INQUIRY INTO THE MANAGEMENT OF HEALTH CARE DELIVERY IN NSW

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Date Received: 11 May 2017

NSW HEALTH SUBMISSION

1. Executive Summary

1.1   As a whole, Australia has a system of health care that is recognised as being one of the most effective in the world. The NSW public health system is a critical part of this achievement, contributing more than 30% of the total national public hospital and related service volume.

1.2   In 2016, the Bureau of Health Information released the report *Healthcare in Focus 2015 – How does NSW compare?*[1] Within this report, more than 130 measures were considered to assess how care in NSW Health is provided and how the NSW public health system responds to the needs of the population it serves. This report demonstrated that the NSW public health system performs well when set alongside 11 countries with developed healthcare systems.

NSW Health has undergone transformational change

1.3   Over recent years, NSW Health has undergone transformational change to the way it operates and delivers healthcare services. A number of reforms have been implemented to continue to enable the system to provide and improve high quality, safe and efficient patient care to the population.

1.4   Some of the key reforms and catalysts for change have been:

- o   2008 – a Special Commission of Inquiry into *Acute Care Services in NSW Public Hospitals* was undertaken and delivered 139 recommendations across many facets of the NSW public health system. This Inquiry was the precursor for a number of reforms within NSW Health, including the establishment of the Agency for Clinical Innovation (ACI) and the Bureau of Health Information (BHI).

- o   2011 – 15 local health districts and 2 state-wide specialty health networks established, supported by local boards. Legislation to establish districts and boards came into force on 1 July 2011[2].

- o   2011 – all states, territories and the Commonwealth entered into the National Health Reform Agreement (NHRA) in August 2011[3] with shared intentions to work in partnership to improve health outcomes and ensure sustainability of

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[1] http://www.bhi.nsw.gov.au/__data/assets/pdf_file/0009/309663/report-Healthcare-in-Focus-2015.pdf
[2] http://www.health.nsw.gov.au/healthreform/Documents/governance-report.pdf
[3] http://www.federalfinancialrelations.gov.au/content/npa/health/_archive/national-agreement.pdf

Australian healthcare systems. Major funding reforms were also part of the NHRA, including the establishment of the Independent Hospital Pricing Authority (IHPA) and requirement for the public health system to implement Activity Based Funding (ABF).

o 2012 – NSW Health commenced implementation of the ABF model of health service funding. Under the NHRA, there is commitment of all states and territories to fund public hospitals using ABF where practicable.

o 2017 – NSW Health is expected to sign the NHRA Addendum which incorporates quality and safety into hospital pricing and funding and to continue to improve the integration of care between primary, secondary and tertiary sectors. These changes align with the NSW Health *Better Value Healthcare* and *Integrated Care* reforms.

1.5   NSW Health has strong governance in place to drive improvements in the performance of health services and the outcomes that care delivers to patients. The NSW Health Performance Framework (2009 to present) and NSW Health Purchasing Framework (2012 to present) include a strong focus on monitoring, evaluation and system management but recognise that accountability for the delivery of high quality and safe health services sits with local health districts and specialty health networks. These frameworks support transparency and accountability at all levels of the health system.

1.6   Recent and ongoing investments in Information and Communication Technology (ICT), data governance and enhancements to performance reporting at a system level (publically through the BHI and internally through the Ministry's 'system manager' function) and locally by local health districts and specialty health networks, continues to drive further reform and improvement in health services across NSW.

1.7   NSW Health has achieved significant progress against a number of key performance indicators and measures of healthcare delivery over the past few years. This is highlighted in Table 1 below.

