New South Wales

Special Commission of Inquiry into Healthcare Funding

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The Special Commission of Inquiry into Healthcare Funding

EY Submission

31 October 2023

Building a better working world

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Building a better working world

Mr Richard Beasley SC
The Commissioner, The Special Commission of Inquiry into Healthcare Funding
Via email: submissions.hfi@specialcommission.nsw.gov.au

23 October 2023

EY Submission to The Special Commission of Inquiry into Healthcare Funding

Dear Commissioner

EY welcomes the opportunity to provide a submission to The Special Commission of Inquiry (the 'Inquiry') into Healthcare Funding.

The Inquiry is an important opportunity to examine Healthcare funding in NSW and consider how it can meet the current and future demands facing the health system. Healthcare is facing the dual challenges of an ageing and a growing population which bring increased complexity (and associated cost) due to the burden of chronic disease. The system is also experiencing significant workforce constraints, and whilst rapid technological changes present an opportunity to mitigate these pressures they can also be a significant cost if not carefully and consistently deployed.

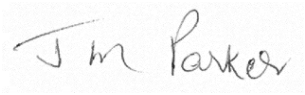
EY offers this submission in our capacity as a provider of strategy, consulting, tax, audit and transaction advisory services to NSW Health. EY has a team of over 270 professionals delivering critical work for our health clients in Australia: approximately 25% of this team have clinical practitioner experience and approximately 25% of this team are located in NSW, including those that have previously worked as clinicians. We have brought this team together to coordinate a submission that we anticipate contributes to the inquiry in a positive manner.

In preparing our submission we have structured our response to the Terms of Reference, and have sought to contribute with the following lenses:

- Recognition of the current workforce pressures following the COVID-19 pandemic and the changing demographics and demand being placed on the health system.
- EY's national and global connectivity to share our understanding of emerging healthcare trends and disruptions that will impact Healthcare funding.
- Our experience with National and State funding mechanisms.

We lodge our submission in anticipation of a positive contribution to your inquiry such that NSW Health can continue to receive the support and funding needed to deliver on its critical role.

Yours sincerely,



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Executive summary

Our point of view

The challenge

Increasing pressures from population growth, chronic disease burden and population ageing are challenging system sustainability in a time of immense change and disruption in healthcare.

NSW Health has historically been heavily invested in episodic care associated with large-scale hospital infrastructure; driven by national activity based funding models that largely incentivise the system to do more to support a growing cost base, which is driven by growing demand in a potentially virtuous cycle.

The devolved Governance model is placing this challenge of financial sustainability on LHD's, who are responding reactively to address pressing localised needs. This system's ability to plan, allocate and distribute funding for care in a systematic manner to reduce costs is limited by the current fragmentation across Local, State and Federal governance and funding structures.

Whilst NSW compares favourably in global healthcare outcomes there are key trends in NSW Health performance that indicate that the system is not sustainable for the longer term and the system is facing pressing workforce challenges, impacting the way consumers experience or receive fair outcomes.

The case for change

The case for change is compelling, the health megatrends are accelerating, and demand and complexity of care will continue to challenge system sustainability. But the opportunities are large and compelling in a future state where:

- Hospital care needs to be only used for those people who absolutely need it.
- Funding supports a system reorganisation towards preventative and primary care.
- Emerging digital and virtual care models are implemented at scale to shift volume from patients in hospital to lower cost settings.
- Home based support services, virtual care and aged care and a range of other out of hospital services support equitable care and increasing consumer participation in their health.
- There is a focus on value based care, driven by outcomes and consumer needs, across the entire care continuum.
- Partnerships are harnessed to reduce demand, support better outcomes in the community and deliver system-changing innovation.

Implementation

Transformative initiatives will require a coordinated State and Commonwealth effort, demonstrating benefits of change, a clear implementation plan and coordination with the system as a whole (e.g., including the community and community care, clinicians and researchers, disability, aged care, and primary care providers).

Transformative initiatives will need to be underpinned by funding models and supported through:

- Policy and regulation changes for at-scale investment in preventative, primary and community care, system wide needs, and reduce pressure on hospitals and the workforce.
- Workforce initiatives that reduce the clinician administrative burden and free up clinician time through new digital solutions, initiatives that attract and retain workforce to parts of the system that need it most and initiatives that support a culture of innovation and change.
- A system based approach to procurement and operations.

- A shift-change in capital investment, recognising that health infrastructure has a material recurrent cost multiplier and new models of digital and virtual care have the capacity when delivered at scale to reduce these cost pressures.
- Investment at scale in digital implementation, virtual and home based care as well as data analytics and Ai to provide connected, high quality care.

These levers ultimately need to incentivise providers to shift the point of delivery over time. Other jurisdictions globally are making real progress in these areas and NSW has itself implemented a range of pilots and initiatives, but it is where substantial volume and scale at a system level that the real opportunity lies.

Our approach to responding to the Terms of Reference

1. Identify the challenges of the current funding models	2. Identify global Health Megatrends and the challenges and opportunities they present to healthcare funding and the Terms of Reference in the Inquiry	3. Provide EY's point of view on what these megatrends mean for the future of healthcare funding and where opportunities exist
Whilst NSW compares favourably in global healthcare outcomes there are signs that the system is not sustainable for the longer term, facing: ► Challenges related to historical activity based funding models ► Impact of a devolved healthcare system ► Workforce challenges ► Cost of large-scale hospital infrastructure The challenge is how to provide equitable care by addressing accessibility to primary and preventative care to free-up our hospitals to continue to provide world-class care when it is most needed.	In addition to these challenges EY observes the following megatrends in healthcare delivery globally, many of which are already materialising in NSW Health. ► System sustainability ► Workforce shortages, fatigue and changing demands ► Digital health transformation – ► Shift to home ► Fairness and experience ► Participatory health and the commercialisation of health ► Advances in medical research and clinical care and personalised care ► Places, Partnerships and Capital	These megatrends are fundamentally changing how providers and funders approach healthcare. Health providers will need to re-position and optimise their business models, people strategies and operational structures to address cost pressures while leveraging the opportunities of analytics, and technologies to improve the quality of care. The real opportunity at a system level is implementing these new approaches and technologies to shift the point of care at scale.

A. The funding of health services in NSW. How can funding most effectively support the safe delivery of high quality, timely, fair and accessible patient-centred care and health services to the people of NSW, now and into the future?

Context

Health services provided in NSW today are funded and administered by several levels of government, non-government entities and consumers. In understanding how health services provided in NSW are funded, it is important to place this in context of the responsibilities of the Commonwealth and NSW Governments and reflect on the journey taken to arrive at today.

In 2020-21, it was estimated that Australia spent $220.9b on health services, where 70% was government funded.1 Most of that spend was on public and private hospitals. The Commonwealth and NSW Governments share the funding of public hospital services and this typifies the stratified system we have in Australia, where the competing priorities of different payers and levels of government present significant challenges to having coordinated and efficiently funded care. The 2022-23 NSW budget provided over $30b in funding to NSW public hospitals, representing more than 25 cents in each dollar of government sector expenses.2 Additionally, public hospitals can generate additional revenues from private health and motor vehicle accident insurance, the Department of Veterans' Affairs, and consumers.

In contrast, health services provided in primary care are mainly funded by the Commonwealth, with funding flowing from Medicare and the Pharmaceutical Benefits Scheme.

