Government of **Western Australia**
Department of **Health**

Discussion Paper

Financial Sustainability Working Group

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better health ▪ better care ▪ better value

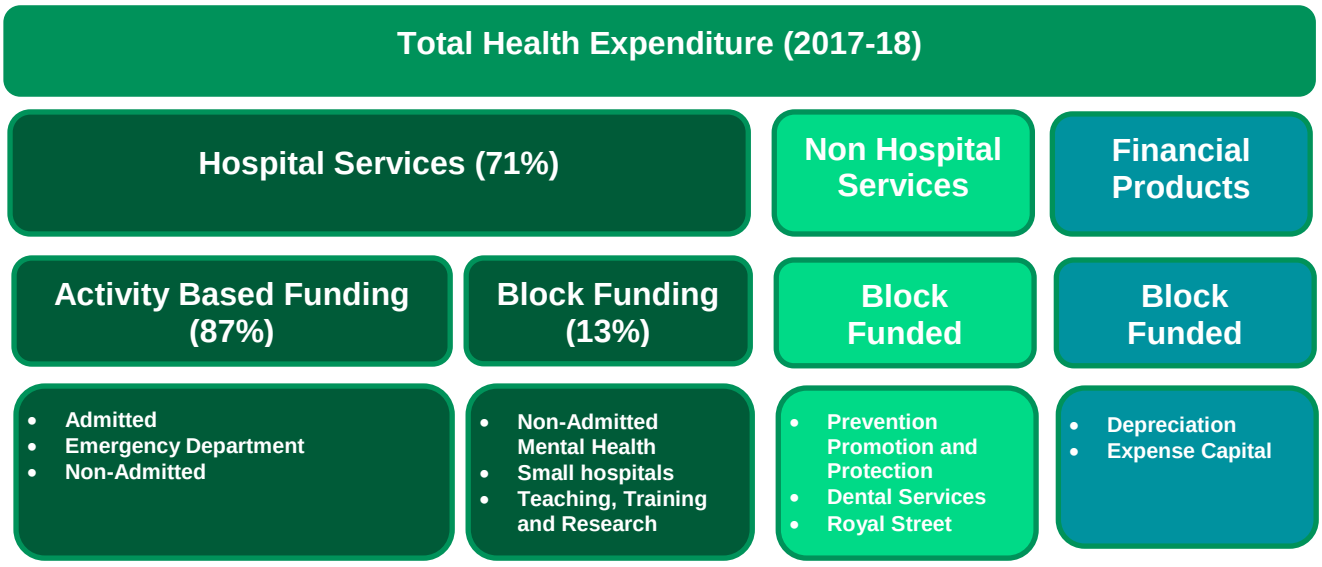
Contents

1 Current State

Health expenditure has grown faster than inflation and the economy as a whole, accounting for 52 per cent of overall government expenditure growth between 2013-14 and 2016-17. The estimated cost of delivering hospital services in WA is 20 per cent above the national average. While health expenditure growth has been reduced from an average of around 10 per cent annually to an estimated 4.3 per cent in 2016-17, the WA health system remains the largest single expenditure in the WA State Budget. The WA health system represents 30 per cent of expenditure in 2016-17 compared to 24.9 per cent in 2008-09. This growth is unsustainable with State Government debt forecast to reach $43.64 billion by 2020-21.

The WA health system's approved budget for 2017-18 is $8.9 billion. The budget and funding for health services in WA is a combined State and Commonwealth responsibility. The Commonwealth funding component of the 2017-18 Budget was approximately $2.1 billion, according to the National Health Reform Agreement. Some additional funding is also provided by the Commonwealth through direct grants for specific programs.

The Mental Health Commission provides 75 per cent of its budget for public mental health services delivered by the WA health system, which includes inpatient and community treatment services. A Mental Health Head Agreement has been established between the Department and the Mental Health Commission. Each Health Service Provider also has a service agreement with the Mental Health Commission that is consistent with the Head Agreement.



Source: WA Health Funding and Purchasing Guidelines 2017-18

1.1 Commonwealth Funding

In August 2011, the State and Territory governments and the Commonwealth entered into the National Health Reform Agreement (NHRA). The agreement introduced Activity Based Funding (ABF) based on a National Efficient Price (NEP). The agreement included the provision that no State would be worst off and would receive at least the amount of funding they would have received under the National Healthcare Specific Purpose Payments agreements.

The Commonwealth Government's Budget 2014-15 detailed the cessation of the funding guarantees under the National Health Reform Agreement 2011 and the revision of Commonwealth Public Hospital funding arrangements from 1 July 2017. If implemented, the indexation of the Commonwealth Government's contribution to hospital funding from 2017-18 would have been based on the Consumer Price Index (CPI) and population growth. This initiative would, in effect, have shifted the cost burden from the Commonwealth to the States for activity growth that exceeded population growth and medical services cost growth that is above the CPI. The *Budget Review 2014-15* estimated that the expected savings from changes to public hospital funding arrangements would be significant. If implemented, this would have placed further pressure on the State's budget.

In April 2016, the *Heads of Agreement between the Commonwealth and the States and Territories on Public Hospital Funding (Agreement)* was signed forming the basis for further negotiations regarding the funding of public hospital services. The Agreement provided a commitment to develop an addendum to the current National Health Reform Agreement that would commence on 1 July 2017 and operate for three years, ceasing on 30 June 2020. The Agreement would retain most of the existing funding methodology including the calculation of both the National Efficient Price and the National Efficient Cost. The Commonwealth will continue to fund 45 per cent of the efficient growth of services however, it is important to note that this funding will be subject to a 6.5 per cent national funding cap.

The addendum to the National Health Reform Agreement has now been developed and signed by the Commonwealth and the States. A significant inclusion in the addendum is the shift from purchasing for activity to purchasing for value and outcomes. The addendum earmarks the development of pricing and funding adjustments for Sentinel Events, Hospital Acquired Complications and Avoidable Readmissions. The Commonwealth and the States have agreed that any episode of care that gives rise to a Sentinel Event will not be funded. The Commonwealth and the States have also agreed to the development of a safety and quality adjustment which will result in a reduction in the funding payable following the occurrence of a Hospital Acquired Complication or an Avoidable Readmission.

It is evident that funding remains a challenge not only for the State but also for the Commonwealth. Future Commonwealth initiatives have the potential to place additional strain of the State's budget. A more efficient WA health system is critical.

1.2 State Price and National Efficient Price Disparity

The cost models to derive the State Price and the National Efficient Price are not directly comparable due to different cost inclusions. The Average State Cost per National Weighted Activity Unit (nWAU) in WA is, nevertheless, higher.

The *State Price Analysis* was conducted to identify the avoidable and unavoidable cost differences between the State Price and the National Efficient Price.

The Independent Hospital Pricing Authority has recognised the Department of Health's submission to address legitimate and unavoidable costs in rural and remote areas of WA and will introduce a Treatment Remoteness Adjustment into the funding model in 2018-19.[1]

[1] Independent Hospital Pricing Authority (2017), *'Pricing Framework for Australian Public Services 2018-19*', Independent Hospital Pricing Authority, Canberra Australia.

