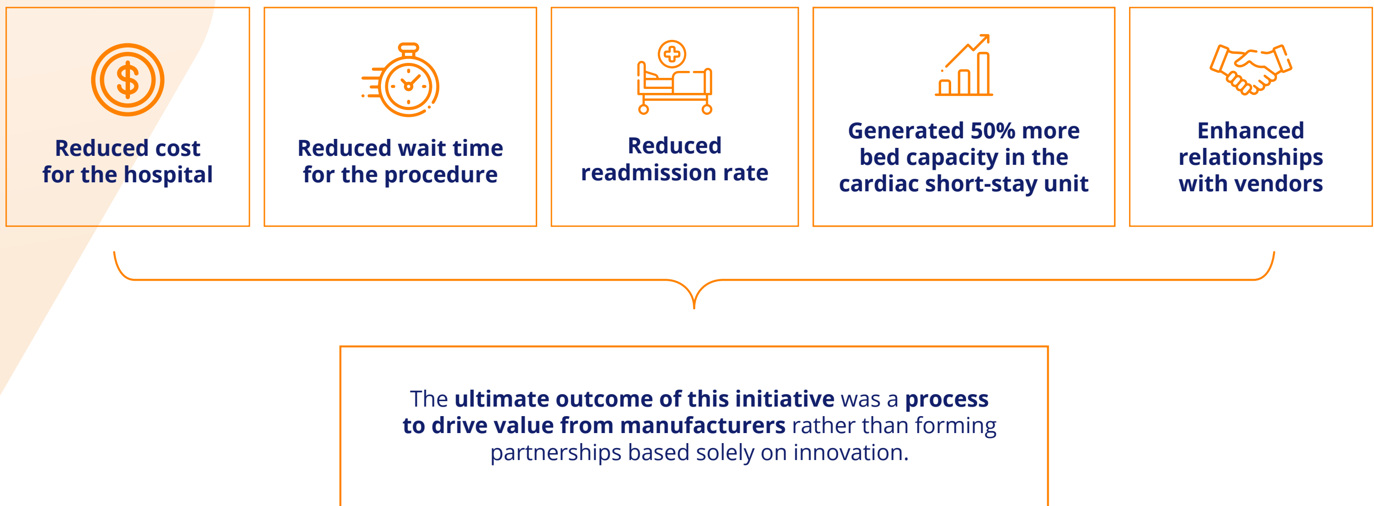


Figure 4. Initiative Outcomes

Relevance to Australia:

The objectives of the pilot in Canada are to extract value for the system, instead of only innovation, a fair goal. Given the holistic value medical technologies can play in the healthcare ecosystem, this is an example where value beyond innovation can be levered.

Case Study 5 in England: VBP Urinary Tract Infection Pilot in the North Midlands[15]

Background

In England, and globally, catheter-associated urinary tract infections (CAUTIs) are quite common and can cause patients significant pain, discomfort, confusion and anxiety for family and friends. This has downstream impacts on healthcare system utilisation due to increased antibiotic use, prolonged hospital stays, increased clinical activity and risk of complaints and litigation. In 2019, the University Hospitals of North Midlands NHS Trust audited its urethral catheterisation practice and the way patients were cared for in clinical areas. The audit highlighted a wide variation in care delivery leading to inconsistent outcomes for patients and staff.

Initiative

The manufacturer technology for urinary catheter contains all the essential items to (re)catheterise a patient in one pack and includes the catheter with a pre-connected urine drainage bag. This unique "closed system" prevents ingress of bacteria and helps avoid catheter-related infections. The supplier worked collaboratively with the University Hospitals, to identify and build evidence around how a change in practice can improve patient care and achieve savings. The introduction of the all-in-one system was supported by supplier training and an audit that enables clinicians to easily follow the best clinical practice in the catheterisation and management of patients with Foley catheters.

Results with the VBP Model

As a result of this pilot, catheter-related infection rates fell by 80% at the pilot site. Patient experience improvements included a reduction in complaints, a reduced length of stay, a reduction in catheter-associated urinary tract infections and a reduced likelihood of patient urethral meatus trauma. Moreover, clinicians reported that the pack was intuitive and saved approximately 5 minutes per catheterization, which during the pilot process, meant over 83 hours for 1,000 catheterization procedures. The key outcome was that the technology was further rolled out in the NHS England after this pilot, based on improved health outcomes which is the real value for patients. The initiatives outcomes are demonstrated in Figure 5.

Figure 5. Initiative Outcomes

The Australian healthcare system is experiencing significant challenges, as evidenced by the fiscal and operational challenges highlighted. Many of these challenges can be resolved when taking best practices from international examples in VBHC and VBP. Australia can implement the changes, it now needs the associated shift in mindset to overcome the silos and hierarchies, collaborate across stakeholder groups, and begin to implement holistic change. The MTAA would welcome this shift and would support initiatives improving health outcomes and lowering total system costs.

Section 4: Summary of the Australian Desk Research and Expert Interviews

Value-based healthcare and value-based procurement are well discussed concepts. In fact, many feel the terms to be a cliché at this stage. This goal of this White Paper is to avoid this stigma. One of the primary ways to avoid this was to do an extensive baseline of VBHC and VBP readiness across each Australian state and territory, and then validate the findings with expert interviews. This section will discuss the key themes and findings of the desk research and the expert interviews that were conducted.

The MTAA, in collaboration with industry participants, commissioned Alira Health to undertake an extensive deep dive, state-by-state, and stakeholder-by-stakeholder, to understand the VBHC and VBP landscape. Alira Health reached out to 160+ individuals/organizations from different states and stakeholder groups in Australia with a personalized email. An overview of the included stakeholders and states are given in Figure 6; industry participants are not included in the left figure showing the state/territory distribution.