A short history of the funding journey provides some context for the challenges of today and EY's perspectives moving forward (*Source:* *Senate Select Committee on Health Final Report Chapter 2 (May 2016)* and *EY high-level perspectives of historical health funding)*

< 1988 Universal Healthcare / Medicare	1998 - 2008 AHCA	2008 - 2011 NHHRC	2011 - 2023 ABF	2023 onwards Future of Healthcare Funding
Pre 1984, hospital funding was via a cost-sharing arrangement. Medicare and universal healthcare (1984 - 1988) '1st round': bilateral agreements signed in exchange for free public hospital treatment to public patients. 2nd round: new hospital funding grants, adjusted for inflation, and weighted population growth. 3rd round (1993): as before, but with two bonus payment pools aimed at improving public access.	In 1998, the Australian Healthcare Agreements (AHCAs) were developed and included a stronger focus on equitable access to public hospital services regardless of geographic location. Between 2003 and 2008, negotiations saw an increased focus on accountability. This saw the Commonwealth publish an annual report on The State of our public hospitals.	In 2008, The National Health and Hospitals Reform Commission (NHHRC) was established to provide advice on progressing health reform. The Commission gave support for the principal mode of funding for both public and private hospitals be linked to the volume of services provided using casemix calculations - this put into effect activity-based funding (ABF).	In August 2011, the National Health Reform Agreement (NHRA) was signed, introducing ABF to improve patient access to services and public hospital efficiency. However, this has created a hospital funding system which focuses on volume and burn rather than outcomes.	Funding needs to be flexible and adaptable, potential areas of focus include: ► Value based care ► Unmet need in primary care ► Prevention - understanding behaviour change ► Social determinants of health ► Virtual team-based/connected models The next NHRA (2025) and *Strengthening Medicare* Report offer reform opportunities.

[1] AIHW (2022). Health Expenditure Australia 2020-21. In 2020-21, it was estimated that Australia spent $220.9b on health services, where 70% was government funded. Accessed 26 Oct 2023.

[2] NSW Budget Paper No. 1. Budget Paper No. 1 - Budget Statement - Budget 2023-24 (nsw.gov.au) Table A1.7 Accessed 26 Oct 2023.

Inquiry Response

Current funding models have limitations with respect to meeting the future requirements of healthcare. Healthcare delivery is changing and a shift in funding is required to support entire care pathways, a hybrid approach of value based, patient-centred care and episodic care.

Value based care and future funding models

Over the last decade we have witnessed a shift towards prioritising better value from health services for consumers. While traditionally public funding and delivery of health services have been volume-based, the shift to value-based care places emphasis on providing the best clinical outcomes for consumers relative to the optimal cost of care.

The shift to placing the individual at the centre of the provision of health services has, in part, been driven by:

- Needing to deliver high quality services with increasingly constrained budgets
- Rising health costs
- Cost optimisation through greater transparency, efficiency and process improvement
- The elimination of waste and addressing the misuse of resources

NSW Health has the opportunity to play a leading role in influencing how value based care can be embedded within future Commonwealth / State funding arrangements.

Activity based Funding: challenges of the current funding model

ABF is the main payment mechanism for public hospital services in Australia, where a provider is paid for the number and mix of patients treated. Put simply, if a hospital treats more patients, or treats more complex patients, it will receive more funding. It was intended to support timely access to quality health services, improve the value of the public investment and ensure a sustainable and efficient heath system, whereby the payments for health services are fair and equitable.

However, the global implementation of ABF has had mixed results, in some cases leading to perverse incentives, including supplier-induced demand, distorting public / private competitive balance, being financially rewarded for keeping patients longer and a misalignment with the needs of the community and community health providers. In addition, and relevant for the regional-metro nature of Australian healthcare is the potential for regional and remote centres being placed at a competitive disadvantage to metropolitan health services due to economies of scale (despite the efforts of national weightings and efficient price adjustments).

Opportunities

There is no principal funding system that alone is likely to be 'fit-for-purpose' for Australia's health ecosystem, but there is an opportunity to review and adapt existing models to:

- Be more patient-centred/outcome focused and continue to support NSW's push towards value based care.
- Consider hybrid funding model that aligns the outcome and the payment mechanism (e.g. fee-for-service for screening, bundled payments for the first 1,000 days of life, and capitation payments for the management of chronic disease).
- To build in sufficient capacity and flexibility to respond quickly to changing technology and delivery models without disrupting the performance of the current health system.

Health consumer attitudes are changing[3], there is an increasing willingness to be part of a digitised system. Customers' expectation is there will be a hybrid future of virtual and traditional care models.

[3] Ernst & Young 2023, EY Global Voices in Healthcare Study 2023

EY recently undertook a Global Consumer Health Survey 2023[4] which found that access to care is valued most highly by consumers, along with high value placed on cost-effectiveness and relief from pain and anxiety. Importantly, a key assumption of access is that services are safe, high quality, and effective.

In seeking patient-centred outcomes it is important to understand the relationship that exists between consumer, provider, and funder. In Australia, funders and insurers currently have a greater view of system and population based health information compared to LHDs, which are focused on operational delivery. Addressing this information gap and/or coordinating funding and health service provision as a network (rather than individual LHDs) with a view to addressing unmet need and adapting to changing consumer expectations will be critical to delivering future healthcare services.

Opportunities

Engage further with consumers to understand personal preferences, and what matters most to consumers regarding their healthcare.

There is significant focus on acute care and reactive delivery of healthcare in Australia. Enabling funding models to pursue a prevention and primary care agenda in a coordinated manner will be transformative, but this requires a step change from current funding models and requires careful consideration of transition to ensure the current quality, safety and efficiency of acute care services are maintained.

Australia's federated health approach, with multiple levels of government, multiple health insurers, and multiple providers of services, is complex. Few would disagree that prevention is better than cure. Yet, an assessment of how health services funding is applied highlights that a disproportionate amount of funding focuses on cure. The large majority of healthcare delivery costs are allocated to acute care provision, driven by a highly skilled workforce and there is a "baseload" cost of maintaining access to services.

Investing in targeted and effective prevention measures would help NSW alleviate the pressure on acute care in the long run and would also be less costly. Likewise, working closely with the Commonwealth in its implementation of the *Strengthening Medicare* investments (announced in the 2023 budget) is an important step in trying to reduce pressure on hospitals by increasing primary care access and enabling connected multi-disciplinary care. However, the challenge for policy makers is managing such transitions safely, and in particular, not disrupting existing levels of care.

Opportunities

- NSW to continue to engage with the Commonwealth to enable the effective use of primary and preventative care and leveraging private health insurance services for transformative change to address rapidly changing healthcare needs.

[4] Ernst & Young 2023. EY Global Consumer Health Survey 2023

B. The existing governance and accountability structure of NSW Health.

Areas of Inquiry

B.1 the balance between central oversight and locally devolved decision making (including the current operating model of Local Health Districts);

B.2 the engagement and involvement of local communities in health service development and delivery;

B.3 how governance structures can support efficient implementation of statewide reform programs and a balance of system and local level needs and priorities;

B.4 the impact of privatisation and outsourcing on the delivery of health services and health outcomes to the people of NSW;

B.5 how governance structures can support a sustainable workforce and delivery of high quality, timely, equitable and accessible patient-centered care to improve the health of the NSW population.

Context

As the largest public health system in Australia, NSW Health is characterised by enormous scale, diversity, and complexity. The State's federated healthcare system operates across 15 Local Health Districts (LHDs), two Specialty Health Networks (SHNs), three Statewide Health Services, three large scale shared services organisations and five pillar agencies.

Inquiry Response

Achieving an optimal balance across such a complex system is highly challenging in terms of both business –as- usual operations as well as design and delivery of new programs; especially with competing local (LHDs) and central priorities. The pressure of rising demand is likely to be driving local responses that are not always aligned with central, system-wide funding priorities.

In NSW, Statewide governance by the Ministry of Health is responsible for various boards, committees, and executive accountabilities across the system. Statewide strategies, performance and risk management are supported by local boards and executive operations responsible for delivering vitally important healthcare outcomes for patients, clinicians, and citizens in their various local communities.

The high levels of decentralisation can mean planning can become heavily focussed on district or local level and reactive to specific needs. Instances of the limitations of this approach include:

- Capital investments that are duplicative and do not optimise network capacity or system objectives; with a tendency to focus heavily on replacement capacity with some growth, rather than opportunities for transformative change.
- Potential bias towards equitable distribution of funds across LHDs - not always necessarily in relation to demographics or the services in greatest demand in the LHD.
- The pressure of rising demand for services and constrained, combined with inflexible funding models meaning LHDs, and specialist entities are forced to be reactive to focus on short term needs.