It is also important that both positive cost drivers (efficiencies) and negative cost drivers (inefficiencies) are identified and considered. This ensures lessons can be learnt from efficient cost drivers and strategies can be developed to address inefficient cost drivers.

1.3 State Funding

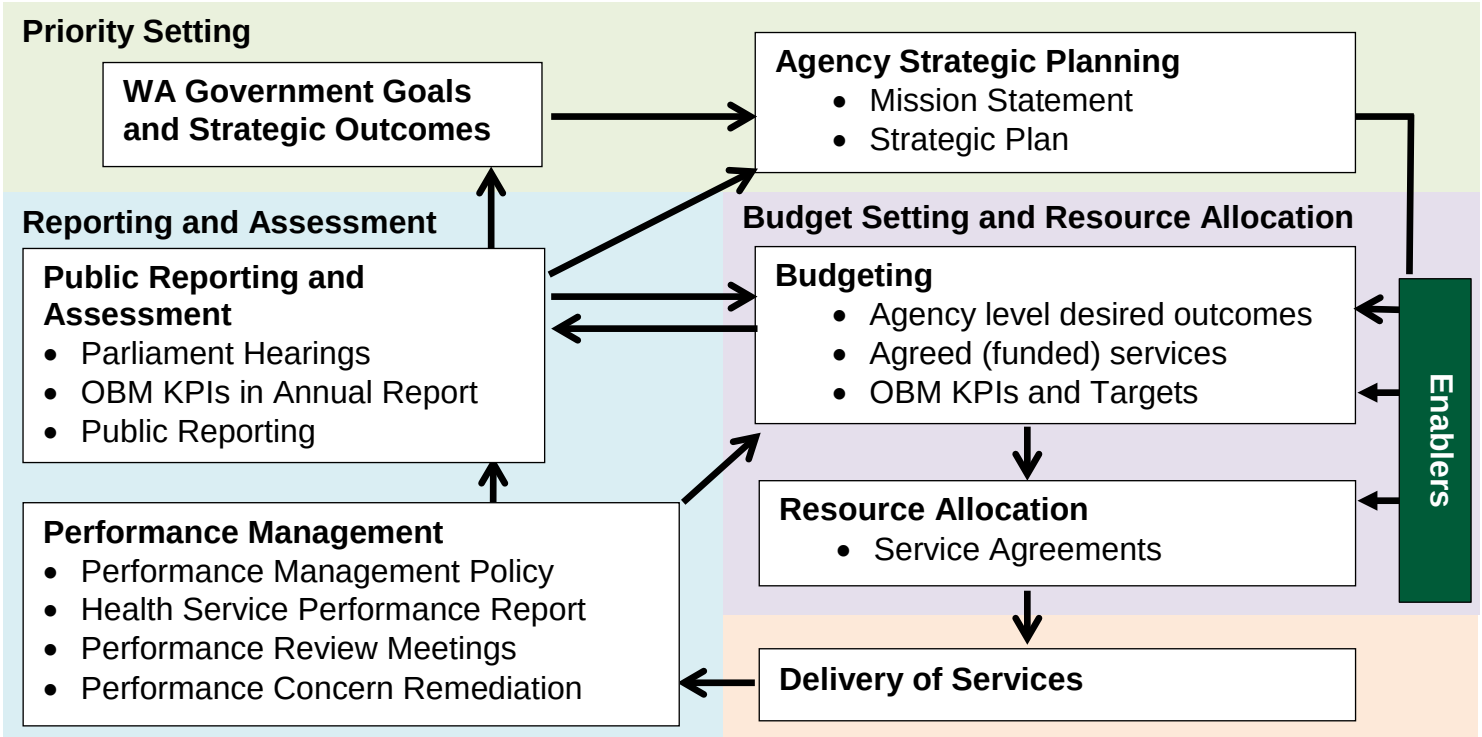
State funds are allocated to the WA health system via the annual budget process. The Department of Health is required to undertake the budget setting and allocation process for the WA health system in accordance with the *Health Services Act 2016,* the *Government Financial Responsibility Act 2000, Public Sector Management Act 1994* and the *Financial Management Act 2006*.

1.4 Funding Model and Service Agreements

The Director General, as the System Manager, enters into an annual Service Agreement with each Health Service Provider as prescribed in the *Health Services Act 2016*. The Service Agreements include:

- funding to be provided, including the way the funding is provided
- health services to be purchased
- teaching, training and research to be purchased in support of the provision of services
- any other matter the Director General considers relevant to the provision of services.

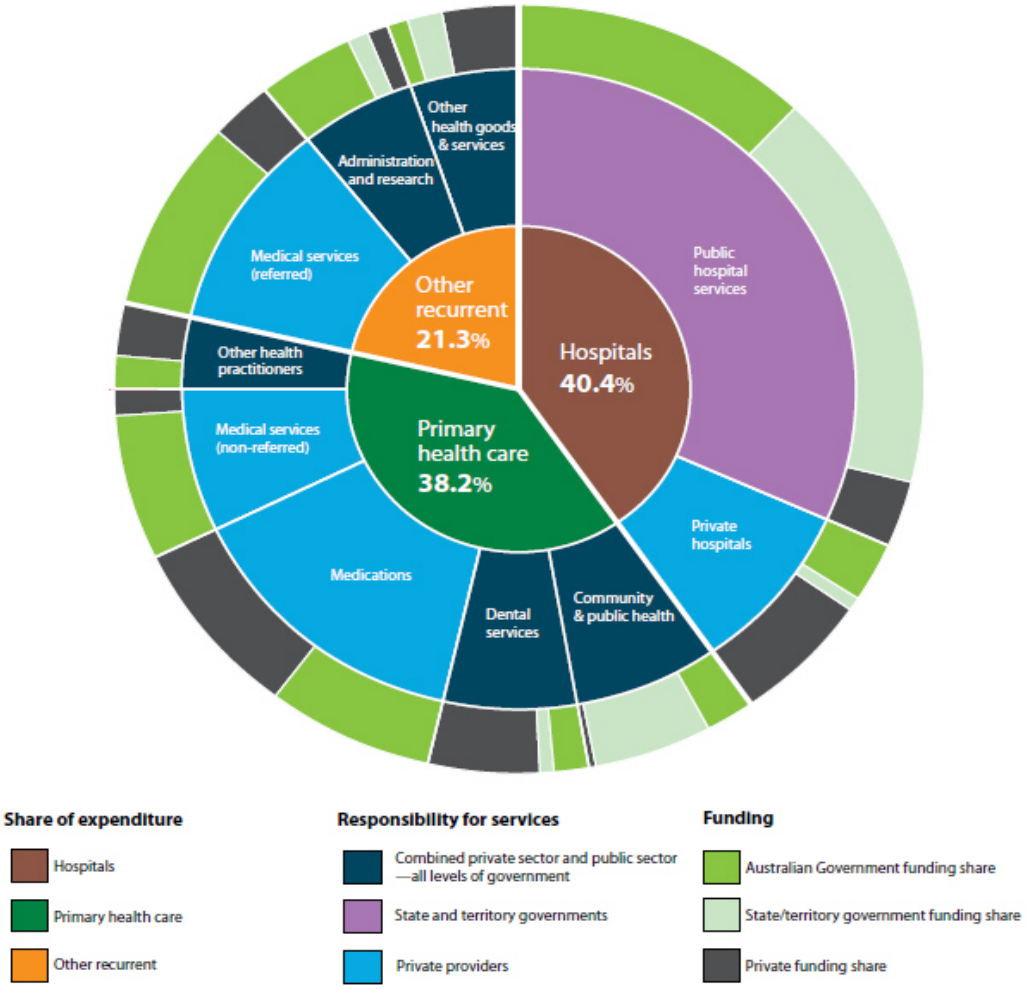
The flowchart below highlights the importance of the Service Agreements within the priority setting and funding cycle.



