Opening statement

NSW is the most significant health system in Australia with more people, health care providers, patients, and hospitals than any other state. The Productivity Commission noted that '' Australia's healthcare sector is one of the world's most productive. Compared to peer countries, we achieve some of the best population health outcomes for our healthcare dollar. ''(Productivity Commission, 2024b). Similarly, the Commonwealth Fund (USA) found in 2024 that Australia has the best health system of 10 highincome OECD countries after the COVID-19 pandemic. Identifying long life, lower levels of preventable illness, efficient healthcare funding and health funding as a percentage of GDP (9.8%) provide better value for money than most health systems. However Australians were challenged by access to appropriate care and care processes (Blumenthal, 2024).

Nobel prize winning economists have identified the power of innovation to improve service effectiveness and the importance of creative destruction of outmoded methods (Schumpeter, 1942; Solow, 2005). However the value of innovation in hospitals has been harder to prove(Ballard, 2007; Berry, 2018). Innovation for hospital capital and facilities to support effective clinical care has been advanced through evidence-based design and research-informed design (Berry, 2004; Peavey & Vander Wyst, 2017). But there has been resistance to the adoption of innovation due to perceived costs and the ''willingness to pay'' threshold of health officials and governments (Carvalho, 2022).

Activity Based Funding: benefits and limitations

- 1. Activity Based is at the core of feature of the National Health Reform agreement and is used in allocating budgets to Local Health Districts, Specialty Health Networks, and individual facilities.
- 2. However the NSWSC identifies that ABF does not readily support or incentivise allocative efficiency, the development and implementation of innovative models of care or other innovations, or the prioritisation of preventative health measures and other models of care directed to keeping people healthy and well in the community."

ABF was designed to be a funding system for the effective and cost efficient care of patients in public hospitals. It has largely been successful due to

the excellent work of academics and IHACPA. There are mechanisms for improvement within ABF and the determination of the efficient price, but scope for further development to enable patient access to appropriate care in effective and efficient hospitals.

Loading ABF with additional responsibilities for preventative health care, beyond those delivered from hospitals, would be an inappropriate and unsupportable burden.

Preventing illness is essentially a community level issue with a substantial role for national and NSW governments in public health services(Crisp, 2020). Failures in access and affordability of community health services over the past decade have led to increased acute health issues. ''Reducing our sizeable risk factors, such as obesity and alcohol consumption, would enable our healthcare sector to do more with less.''(Productivity Commission, 2024a)

While ABF hospital funding has been a system developed over 30 years and working across Australia since 2013, no similarly well designed systems have been developed for preventing illness in the community.

ABF has transformed hospital funding across Australia from a state political issue, with highly public emotional conversations about local hospital funding, to a transparent national system with comparable cost buckets and a broader understanding of cost drivers within the system. Cost increases to the public purse have been restrained from the previous experience of 8-10% growth per year for most of the last decade.

Importantly ABF has identified the significance of the patient, and the patient diagnosis as the key to funding operational costs.

Capital funding and capacities

However, ABF has never had a capital component to fund acute care. This is curious because hospitals are the technological highpoint of public healthcare in communities, and especially in outer metropolitan and rural communities. Residents referred for diagnostic services, including imaging and pathology have only the private system or the public hospital. When public hospital diagnostic services are insufficient, inaccessible or not of high specificity important information for GP's to manage patients in the community is limited to those who can afford private fees. For people with complex health problems, the private system may not be possible making progress toward a hospital admission more likely.

Essentially capital funding defines the capacity of a hospital to provide care for the community. Capital invested in the number of emergency department bays, operating theatres, procedure rooms, intensive care beds, imaging machines, pathology services, dialysis and chemotherapy places and beds enable, or limit, the number of patients that can be seen. The technologies are also set by the most recent investment in that hospital. If a hospital has not had investment for more than 6 years their technology, capacity, systems and response to clinical innovation will have been limited to their last renovation.

Capital also defines the productivity and efficiency of the hospital. Paper based and fax based communications are unexpected in 2025, but they remain in public hospitals without access to digital medical records(Productivity Commission, 2024b).

Infrequent project based ''prioritised'' capital investments for a small percentage of hospitals limit the capacity of most hospitals to respond to changes in patient numbers and diagnosis groups, clinical innovation, technological improvements

If ABF included an Efficient Price per Diagnosis- Related Group for Capital it could also for provide specific funding for the purchase and maintenance of equipment, systems and facilities. This is an area which has been underfunded and ignored in the traditional capital allocation approach.

Continuous improvement

In healthcare the people of NSW expect to see continuous improvement of technology, medical equipment and facilities of public hospitals to meet their clinical needs. However, NSW has a prioritised hospital investment system based on hospital asset replacement, institutional capital planning, budgetary and political priorities. Australian hospital capital allocation systems are not patient centred or focused on clinical standards (Kerr & Hendrie, 2018).

Activity-based funding for the operational costs of hospitals based on the patient, the treatment and the diagnosis group has improved both the allocative and technical efficiency of NSW hospitals. Improved efficiency

and productivity are achieved by focussing on the patient, their treatment and the outcome. As the Productivity Commission found ''Quality improvements, not cost reductions, were the big drivers of productivity growth, and the vast majority of these have come from advances in saving lives.''(Productivity Commission, 2024a)

Yet capital funding is not patient focussed or clinically based.