Opportunities

- Support a national and statewide funding model that encourages greater coordination and central oversight between the Ministry, LHDs and Pillar Agencies to focus on improving the long-term outcomes of healthcare delivery and work on system-wide approach to planning.
- A prioritisation framework for funding that is focused on merit and transparency and tries to avoid prioritising to ensure equal distribution and focus on meeting long term objectives.

Devolved decision making is leading to differential levels of maturity in respect of technological implementation, creating pockets of excellence and other areas facing material challenges. This could lead to differing approaches to care within NSW and a potentially confusing and overly complex system for patients, users, and the workforce as they navigate across the system.

The Ministry of Health recently announced the signing of a major new contract with Epic for a new statewide Electronic Medical Records system. The Single Digital Patient Record (SDPR) signals a transformational opportunity for data-informed decision making and driving efficiencies across the NSW Health system. The Operating Model outlines a "One Digital Health" vision and is critical to achieving improved outcomes for citizens across the State. This SDPR instance will be the largest digital health implementation of its kind in Australia and is also likely to be the largest single instance implementation of the Epic platform globally.

The implementation of this program requires extensive consultation with LHD Chief Executives, the State's CIOs, leading clinicians, other Digital Health stakeholders, and eHealth NSW leadership. Implementation will be challenging as there is a complex system of existing ICT Operating Models in NSW Health which is highly federated with a mix of centralised statewide services and other ICT activities led and implemented locally "at the elbow".

While there have been substantial advancements in terms of digital health delivery across the State, tensions still exist between federation and standardisation. Strong collaborative partnerships exist in pockets, but challenges remain around the implementation of statewide services and how to balance standardisation with local innovation and agility.

Recognising that a 'hub-and-spoke' operating model is still required in a refined form in the future, the operating model highlights the importance of collaborative partnerships between central statewide services (for example, the design, architecture, procurement and build of key statewide platforms) and frontline delivery for clinicians and patients that is so vital in local communities. Back-of-house efficiencies need to be achieved in a way that also improves frontline delivery rather than compromising it.

Opportunities

- Implement technology at-scale to improve system equity and access and drive better care through access to data and achieve material cost savings and efficiency benefits.
- Realise the benefits that SDPR will present in relation to future decision making at a system level to drive targeted allocation of funding alongside value based care.

C. The way NSW Health funds health services delivered in public hospitals and community settings, and the extent to which this allocation of resources supports or obstructs access to preventative and community health initiatives and overall optimal health outcomes for all people across NSW.

Context

NSW is not alone in experiencing growing healthcare costs and challenges to funding. Worldwide, health systems are focussing on how they can create more sustainable and effective ecosystems with appropriate resources, autonomy and decision-making capabilities. The ecosystems need to operate in a clear, but flexible, accountability framework that enables collaboration around funding and financial accountability, local design, commissioning, and risk management.

As the health system becomes more connected, it will also become more difficult to function as a solo entity – and collaboration and partnering between general practise, the public health system and primary health networks will become increasingly important.

Inquiry Response

Fragmentation across Australia and NSW's many participants, compounded by increasing financial deficits, growing populations and complexity of care is placing challenges to long-term affordability and sustainability, limiting the ability to engage with community health providers and local communities themselves.

By way of example, the recent New Zealand health and disability system reform was in response to a review and report published in 2020 that found that while the New Zealand health system performed well for most, there were significant inequities of access, and priority populations were consistently underserved. The Review highlighted fragmentation and a lack of cohesion across the system's many actors and increasing financial deficits that prevented long-term affordability and sustainability.

The principal elements of structural change included the establishment of Health New Zealand, which consolidated the operations of 20 District Health Boards (through four regional networks) to deliver simplicity, consistency and quality of care.

Primary and community care was reorganised to serve communities through "locality networks". A new Māori Health Authority was also established to lead improvement in Hauora Māori in the health system, acting as a co-commissioner working jointly with Health NZ to increase equity. A National Public Health Agency was further established to bring together 12 public health units to strengthen health protection and health promotion, and to improve public health knowledge, research and intelligence. Initial findings support the success of these governance changes, but NZ Cabinet was able to deliver a multi-year Budget plan for NZ Health (with a three year budget commitment) and a Transitional Funding Package.

The challenge to comparable reforms in NSW (and Australia) is the separation of funding and competing objectives of a system separated by primary, secondary, tertiary, community, aged and disability care, without a single public funder.

Opportunities

- Increase engagement and involvement of local communities through coordinated funding and collaborative commissioning (see below), but this requires investment in capability and capacity, transforming governance and funding models across the system.

Pursing a prevention and primary care agenda through Collaborative Commissioning

Collaborative commissioning

NSW Health has been on an iterative reform journey to provide the right care, in the right place at the right time since approximately 2014 with the introduction of the Integrated Care program. Since then, the Leading Better Value Care program has been launched (2016) as well as the Collaborative Commissioning initiative (2020).

Collaborative Commissioning is a mechanism which supports a whole-of-system lens and can optimise the value of investment and resources through formalised local partnerships with pooled investment underpinned by clear accountability and outcome-based performance payments (for all parties). In NSW, the focus of Collaborative Commissioning so far has been on the delivery of care in the community through establishing formal collaborative relationships with service providers incentivising local autonomy, accountability, and realigning resources through funding reform.

Key benefits of Collaborative Commissioning include:

- Aims to introduce long term, systemic changes to health pathways that focuses on achieving integrated care, value based care and consumer choice
- Solves problems that cannot be addressed by any one organisation through scale or replication, supporting the shift to value based healthcare
- Allows for greater collaboration across different components of the health system and greater input from an array of commissioning professionals
- Achieves an improved end-to-end, person-centred journey for better outcomes and better patient satisfaction
- Allows for more efficient and flexible allocation of resources, creating greater value per dollar spent in a care pathway

Opportunities:

- Support joint planning, delivery, and accountability at a population level and at scale to make a system level shift.
- Opportunity to establish governance structure that integrates clinical innovation / insights team as part of the collaborative commissioning process, providing insight from the front line.

D. Strategies available to NSW Health to address escalating costs, limit wastage, minimise overservicing and identify gaps or areas of improvement in financial management and proposed recommendations to enhance accountability and efficiency.

Context

When assessing escalating cost, the existence of wastage and the existence of overserving, it is important that this is considered at an aggregate system level. Continuing the journey toward a focus on system outcomes and not the cost of individual services and products will be critical – as the application of these two lenses can provide two different stories.

Inquiry Response

Promote value based care to address some of the challenges of unit-based costing models

There are inherent challenges with a unit-based costing model in some aspects of the system, which hinder the ability of the system to promote value based patient centred care. Unit-based costing models can be developed using historic or modelled costs. The implementation of ABF in Australia has used historic costs, where an assumption with this approach is that prior activity was appropriate, was warranted and delivered patient centred value based healthcare.

The unit cost may appear low when applying a purchaser and provider lens, however, the unit cost could appear that way due to overservicing, or where the services are not well aligned to clinical need. A policy decision to move the system to focus on value based care could increase the unit cost, as the fix costs may be spread over fewer service events.

Opportunities:

- Support value based care models by way of considering funding costs at a system level rather than heavily relying on unit cost approaches, this will support system funding allocation and resourcing that supports and manages demand.
- To promote value based care, Commissioners can in the establishment of funding and activity targets promote appropriate volume of services, providing clarity and direction to the provider on the activity and/or services that are required to meet the needs of the community.
- To support a hybrid approach of unit-based costing that is reflective of patient centred value based healthcare, it is important that a mix of historic and modelled costs be used.

Understanding cost drivers at a system level to enhance accountability and efficiency

Australian led research has shown that patients stay longer in hospital when they are harmed through hospital-acquired complications, and that stay costs more[5]. If a patient stayed three times longer due to the harm, then two patients would have been placed onto a waitlist. The provider, and the NSW Government, missed-out on revenue from two patients, while incurring more costs. This would contribute to financial pressures.