The Mental Health Commission is also a purchaser of services via the Head Agreement with the Department of Health and the Commission Service Agreements with individual Health Service Providers.

1.5 Broader Health System

The health system in WA is large and complex. There are three levels of government (federal, state, and local) and numerous private and not-for-profit entities contributing to the design, funding, management, and delivery of health services to the WA community. These providers deliver a broad range of health services, from public health and preventive services in the community, to primary healthcare, emergency health services, hospital-based treatment, and rehabilitation and palliative care.



1.6 Demand Drivers

1.6.1 Ageing Population

WA's population is ageing. In the next 10 years the number of people aged 65 years and over is projected to grow by 50 per cent from 340,224 to 518,340. Regional areas of WA currently have the highest proportion of older adults. As people age they tend to be higher consumers of more costly healthcare services. As this population group increases in size, so does the strain on the health system.

1.6.2 Population Growth

According the Australian Bureau of Statistics, WA recorded the highest population growth in the country in the ten years to 2016. The state's population increased from 2.05 million in 2006 to 2.56 million in 2016. This represents a 24.8 per cent expansion in the state's population over a ten year period. This growth has been driven by the mining boom and the rapid expansion in the state's economy. More recently the mining boom has slowed dramatically and the state's population growth has fallen to less than 1 per cent.

1.7 Cost Drivers

1.7.1 Wages

Wage costs comprise approximately 60 per cent of total health expenditure. High wage outcomes in WA are primarily the result of labour market conditions emanating from the mining boom. The wage costs continue to exert significant cost pressures on the public health system.

Enterprise Bargaining Agreements (EBA) have provided for average wage increases for doctors, nurses and HSU staff above Government Wages Policy (GWP). These cohorts of staff make up approximately 90 per cent of the salary costs in the health system. These high wage increases have become embedded in WA health system's operating cost structure, making it harder to achieve parity with the national efficient price benchmarks.

1.7.2 Highest Total Cost Procedures

The total reported cost for the top 10 diagnosis delated group (DRG) procedures in WA Public Hospitals was $408.6 million in 2015-16.

DRG Procedure Descriptions	Separations	Total Reported Cost[a]
Haemodialysis (L61Z)	112,079	$68,789,089
Chemotherapy (R63Z)	29,388	$54,658,574
Other Factors Influencing Health Status, Major Complexity (Z64A)	3,010	$40,900,385
Schizophrenia Disorders, Major Complexity (U61A)	796	$40,482,024
Respiratory Infections and Inflammations, Major Complexity (E62A)	3,750	$39,084,615
Neonate, Adm Wt >=2500g W/O Sig OR Proc/Vent>=96hrs, >=37 Comp Wks Gest, Minor Complexity (P68D)	16,235	$34,681,013
Tracheostomy and/or Ventilation >=96hours, Intermediate Complexity (A06B)	266	$34,272,645
Caesarean Delivery, Intermediate Complexity (O01B)	2,781	$33,092,975
Vaginal Delivery, Intermediate Complexity (O60B)	5,499	$31,913,645
Tracheostomy and/or Ventilation >=96hours, Major Complexity (A06A)	129	$30,676,419

Source: Cost Data is reported by the Area Health Services as part of the annual National Hospital Cost Data Collection (NHCDC) (ABF Hospitals only) [a]Less Corporate, Depreciation and Teaching and Research costs.

Further investigation of high cost procedures is required to identify efficiencies and inefficiencies within the WA health system.

2 Working Exemplar

The Australian Health System is based on a universal healthcare model that aims to provide quality healthcare and services to all members of the community regardless of personal circumstances.

Healthcare in Australia comprises a myriad of integrated health services provided by private, government and not-for-profit organizations.

The Australian Health System is the envy of many countries around the world.

The New York based Commonwealth Fund recently released a comparison of 11 leading health systems and concluded that Australia had the number one ranking for healthcare outcomes and administration efficiency, a number two ranking for care processes, a ranking of four for access and seven for equity.[2]

Health System Performance Rankings 2017

	Health Care Outcomes	Administrative Efficiency	Care Process	Access	Equity
Australia	1	1	2	4	7
Canada	9	6	6	10	9
France	5	11	9	9	10
Germany	8	6	8	2	6
Netherlands	6	9	4	1	2
New Zealand	7	2	3	7	8
Norway	3	4	10	5	5
Sweden	2	5	11	6	3
Switzerland	4	8	7	8	4
UK	10	3	1	3	1
USA	11	10	5	11	11

Source: Commonwealth Fund[2]

Australia's results are particularly exemplary when it is considered that the healthcare outcome ranking is based on a comprehensive suite of nine measures that cover population health, mortality amenable to healthcare and disease-specific outcomes.

Life expectancy is a key measure of the overall performance of a health system. From a WA perspective, the state has the highest life expectancy for females and the second highest for males when compared to other Australian states.

Life Expectancy at Birth By States 2015

	Male	Female
WA	80.5	85.0
NSW	80.4	84.6
Victoria	81.1	84.7
Queensland	80.0	84.3
SA	80.3	84.4
Tasmania	78.9	82.8

Source: ABS Cat. No: 3302.0.55.001

[2] Schneider, E. C., Sarnak, D. O., Squires, D., Shah, A., Doty, M. M., (2017) *Mirror, Mirror 2017: International Comparison Reflects Flaws and Opportunities for Better U.S. Health Care*. Commonwealth Fund, New York, USA.

3 Future State

3.1 Discussion Point 1: Creating an environment with funding enablers that support health system and healthcare efficiencies and effectiveness, an integrated healthcare system and effective partnerships

There is significant pressure on health systems world-wide to contain costs, improve performance and maximise value for money against a backdrop of rising consumer expectations and increasing demand.[3]

3.1.1 Funding model and financial systems

There is growing interest in funding models to influence healthcare service delivery effectiveness and improve efficiencies.[4] The evidence to support the efficiency and effectiveness of funding models to-date is limited.[4] Every funding model creates its own set of perverse and desired incentives.[5]

A review[6] of 32 studies evaluated the effectiveness of financial incentives in changing healthcare professional behaviours and patient outcomes. The review concluded that payments were generally effective for:

- each service, episode or visit
- providing care for a patient or specific population
- pre-specified levels of providing a change in activity or quality of care
- improving processes of care
- improving prescribing costs.