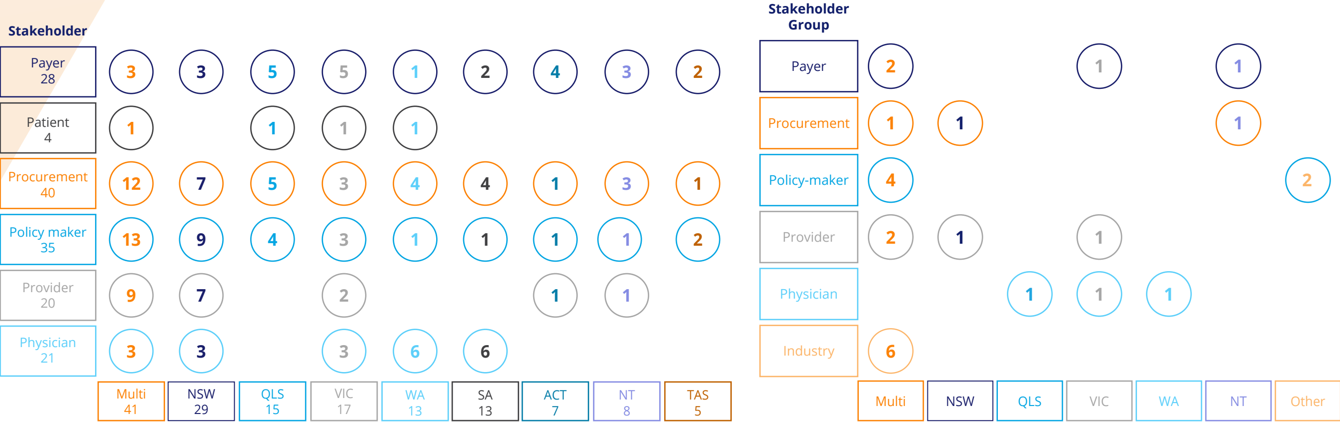


Figure 6. Overview Interview Outreach and Completed Interviews

26 interviews (including industry) were conducted during this project, with nearly 160 stakeholders contacted.

These figures are interesting in that those that were interviewed were very supportive of VBP. However, this VBP advocacy has not yet taken hold in Australia. We expect significantly higher response rates as the success of VBHC initiatives grow and are shared. As highlighted in the methodology, the objective of these interviews was to engage with key stakeholders across diverse groups, including physicians, providers, payers, policy makers, procurement officials and industry representatives. Of note, many stakeholders who were contacted did not feel their initiatives were VBHC or did not feel ready to discuss. Time constraints, lack of familiarity with the topic or complexity of the value-based terminology could have played a role here. However, given their programs were designed to improve outcomes, improve the efficiency of the system, indicates there is significant misunderstanding of each stakeholder role in the VBHC ecosystem. A top-down approach towards value-based healthcare and value-based procurement implementation can help clarify this misunderstanding.

It is acknowledged that selection bias may exist with respect to the interviewed candidates, as those not wishing to engage with industry may not have accepted invitations to contribute.

From this outreach, 26 interviews were conducted for this project, from various roles and states. Interviews also spanned both public and private healthcare stakeholders. We have aggregated the findings into two main categories: by stakeholder and by level of government.

Findings by Stakeholder Group

Overall, the interviewees from the different stakeholder groups were broadly aligned on the following three items:

1. Long-term financial sustainability of the Australian healthcare system is at stake. The model is currently funding volume (not enough value), and various inefficiencies need to be addressed. The healthcare system is complex, with many stakeholders involved through fragmented budget models and siloes. Changes that add value across the health system may be delayed or even stopped as costs and decisions reside in a single budget different from where the value is obtained.

2. Broad alignment on the concept of VBHC. The VBHC model can help the various stakeholders to align around value while limiting costs paid by taxpayers and patients. There is the need for clearer definitions around value, VBHC and VBP to have an agreed and consistent direction for these multidisciplinary engagements. Engagements in pilots are possible at a local individual basis, but a strong Commonwealth push for the value-based agenda is unlikely.

3. Most participants agreed on the importance of Industry. Industry is a long-term partner in providing value to patients and the other healthcare stakeholders. Industry is bound by commercial imperatives but run by patients. Increased trust and transparency between industry and the other stakeholders is needed. This can be obtained through more value capturing, messaging, and sharing. Data collection (including RWD) will play a vital role in this. It is acknowledged that selection bias may exist, as those not wishing to engage with industry may not have accepted invitations to contribute.

The key interview findings per stakeholder group are summarised in Table 1, together with the number of persons interviewed per stakeholder group:

Table 1. Key interview findings per stakeholder group

Physicians (3):	Providers (4):
1. Fear that VBHC would turn out to be a funding or control mechanism. Little willingness to be evaluated on outcomes. 2. Believe that big advances in the medium term will come from improvements in the healthcare systems. Request for more RWD on the value of medical devices to see their impact. 3. It is the value-based payments and Procurement models that need the work, less so the clinical pathways.	1. Willing to have more discussions around value as patients are coming in unnecessarily or (too) late. Need for systematic changes to the system. 2. Increasingly looking at patient and other outcomes when making procurement, staffing and other organisational decisions. 3. Feel like they have little control over the levers to drive towards VBHC. Prevention often occurs outside their remit and physicians/surgeons often not employees.

Payers (4):

1. Drivers to have more value discussions are the variation in care and patients receiving low value care too often (e.g., over utilisation of certain procedures).

2. Willing to pilot VBP, e.g. through a fund based on savings from price decreases. Especially willing to support getting innovative technologies faster to market.

3. To look at value beyond budget cycles and cost-saving KPIs; support from the executive level will be required.

Policy makers (6):

1. Supporting the value-based transition through research and policy work.

2. The Funding Medicare Report described how to move care out of the hospitals into the community, prevention, and multidisciplinary approaches.

3. The government is looking for efficiencies and improving outcomes. Facing significant workforce shortage issues that are unlikely to be resolved soon. VBHC thinking will be part of the solution.

Procurement teams (3):

1. Still driven by annual budget cycles and cost containment KPIs. Little experience or flexibility with non-standard procurement processes.

2. For larger procurement decisions, discussions are split over different panels (clinical, economical, operational or IT/technical/interoperability), with a super panel making the final decision.

3. Greenfield versus Brownfield investment decisions. These budget discussions usually happen outside of the procurement bodies.

Patients:

1. Need for a patient identifier that follows patients over the total care pathway.

2. Need for more transparency over the full cost of the treatment and out-of-pocket costs. Value-based thinking can help in collecting this data.

3. Need for more outcomes and follow-up data. Complication rates, unplanned readmissions, length of stay, transfer rates to ICU, rehabilitation over periods of time (e.g., 90 days after a hip surgery) are often missing.

**Due to privacy and unique considerations, the perspective of patients was not directly included. This was done through the stakeholder groups indirectly. Patient/consumer groups will be recontacted in later stages.*

Industry (6):

1. Customer (both patients and staff) relations are being transformed from transactional (product and price focussed) to a genuine partnership with the industry as a critical enabler of delivering value (tools, services, and outcomes). Co-design with customers is key. Providing solutions to customers and their patients that are based on value-for-money instead of focusing on the lowest possible sell price.