Financial challenges are clearly impacted by length of stay. Longer stays will result in the provider incurring more costs and foregoing revenue. Marginal improvements could release beds across the system, relieve access block, and reduce system costs.

The relationship between safety and quality, access and finance is critical to understanding health system performance. It will take time to develop an understanding of funding and cost requirements of acoordinated, value- based care; any future funding arrangement will need time to understand the

[5] Trentino et al. (2013). Measuring the incidence of hospital-acquired complications and their effect on length of stay using CHADx. *MJA*. 199 (8): 543-547. || doi: 10.5694/mja12.11640

independencies within the system and how that relates to the financial management of the organisation, and closely monitor these for gaps and opportunities.

Opportunities:

- There is an opportunity for a transformative shift from unit costing, this will require system-level strategies that recognise the relationship between safety and quality, access, and financial pressures.
- NSW has invested over a number of years now in value based care and there is an opportunity to leverage this work to inform a future funding strategy that goes beyond the traditional management accounting lens of looking at input costs and explores how safety and quality can create and/or alleviate financial pressure(s) at a system level and across the continuum of care.

Addressing escalating costs and overservicing

The current operating structure across NSW creates micro-systems, meaning the ability for the whole state to operate as one system can be challenging. The creation of micro-systems can contribute to escalating costs and overservicing.

A provider may commence providing a given specialty service to address several years of un-met need, however, the demand in that community on an annual cycle may not warrant a full-time service. In contrast, another provider may have excess demand. This creates several challenges for the system, patients across NSW will not be treated in turn (i.e., the person in NSW of most need may not access care first) and can contribute to long-wait patients and deteriorating seen-in-time performance.

Opportunities:

- Consider aggregate system level costs growth before focusing on changes or growth in activity and unit costs.
- Explore the establishment of a statewide, or cluster-based, service model across smaller markets (i.e., a speciality). These models should encourage patients being treated-in-turn across the state, and address allocation inefficiencies across the system and promote patient centred decisions.
- The application of technologies, analytics and AI could yield significant opportunities and benefits to system planning, but the "Centre" requires investment in this to build capability and capacity at scale.
- The shift to value based care provides opportunities for material system benefits by moving away from a focus and payment approach based on episodic activity. However, the success of value based care models requires investment in appropriate data, analysis and funding that incentivises a different model to that currently.

E. Opportunities to improve NSW Health procurement process and practice. To enhance support for operational decision-making, service planning and delivery of quality and timely healthcare, including consideration of supply chain disruptions.

Context

Efficient procurement processes are a cornerstone of effective healthcare delivery. NSW Health, operating within a devolved model, faces challenges that require comprehensive solutions to optimise procurement practices, strengthen operational decision-making and financial sustainability, and improve healthcare delivery. Opportunities are outlined below for this item of the Terms of Reference.

Inquiry Response

Continued integration of sourcing and purchasing functions

NSW Health currently grapples with a divide between decentralized local health district-level purchasing and centralised sourcing within HealthShare NSW.

To enhance the procurement process, improve supply chain management, and better mitigate supply disruptions, the consolidation of sourcing and purchasing functions, particularly for key strategic categories within HealthShare NSW could be an option. This integration would align strategies, promote data-driven decision-making, and standardise product selections while enhancing overall efficiency. This would also incentivise suppliers to deal directly with HealthShare as opposed to selling products and incentives to the clinicians.

A focus on key strategic procurement initiatives to enhance savings is imperative for NSW Health. Building a robust supplier relationship management (SRM) capability and prioritising short and medium-term savings initiatives would be central to these efforts. SRM in key categories would encourage collaborative partnerships with suppliers, drive innovation including ESG requirements, and ensure supply chain security. Concurrently, savings initiatives would unlock resources for reinvestment in patient care and healthcare service expansion.

Opportunities:

- Drive efficiencies through continued consolidation of sourcing and purchasing functions, particularly for key strategic categories within HealthShare NSW.

Transition to a combination of push and pull models

NSW Health procurement and supply chain majorly works on an on-demand model. This means that the LHDs order or procure items when they need them. While this model is flexible and can adapt to changing needs, it leads to longer lead times, adds complexity, and increases logistics costs etc. Conversely, HealthShare NSW could consider using a push model for key categories/ products. This would mean that the procurement and supply chain operations would work on a predetermined schedule or forecast thereby brining efficiencies through product standardisation, aggregation, route planning etc.

Managed centrally by entities like HealthShare NSW, this approach could optimize inventory levels, reduce logistics costs, manage disruptions, and would allow frontline healthcare workers to prioritise patient care and not spend time in ordering. This could be timed perfectly with the current contract renewal of HealthShare NSW logistics and distribution.

Opportunities:

- Improve procurement and supply chain efficiency through transitioning from the current on-demand model of ordering within Local Health Districts to a push model for certain categories and products, anchored in best practice replenishment principles.

Consolidation of key corporate functions including procurement

The duplication of corporate functions across HealthShare NSW and LHDs (finance, procurement, IT) necessitates careful evaluation. While consolidation may be suitable for metropolitan LHDs, regional and remote districts must balance efficiency with the need for localised engagement and employment needs to address their unique challenges.

Opportunities:

- Review corporate functions and services across the system and seek opportunities to provide these as a service from the "centre".

Linking core procurement systems with active reporting

A significant challenge in NSW Health's procurement process is the absence of connectivity between contract management and source-to-pay systems. This disconnect creates difficulties in reconciling contract spending and erodes trust in reported data.

Opportunities:

- There is an opportunity to establish active reporting of procurement data and prioritise data-driven decision-making. This would be vital in enhancing transparency, reliability, and the overall integrity of the procurement process.

Enhanced data-driven decision-making

Robust data analytics, real-time reporting, and performance metrics should be integral components of NSW Health's procurement process. By leveraging data, NSW Health can proactively identify trends, forecast demand, and respond swiftly to potential supply chain disruptions, thus safeguarding the quality and timeliness of healthcare services.

Opportunities:

- New data initiatives such as SDPR will provide NSW Health the opportunity to undertake predictive analysis on all parts of the system and look to improve procurement process and practice through data analytics.

Sharing technology and new ICT services and creating opportunities to regionalise services

There is opportunity to further strengthen NSW Health's shared services capabilities in a way that also supports and improves fairness to the regional LHDs. The new SDPR Operating Model project, hub-and-spoke delivery, will continue to be important for ICT services (as well as other back-of-house functions such as finance, procurement, HR and asset management), yet hub resources do not always need to be based in Sydney.

Understandably, centralised shared services models tend to evolve around metro centres with easier access to people and capability. This is often the case in establishing a new capability model where governance and operations are in the process of being established. However as maturity increases, it becomes more viable and attractive to consider other regional and/or rural hubs, which further support fairness and economic investment in priority areas.

Examples of other regional government shared service capabilities include Services Australia's Newcastle customer service functions, the Geelong operations of the National Disability Services Agency, and Victoria's GovHub investments in Ballarat, Bendigo and the Latrobe Valley.

Opportunities:

- Regionalise shared services capabilities in new and emerging technology procurement.

F. The current capacity and capability of the NSW Health workforce to meet the current needs of patients and staff, and its sustainability to meet future demands and deliver efficient, equitable and effective health services.

Areas of inquiry:

F.1 the distribution of health workers in NSW;

F.2 an examination of existing skills shortages;

F.3 evaluating financial and non-financial factors impacting on the retention and attraction of staff;

F.4 existing employment standards;

F.5 the role and scope of workforce accreditation and registration;

F.6 the skill mix, distribution and scope of practice of the health workforce;

F.7 the use of locums, Visiting Medical Officers, agency staff and other temporary staff arrangements;

Context

NSW Health is facing a workforce crisis of unprecedented scale. By 2030, there will be a shortfall of 123,000 nurses in Australia[6] and 10,600 general practitioners by 2031[7]. Today, 1 in 5 Australians have multiple chronic conditions; by 2041, the population over the age of 65 years is expected to increase 54%; and according to the EY 2023 Global Voices in Health study, 58% of Australian General Practitioners reported mental exhaustion and burnout as one of their top challenges.