The review also concluded that payments were generally ineffective for:

- specified time periods
- compliance with guidelines.

[3] Hurst, J. and Jee-Hughes, M. (2001). 'Performance Measurement and Performance Management in OECD Health Systems', *OECD Labour Market and Social Policy Occasional Papers*, No. 47, OECD Publishing.

[4] Eagar K, Sansoni J, Loggie C, Elsworthy A, McNamee J, Cook R, et al. (2013) *A literature review on integrating quality and safety into hospital pricing systems*. Centre for Health Service Development, Australian Health Service Research Institute, Wollongong, Australia.

[5] Young D, Gunn J, Naccarella L. (2008). *Funding Policy Options for Preventative Health Care within Australian Primary Health Care: Discussion Paper, in Funding Policy Options for Preventative Health Care.* Department of General Practice, The University of Melbourne, Melbourne, Australia.

[6] Flodgren G, Eccles Martin P, Shepperd S, Scott A, Parmelli E, Beyer Fiona R., (2011), 'An overview of reviews evaluating the effectiveness of financial incentives in changing healthcare professional behaviours and patient outcomes'. *Cochrane Database of Systematic Reviews*., Issue. 7 Art. No. CD009255, pp1-94.

For financial incentives impacting adherence to best practice guidelines in WA is mixed.

CASE STUDY **PREMIUM PAYMENTS PROGRAM**

A Premium Payment Program was introduced into the WA heath system in 2012-13. The program was designed to encourage, and improve sustainability via clinical practice improvement.

The program provided incentive payments based on compliance with evidence-based clinical best-practice for Fragility of Hip Fracture Treatment, Stroke Model of Care and Acute Myocardial Infarction. An evaluation in 2016 concluded that compliance was successful when clinical champions engaged in the program and that the financial processes within the WA health system did not support the appropriate allocation of financial incentives. The program ceased in 2016.

The annual budget process governs the allocation of state funds to the WA health system. The Department of Health allocates these funds to the Health Service Providers via the annual Service Agreements in accordance with the *Health Services Act 2016*.

Hospital services in the WA health system account for 71 per cent of total health expenditure in 2017-18. The funding for 87 per cent of these services is based on a model that purchases activity. The remaining health expenditure in the WA health system is block funded. Block funding is provided to ensure access and equity of health services across the WA health system and to support functions not related to activity such as teaching and research.

The Commonwealth is shifting to a funding model that purchases not only for activity but also for value and outcomes. The Commonwealth and the States have agreed that any episode of care that gives rise to a Sentinel Event[7] will not be funded. It has also been agreed that a safety and quality adjustment will be developed which will result in a reduction in the funding payable following the occurrence of a Hospital Acquired Complication or an Avoidable Readmission.

3.1.2 Integrated Healthcare

Research reveals that an integrated healthcare system that delivers services in the right setting is a critical feature of long term financially sustainability. [8] Integrated healthcare has been adopted internationally in many countries including the UK, USA, Taiwan and New Zealand.

A significant body of evidence shows that, in addition to reducing costs, delivering healthcare in the right setting provides the opportunity to better target health and broader services to those most in need and to improve health outcomes.[8,9,10,11,12]

It is important that the WA health system funding model supports the delivery of integrated healthcare. In addition to the financial imperative, it is also evident from the Sustainable Health

[7] A Sentinel Event is an unexpected occurrence that results in the death or serious harm of a patient that is not related to the natural course of the patient's illness.
[8] Flower, J., (2012), *Healthcare Beyond Reform, Doing it Right for Half the Cost,* CRC Press, Boca Raton, USA.
[9] Smith, S. M., Cousines, G., Allwright, S., O"Dowd, T., (2017), 'Shared care across the interface betgween primary and speciality care in management of long term conditions'. *Cochrane Database of Systematic Reviews*., Issue. 2 Art. No. CD004910, pp1-95.
[10] Kings Fund (2008), *'Background to the Next Stage Review*', Kings Fund, London, UK.
[11] WA Country Health Service (2016), '*Southern Inland Health Initiative, Program Evaluation – Preliminary Key Findings, March 2016*', WA Country Health Service, Perth, Australia.
[12] World Health Organisation, (2016), *Right care, right time, right place: how Lithuania transformed cardiology care,* World Health Organisation, Geneva, Switzerland.

Review Public Forums that the community also wants to receive integrated healthcare in the right setting.

A review of the data reveals that 63 per cent of total local and state expenditure in WA is spent on hospital services compared to only 15 per cent on community health services.[13]

Further investigation shows that in comparison to other states, WA had the highest rate of public hospital admissions.

Public hospitalisations per 10,000

	NSW	Vic	Qld	WA	SA	Tas
Public hospitalisations[b] per 10,000 people [a]	2,405	2,703	2,667	3,683	1,716	2,376

[a] Australian Demographic Statistics 3101.0 (Population Estimates 2015-16)
[b] AIHW Hospital Statistics 2015-16

These disparities suggest a significant opportunity to introduce funding levers that support the shift of healthcare delivery from a hospital care focus to more appropriate and affordable settings.

It is evident that the lack of GPs and residential aged care beds in WA has added significant pressure on emergency departments and the WA health system. [14]

Regional and remote areas in WA are particularly impacted by the lack of appropriate healthcare services. There are a range of initiatives at a state and local level that aim to ensure integrated healthcare services are provided in the right settings.

EXEMPLAR **SOUTHERN INLAND HEALTH INITIATIVE**

The Southern Inland Health Initiative was introduced in WA as part of the Royalties for Regions program. A key feature of the program was improved primary healthcare and medical resources, and access to health services locally.

The program evaluation has commenced with preliminary key findings including:

- Significant improvements in emergency medical care with more doctors being supported to live and work in the country. This has been supported through the use of modern technology.
- A safer, better and more reliable emergency care to ensure rural and remote communities receive equitable access to high quality healthcare.
- Significant increases in the range of local health services are having a positive effect on helping people avoid hospital and bringing care closer to home.

[13] Australian Institute of Health and Welfare, (2017), *Health Expenditure Australia 2015-16,* Australian Institute of Health and Welfare, Canberra, Australia.
[14] Department of Health, (2017), '*A fair share for WA health care*', Department of Healt*h*, Perth, Australia.

Integrated healthcare solutions that provide appropriate services to disadvantaged members of regional and remote communities are critical.[15]

EXEMPLAR **SPECIALIST OUTREACH SERVICES**

In the Northern Territory, specialist outreach services provided an innovative solution to ensuring remote Aboriginal communities received the care they need. The outreach services delivered specialist services and overcame the barriers relating to distance, communication and cultural appropriateness of services.

The services resulted in a fourfold increase in the number of consultations with people from remote Aboriginal communities.

Technology also plays an important role in ensuring equity and access to healthcare. In WA there are many technology initiatives that support the WA health system to deliver health services in the right settings.