2. Will be suspicious of tender processes focusing on outcomes rather than products/price because it may appear to create an unfair advantage to some suppliers. The expectation that equitable opportunity for all companies to respond to a tender will remain, not to exclude local or smaller companies through tender specifications. For any change, it is key to consider facilitating a competitive landscape.

3. Industry can help by having technologies go through HTA assessments (where relevant), having a clear value defined, and having the proper data on patient-reported outcome measures and other outcomes to see how the technology affects patients more than just the cost to the hospital or system.

VBHC is everyone's responsibility. Everyone needs to engage around a common purpose."
Kylie Woolcock, ***CEO Australian Healthcare and Hospitals Association***

The desk research and interviews captured various initiatives, frameworks, pilots with a value-based element at both the federal, state, and territory level. The results were consistently supportive of the value-based care delivery model. The largest concern from most stakeholders was that scaling up the pilots can present significant administrative and operational challenges. On a state-by-state basis, various initiatives were identified, but there remains much work to do before the holistic adoption of VBHC and VBP.

Findings by Level of Government

NATIONAL LEVEL

Similar to the EU Directive in Europe, in the last NHRA, specific language was included to highlight the measurement of health outcomes and purchasing based on "value" in Australia.[18] All Australian states and territories have agreed to move towards value-based care through the Addendum to the NHRA 2020-25. The NHRA 2020-2025 introduced six long-term health reform principles, of which two relate directly to value (Nationally Cohesive Health Technology Assessment, Paying for Value and Outcomes), two enable greater value in the system, and two aim at improving population health. The Paying for Value and Outcomes reform seeks to enable new and flexible ways for governments to pay for health services, by creating stronger financial incentives to improve patient health outcomes and patient equity through best-practice care, delivered within a more coordinated and integrated way. The Long-term Health Reform Agreement outlines a pathway toward achieving these reforms. The Paying for Outcomes and Value reform will start by developing a National Health Funding and Payments Framework, seek to remove legislative, regulatory, and technical barriers to funding reform, and trail and evaluate new funding models by the end of 2024-2025. Given the similarities, VBP could be part of the NHRA pilots.

The CPRs are a set of rules published by the Australian Government and are used, e.g., for the national stockpile and the national diabetes service scheme.[23] The CPR does not mention outcome measurement but does include whole-life costs and non-financial costs when making procurement decisions. While these CPR rules include some value-based terminology, as highlighted by some interviewees, these rules are rarely used for medical technology procurement.

STATE & TERRITORY LEVEL

New South Wales: Frontrunner regarding VBHC thinking and implementation among the Australian states and territories. Value-based thinking and initiatives are common and often clinician focused. Examples are: Leading Better Value Care, a value-based healthcare framework, Integrated Care, Commission for Better Value, a state-wide initiative for diabetes management and a publicly communicated VBP contract for hip and knee replacement.

Collaborative commissioning in NSW is the closest to VBP I have seen in Australia. NSW has a clear value agenda."

Sigrid Patterson,
Director of People, Planning and Performance at Healthy North Coast

Victoria: Has a globally renown VBHC project with the Dental Health Services Program. The VBHC is also included in the Transport Accident Commission Strategy 2025. HealthLinks, a VBHC pilot project, has been completed with valuable learnings. Broader alignment that the VBHC is the way to go needed among various stakeholders.

Victoria has moved towards a more centralised procurement system. Being a bigger customer on behalf of the health system is one way to advance value. I also think that working with clinicians is critical, to get them to understand that choices and high-value decisions impact their patients and the HC system."

Andrew Wilson,
Chief Medical Officer at Safer Care Victoria

Queensland: There are several initiatives in VBHC as well as a publicly shared example of VBP (see section 4). Initiatives such as the Queensland Health 10-year Research Strategy can be supportive to VBP.[24] The Allied Health Service in Queensland has a VBHC framework.[25] Other initiatives are the Promoting Value-Based Emergency Department (Prov-ED) and Getting it Right First Time (GIRFT) programs.[26,27]

South Australia: Few initiatives were identified, although there was some terminology and pilot programs identified in South Australia. The exception is the state-wide initiative to collect patient-reported measures, scheduled to launch in mid-2023.[28]

Western Australia: VBHC and VBP are mentioned in policy recommendations such as the Sustainable Health Review Final Report in Western Australia. There are a few examples with VBHC, such as the GenesisCare and the High-Value HealthCare Collaborative.[29,30,31]

Tasmania: VBHC is part of the Long-Term plan for Healthcare in Tasmania 2040.[32] The newly formed clinical senate mentions VBHC as a broad policy objective across all health services. In 2021, the Australian Healthcare and Hospitals Association (AHHA) submitted recommendations to the Tasmanian Government on the future of the healthcare system.[33]

Northern Territory: No publicly available initiatives identified for VBHC or VBP. A maximum 30% of tender criteria are based on price (see quote below). Rather, "Value for Territory" criteria are used to support local businesses, needs and supply chains.

Being in the Northern Territory, we have some unique challenges in that we are the supplier of last resort, and we treat everything that comes through the doors as it comes. We also have workforce challenges as we are small and far away."

William Monaghan,
Chief Procurement Officer in the Northern Territory

We procure on a "Value for Territory" basis with a mandatory minimum weighting of 30% applied to Local Content and a maximum 30% of the weighting element on price. Sustainability and supply chain are often included in the criteria."

Debra Waters,
Procurement Project Manager

Australian Capital Territory: No publicly available initiatives were identified for VBHC or VBP in the Australian Capital Territory (ACT).

Summary:

Overall, VBHC is a frequent topic of discussion among the stakeholders interviewed. There is a significant evidence of pilots in the majority of states. However, there is very little holistic movement towards full scale implementation. This is actually consistent with international findings, which suggests Australia could very quickly become a leader with the right focus.

Value-based procurement is less known among the interviewees, but Australia is well placed to on-board VBP. It has mature procurement organisations; the state healthcare systems are aligned and there is a healthy element of competition among the states. Tax and other benefits are available for pilots and for performing clinical trials. The disconnect between acute (public and private) and primary care systems, together with a lack of trust between the different stakeholders, are key barriers to VBHC implementation.

A critical need is strong leadership with a willingness to move VBP forward. In short, a bold leadership initiative is needed to transform the system into a VBHC delivery model. Value-based procurement would be a very promising start to this shift. Drawing from the experience of successful VBHC projects globally (see section 4), collaborative, and inclusive multi-stakeholder dialogue, support from senior leadership and clinical input is vital, and this was articulated through many of the interviews.