Care delivery models of today rest on the idea that clinicians will continue to work as they have for generations – for long hours, often on call and unpaid for their documentation and for training new physicians and nurses. While technology creates the promise of greater efficiencies, those efficiency gains are being eroded with the volume of patients that continues to rise.

Without a radical rethink of the end-to-end health model and a coordinated and interdisciplinary response to the pressures on the system and healthcare providers, there is real and significant concern patient outcomes will deteriorate, and the workforce will continue to leak.

It is imperative that options for new models of care address future needs of patients and the capacity of the NSW Health workforce. Whilst at the same time providing the resources to meet today's patient requirements. A holistic view across workforce and role design is required to address: patient to practitioner ratios, provide adequate skilling and clinical exposure early in the educational pathway, and improve the risk exposure for clinicians in meeting patient needs. The risk of not addressing these issues will result in continued front line talent leakage, particularly as new digital and cosmetic career paths emerge that offer better hours, reduced stress and more work-life balance.

Our point of view is supported by primary research conducted in 2023 with patients and clinicians…

EY's point of view on the NSW workforce is informed by our leading global healthcare practice, our engagements in the system; and our 2023 global research on Healthcare Consumer Views on Value; our 2023 Global Voices in Healthcare Study that included 100 in-depth interviews across 11 countries with health system executives and clinicians, including physicians, nurses, nurse practitioners and allied health workers; and our 2022 research to boost the NSW rural health workforce.

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6 **Nurse shortage:** https://www.unimelb.edu.au/__data/assets/pdf_file/0004/4085194/katelyn_mannix_report.pdfhttps://www.unimelb/pdf_file/0004/4085194/katelyn_mannix_report.pdf

7 **GP shortage:** https://www.ama.com.au/media/ama-report-confirms-staggering-undersupply-gps-next-two-decades

Inquiry Response

Examining financial and non-financial factors impacting the attraction and retention of staff

The EY Global Voices in Healthcare Study, released in October 2023, revealed clinicians are ultimately seeking a model that allows them to put patients first without sacrificing their own quality of life. Patient safety and lack of autonomy are top reasons cited by clinicians as to why they would leave medicine. One Australian Health executive said:

> "The medical workforce in the past was willing to do exceptional hours, long working hours, much more than standard 40-hour working weeks. The new generation of doctors is much more focused on work-life balance. So not only are there less doctors, the doctors that are there want to work less, so it's a double-edged sword."

There appears to be a disconnect between clinician and health system perspectives, the study highlighted. As health systems were confronted by increasing volumes of patients, financial challenges and skyrocketing labour costs through the use of locums, agency staff and other sources, health system executives tended to focus their attention on pay in response to the shortages, making sure clinicians were practicing at the top of what their license enabled, providing education pipeline initiatives, and wellness benefits.

In contrast, when clinicians were asked about how the system needs to change in the future, the top changes cited were:

- More preventative care
- Better staffing ratios
- Better flexibility

Clinicians in several countries, including Australia, shared stories of not being able to get the care they believed their patients needed, and then seeing them cycle through the health system ineffectively without addressing the root cause of disease or preventing crisis. The NSW commitment to a Single Digital Patient Record is a positive step forward in creating visibility of a patient's health journey, and the appropriate use of technology and Ai, wearables and telehealth may provide proactive intervention to improve preventative care.

That said, wages are a significant issue given the trade-offs staff are being asked to make across additional administrative burdens, professional risk, and well-being. Wages and incentives for nurses in NSW are below that of those in Queensland, SA, and ACT (with VIC catching up), with 40% of healthcare workers reporting that they would consider changing careers for higher pay. Whilst current incentives are mostly focused on attraction, expanding the focus to retention will support a more sustainable workforce as well as a higher quality of talent that is attracted.

Specifically in regional and remote areas, staff often face onboarding challenges with little to no relocation support, and partners or spouses often finding it difficult to find jobs. Emotional as well as pragmatic support is critical in rural locations where non-local health workers commonly report loneliness and social isolation. Onboarding programs are often too brief and focus more on paperwork and polices than on culture and engagement and research shows that it is difficult for employees to overcome poor onboarding.

To build efficient, sustainable and effective health services, NSW needs to ask:

- Are your workforce strategies addressing clinicians' feelings that they can't practice medicine safely?
- When you improve workflows to save time, are you adding more patients to clinicians' workloads?
- Clinicians say they want better insights about their patients, what training and support do clinicians need to interpret data?
- Are you including clinicians in the design of digital solutions?
- Do your triage strategies properly guide patients to the right care site in a hybrid model that blends virtual and in-person care?To support a hybrid approach of unit-based costing that is reflective of patient centred value based healthcare, it is important that a mix of historic and modelled costs be used.

Opportunities:

The following is a summary of example opportunities based on best practices across health systems that have been implemented to relieve workforce pressure:

- Adding new roles to relieve burden – virtual nurses focused on admission / discharge; patient support staff to do non-clinical tasks; dedicated clinical coaches to focus on new nurse support.
- Bringing clinicians to the table for solutions – have nurses identify outdated policies that add time; reviewing the necessity of all data collected and sharing the insights with the clinicians; strengthen clinical governance to improve patient safety.
- Introduce new digital solutions – to free up clinician time and handle increased demand, some health systems tried self-service kiosks in the ER to accelerate triage; rolling out apps to help patients manage their conditions; nudging patients via text to take action to improve health; patient education videos embedded in EHR.
- Expanding the worker pipeline – "grow their own" by creating internal certification programs for existing employees; speeding up licensing for immigrated workers; increasing clinical spots for hard-to-fill roles.
- Relieving demand through enhanced care options – Home monitoring to keep discharged patients from readmission, place based care and collaborative commissioning with the private sector.
- Clearing policy obstacles – Overly restrictive licensing; immigration rules preventing clinicians from working to scope; dated policies that don't fit today's model but create administrative burden.
- Creating a culture of front-line innovation – training staff on design thinking and experimentation, empowering and rewarding them to solve human-centered problems.

G. Current education and training programs for specialist clinicians and their sustainability to meet future needs.

Areas of inquiry:

G.1 placements;

G.2 the way training is offered and overseen (including for internationally trained specialists);

G.3 how colleges support and respond to escalating community demand for services;

G.4 the engagement between medical colleges and local health districts and speciality health networks;

G.5 how barriers to workforce expansion can be addressed to increase the supply, accessibility and affordability of specialist clinical services in healthcare workers in NSW

Context

Education and training programs for healthcare workers and specialist clinicians are critical to upholding an effective healthcare system. In the 2023-24 NSW State Budget, the government pledged $121.9 million to study subsidies for health workers who commit to the NSW public health system for five years, recognising the value placed on cultivating this profession. However, there are a still a number of barriers that are preventing future clinicians to be job-ready, as reported in the 2022 Medical Training Survey National Report. More recently, the pandemic has negatively impacted doctors' training opportunities, routine teaching, ways of learning, access to learning opportunities and overall medical training.

Inquiry Response

Partnering with the university sector and strengthening placements

The professional preparation of doctors, nurses and allied health practitioners has remained consistent over many years. University education for nursing and medicine used to place particular emphasis on medical practice, with the majority of learning consisting of on-site clinical exposure. Course curriculums today often take a more theoretical approach to study, with only about a third of learning spent on clinical placement. This places a lot of pressure on students and the placement model to provide a larger amount of capability in a shorter amount of time. Health placements are unpaid and often require students to move to new locations (i.e. potentially away from their income streams), which is becoming increasingly less feasible in the current economic climate. Placements can therefore end up restricting the opportunities a student has to participate in the workforce prior to graduating, negatively impacting their employability.