EXEMPLAR **TELEHEALTH**

Telehealth is a WA program that utilises information and communication technology to provide healthcare across the state. The program connects regional patients to cost-effective clinical services closer to home.

There have been over 40,000 'virtual' clinical consultations across WA with emergency Telehealth Service equipment being installed in 63 regional sites.

A key factor of integrated healthcare is receiving the right treatment when it is needed.[16]

EXEMPLAR **RAPID ACCESS CARE MODELS**

A Rapid Access Heart Failure Clinic was established in a district general hospital serving a population of 292,000 in South-East London. The aim of the initiative was to diagnose and manage new cases of heart failure presenting for the first time in the community.

Over 15 months, 383 patients were seen and after subsequent specialist investigations and follow-up, including a trial of therapy where appropriate, 101 patients (26%) were diagnosed with clinical heart failure and treated in the appropriate manner.

The Rapid Access Heart Failure Clinic provided rapid assessment, prompt diagnosis and early introduction of life prolonging therapy for patients presented with suspected heart failure in the community.

[15] Gruen, R. L., Weeramanthri, T. R., Baile, R. S., (2002), 'Outreach and improved access to specialist services for indigenous people in remote Australia: the requirements for sustainability', *Journal of Epidemial Community Health*, Vol. 56, pp517-21.
[16] Fox, K. F., Cowie, M. R., et al, (2000), 'A Rapid Access Heart Failure Clinic provides a prompt diagnosis and appropriate management of new heart failure presenting in the community'*, European Journal of Heart Failure*, Vol. 2, pp423-9.

Integrated healthcare is broader than health, and needs to address both health and social needs.[17,18]

EXEMPLAR	THE NORRTAELJE MODEL[18]

Unlike Sweden, many countries organise and fund health and social care separately.

The Norrtaelje model is a Swedish initiative to promote and develop horizontal and vertical integration of health and social services in order to better respond to the older patients with complex needs. The model demonstrates the benefit of agencies working together to improve the quality of care.

The initiative was able to change the setting in which care was delivered and improve the quality of care provided without any additional funding. Improvement was evident across several key performance measures.

3.1.3 Effective Partnerships

To be able to provide the community with integrated healthcare in the right setting effective partnerships are essential.

Research[8] shows that effective partnerships have the capacity to:

- improve health outcomes
- minimise waste in the system
- reduce costs
- lessen demand for hospital and high cost services
- increase healthcare access
- improve equity to at risk populations
- deliver healthcare in community and patient preferred settings

In 2015, the Commonwealth established the Primary Health Networks to ensure better access to frontline health services.

Internationally, there are several examples were strong partnerships with the primary care sectors have led to significant improvements to health outcomes and reduced demand on hospital services.[19]

[17] Baeck, A. M., Calltorp, J., (2015), 'The Norrtaelje mode: a unique model for integrated health and social care in Sweden', *International Journal of Integrated Care*, Vol. 15, pp1-11.
[18] Ovretveit, J., Hansson, J., Brommels, M., (2010), 'An integrated health and social care organization in Sweden: creation and structure of a unique local public health and social care system', *Health Policy*, Vol. 97 (2-3), pp113-21.
[19] Timmins, N., Ham, C., (2017), '*The quest for integrated health and social care: A case study in Canterbury, New Zealand*', Kings Fund, London, UK.

EXEMPLAR **EFFECTIVE PARTNERSHIPS**[19]

In 2008, the District Health Board for Canterbury in New Zealand set up an integrated health service. The integrated health approach was to ensure people could stay in their homes and communities, and hospitals were able to provide timely complex care when it was needed.

One of the key features of the integrated health system was the partnership with the primary care sector via the HealthPathways program. The program reached out to the primary care sector to develop guidelines for treatment. The program brought together hospital doctors and GPs to determine best practice patient pathways for particular conditions. This included detailing what treatments GPs should manage in the community and the tests GPs should carry out before hospital referrals. The program firmly places primary health care as a key stakeholder within an integrated healthcare system.

The approach has resulted in a myriad of improved health outcomes and lower costs.

At a local level, the WA Primary Health Alliance has adopted the New Zealand model with the establishment of HealthPathways WA. The Department of Health in WA recognises the critical role the primary health sector plays in the sustainability of the WA health system. The department provides financial support to the HealthPathways WA program and has entered into a partnership agreement with WA Primary Health Alliance. Health Service Providers also provide clinical support in the development of clinical pathways. To-date over 300 pathways from the New Zealand HealthPathways have been localised to be suitable for use in the WA context.

3.1.4 Financial Enablers

Funding Model

Internationally, there are a large number of health system pricing and funding models. Common funding models include:

- activity based funding
- marginal pricing
- pay for performance
- best practice pricing
- purchasing for value and quality

Research suggests that the desired outcomes of any payment system are unlikely to be achieved by financial incentives or disincentives alone.[20]

All states in Australia fund health services through a combination of activity base funding and block funding.

Currently in WA the activity based funding model purchases a pre-defined number of activities

[20] Glasziou, P. P., Buchan H, Del Mar, C., et al (2012), 'When financial incentives do more good than harm: a checklist', *British Medical Journal*, e5047, pp1-5.

from Health Service Providers at a set price. The set price is based on the Health Service Allocation Price per Weighted Activity Unit. The Health Service Allocation Price is set at a level below the State Price which is well above the National Efficient Price. There are no payment adjustments within the model to address over or under delivery of purchased activity. There are also no financial mechanisms to reward quality, value and/or best practice in the delivery of the purchased activity. In WA transitional grants to Health Service Providers are provided on a needs basis and there is not link to outputs or outcomes.

A review of the funding model in other state jurisdictions highlights significant variation. NSW, Victoria and Queensland have achieved state prices that are below the national average.

Pricing incentives and targeted transitional grants

In NSW, the funding model is based on three pricing levels and the application of transitional grants to assist Health Services to improve efficiencies to converge to the state price. Health Services providing services below the state price are funded at the state price. The difference in the price and the cost to deliver is retained by the Health Service and provides an incentive to maintain or achieve greater efficiencies.

Perspective and best practice Pricing

Current activity based funding in the WA health system is based on historical costs. Perspective pricing is funding based on the cost to deliver best practice pathways. This approach has the potential to drive clinical change and achieve better outcomes. In 2015, the Australian Commission on Safety and Quality in Health Care recommended the Independent Hospital Pricing Authority should consider best-practice pricing that is aligned to the Commission's Hip Fracture Clinical Care Standard. In 2014-15, Victoria introduced evidence-based best practice pricing scheme that is based on clinical consensus.

Own source revenue

In Queensland, the efficient price adopted in the funding model is 7 per cent below the national efficient price. This funding mechanism creates an incentive to focus on own source revenue. Unlike WA, Health Service Providers in Queensland are able to retain all own source revenue without any adjustments to funding. In WA, own source revenue that exceeds the targets set in the annual Health Service Provider Service Agreements is not retained by the Health Service Provider. There is an opportunity for Health Service Providers to explore own source revenue initiatives such as the commercialisation of research, development, and intellectual property.