Section 5: Implementation by State and Stakeholder – VBHC and VBP in Australia

The desk research and expert interviews suggest Australia has a long way to go before VBHC and VBP are fully embraced. In the transition to VBHC, VBP is a logical way to expand this movement. Organisations such as the AHHA, and the Australian Centre for Value-Based Healthcare (ACVBHC) have done a fantastic job of advocating for the transition to VBHC, and have produced some excellent thought leadership and research on this topic. The medical technology sector aims to support this transition by focusing on VBP. Given the role of procurement for medical technologies reaching patients and clinicians, the medical technology sector can play a significant role in enabling this shift. This section will focus on the implementation of VBP, and the role improved health outcomes and total costs can play for patients and the systems.

Our methodology in examining the maturity is based on Alira Health experience, feedback form expert interviews and extensive desk research. Each Australian state was ranked across a 5-point scale and from each stakeholder perspective. Limitations in the ranking include a relatively small sample size per state per stakeholder, as well potential selection bias in interview candidate perspective. Typically, those advocating for VBHC and VBP are more willing to discuss its merits, and therefore, it is expected there is bias in respondent perceptions. Regardless, the overall trend is the primary metric, and there is a clear desire and direction to move towards VBHC and VBP. Moreover, this direction makes intuitive sense. There is very little case against improving health outcomes and lowering total system costs.

Our ranking scale, per state/territory, per stakeholder was ranked 1 to 5 and based on the following scale:

Table 2. Ranking Scale per State/Territory

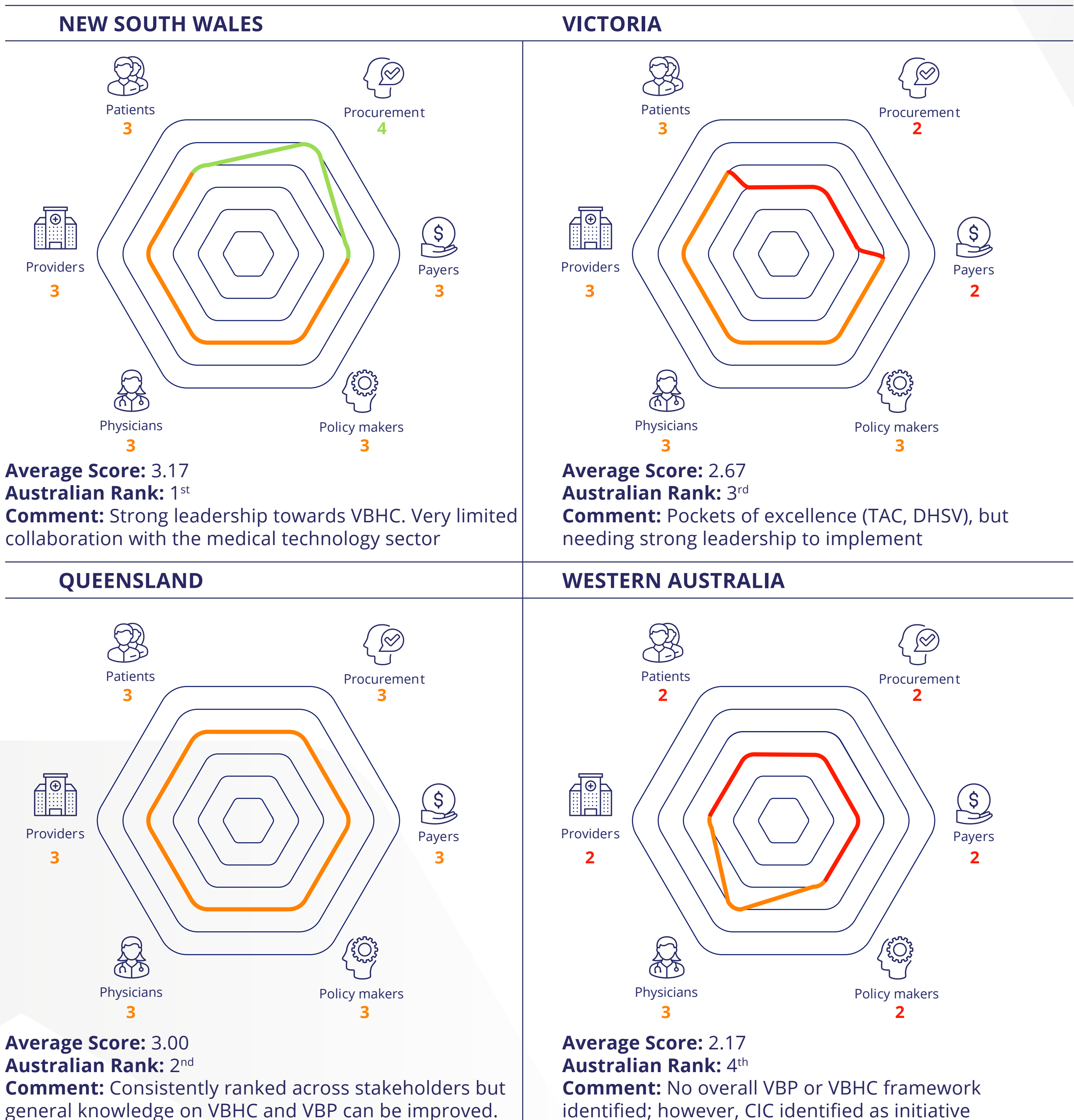
Score	Descriptor	Criteria
1	**Low** (No information, no implementation)	No state/territory literature, strategic direction, policy, or VBHC initiatives found. Low awareness and implementation.
2	**Medium/Low** (Some information, no implementation)	Some state/territory literature, strategic direction, policy or VBHC initiatives found online. Stakeholders are interested in implementing VBHC.
3	**Medium** (Some information, some implementation)	VBHC (including VBP) literature, strategic direction, policy and pilots were identified. Pilots were identified but with a limited baseline and measurement of outcomes and costs.
4	**Medium/High** (Robust Information, some implementation)	Value-based language was clearly used in strategic and policy documents, pilots identified, active and with outcomes and/or costs, clear measured and success stories shown, but fragmented examples.
5	**High** (Robust information, robust implementation)	VBHC delivery was full embedded and integrated into the state/territory care model, with alignment from all stakeholders.

Our research suggests that New South Wales has led the way in setting forward a path to VBP implementation. Victoria and Queensland have also articulated a desire to implement VBHC. The remaining states have some way to go, but there are pockets of excellence. Given the relatively small sample size and potential interview bias, we would strongly welcome further input into refining this scoring system. As a preliminary baseline, our analysis yielded the following results which suggest that Australia has not holistically embraced VBHC and VBP. If Australia were to expand VBHC delivery, patients would experience improved health outcomes, and lower total costs. Value-based procurement would be the medical technology sector's most significant contribution to moving towards a VBHC ecosystem.