Whilst universities are constantly developing curriculum, the placement and exposure to practice needs attention, particularly in the area of nursing which makes up the largest component of the health workforce. Nurses often have minimal exposure to the realities of practice when they enter their graduate year, which includes shift work, teaming, responding to patient need and being able to deductively reason during times of high stress. Working with the education sector to redesign course curriculum and the placement approach will be important to prepare the workforce of today for the realities of tomorrow.

Modernising learning approaches and incentivising continued professional development

The role and expectations of clinicians has changed over time, with clinicians often needing to 'do more with less' and filling roles that have increased scopes of practice. Medical advancements are occurring at an exponential rate, providing the benefit of innovation, though requiring significant time for upskilling. Clinicians are expected to competently display leadership, coaching, academic and digital health skills, whilst keeping abreast with medical advancements. The patient profile is evolving as well, with patients typically presenting increasingly complex, multi-system conditions. Looking at opportunities to chunk

down learning so it is more digestible, leveraging digital tools and tapping into Ai to garner content, will create a more accessible learning solution for time-poor clinical professionals.

In addition, nurses and many allied health practitioners do not have paid continuing professional education as part of their industrial conditions, yet this is often a requirement for promotion or working in a specialist area, and this knowledge is not obtainable 'on the job'. A review of industrial conditions and learning provisions is required to provide greater equity and accessibility to ongoing professional development.

Rethinking the way medical specialisation is achieved

Medical specialisation and post-graduate training for doctors is time intensive and does not account for the needs of different cohorts, particularly women. To achieve college membership and be recognised as a consultant with specialisation, continuous training and study is required, which often coincides for women during their child-bearing years. A more flexible approach to medical specialisation needs to be considered to allow for greater gender equity and increased retention of a critical cohort of the workforce.

Opportunities:

- Reviewing the education and training model for health care workers, with a focus on the nursing profession and their need for accessible placement opportunities
- Leveraging a more digital approach, incorporating modern training techniques and tools, to improve ongoing clinician professional development
- Reviewing industrial conditions for nurses and allied health workers to provide compensation for ongoing professional development
- Taking a more flexible approach to medical specialisation to facilitate improved gender equity

H. New models of care and technical and clinical innovations to improve health outcomes for the people of NSW, including but not limited to technical and clinical innovation, changes to scope of practice, workforce innovation, and funding innovation.

Context

Globally, our current models are not sustainable to deal with the demand for care. Recent EY analysis has shown the global changes in demand and workforce in the context of increasing healthcare costs:

Chronic Diseases

41 million[1]
Noncommunicable diseases (NCDs) kill 41 million people each year, equivalent to 74% of all deaths globally

Of the population 50 years and older, the number with at least one chronic disease is estimated to increase by 99.5% from 71.5 million in 2020 to 142.7 million by 2050[2]

Obesity

1 Billion people
worldwide are obese[3]

39 million[4]
Children under the age of 5 were overweight or obese in 2020

Aging[5]

In 2020
The number of people aged 60 years and older outnumbered children younger than 5 years

3x

The number of persons aged 80 years or above globally is projected to triple, from 143 million to 426 million, between 2019-50[1]

Workforce Shortage[6]

6.4 million
physicians
30.6 million
nurses

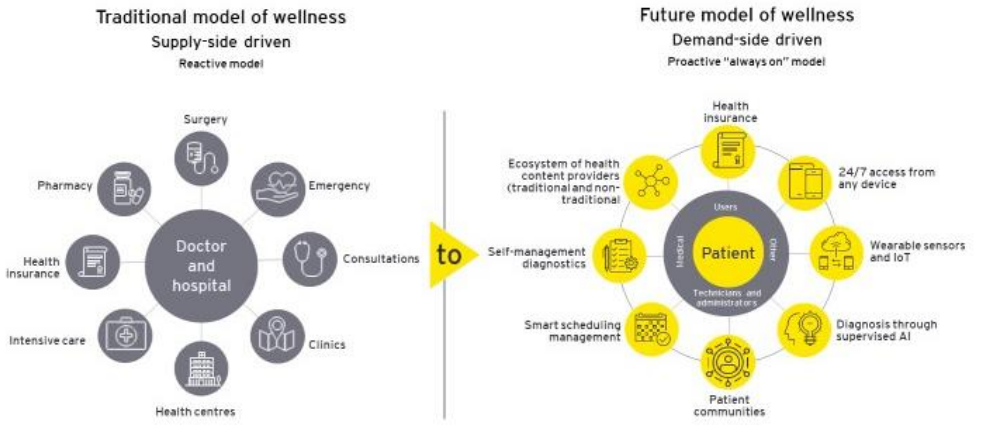
Health workforce shortages in 2019

Health care costs are increasing globally

- 14.2% in Latin America
- 10.6% in the Middle East and Africa
- 7.6% in the US
- 7.6% in Asia-Pacific
- 6.7% in Europe[7]

8

Global evidence suggest suggests successfully integrating virtual and in-person care can free up staff and hospital beds, reduce costs and improve outcomes as health systems try to treat an older, sicker population, with proportionally fewer health workers.



EY

[8]Footnotes to graphic:

1 Noncommunicable diseases
2 Projecting the chronic disease burden among the adult population in the US using a multi-state population model
3 World Obesity Day 2022 – Accelerating action to stop obesity (who.int)
4 World Obesity Atlas 2022
5 Ageing and Health
6 Measuring the availability of human resources for health and its relationship to universal health coverage for 204 countries and territories from 1990 to 2019: A systematic analysis for the GBD Study 2019
7 Genes shed light on why men and women experience different depression symptoms

Inquiry Response

COVID-19 showed that patient-centred, clinician-led virtual care was an efficient and effective model of care to complement, or supplement face-to-face care. However, Commonwealth Funding models do not support changes to scope of practice such as Virtual Care.

Emboldened by the acceleration of uptake during the pandemic, NSW Health has started to deliver virtual care in a number of settings across the state. Virtual care can support the whole continuum of care from first response and emergency care and back into the community. Virtual care can also enable better multidisciplinary/connected team care from specialists, allied health, and primary care.

In the future, models of care will also be transformed by multiomics, artificial intelligence and precision medicine. We have provided additional detail on the emerging healthcare trends and future of healthcare in response to Item I.

Opportunities:

- Drive and build on the success of NSW's virtual care models at scale - the success of virtual models will be dependent on appropriate funding mechanisms - as most of the virtual care services provided by NSW Health do not constitute 'hospital care' for Commonwealth funding.

Key considerations for future funding arrangements to support virtual care include:

- Interoperability of systems across settings/providers/geographies
- Effective co-design of models of care and change management with patients and clinicians
- Closing the digital divide for those on low incomes, and those in regional, remote and rural areas who are most likely to benefit from virtual care

I. Any other matter reasonably incidental to a matter referred to in paragraphs A to H, or which the Commissioner believes is reasonably relevant to the inquiry.

Context

Globally, our network is seeing several "healthcare megatrends" impacting the future of healthcare. The pace of disruption of these trends and the burden of a growing, more complex and ageing is accelerating. To support the scope of the Inquiry we have outlined these megatrends and the consequent considerations to future healthcare funding.

Inquiry Response

Global Health Megatrends and the impact on healthcare funding

System sustainability - Demographic and population changes impacting system sustainability (financial, economic, and environmental).

Financial sustainability

Australia has one of the highest population growth rates in the OECD and an ageing population where the burden of chronic disease is increasing.

From an average age of 29 years in 1976 to 37 years in 2016, the average age in NSW is forecast to reach 41 years in 2056. This projected trend is evident across every NSW Local Health District (LHD), including in metropolitan and regional areas.

An ageing population means higher rates of sickness and injury as the burden of disease is higher among the over-65s cohort. As this age group increases as a proportion of our population, this will place significant demand on the capacity and resources of the health system. Further compounding this, a growing number of Australian's are suffering from chronic diseases, with the AIHW estimating that over 11 million Australians have at least 1 or more chronic diseases in 2014-15, exacerbated by lifestyle factors.