Efficiency dividends

In Victoria, the price of activity purchased is based on a level that is lower than the average cost for the delivery of the health service. This creates an 'efficiency dividend' which is redistributed to fund extra demand or alternative services.

Funding adjustments

For over or under delivery of purchased activity, adjustments are a feature of funding models in all states, bar NSW and WA. The rate at which the funding is adjusted varies between the

states. Typically, Health Services receive a marginal rate for additional services above the purchased activity targets and no payment for purchased activity not delivered that falls below a set tolerance level.

Purchasing for value and outcomes

The Commonwealth and the states have recently agreed to a funding model that will purchase for value and outcomes. Once implemented any episode of care that gives rise to a Sentinel Event will not be funded by the Commonwealth. Similarly, a safety and quality adjustment is also being developed and will result in a reduction in the funding payable for any occurrence with a Hospital Acquired Complication or an Avoidable Readmission. The current activity based funding model in WA does not purchase for value or outcomes.

Block funding and targeted grants

Just over 13 per cent of the hospital services and all non hospital services are block funded. This type of funding ensures regional and remote areas of the state receive appropriate access to services and functions that are not related to activity are funded. Block funding and targeted grants are potential financial levers that could underpin innovations that support integrated healthcare, technology and partnership initiatives across the WA health system. To be able to fund these innovations, savings need to be realised in other parts of the system.

To support financial sustainability, enablers that could be incorporated into the WA funding model include:

- efficiency dividends
- own source revenue incentives
- pricing incentives and targeted transitional grants
- funding adjustments
- best practice pricing
- purchasing for value and outcomes
- block funding and targeted grants.

Private health insurance funded patients in public hospitals

WA has the second highest level of private health insurance coverage in Australia.[21] The state, however, has the second lowest proportion of private health insurance funded patients in public hospitals in the country.[21] WA recorded only 8.5 per cent of private health insurance funded public hospital separations compared to nearly 20 per cent in NSW.[21]

Increasing the proportion of private health insurance funded patients in the public sector will directly grow revenue. Over the longer term, however, it also has the potential to lead to rising insurance costs, lower private health insurance coverage and greater public sector demand. Determining the right balance requires careful consideration as it is imperative to the WA health system that the state has a strong private sector.

[21] Australian Institute of Health and Welfare (2017). *Private health insurance use in Australian hospitals, 2006-07 to 2015-16: Australian Hospital Statistics Report,* Australian Institute of Health and Welfare, Sydney, Australia.

3.2 Discussion Point 2: Ensuring funding arrangements support preventive and curative strategies, services and care

3.2.1 Preventive and Curative Funding Strategies

Although preventive strategies are not always cost-effective,[22] an Australian review of 120 preventive interventions found improved health outcomes and reduced overall health costs that were the result of a decline in subsequent healthcare costs.[23] It is imperative that the WA health system continues to pursue preventive strategies to reduce future hospital demand and costs.

Prevention is sometimes seem as a cost burden but the research results[23] clearly demonstrate that prevention is an investment in the future health of the community which leads to reduced medium to long term healthcare costs.

EXEMPLAR **IMMUNISATION PROGRAMS[24]**

Immunisation remains the safest and most effective way to stop the spread of many of the world's most infectious diseases. Before the major vaccination campaigns of the 1960s and 1970s, diseases like tetanus, diphtheria and whooping cough (pertussis) killed thousands of young children each year. Today, deaths from these diseases are extremely rare in Australia, and the rest of the developed world.

If enough people in the community are immunised, the infection can no longer be spread from person to person and the disease can die out altogether. Vaccinating a child also reduces the opportunity for that child to pass that disease on to another – especially young babies who are unable to be fully immunised. It is estimated that vaccinations currently save up to three million lives worldwide each year.

In 2009-10, the Commonwealth and the States entered into the National Partnership Agreement on Preventive Health. The aim of the agreement was to fund activities and programs to reduce the burden of chronic disease. The Commonwealth withdrew from the nine year agreement in 2014. Public health expenditure has since fallen back to pre-agreement levels which is now less than 1.5 per cent of GDP.[25]

On a per capita basis, public health expenditure in WA is similar to other Australian states.[25] Internationally, Australia spends substantially less on public health than Canada, New Zealand and the UK.[25]

[22] Shiell, A., McIntosh, K., (2006), 'Some economics of health promotion: what we know, don't know and need to know before deciding how much to spend on promoting the public's health', *Harvard Health Policy Review*, Vol. 7, pp21-31.
[23] Vos, T., Carter, R., Barendregt, J., et al. (2010). *Assessing cost-effectiveness in prevention: Final Report,* University of Queensland and Melbourne, and Deakin University, Australia.
[24] Immunise Australia Program. (2015). *About immunisation*, Immunise Australia Program, Canberra.
[25] Jackson, H., Shiell, A. (2017). *Preventive health: How much does Australia spend and is it enough*. Foundation for Alcohol Research and Education, Canberra, USA.

3.2.2 Financial Enablers

Bilateral agreements

Bilateral agreements between the Commonwealth and individual states set out jurisdictional specific activities, interventions, strategies and funding arrangements to achieve agreed outcomes.

It is important that the WA pursues all bilateral agreement opportunities with the Commonwealth to ensure appropriate Commonwealth funding is available to support targeted preventive and curative initiatives to achieve better health outcomes for Western Australians.

Quarantining a proportion of expenditure growth for preventive health

Preventive strategies are an investment in the future financial sustainability of the WA health system. Quarantining a proportion of expenditure growth for preventive health strategies is a potential funding mechanism that could be implemented to ensure appropriate ongoing levels of funding for preventive health.

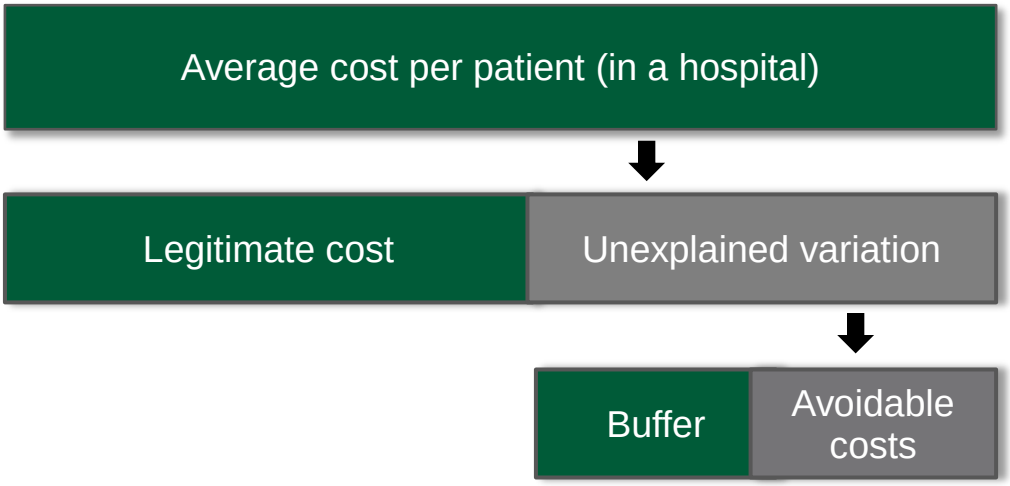
3.3 Discussion Point 3: Identifying funding opportunities to support the reduction of unwarranted clinical variation

3.3.1 Cost drivers and unwarranted variation across the whole of health

What is an acceptable level of spending on health was raised in the Sustainable Health Review Public Forums. Every dollar spent on health is a dollar that cannot be spent on other essential government services. Total health expenditure has risen from 24.9 per cent of the State's budget in 2008-09 to 30 per cent in 2016-17. This growth is not sustainable. State Government debt is forecast to reach $43.64 billion by 2020-21. The State's financial capacity to raise revenue without leading to further deterioration in WA's share of GST is also a major fiscal challenge. Although the acceptable level of health funding is ultimately a political decision, it is clear that every dollar counts.