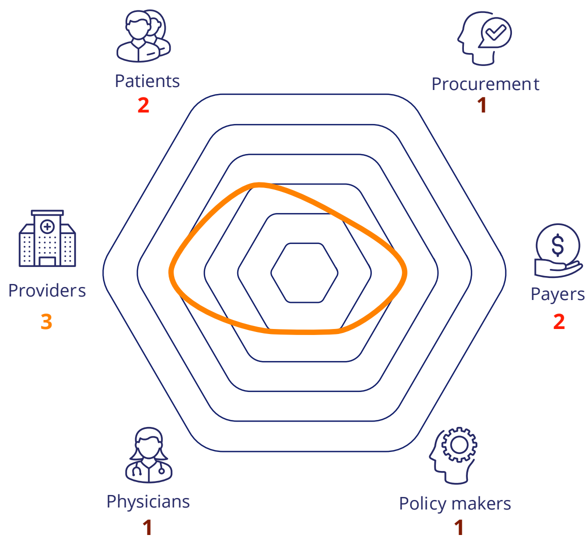
Our preliminary baseline rankings by state, are as follows:

EVALUATION SYSTEM: Strong — Weak

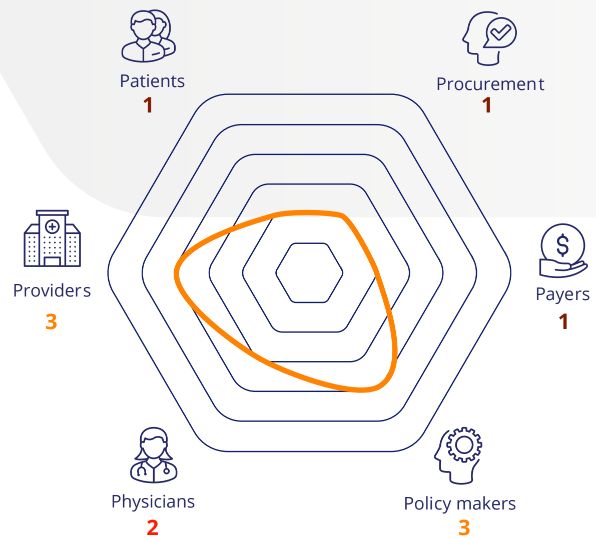
Table 3. Interview & Desk Research Summary by State



SOUTH AUSTRALIA	TASMANIA



Average Score: 1.67
Australian Rank: 6th
Comment: Very little awareness or policy for VBHC. There is; however, a statewide PRO initiative identified



Average Score: 1.83
Australian Rank: 5th
Comment: Strategic direction is to implement VBHC, but more stakeholder knowledge is needed.

Some states have clear value-based objectives but refused comment when it came to understanding how the industry could support the shift. Leaving industry out of the solutions they are to procure represents a major barrier to overcome and raises questions about the viability of such programs. Moreover, with procurement bodies often spending patient and taxpayer funds, one would assume there is a fiduciary obligation to include the most knowledgeable stakeholders about medical technologies in the procurement process: those whose technologies support key care solutions.

Drawing from the experience of successful VBHC projects globally (see section 4), collaborative, and inclusive multi-stakeholder dialogue, support from senior leadership and clinical input are critical to enabling VBHC solutions. Australia has some very strong foundations in place to more fully embed VBP, but a significant amount of work and leadership is needed.

Challenges with VBP Implementation, a Stakeholder Assessment:

Alira Health has conducted numerous value-based healthcare projects globally. The findings from the Australian research and expert interviews align with challenges facing VBHC and VBP globally. These can be grouped into three primary areas:

Technical Knowledge ("WHAT"): The knowledge by therapeutic area collects and aggregates data into baseline costs and outcomes to determine the prospective improvement in those baseline costs and outcomes. This requires having a strong theoretical foundation and technical capability to move from theory to practice.

Talent and Soft Skills ("WHO, WHERE, WHEN and the HOW"): Moving to VBHC/VBP requires a cultural shift in approach across almost all stakeholder groups. Manufacturers need to move to a longer-term approach and move from selling product to selling solutions and outcomes that satisfy a defined unmet need. This is a "cultural" revolution that is needed in healthcare that moves away from perverse financial incentives, silos and hierarchies that stifle physician innovation and new product adoption.

Trust ("WHY"): this is undoubtedly the heart of the issue. There is simply very little trust between stakeholder groups. On countless occasions, VBHC has been coined an enabler for a poorly defined agenda, whether it be a price reduction for payers, price appreciation for the industry, or worse, a rationale to refuse a seat at the table should the "risk" be seen as too high. Trust must be fostered.

On a state-by-state basis, when taken from a multi-stakeholder perspective, against the ability and desire to collaborate across the key challenges, there is a lot of work to be done. This is one of the core reasons a multi-stakeholder Community of Practice is needed in VBP implementation.

When considering the challenges associated with VBHC and VBP implementation, the preliminary rankings by stakeholder, along with recommendations for engagement are as follows:

Table 4. Interview and Desk Research Summary by Stakeholder

STAKEHOLDER	ROLE in VBHC/VBP	Australian Narrative on VBHC and VBP	Recommendation	Average Score	Australian Rank
Physicians: Those delivering the care at the individual patient level.	Key role, as physicians are responsible for delivering the care that drives outcomes, which are the numerator in the VBHC definition.	Most physicians operate on a fee-for-service model, in the private and public system, with no focus on treatment "cost". Physicians are central to care delivery, and successful VBHC and VBP pilots.	Engage across the colleges to build support for clinician-led initiatives. Select key areas such as Orthopaedics and Road Trauma (Victoria) where data is stronger.	**2.50**	**2**
Providers (hospitals): Those providing the place of care either individual or hospital groups.	Key role in care and service organization, funding and procurement of medical technologies. Often the provider collecting outcomes and cost data.	The public and private split have very different incentives and abilities to engage. Care pathways that cross public/private settings seen as a challenge. Public healthcare often too stretched to implement pilot programs.	Potentially start with private systems for pilots, then expand with physicians practicing in the public setting. Public policy will be key to driving a provider-led initiative.	**2.83**	**1**
Patients: The end "consumer" of healthcare.	Central in decision-making (e.g., through PROMS), and shared decision making.	Patients are often not put at the centre of healthcare decision making, instead it is provider driven. VBHC reverses this and ensures care is delivered from a patient perspective.	Engage with key patient groups from key therapeutic areas to build patient input to VBHC and VBP pilot programs.	**2.33**	**5**