Table 1: Overview of demand and performance changes over time

Volume & Efficiency	2010-11	2015-16	Avg. annual growth rate (for applicable period)
ED presentations*	2,486,026	2,733,853	1.9%
Admissions*	1,629,572	1,886,668	3.0%
Non-Admitted Service Events* (ᵛ)	Not comparable	13,478,446	-
Admissions from an elective surgery waiting list**	204,820	217,817	1.2%
Average cost per NWAU (estimated)	$4,164	$4,478 (2014-15)	1.9%
Average length of stay - acute (LOS)*	3.5 days	3.2 days	-1.2%
Performance Measures			**Avg. annual growth rate**
Emergency Treatment Performance (ETP)*	59.9%	74.2%	2.8 % points
ED presentations seen within clinically recommended timeframe**	76%	81%	1.0 % points
Elective Surgery Access Performance (ESAP)**	91.3%	97.1%	1.2 % points
Transfer of Care (TOC)*** (±) (measure commenced April 2012)	80.8% (2012-13)	87.4%	1.7 % points
Ambulance response times (minutes)(#)	10.6	11.0	0%
Safety and Quality Indicators			**National Avg.**
Adverse events arising during hospital stay (proportion of separations)** (^)	Not available	8.5% (2014-15)	10.1% (2014-15)
Unplanned Readmissions – Cataract extraction** (ˣ)	Not available	2.5 (2014-15)	3.1 (2014-15)
Falls (per 1,000 separations) ** (^)	Not available	5.6 (2014-15)	4.5 (2014-15)
Staphylococcus aureous bacteraemia (SAB) (infections per 10,000 occupied bed days)**	1.2	0.75	0.73 (2015-16)

*Source: NSW Health Annual Reports
**Source: AIHW
***Source: Ministry of Health
(ᵛ) Measure changed in 2015-16 so is not comparable to prior years
(±)Transfer of Care reported from 2012-13 vs. 2015-16. 2012-13 result aligned to current TOC definition.
(#) Priority category 1 median response time for potentially life-threatening cases
(^) Reported for 2011-12 vs. 2014/15
(ˣ) Per 1,000 separations, unplanned/unexpected readmissions within 28 days. NSW Health is below the national average for all 7 procedures reported by AIHW 2014-15.

1.8   Like other health systems around the world, NSW Health must position itself to manage future challenges. These include a growing and ageing population which is living longer but where a growing number of people experience multiple chronic conditions and require more health services tailored to their specific needs.

1.9   NSW Health is well positioned to meet these challenges, leveraging new technologies, new models of care and partnering with the primary care sector to ensure prevention and management in the community occurs to ensure the best outcomes for the people of NSW.

2. Introduction

2.1   NSW Health welcomes the Public Accounts Committee Inquiry into the Management of Health Care Delivery in NSW. The public health system in NSW continues to grow, evolve and improve. It is important to reflect on the significant achievements of this world-class health system, and to continue to improve the delivery of healthcare and outcomes to patients who access services.

2.2   This submission is structured to respond to the terms of reference to this Inquiry, which are closely intertwined. The terms of reference are:

"that the Committee inquire into and report on the management of health care delivery in NSW, with particular reference to:

   a) The current performance reporting framework for monitoring the effectiveness and efficiency of health care service delivery in NSW;

   b) The extent to which efficiency and effectiveness is sustained through rigorous data collection, monitoring and reporting;

   c) The adequacy of the provision of timely, accurate and transparent performance information to patients, clients, health providers and health system managers;

   d) The extent to which the current framework drives improvements in the health care delivery system and achieves broader health system objectives;

   e) Any other related matters."

2.3   This submission is structured as follows:

   o Context and overview of the NSW public health system;

   o NSW Health 'System Manager' Governance – driving effective, efficient and sustainable healthcare delivery in NSW. This section details the NSW Health Performance Framework; NSW Health Purchasing Framework; and NSW Health Service Agreement and Service Compacts;

   o Public Transparency, continuous system-wide improvement, and patient, clinician and local engagement in data and analytics. This section details data governance; performance monitoring; public reporting; and levels of performance reporting and improvement;

   o Achievement of improvements in healthcare delivery and health system objectives.

2.4   This submission is a collated response on behalf of NSW Health into the Public Accounts Committee Inquiry into the Management of Healthcare Delivery in NSW.

The NSW Ministry of Health, NSW Pillar organisations, and NSW local health districts and specialty health networks provided input into this submission.