Funding approaches and methodologies

As NSW hospitals and healthcare face major challenges over this decade from clinical and technological change, environmental physical issues, climate change challenges and financial sustainability challenges, the efficiency and effectiveness of health care cannot continue to be restricted by outmoded acute care capital allocation methods.

It is recommended that an NSW- Commonwealth system of shared funding for hospital capital should on a 50:50 basis based on the patient, their treatment and community outcomes. That is a DRG -based system of capital allocation per patient aligned with ABF funding based on cost buckets for technology (direct and indirect), medical and other equipment (direct and indirect) and facilities by room type plus other capital required for the DRG.

Transforming healthcare and NSW hospitals will necessitate capital allocation processes to be aligned with clinical care and technological standards for equitable access for all residents of NSW, not just a lucky few. Payment of a per patient activity based capital amount based on clinical standards and clinical pathways offers an equitable way forward.

Shared 50:50 Commonwealth-state funding of a capital payment per diagnosis group will enable well planned, continuous improvement of clinical services and capacity and adaptability for every NSW hospital simultaneously.

The development and implementation of innovative models of care and other innovations

The Productivity Commission identified '' Used well, technologies such as remote patient monitoring and digital therapeutics are highly cost-effective alternatives to traditional forms of care. Targeted support could see these

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technologies integrated into everyday practice." (Productivity Commission, 2024b)

The patient and their journey through the acute healthcare is evident in the acute sector but not so evident in the funding systems and care delivery structures in the non-acute sector. Prior to a patient being admitted and after discharge, the patient clinical pathway is less reliable and structured. Funding for patient care is from a series of programs under Medicare and in the private system and increasingly from the purse of the patient.

Capital funding includes:

- technologies and systems, including communications systems and digital medical records, and many other specific applications including e-prescribing, virtual care remote monitoring, automated pharmacy, automated pathology, robotic systems for food, pharmacy, supplies, linen and waste management and many other applications.
- Medical equipment, and
- facilities to house the patient clinical pathway and the support services required for acute care.
- Capital funding can also include materials required to deliver care out of hospital including technologies for patients to communicate with clinicians, mobile pathology and imaging equipment, treatment therapies, telehealth hubs/virtual care centres and vehicles.

Prior to 2014 there was capital funding for hospitals by the Health and Hospitals Fund. This was Commonwealth funding, shared with the states and territories. While it was an imperfect system, the HHF enabled the capital funding for the development of cancer services, particularly regional cancer services, significant hospital expansion and improvements and for new hospitals to be built in areas of need.

It is argued that states and territories are carrying the burden of capital funding for hospitals without the essential support of the Commonwealth to achieve the transitions necessary over the next decade.

Illness prevention

ABF is a funding method for acute care. Actions taken to prevent people becoming ill, or chronically ill are usually based in the community through

health centres, general practitioner practices, local government, pharmacies, and allied health practices. While these are partially funded through Commonwealth government programs, these are largely private for profit organisations over which ABF has no influence.

Government agencies have a significant role to play in minimising the risk of illness through housing policies, water and sanitation investment and transport systems. Hospitals do also provide some acute preventative care to prevent the deterioration of existing illnesses and assist in the diagnosis of illness. These are generally covered within ABF.

Budget consideration of population health needs

Health systems planning addresses the health needs of a population on a statewide basis or for a relevant area. When NSW Budget processes consider the allocation of capital resources to improve the health outcomes of the community a contemporary, verifiable Health Systems Plan, integrated with public and private providers, would give a sound basis for decision making. (Issue D7)

Health Planning

The absence of health systems planning for healthcare was emphasised in research undertaken by the Australasian Association of Health Planners (AAHP) in April 2024 and was reinforced by a survey of 80 health planners from across Australia and New Zealand in May 2024. Clinical service plans and infrastructure projects suffered from the absence of a health system wide approach to planning it was reported, resulting in expensive redo's and project amendments. Health systems planning provides the framework, policy setting advice, roles and responsibilities and actions required to deliver better health outcomes for the population, including rural populations and First Nations people. Importantly, health systems planning also connects private and public health and other services in pursuit of specific health outcomes for a population. Preventative health actions would be a good example of where health systems planning can reduce costs to people and governments.

In evidence to the Commission, health officials have advised that '' the absence of skilled professional clinical service planning and planners" (Page 6576) has adversely effected the planning and delivery of health services . It can be the case, in my experience, that senior managers

and clinicians have powerful influence on Clinical Service Plans, Health System Plans and Health Infrastructure Plans preferring to continue old models of care than to embracing newer evidence-based options. It is noted that other evidence to the Commission has also identified a resistance to new models of clinical service delivery.

The Australasian Association of Health Planners Inc. (registered and launched in NSW) now provides for recognition of health planners defining their capabilities, scope of practice, typical deliverables, qualifications, attributes and professional standards. Four streams of Health Planners are identified as Health Systems Planners, Health Service Planners and Health Infrastructure Planners and Technical Specialist Health Planners. https://www.aushdc.org.au/aahp I have the honour to be the Chair and Convenor of the AAHP.