Economic value

In addition, the economic value for each dollar of Government healthcare investment will continue to deteriorate if the system does not adopt new ways of delivering healthcare to increase productivity; healthcare as a proportion of total spending will continue to increase without material gains.

In summary, without a change in the way healthcare is delivered and the adoption of new models of care (e.g., virtual) financial sustainability and economic value will only worsen as activity grows.

Opportunities:

- Deliver and implement at scale digital ways of working, virtual and home-based healthcare.

Environmental

The use of energy to build and run health facilities is a major contributor to NSW's emissions footprint, as is the very complex supply chain associated with safely operating hospitals. Healthcare also produces significant waste material including hazardous material, single-use clinical and personal protective equipment (exacerbated by the pandemic); disposable linen, excessive packaging for medical items; materials contaminated by patient fluids or contact; and food waste from patient meals.

From an environmental perspective, climate change affects the social and environmental determinants of health – clean air, safe drinking water, sufficient food and secure shelter - which, in turn, has a significant impact on healthcare costs. There is also a heighted risk of large-scale health emergencies caused by climate change.

Opportunities:

- There is an opportunity to improve and implement funding frameworks to support sustainability:
- Whilst Environmental and financial sustainability are key reform areas in the Future Health Strategy Opportunities, it is important that NSW Health is held accountable for its Net Zero goals. We understand that work is underway to capture carbon emissions in healthcare delivery as part of annual reporting obligations (which is an important first step) but environmental sustainability ought to be a discrete consideration in future funding and planning decisions.

Workforce shortages and changing demands – A sustainability challenge in relation to workforce in a time of changing demands of healthcare workers.

The fundamental sustainability challenge facing healthcare globally described above demands a rethinking of traditional and non-traditional healthcare workplaces. This reinvention will involve health organisations determining the right mix of innovative technology – and people-powered solutions – from differentiated care models using virtual care and remote monitoring, to new approaches to workforce pipeline, clinician experience, automation and more. The voice of the clinician will be critical in garnering the support of a system experience major change and will be integral to success.

Recent EY consultation in other jurisdictions has indicated the pressures of absenteeism since the pandemic and backfill those roles and the challenges of allocation, planning and utilisation as opposed to an overall workforce shortage.

See recommendations / opportunities in our response to Item F.

Digital health transformation – digitalisation of healthcare information will provide more connected, high quality care (e.g. through better data) but requires significant change and risk (e.g. cyber) management to be successful

Digital health transformation can help NSW reduce costs, optimise clinical capacity and improve patient outcomes and experience to make better use of scarce resources. Current models of care delivery are not sustainable, especially with rising labour costs, financial challenges, expected demographic shifts and workforce shortages.

Opportunities:

- Support investments at scale in big data as well as human-centric AI solutions to enable predictive and personalised care as well as proactive customer support.
- Make the most of the coming increase in data – data in healthcare is often underutilised.

Shift to home - push towards new models that seamlessly integrate virtual, home-based and in-person care.

NSW Health must seize on the progress it has made during COVID-19 to push (e.g. RPAVirtual) towards new models that seamlessly integrate virtual, home-based, and in-person care. Global evidence suggests that successfully integrating virtual and in-person care can free up staff and hospital beds, reduce costs and improve outcomes as health systems try to treat an older, sicker population, with fewer health workers.

Opportunities:

- Home based care initiatives require a cross-system approach to funding healthcare to achieve and maximise value for spend, coordinating the entire care economy; recognising the interdependences of aged care, the NDIS, primary care, community care and regional and rural care and the challenges to achieving that given Australia's federated model.

Equity and experience – the challenge of delivering similar health outcomes regardless of race, ethnicity, socioeconomic status, education, neighbourhood, or other potentially disadvantaging social and structural determinants of health.

Health equity has become an organisational priority for many sectors across the health value chain to ensure all people experience similar health outcomes regardless of race, ethnicity, socioeconomic status, education, neighbourhood, or other potentially disadvantaging social and structural determinants of health.

The NSW Future Health Strategic Framework has a key objective to strengthen equitable outcomes and access for rural, regional and priority populations and from a funding perspective there is an opportunity for Federal, State and Community care to come together through initiatives such as co-commissioning to deliver these outcomes.

Opportunities:

- Increased investment in non-health primary prevention and system interventions (e.g., education, family and communities, smoking legislation) will require a whole of government response together with ongoing education around healthy and safe habits such as eating well, exercising regularly and not smoking to increase awareness, improve health literacy and ultimately reduce risky behaviours.
- Substantial opportunity for transformative initiatives that use an issues-based funding approach rather than population or activity-based measures; the latter have the potential to lead to perverse outcomes of delivering more activity or substantially underfunding areas of socially disadvantaged populations.

Participatory health and the commercialisation of health - greater consumerisation of healthcare, the role of personal devices and changing attitudes towards access and use of personal information.

Although highly regulated and specialised, the health sector is not immune to the trend influencing so many other sectors: greater consumerisation of healthcare, with consumers wanting to have more say in the services they receive. Combined with a growing need to manage health expenditure, this is leading to new service models such as participatory.

Increasing mobility, ownership of smart devices and online platforms for social interaction andinformation exchange are changing global attitudes toward healthcare and sharing and participating in this. Individuals are shifting their focus to wellbeing, in which health is one aspect, and are engaging more frequently and holistically rather than engaging only when they are ill. Also facilitating this is the increase in non-traditional players (retailers, telecommunications and technology companies, entrepreneurs etc.) creating tools and platforms through which consumers can engage in the management of their wellbeing.

International research highlights a shift to participatory health where individuals are taking on greater responsibility, curating and navigating their health and their care as an equal partner. For example, the number of health-related smartphone apps more than doubled between 2013 and 2015. A recent survey of US citizens by EY found that 33% would be willing to use smartphone devices to send information to a doctor.

Opportunities:

- Drive investments in technology at scale, big data and leverage the SDPR in an effective manner, including to support predictive and personalised care.
- Work with consumers to make use of smartphone and personalised data as well as creating a funding environment that is supportive of emerging health-tech players.

Advances in medical research and clinical care and personalised care are leading to better insights into and understanding of diseases, treatment, management, and prevention.

Advances in medical research and technology are leading to better insights into and understanding of diseases, as well as how to more effectively treat, manage and prevent them. For example, rapid technological advancements are aiding enhanced early identification and more targeted understanding of the progression of diseases, allowing treatment to be tailored and more effective.

Researchers are also integrating big-data analytics and genomics to build databases of cancer genome mutations to produce reports that act as an 'identity card of a tumour', which clinicians can use to tailor treatment.

Such advances hold significant potential in offsetting the growing pressure on healthcare. As noted in the *Future Health Strategy,* precision medicine will support targeted evidence-based healthcare to help prevent the incidence and morbidity of chronic disease.

To deliver these advances NSW needs to attract, retain and develop world class clinicians and researchers. NSW has had a strong focus on dedicated precincts of specialisation and continuing this will be critical to creating nationally leading focus areas (e.g. cancer research, genomics); modern research requires economies of scale around researchers, facilities, and access to multi-disciplinary skills.
Existing and future precincts need to have an amenity and access lens in order to attract and retain the best researchers and clinicians, as there is significant global competition for these resources. In particular, greenspace, childcare, end-of-trip facilities, key worker housing and adequate retail and commercial facilities are becoming increasingly critical to staff retention.

Opportunities:

- Investment in research has a proven multiplier, but funding is required to retain talent, facilitate multi-disciplinary research (e.g., intersection of health, engineering, technology, and data) with translation and commercialisation capability.
- This requires investment in co-location and collaboration, not only for facilities but a place where one can combine talent across research, education, training, clinical trials, and complex care).

Places, Partnerships and Capital – capital is scarce, the demands of healthcare in the future will require working partnerships between health, research, education, housing, and other social and community organisations to create environments for success.