3. Context

Special Commission of Inquiry into Acute Care Services in NSW Public Hospitals

3.1   A Special Commission of Inquiry into *Acute Care Services in NSW Public Hospitals* was undertaken in 2008 in response to highly publicised incidents that occurred within the NSW public health system that raised questions on how safe our public hospitals were and what quality of care patients were receiving.

3.2   A total of 139 recommendations were made in the final report of Commissioner Peter Garling SC ('the Garling Report' hereafter).

3.3   A number of recommendations from the Garling Report were in relation to devolution of the NSW public health system, as well as strengthening the role of the Pillar organisations. The Pillars have key roles in the respective areas of health care design, standards, reporting, education and associated policy.

3.4   The Garling Report was the precursor for a number of reforms within NSW Health and has driven numerous improvements across the NSW public health system including areas of performance, workplace culture, workforce reform, patient safety, and administration.

3.5   NSW Health undertook a review of the system's governance arrangements in response to the Garling Report and published a report *Future Arrangements for Governance of NSW Health[4]*.

3.6   Local health districts and specialty health networks were created from former Area Health Services in 2011 and the formulation of local health district and specialty health network boards for governance. Along with this came the devolution of health service delivery to the Districts and Networks. From 1 January 2017, amendments to the *NSW Health Services Act[5]* provide for the Boards of local health districts and specialty health networks to appoint their Chief Executives, with the concurrence of the Secretary, NSW Health.

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[4] http://www.health.nsw.gov.au/healthreform/Documents/governance-report.pdf
[5] http://legislation.nsw.gov.au/inforce/59d71b18-59e1-693c-e068-b6c6de1d2851/1997-154.pdf

National Health Reform Agreement

3.7   In August 2011, all states, territories and the Commonwealth entered into the National Health Reform Agreement (NHRA). The NHRA set out the shared intention to work in partnership to improve health outcomes for all Australians and ensure sustainability of the Australian health system.

3.8   The arrangements within the NHRA aim to deliver a nationally unified and locally controlled health system through:

- o   Introduction of a number of financial arrangements for the Commonwealth and states and territories in partnership
- o   Confirming state and territories' lead role in public health and as system managers for public hospital services
- o   Improving patient access to services and public hospital efficiency through the use of Activity Based Funding (ABF) based on a nationally efficient price
- o   Ensuring the sustainability of funding for public hospitals by the Commonwealth providing a share of the efficient growth in public hospital services
- o   Improving the transparency of public hospital funding through a National Health Funding Pool
- o   Improving local accountability and responsiveness to the needs of communities through the establishment of local hospital networks and Medicare locals
- o   New national performance standards and better outcomes for hospital patients

3.9   The major reforms to the funding of public hospitals in the NHRA included the establishment of the Independent Hospital Pricing Authority (IHPA), an independent government agency with the primary function to calculate and deliver an annual National Efficient Price (NEP) for public hospital services to deliver ABF reform.

3.10   The NHRA established the Australian Commission on Safety and Quality in Health Care (ACSQHC) as a Commonwealth government entity (the ACSQHC was initially established in 2006). The ACSQHC works in partnership with a broad range of stakeholders to achieve a sustainable, safe and high-quality health system.

3.11   A National Health Performance Authority (NHPA) was established in 2011 in response to the NHRA. The development of a Performance and Accountability Framework was designed to support improved local level performance assessment and drive improvements in health system performance through public and transparent reporting.

Funding of NSW public health services

3.12 There has been significant change to the way NSW hospitals are funded over recent years.

3.13 As agreed in 2011, the NHRA introduced new financial and governance arrangements for Australian public hospital services, including objectives to:

  o improve patient access to services and public hospital efficiency through the use of ABF based on a national efficient price

  o ensure the sustainability of funding for public hospitals by increasing the Commonwealth's share of public hospital funding through an increased contribution to the costs of growth

  o improve the transparency of public hospital funding through a National Health Funding Pool and a nationally consistent approach to ABF

3.14 In 2012, NSW Health commenced implementation of ABF.

3.15 ABF has been implemented on the basis of nationally determined efficient prices, and agreed block funding for small hospitals and some designated services. ABF is a method for allocating funds based on the activity or outputs of an organisation or service, and aims to fund the actual work performed within agreed targets.