It is proposed to work with NSW Health to provide suitably qualified and experience health planners to meet the needs of the population of NSW and to develop educational programs to increase the number and expertise of health planners.

Resourcing for operational and infrastructure costs

In reference to Issue D regarding b. the mix of infrastructure and services required to efficiently provide adequate standards of patient care to meet that need; and c. the resources (capital and human) required to deliver services to meet that need.

As the Productivity Commission has pointed out it is in the specific service that productivity improvements are achieved through delivering improved population outcomes. Generalising to one capital amount for any patient would not provide the support clinicians need to provide clinically appropriate and sustainable delivery of care.

The patient clinical journey through the health system as the focus for improvements in health outcomes and health funding will provide a better return on investment for the NSW government.

My doctoral research found that specific equipment, systems and facilities are required for different types of patients. Clinical pathways based on clinical guidelines, expert clinical advice and the Australasian Health Facility Guidelines (AusHFG) were developed for 8 diagnosis groups representing 36% of Australian public patients. Equipment, systems and rooms required for direct patient care were identified and the clinical and non-clinical support were also identified and verified. These were costed on a per patient basis by diagnosis group.(Kerr, 2019)

Relative to the operating costs the capital required for effective patient care ranged from:

5% for DRG I03A - Hip Replacement, Major Complexity (due to the very high salary costs)

6% for DRG O60C - Vaginal Delivery, Minor Complexity Day -only

8% for DRG L61Z -- Haemodialysis

10% for DRG 104B- Knee Replacement, Minor Complexity to

24% for DRG 001B - Caesarean Delivery, Intermediate Complexity

33% for DRG O60B - Vaginal Delivery, Intermediate Complexity and

36% for DRG O60C - Vaginal Delivery, Minor Complexity.(Kerr, 2019)

Recent research on rehabilitation has also identified population health benefits from appropriate resourcing and design of patient treatment and ward areas (accepted and awaiting publication).

John Maynard Keynes identified that "The difficulty lies not so much in developing new ideas as in escaping from old ones" (Keynes 1936) Replacing the existing model of capital funding with the proposed model will face difficulties arising from changing traditional methods and accepting shared responsibilities for capital funding. However, these difficulties can be overcome as were the difficulties with implementing the activity-based funding for recurrent costs.

Sustainable future

The evidence suggests that allocating capital funds for hospital based on central priorities, often with significant political influence is not the optimal method to achieve sustainable healthcare.(Kerr, 2019) Enabling effective patient care requires the capacity for change. Change to meet shifts in population health issues, to better connect with community based health providers through technology and electronic medical records, to respond to clinical innovation and medical research findings, to enable technological improvements, respond to floods, fires, extreme heat and epidemics.

Per patient funding at the hospital level will allow for master planning, adaption, responsiveness to change and continuous improvement based on patient requirements.

What do we know about future healthcare in the future?

Once risk and environmental factors are managed, there are a number of reliable tools which can indicate a healthy and resilient future.

Clinical guidelines with an economic evaluation element

It is expected that in the future NSW patients will receive high quality care from NSW Health services. NSW has developed some clinical guidelines. NH&MRC are reviewing clinical guidelines. It is expected that clinical guidelines will be improved and made more accessible overtime. Sound clinical guidelines will form the basis of effective health services of the future, integrating in person and virtual care.

It is important for the sustainability of the health system in NSW that there is a careful economic review for each guideline to ensure appropriate funding incentives and resourcing supports clinical best practice(Antioch, 2017). An example is the Norwegian system of clinical guidelines which have a codified system of recommendations revised at regular points including economic evaluations.

AusHFG

NSW hosts the world leading Australasian Health Facility guidelines. These define the areas patients and clinicians need to delivery clinically appropriate care. Drawing on significant clinical research, clinical expert advice, frequent revisions, national review structures, industry expert panels, architectural and engineering expertise and feedback mechanisms the AusHFG is a vehicle to deliver effective environments for clinical care into the future.

The AusHFG supported by NSW HI is a significant asset for the future of NSW hospitals and health services. Other nations reference the AusHFG as the most effective aids to appropriate evidence-based clinical facilities and equipping. In contrast the US guidelines specify significantly larger areas at higher costs in a less connected healthcare environment.

Future Funding

With appropriate operational and capital funding per patient by diagnosis related group allocated to the hospitals delivering care, it is possible to achieve the transitions required over the next few years. Capital funding to allow the integration of virtual care and streamline clinical pathways can enable more efficient use of clinician time. Capital funding to support the retention of staff and reduce pressures from overcrowding, reduce bottlenecks in care, poor access to equipment, procedure rooms and theatres, digital medical records and resources and virtual support will be transformative for NSW hospitals.

I urge consideration of a new model of shared NSW-Commonwealth DRG and ABF capital funding to enable continuous improvement for every NSW hospital. As outlined in this submission, optimising the patient clinical journey through the health system provides a viable focus for improvements in health for the people of NSW.

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