Flexible and adaptable health infrastructure

New facilities and assets are a major driver of future expenditure. Health is a capital intensive service, and previous EY analysis has indicated that the sector has around $9 of operational expenditure for every $1 of capital investment each year. As a result, new infrastructure is already placing additional recurrent funding demands on the system, so future health infrastructure needs to be flexible and adaptable to rapidly changing needs and new models of care delivery.

The digital roll-out and healthcare trends towards digital should be less capital intensive but funding mechanisms and governance structure needs to prioritise this to avoid locking-in additional large infrastructure assets that place an additional burden on the system. Part of this equation is also a focus on asset management and partnerships to make the greatest use of the existing NSW Health estate without the need to invest in greenfield projects which are significantly more expensive.

The NSW Health 20-year Health Infrastructure Strategy addresses these key issues with a focus on the best use of assets to respond to future patient needs:

Extract – NSW 20-Year Health Infrastructure Strategy

Changing what we invest in	**This means:** • investing in the next wave of future healthcare facilities • accelerating virtual and digitally enabled care where cyber security and privacy remain foundational • making better use of our assets • advancing whole of system digitisation.
Changing how we invest	**This means:** • an agile planning and prioritisation framework that assesses each investment proposal to meet patient needs • prioritising network sharing and specialisation • allowing for technological uncertainty • strategically coordinating place based investment.

Source: [his-overview.pdf (nsw.gov.au)]

Opportunities (future models of funding):

Healthcare capital funding is scarce and historically directed to major tertiary infrastructure and continuing this will exasperate existing sustainability changes.

There is an opportunity to address these challenges through:

- Future funding strategies (at scale) that apply a similar strategic approach to the 20-year Infrastructure Strategy principles, by "Changing what NSW Health invests in" and "Changing how NSW Invests"

Partnerships

Partnerships remain a useful delivery tool, and lessons need to be learned from past experience of what works, and when. Recent research partnerships such as Sydney Biomedical Accelerator and Health Transformation Hub have seen a significant multiplier in terms of investment and Government sharing risks and resources to deliver projects more efficiently. Partnerships don't need to be of a scale to be inflexible, much of the emerging technology can be tested and proved on a smaller timescale and size to enable Health to retain flexibility and be adaptable. NSW's Health Prototyping Centre is a great example of a dedicated investment to rapidly test ideas, designs and concepts before building a final version of a product.

Opportunities (partnerships):

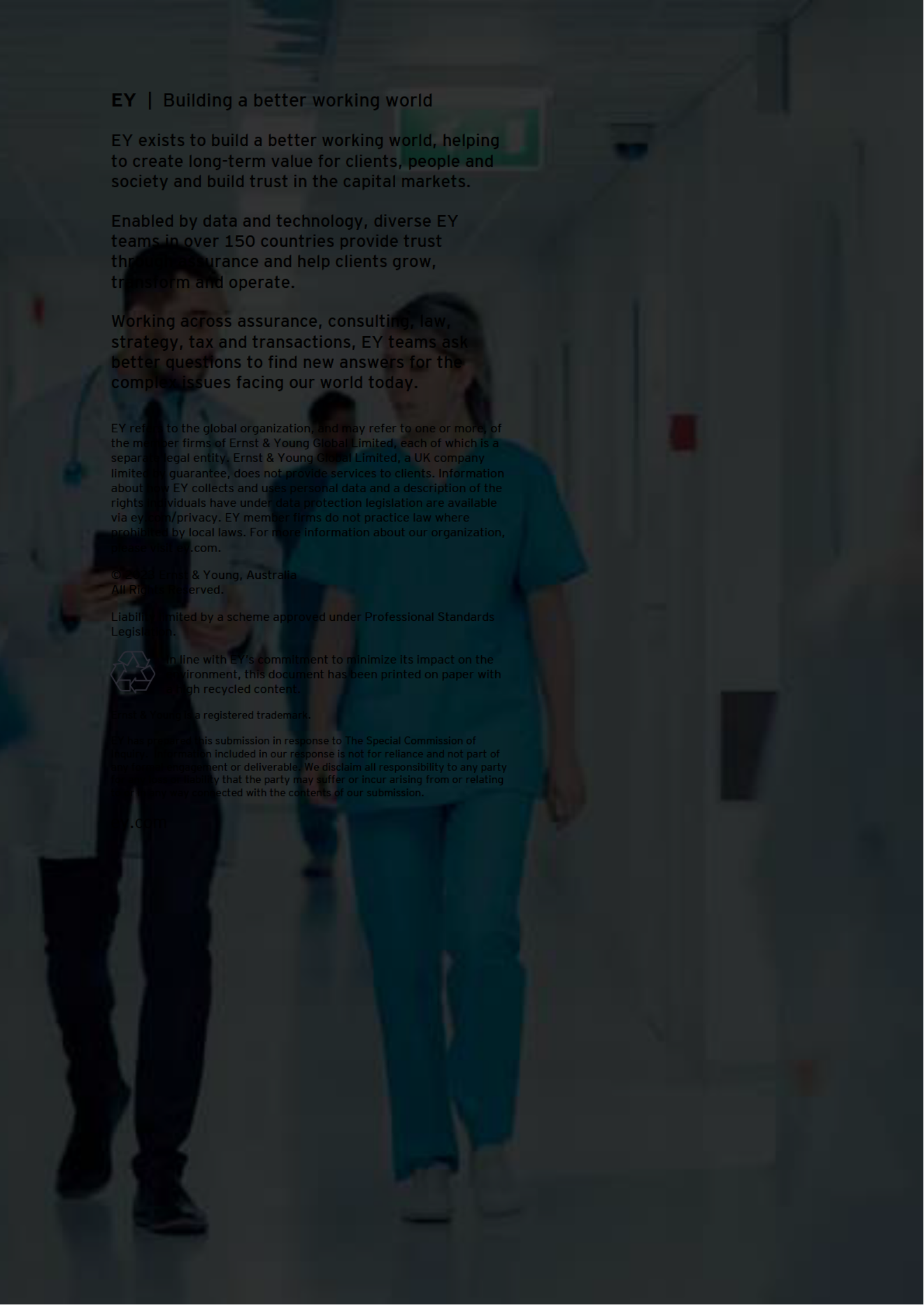
- Leveraging the value of existing Health Precincts – NSW Health has a strong history of partnerships and recent examples such as Health Translation Hub and Sydney Biomedical Accelerator show the multiplier benefits of partnering
- Increasing partnership models, through new approaches that don't surrender Government long-term flexibility but leverage new technologies and innovations (software as a service replacing existing capital-intensive technology as an example)

Recognising capital in funding models

ABF focuses on operating costs not paid by other programs, which can create challenges for operators when planning capital investment. The focus on operating costs is to support the funder paying the marginal cost of care, preventing the Commonwealth paying for the same service under different programs. A limitation of focusing on the operating cost, however, is that a provider experiencing significant growth in activity will find it challenging to plan for capital investment. In contrast, however, if the ABF payment included a capital charge for each unit of activity there would be allocation inefficiencies created, as providers who are able to provide services at a marginal rate (i.e., due to latent capacity within a fix operating cost model) are likely to receive a windfall. Ideally future funding models will recognise operating costs and capital management.

Opportunities (capital funding):

- Investing with whole-of-life considerations considering the impact of investment recurrent funding costs
- A focus on how capital funding is prioritised and directed to address system level issues (as opposed to a traditional equitable distribution model)
- Considering the cost of capital and infrastructure funding models to adequately provide for the cost of depreciating assets
- Build or invest in new assets only after an adequate assessment of the ability to reduce demand, release latent capacity within the system, invest in alternative non-infrastructure initiatives or repurpose existing facilities
- Consider place-based investments for retention of workforce – key worker housing and other amenities and partnering with social infrastructure providers to deliver
- Focus on the link between capital and clinical outcomes for all healthcare funding decisions



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