3.16 The National Weighted Activity Unit (NWAU) is the 'currency' that is used to express the price weights for all services that are funded on an activity basis. This scale identifies the relative weights for each public hospital service. This enables facilities to better understand the relative cost between their acute admitted, emergency department and non-admitted services and make informed decisions regarding which setting and modality in which to provide care.

3.17 NSW Health provides the Independent Hospital Pricing Authority (IHPA) with patient-level and hospital-level service data, staffing information and financial information to be used in the determination of the national efficient price and ensure appropriate Commonwealth payments for public hospital services.

3.18 Reconciliation processes are performed by the Administrator of the National Health Funding Pool on a six-monthly and annual basis which determines actual volumes of services provided by local health districts and specialty health networks for Commonwealth payment purposes. Where actual activity is greater or less than estimates, payments are adjusted accordingly.

3.19 In 2016, the Council of Australian Governments finalised a Heads of Agreement for public hospital funding that will preserve important parts of the existing systems, including ABF and the nationally efficient price, and focuses on improving patient safety and the quality of services, and reducing unnecessary hospitalisations.

4. The public health system in NSW

4.1   NSW is home to approximately one third of the Australian population, around 7.7 million people.

4.2   NSW Health is the largest healthcare system in Australia, and one of the largest in the world. Each year, NSW Health cares for millions of people and oversees billions of dollars' worth of investment in patient care, buildings, equipment, technology and research.

4.3   As a snapshot, NSW Health in 2015-16:

   o   Provided services across 230 hospitals

   o   Delivered care for 2.7 million emergency department attendances and 1.9 million inpatient episodes

   o   Provided over 960,000 ambulance emergency responses

   o   Performed almost 219,000 planned surgical cases

   o   Employed 111,000 dedicated full-time equivalent staff

4.4   NSW Health operates under a devolved model of health service governance.

4.5   The NSW Ministry of Health provides Westminster functions and supports the executive and statutory roles of the Health Cluster and Portfolio Ministers. The Health Secretary is the 'system manager' of the NSW public health system, which operates 230 public hospitals, as well as providing community health and other public health services, for the NSW community through a network of local health districts, specialty health networks, and non-government affiliated health organisations.

4.6   Local health districts and specialty health networks have responsibility and accountability for managing all aspects of hospital and health service delivery for their local district or specialty network. This is undertaken under a Service Agreement which is held between the Health Secretary, and the district or network's Chief Executive and Board.

4.7   There are 15 local health districts (eight covering the greater Sydney metropolitan regions, and seven covering rural and regional NSW) and two specialty health networks:

   o   Central Coast Local Health District

   o   Far West Local Health District

   o   Hunter New England Local Health District

   o   Illawarra Shoalhaven Local Health District

   o   Mid North Coast Local Health District

   o   Murrumbidgee Local Health District

   o   Nepean Blue Mountains Local Health District

- o   Northern NSW Local Health District
- o   Northern Sydney Local Health District
- o   South Eastern Sydney Local Health District
- o   South Western Sydney Local Health District
- o   Southern NSW Local Health District
- o   Sydney Local Health District
- o   Western NSW Local Health District
- o   Western Sydney Local Health District
- o   Sydney Children's Hospitals Network
- o   Justice Health and Forensic Mental Health Network

4.8   There are five Pillar organisations which are statutory health corporations, subject to the direction and control of the Minister for Health or Health Secretary. These Pillar organisations are:

- o   Agency for Clinical Innovation
- o   Bureau of Health Information
- o   Cancer Institute NSW
- o   Clinical Excellence Commission
- o   Health Education and Training Institute

4.9   There are also a number of units of the Health Administration Corporation which provide support services to the NSW public health system. These are:

- o   Health Infrastructure
- o   Health Protection NSW
- o   HealthShare NSW
- o   eHealth NSW
- o   NSW Ambulance
- o   NSW Health Pathology

4.10   Affiliated health organisations also play an important function in the NSW public health system, providing a wide range of hospital and other health services.