A 2017, OECD report estimates that a fifth of health spending in OECD countries is ineffective and wasted.[26] The report highlights that waste is typically clinical, operational and governance related with many patients being unnecessarily harmed at the point of care or receiving unnecessary or low value care that makes no difference to health outcomes.

Variations in healthcare have been documented since the 1930.[27] Some of the variation in healthcare delivery is warranted and desirable as it provides treatment that is specific to the patient's needs or preferences. [28] The unwarranted variation in healthcare, however, is a major concern as it raises the question of equity, quality and efficiency of healthcare.[27,29]



Source: Grattan Institute

Healthcare variation data and mapping[30] as key tools to identify unwarranted variations was first introduced in the 1970's with the release of the Dartmouth Atlas of Health Care. Since then the adoption of healthcare atlases has gained a foothold in many countries. In Australia, the First

[26] OECD (2017). *Tackling Wasteful Spending on Health,* OECD Publishing, Paris, France.
[27] Australian Commission on Safety and Quality in Health Care and Australian Institute of Health and Welfare (2014). *Exploring Healthcare Variation in Australia: Analyses Resulting from an OECD Study,* Australian Commission on Safety and Quality in Health Care and Australian Institute of Health and Welfare, Sydney, Australia.
[28] Buchan H. A., Duggan, A., Hargreaves, J., et al. (2016), 'Health care variation: time to act', *Medical Journal of Australia*, Vol. 205, No. 10, pp530-3.
[29] Corallo, A. N., Croxford, R., Goodman, D. C., et al. (2014), 'A systematic review of medical practice variation in OECD countries', *Health Policy*, Vol. 114, pp5-14.
[30] Wennberg, J. E., Gittelsohn, A. M., (1973), 'Small variations in health care delivery', *Science*, Vol. 182, No. 117, pp1102-8.

and Second Australian Atlas of Healthcare Variation were released in 2015 and 2017 respectively. The Australian Institute of Health and Welfare, and the Australian Commission on Safety and Quality in Health Care have coordinated a significant body of work to identify unwarranted variations in a range of admission types and interventions.[27,31]

3.3.2 Enablers

Targeting low value practices

Redirecting funding from practices and interventions that are not effective or even harmful has the potential to improve health outcomes and increase the efficiency of limited resources. High performing health systems around the world have demonstrated the ability to deliver better health outcomes at lower costs by providing safer more appropriate care.[32,33] An Australian study identified 156 potentially ineffective or unsafe health care practices.[34] It is important that enablers available to the WA health system support the identification of low value practices.

The Department of Health is a member of the US-based Health Care Advisory Board. The board provides best practice insight. In 2016 the board released the System Blueprint for Clinical Standardization.[35] A key aim of the report is to provide a blueprint to reduce unwarranted clinical variation.

Choosing Wisely Australia is an Australian initiative that supports the elimination of unnecessary or harmful tests, treatments and procedures. In WA there are several Choosing Wisely Health Service Champions including Royal Perth Hospital, Sir Charles Gairdner Osborne Park Health Care Group, South Metropolitan Health Service, and the WA Country Health Service. Choosing Wisely draws expertise from peak medical bodies to identify tests, treatments, procedures and medicines that are not supported by evidence. Since launching in April 2015 over 120 evidence-based recommendations have been published by Australian medical colleges, societies and associations. Ongoing education is also a key enabler for clinical practice changes. An example is the healthcare education offered by the Cognitive Institute. The not for profit institute provides education that translates complex issues into simple step-by-step skill models that clinicians can put into immediate practice.

At a local level, the Clinical Variation Application has been developed by the Department of Health. The application is designed to identify clinical variation improvement opportunities across the WA health system. Currently the application is not widely used and there is significant opportunity to promote its use to identify unwarranted variations within hospitals.

Reducing duplication of services

There is an opportunity through integrated planning and building effective partnerships to

[31] Australian Institute of Health and Welfare (2017).*Variation in hospital admission policies and practices: Australian Hospital statistics,* Australian Institute of Health and Welfare, Canberra, Australia.
[32] Alderwick, H., Robertson, R., Appleby, J., Maguire, D. (2015), 'Better value in the NHS', *Kings Fund*, London, UK.
[33]James, B. C., Savitz, L. A., (2011), 'How Intermountain Trimmed Health Care Costs through robust quality improvement efforts', *Health Affairs*, Vol. 30, No. 6, pp1-7.
[34] Elshaug, A.G., Watt, A. M., Mundy, L., Willis, C., D. (2010). 'Over 150 potentially low value health care practices: an Australian study'. *The Medical Journal of Australia*, Vol.197, No.10, pp556-60
[35] Health Care Advisory Board (2016).*The System Blueprint for Clinical Standardization: Leveraging systemness to reduce clinical variation,* Health Care Advisory Board, Washington DC, USA.

reduce waste that results from a duplication of services such as services provided by both the Department of Health and the Mental Health Commission.

System performance management

System performance management is a key mechanism to support the realisation of WA health system priorities and objectives. Existing performance indicators that support system performance management should be reviewed to ensure they are effectively driving the desired behaviours and outcomes. If gaps are identified, evidence-based performance indicators should be developed that focus on minimising waste, reducing low care services, and achieving better health outcomes.

Redirecting savings to other priority areas

Minimising unwarranted variations in healthcare will improve health outcomes and enable savings to be re-directed to other priority areas.

3.4 Discussion Point 4: Streamlining the procurement process to further reduce waste

3.4.1 Procurement and Waste

In addition to unwarranted variation in healthcare, operational waste was identified by the OECD report as significant.[26] An example is pharmaceutical waste. An audit of the content of 'Return of Unwanted Medicines' bins in Australia revealed $2 million worth of discarded medicines.[26] Studies have highlighted that there is no quick way to eliminating waste and making better use of limited resources to improve the value of care for patients.[36]

The recently released Service Priority Review by the Department of Premier and Cabinet highlights the opportunity to leverage government procurement to reduce costs and improve outcomes for the community.[37]

[36] Chalkidou, K., Appleby, J. (2017), 'Eliminating waste in healthcare spending', *British Medical Journal*, Vol. 356, No. 10, pp530-33.
[37] Department of Premier and Cabinet. (2017), *Service Priority Review: Blueprint for Reform*, *Department of Premier and Cabinet*, Perth, WA.