STAKEHOLDER	ROLE in VBHC/VBP	Australian Narrative on VBHC and VBP	Recommendation	Average Score	Australian Rank
Procurement: Those purchasing care and services based on an allocated budget.	Responsible for selecting and contracting with the manufacturers or distributors. Work closely together with all stakeholders to finalize the right procurement criteria.	Procurement teams change frequently, they often do not come from healthcare and simply execute on a mandate. Areas of interest to change perspective, but VBP maturity is relatively low.	Engage with key procurement organisations to build a procurement knowledge base through a Community of Practice. Ensure legal requirements and capabilities are understood.	2.17	6
Payers: Those paying and commissioning healthcare and services.	Define which values to pay for (which technologies to procure) based on the input from the various stakeholders. Move from a price/ volume, and towards an outcome discussion.	Private payers are actively calling for and willing to engage in pilot programs. Public payers need an enabling policy infrastructure to implement VBHC and VBP initiatives. Low ranking due to public payer ability and willingness to engage.	Engage with private payers in potential pilots (similar to provider recommendations). Ensure public payers are included in the dialogue and best practices shared. Identify willing public payers to engage in data collection and pilot programs.	2.17	6
Policymakers: Those providing the policy frameworks and coverage decisions.	Key role in setting top-down VBHC and VBP frameworks, e.g., regulatory or strategic visions for healthcare provision.	Numerous policy documents identified in numerous states. Strong leader needed to implement the change especially in the public sector. Policy documents alone will not be enough. Strong leadership and risk taking encouraged.	Share best practices in VBHC and VBP that support policy initiatives. Ensure a supportive legislative environment for innovative payment models and data collection.	2.50	2

When we cross-reference the assessment by state, and with stakeholders, providers often came out with the highest ranking. A potential limitation of the research is the "average" assigned to each stakeholder group and state. In fact, there are pockets of excellence in every state and across every stakeholder. However, there is a significant variation around state and stakeholder willingness and maturity to engage. Therefore, these averages should be taken with some measure of caution, and the general trendline considered. The trendline is key, and suggests VBHC and VBP are generally seen as a necessary shift in Australian healthcare to mitigate the financial and operational challenges.

Levering an Australian example of a VBP initiative shows how this can be done. An embryonic, example of VBP can be found in Queensland. This initiative has significant potential but has been slowed down and halted due to the COVID 19 Pandemic. It is recommended to reactivate and expand this program. It is a multi-stakeholder, clinician led, evidence-based strategy to improve the care delivery in Orthopaedics:

Case Study 6 Australian Example in Queensland in Orthopaedics[36]

Queensland GIRFT Background

In 2018, Queensland Health Strategic Procurement gained an endorsement from the Orthopaedic Directors' Procurement Forum to progress to a clinician-led state-wide procurement model. This was part of the GIRFT program, which was imported from the UK, levering best practices. Originally, only one in three orthopaedic departments would access data captured by the Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR) to monitor outcomes, and average prostheses costs were 1.6 to 1.8 times the operation theatre costs (second-highest direct cost). The average prostheses costs ranged from AUD3.754 to AUD8.269 for hips, and AUD6.028 to AUD11.430 for knees.

Objectives with VBP Model

The objectives of the program were to improve patient outcomes and improve the value for money for the state of Queensland.

Results with the VBP Model

There were some mixed results. Success included improving clinical outcome monitoring and ensuring that 100% of orthopaedic departments had access to their AOANJRR report so they could monitor clinical outcomes. A market share procurement model was established which improved transparency on implant costs and clinical efficacy. Importantly, savings were realised up to 33% on hip, and 25% on knee implant costs via market share commitments. A challenge to this program was highlighted when the COVID-19 pandemic shifted the priority away from orthopaedics towards management of a pandemic. This highlights the resource focus required for successful VBP programs.

The Role of Industry in Australia and VBP

Currently, in Australia, most procurement decisions are determined by price, or at the very least are heavily price dependent. Considering the estimated 5.1% of healthcare spend on medical technologies, dramatically cutting prices in this sector of healthcare will simply not rectify the root issue. Instead, the medical technology sector should be seen as a willing and collaborative partner to support positive change. The medical technology sector is highly innovative, provides significant benefit to economies, and is often significantly undervalued versus its pharmaceutical cousins.

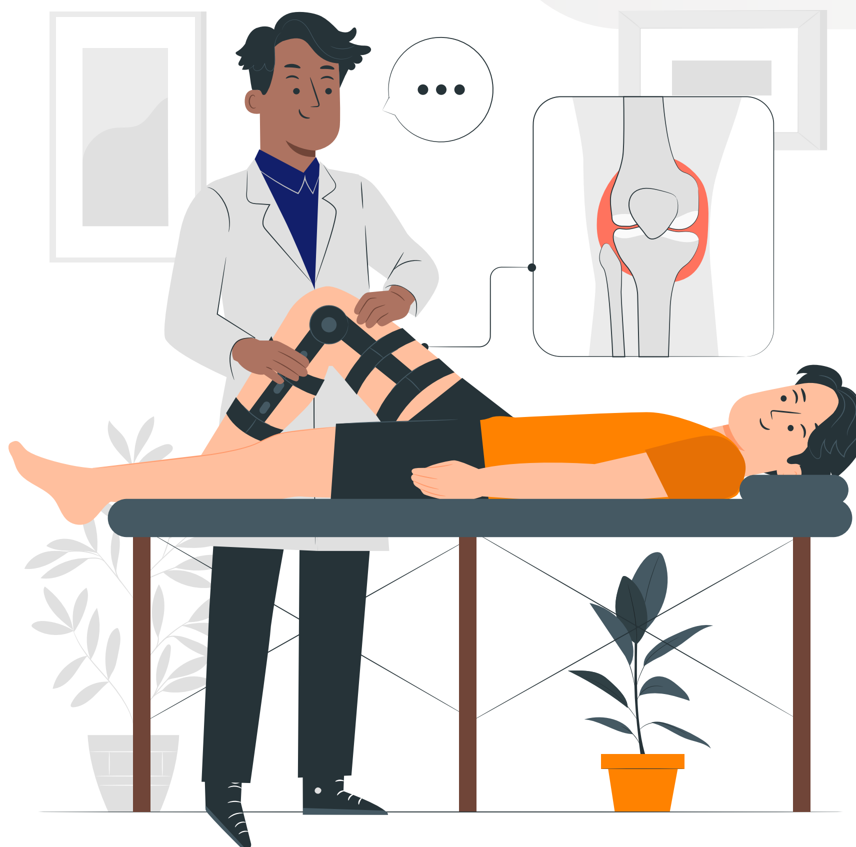
Price-only procurement benefits the procurement teams attempting to manage a very finite budget but it can have significant unintended consequences. If the medical technology sector is the source of economic activity, jobs, clinical trial innovation, design innovation, then all of these are jeopardised if Australia is not seen as an attractive destination. Price-only procurement places significant risk on the manufacturer selling price, revenue, and therefore global investment and innovation. Procurement teams favour price-only procurement because it is easy to implement and very measurable. The cost savings accrue in a very short timeframe, normally within a budget cycle of less than 1 to 3 years. However, this results in an asymmetrical risk against manufacturers and does not incentivise innovation. Prices are lowered, with no opportunity for medical technology solutions to demonstrate improved patient outcomes in a real-world setting. This creates a negative spiral in terms of innovation and has ethical implications whereby technologies demonstrating better health outcomes should be considered over those with very little evidence.

Value-based procurement provides an opportunity to address this. Manufacturers commit to demonstrating improved health outcomes, and more efficient health spending across the care continuum.

Once a technology is assessed and a procurement decision made based on improved outcomes, not solely price, the foundation is set for a full VBHC implementation model. Therefore, the medical technology sector can become part of this paradigm shift, supported by evidence to provide the essential efficiency improvements in the care pathways. Once outcomes across the patient pathway are improved, and total costs more efficiently allocated, healthcare systems begin to benefit, and gains can be fed back into the system. This reverses the negative spiral of a price-only procurement. If healthcare systems are to be rectified, thinking along these lines is needed. The medical technology sector of Australia is committed to being part of this solution.

Other Topics Identified:

As the interviews and desk research were conducted, several other trends emerged that should be considered in the context of VBHC and VBP implementation. Notably, the role VBHC can play in mitigating the variation in health outcomes experienced by Aboriginal and Torres Strait Islander populations, as well as the role of including environmental sustainability in VBP pilots were highlighted. Each of these topics are research reports in their own right, and definitely warrant further analysis and discussion. We would welcome discussing these topics in the context of VBHC implementation.



Summary:

The baseline assessment by state and by stakeholders demonstrates there are pockets of excellence in VBHC and VBP implementation in Australia. However, this is not yet a holistic approach. It is acknowledged that limited input from stakeholders contacted means the average rankings presented above must be taken with some measure of caution; however, the trend suggests VBHC and VBP are the potential solution to the issues Australian healthcare is facing.

Overcoming these challenges requires a new "culture" in healthcare. One that is not defined by dogmatic approaches involving silos and hierarchies, but one that puts the patient at the centre of healthcare decision-making and drives collaboration between all stakeholders. Our systems are broken, and as challenging as these barriers are to overcome, it is possible. The medical technology sector would like the opportunity to earn the trust of all stakeholder groups in enabling this change and redefining the way we deliver healthcare in Australia.

Moreover, VBP is relatively unknown compared with VBHC. As VBP is seen as an enabler of VBHC, more work is needed to support its implementation. The medical technology sector is committed to doing this, and being a collaborative, evidence-based partner in this solution. The next section will focus on some key recommendations to support this evolution.

Section 6: Evidence-Based Recommendations and Call to Action

This White Paper has introduced the challenges healthcare systems globally are facing, and how they relate to the Australian context. Levering a successful international transition to VBHC and VBP, and based on expert feedback, solutions for Australia have been presented. National and international examples have been shared on how VBP can benefit all stakeholders, including patients, physicians, procurement, policymakers, providers, and payers. The expert interviews conducted by Alira Health have found that Australian health stakeholders believe VBHC and VBP should be more holistically implemented across the Commonwealth, and that the Australian healthcare system has the systems and processes required to adopt VBHC and VBP.

However, there are critical elements missing in Australia. The Australian health system has not fully embraced VBHC and VBP. If fully embraced, Australia could also enjoy improved outcomes for patients, more efficient healthcare spending which benefits the overall system.

The overall purpose of this research is to ensure that the medical technology sector is part of a collaborative dialogue to become part of the solution. Therefore, there is the strong recommendation from the MTAA, and organisations globally, that all stakeholder groups have a seat at the table to enable the shift to VBHC. In order to enable this solution, the desk research and expert interviews have yielded some clear levers to enable this change. **These fall under five main categories:**

Recommendation 1: Build a supportive ecosystem for collaborative dialogue through the formation of a VBP Community of Practice.

A VBP Community of Practice is a multi-stakeholder collaboration that shares best practices healthcare pilot programs that emphasise the measurement and improvement of health outcomes and total cost analyses. This would include VBHC and VBP pilot programs.

The mission of the Community of Practice would be to enable a multistakeholder Australian health procurement environment that ensures health-related outcomes are the primary criteria for tendering decisions. The tendering decision-making process should draw input across all key stakeholder groups, including industry, physicians, providers, payers, policy makers, and procurement.

Structurally, this Community of Practice will consist of three main pillars:

1. A VBP "value framework": Building on the strengths of the MedTech Europe value framework, ensuring outcomes and costs are central, we propose emphasising other key domains of value that are relevant to all stakeholder groups. This would include increasing the prevalence of clinician-relevant outcomes as well as increasing the relevance of environmental sustainability.

2. Undertake an extensive stakeholder mapping and prioritisation exercise: ensure a detailed assessment of all stakeholders is undertaken so groups and pilot projects can be effectively prioritised, and areas of focus can be determined.

3. Establish a clear roadmap of implementation: ensure the value framework is taken to the right stakeholders in the right order and build the coalition of the willing along the way. This will respect the "cultural" and technical shift needed to enable VBP. Pilots can be initiated by industry and/or procurement teams and should follow best practices in VBHC and VBP implementation.

In accordance with all procurement and anti-competition law considerations, activities of the Community of Practice will enable knowledge sharing among all stakeholders. This can be done through learning sessions from VBP Pilot Programs, information sessions in the form of online webinars, face-to-face mini-workshops, other knowledge-sharing sessions and conferences, and the creation of tools and materials to guide VBP dialogue. Of note, this will be an arms-length extension of the MTAA Procurement Working Group and will have a supporting and objective Expert Advisory Group to Guide the Community of Practice. Figure 7 represents this visually.