Effective procurement is one of the key mechanisms to support the efficient and effective use of limited resources within the WA heath system.

EXEMPLAR **MANAGED EQUIPMENT SERVICES**

Managed Equipment Services (MES) is a business model emerging in Kenya's healthcare system. The model enables partnerships between the private sector and public healthcare providers to ensure public hospitals have access to modern healthcare equipment and/or services over an agreed period.. The government makes regular, pre-arranged payments based on agreed performance parameters.

The MES program in Kenya covers approximately 98 healthcare facilities across the country. The equipment supplied under the MES arrangement was divided into lots containing specific categories of equipment, such as radiology, ICU, renal, and so forth. Bidders could bid for one or more lots, for which they were required to supply, install, test and commission equipment as well as carry out maintenance, repair, upgrades, and replacement for the duration of the contract at a pre-agreed fee paid at regular intervals. Instead of huge capital outlays that would otherwise be required for building or equipping hospitals,

MES arrangements offer public entities an opportunity to spread costs over the contract period, thereby allowing for long-term sustainable budgeting.

A review of the National Health Service in the UK estimated that potential procurement savings of £1billion per year.[38]

3.4.2 Enablers

Evidence-based best practice procurement

Procurement reform driven by evidence-based best practice has been a priority focus for the state government and WA health system for many years.[39]

The WA Health Reform Program 2015-2020 identified the opportunity to further improve procurement to drive value for money so that more resources can be directed to the delivery of high quality health services.[40] The WA Health Procurement Program, was a key part of the WA Health Reform Program, which implemented 24 recommendations to improve procurement:

- knowledge
- resourcing
- oversight
- standardisation
- practices.

[38] Coles, C. (2015). *Review of Operational Productivity in NHS providers: Interim Report June 2015,* Department of Health, London, UK.
[39] Department of Treasury and Finance (2008). *2008-2010 Procurement Beyond the Reform: Future Directions Discussion Paper,* Department of Treasury and Finance, Perth, Australia.
[40] Department of Health (2015). *Better health, better care, better value: FWA Health Reform Program 2015-2020,* Department of Health, Perth, Australia.

Procurement intelligence

It was recognised that there is a need to strengthen procurement intelligence so that resources can be allocated fairly and used efficiently to support sustainability into the future.[40] A local hospital example is a printer register. The register provides easy access to information that allows consumables of a decommissioned printer to be transferred to an area with the same printer in operation.

Reducing costs and the environmental impact

Being innovative with existing infrastructure, capital equipment and procurement strategies has the potential to not only save money but also has a positive impact on the environment and the Department of Health's carbon footprint. An example is the opportunity to embrace a tri-generation approach which combines electricity, heating and cooling into the one integrated system. This approach has the potential to save not only electricity, heating and cooling costs, but reduce greenhouse gas emissions.

Procurement synergies

In 2016, the Department of Health released the Procurement Policy Framework. The framework specifies the governance and process requirements to ensure effective and consistent procurement activity across the WA health system.

Health Support Services undertake procurement for the WA health system for statewide services and products. Health Support Services has adopted a category management model that provides category streams for statewide clinical products and services, and ICT contracts. In addition to statewide products and services, Health Service Providers also undertake procurement for health service and hospital specific products and services. Additionally, the Department of Health also undertakes procurement activity for statewide contracted services.

It is important that the procurement synergies across the WA health system are maximised to ensure the greatest level of efficiencies and procurement cost savings.

Clinical partnerships

It is also important that partnerships with clinicians are established to ensure tender processes for medical products are established that promote better patient outcomes in the most economically advantageous way.[41]

[41] Gerecke, G. Clawson, J., Verboven, Y. (2015), *Procurement: The Unexpected Driver of Value-Based Care*, *BCG,* Boston, USA.

3.5 Discussion Point 5: Exploring intergovernmental dependencies to better inform the political process

3.5.1 Shaping the political appetite to address health provision as an integrated interconnected system

Information is a critical component of policy decision making processes within the Australian political landscape.[42]

The Department of Health provides advice to the Minister for Health via the Ministerial Liaison Unit and through direct one-on-one meetings with the Minister.

The health system is complex and the interconnectivity within the system is not always fully understood.

3.5.2 Enablers

Better information

To provide information that will influence decision making, it is important that the context of the decision is considered.[43]

It is important that the Department of Health provides advice to the Minister that considers the interconnectivity of the system. This will inform the political decision making process and ensure the better provision of health services within an integrated system.

Simulation models

A systematic review of 182 papers highlights the power of computer simulation models to inform policy decision makers within the health system.[44]

Simulation models have expanded significantly in recent years with the adoption of more complex models that provide a better understanding of the interconnectivity of the healthcare system.[45]

There is an opportunity to consider the development of an integrated simulation model that explores intergovernmental dependencies of the WA health system. This has the potential to provide information that better informs the political process and decision making.

[42] Althaus, C., Bridgman, P., Davis, G. (2017). The Australian Policy Handbook: A practical guide to the policy making process. *Allen and Unwin*, Sydney, Australia.
[43] Snowden, D. J., Boone, M. E. (2007). A. *Allen and Unwin*, Sydney, Australia.
[44] Fone, D., Hollinghurst, S., Temple, M., et al. (2003).Systemic review of the use and value of computer simulation modelling in population health and health care delivery. *Journal of Public Health,* vol. 25, issue. 4, pp325-35.
[45] Almagooshi, S. (2015).Simulation modelling in healthcare: Challenges and trends, *Procedia Manufacturing*, vol. 3, pp301-7.

3.6 Implementation Advice

There is an opportunity to refine the current funding model to ensure the appropriate financial levers are available to support a sustainable health system.

The funding model underpins the service agreement process and the purchase of activity from Health Service Providers. The annual service agreement development is a consultative process between the Department of Health and Health Service Providers.

The consultation process takes into consideration:

- State and Commonwealth funding commitments
- State Government activity requirements and caps
- cost and demand pressures
- wage increases as a result of enterprise bargaining
- efficiency dividends and savings requirements
- purchasing policies and principles
- new initiatives and existing contract arrangements.[46]

Several potential financial levers in this discussion paper may be required to be implemented as part of the service agreement consultation process.

Several enablers identified in this discussion paper are broader than the provision of hospital services. Some of these changes could be effectively implemented in the short term while other changes may require more time and more detailed implementation planning to be effective.

The ability of the system to cope with the level of required change is an issue that also needs to be given serious consideration.

A phased implementation program is the preferred option. This approach ensures stakeholders have the opportunity to adjust and refine business models to accommodate future funding arrangements.

A program that clearly articulates all funding changes and the timeframes that the changes will be implemented will also contribute to greater accountability and transparency of the WA health system.

[46] Department of Health (2017), '*WA Health Funding and Purchasing Guidelines 2017-18',* Department of Health, Perth, Australia.

This document can be made available in alternative formats on request for a person with a disability.