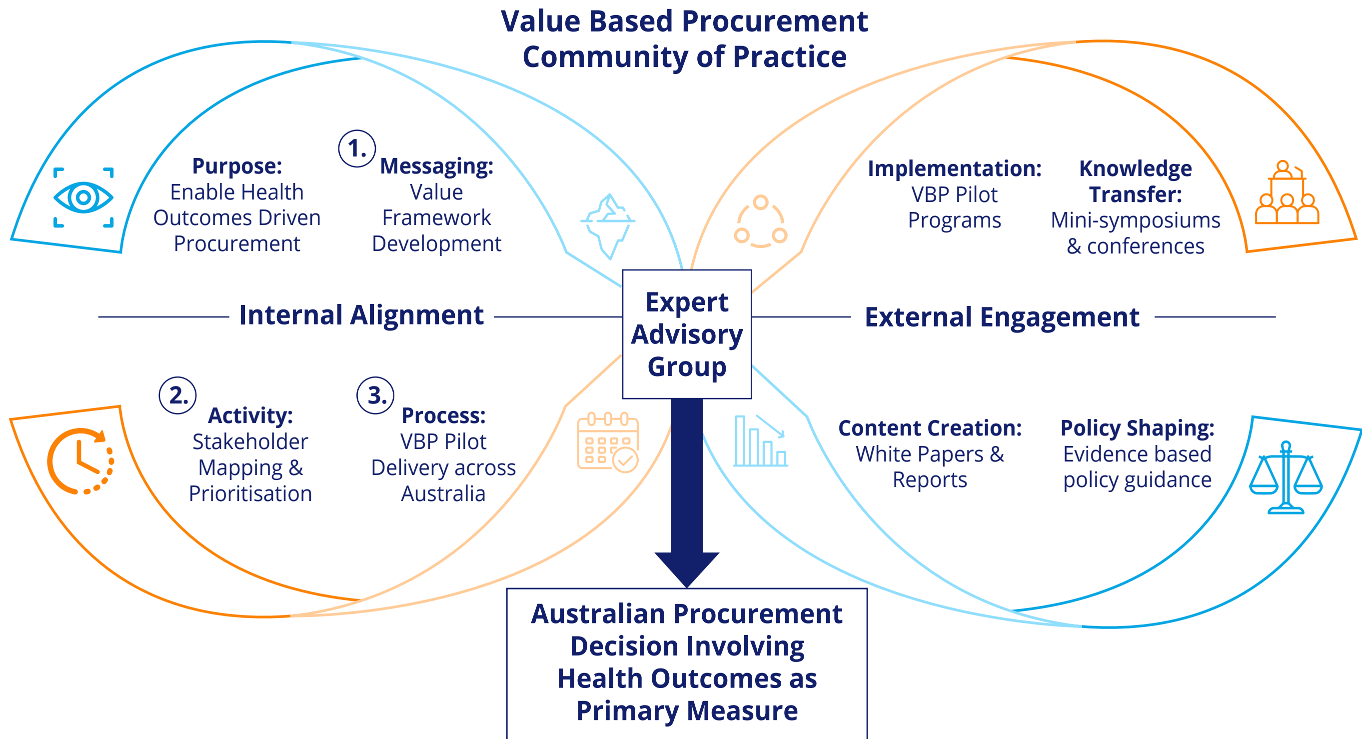


Figure 7. Value-based Procurement Community of Practice

Recommendation 2: Build clinical engagement and leadership.

Physicians are critical to the VBP narrative to ensure clinical and patient outcomes are considered in the procurement decisions. Recommendations should come from expert leaders in the clinical community. As of today, many decisions in Australia are not clinically led. The very nature of medical technologies requires strong support between the industry and the clinical groups. We envision both clinicians and the medical technology sector working together to ensure health-related outcomes are a core criterion of any procurement decision in Australia. We envision this group to start small based on the initial VBP pilots and to grow over time across three primary domains: therapeutic areas, clinical seniority and expertise, and geographic diversity by state/territory.

Recommendation 3: RWE to support procurement decisions.

Australia already has an extremely robust clinical trial environment. Levering this strength, some clear recommendations on RWE will be emphasised. Real-world evidence is data extracted from existing databases or registries that are created to enable evidence-based decision making. Decision-making stakeholders are increasingly getting more demanding in terms of clinical and economical evidence for coverage, funding, access, and reimbursement. Global evidence generation strategies are critical to driving the adoption of innovations and to supporting price points. Real-world evidence data can be used to complement clinical trial data on safety and efficacy, and RWE can be a more effective way of evidence generation compared with costly (randomised) clinical trials.

Real-world evidence is important to VBP initiatives because incremental improvement in costs and outcomes will need to be measured. In the vast majority of examples, either the baseline or the incremental improvement is NOT captured. This complicates the sharing of results of the VBHC/VBP pilots. The use of RWE data is also part of the Australian HTA review, and one of the main commitments under the 2022-27 Strategic Agreement between the Commonwealth and Medicines Australia. The MTAA believes this decision making should include procurement considerations, and therefore, will endeavour to develop a guidance document on the usage of RWE for this purpose.

Recommendation 4: Innovative Funding Models and Risk Sharing.

The funding of healthcare systems needs reform to ensure 21st century application. As highlighted by the Deeble Institute, Australia needs to adapt its funding models.[17] Innovative funding models, risk-sharing agreements and value-based contracting are all potential discussion points with respect to VBHC and VBP. Understanding the basics of risk sharing will support effective dialogue and implementation.

Understanding the nuances and guardrails of risk-sharing agreements will ensure a meaningful dialogue. The MTAA, in collaboration with key thought leaders, will create a guidance document for industry and procurement to engage in innovative funding models, risk-sharing agreements and other collaborative funding mechanisms.

Recommendation 5: Expert Advisory Committee.

The MTAA and the medical technology sector are unable to drive value-based care implementation in isolation, or is any individual stakeholder group. The MTAA will convene an INDEPENDENT (unfunded and transparent) expert advisory board to provide input, guidance, and a multi-stakeholder perspective on the transition to VBP within Australia. One of the outputs of the workstream with the expert advisory committee will be to formulate recommendations to all stakeholders on how to take VBP (E.g. how state health departments could establish VBHC programs, engage industry, create innovation funds, etc..). This expert advisory committee will also be an opportunity to add international experience to the development of VBP in Australia through foreign committee members.

Final Comments

It is through the implementation of this CoP, and the above recommendations, that industry can become a collaborative and engaged partner in the positive changes the Australian healthcare system needs. We welcome all feedback and input to improve and build on the dialogue established in this White Paper.

This White Paper is an open invitation to all partners in health delivery to engage around sustainable and innovative value-based health and the MTAA would welcome your direct contact through its VBP portal:

www.mtaa.org.au

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