4.11   The core roles of the Ministry are:

- o   Advising the Health Portfolio Ministers on policy, legislation, and governance arrangements;
- o   Planning for future capacity and workforce needs of NSW in accordance with state and national health priorities;
- o   Securing the resources the system needs to deliver on the Government's policy;
- o   Distributing resources fairly to promote equity, quality, safety and efficiency;

o As system manager, oversight and control of the public health system, conducting inquiries into health services where warranted, negotiating Service Agreements with local health districts and specialty health networks, monitoring progress against Agreements, and intervening only when performance does not meet specific standards;

o Stimulating system-wide initiatives that improve quality, safety and efficiency based on the need for a critical mass of expertise or economies of scale, such as purchasing and shared electronic medical records;

o Performing its regulatory duties, such as protecting public health and licensing private service providers.

5. NSW Health 'System Manager' Governance – driving effective, efficient and sustainable healthcare delivery in NSW

5.1   This section describes the governance in place throughout NSW Health to support the delivery of effective, efficient and sustainable healthcare delivery.

5.2   The detail in this section covers the following component of this Inquiry's terms of reference:

  a.   *The current performance reporting framework for monitoring the effectiveness and efficiency of health care service delivery in NSW*

5.3   NSW Health has robust governance in place across all levels of the system. This supports the delivery of high quality, safe, efficient and sustainable healthcare. Health services are closely monitored and reported on to drive continual improvements.

Policy and Planning: NSW State Health Plan, Strategic Priorities and Election Commitments

5.4   The *NSW State Health Plan: Towards 2021*[6] was released in 2014. This provides the strategic framework and sets priorities for the NSW public health system. A key focus within this Plan is increasing the transparency of funding and performance. The strategic directions and strategies within the Plan are monitored and reported annually. Some of these priorities are supported by a whole of Government approach, with multiple clusters involved in driving improvements in health outcomes, such as tackling overweight and obesity rates.

5.5   NSW Health is either the lead or contributes to a number of NSW Premier's Priorities and State Priorities[7]. NSW is leading on the following priorities:

  o   Cutting wait times for planned surgeries (State Priority)
  o   Improving service levels in hospitals (Premier's Priority)
  o   Tackling Childhood Obesity (Premier's Priority)

5.6   The NSW Health Performance and Purchasing Frameworks, along with Service Agreements and Service Compacts, have aided NSW Health to deliver additional services and expand key strategic programs to support NSW Government commitments. The robust KPIs and monitoring measures in place at the service delivery level drive local improvement and also aid in identifying areas where performance can be improved. Local health districts and specialty health networks

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[6] http://www.health.nsw.gov.au/statehealthplan/Publications/NSW-state-health-plan-towards-2021.pdf
[7] https://www.nsw.gov.au/improving-nsw/premiers-priorities/

align their local strategies to broad NSW Health and NSW Government priorities and cascade accountabilities throughout the organisation to support engagement and focus at all levels.

Purchasing: NSW Health Purchasing Framework

5.7   The NSW public health system continues on its transformational journey by driving accountability through the measurement of outcomes and performance, investing in new models of care, building capability across all levels to lead the system into the future, providing services across a continuum of care settings, and using new technologies to promote innovation. The NSW Health Purchasing Framework provides a fundamental mechanism for supporting these priorities.

5.8   The Purchasing Framework is an important component of the reforms undertaken by NSW Health over recent years in relation to the devolution to local health districts and specialty health networks, and the Ministry's role as a 'purchaser' of health services from these districts and networks.

5.9   The Purchasing Framework guides the purchasing of services from local health districts and specialty health networks on an annual basis, including the mix and volume of the services to be delivered. It was finalised shortly after the commencement of ABF and was implemented in 2012.

5.10   This purchasing process aims to deliver the objectives, outcomes and goals of a variety of NSW Health and broader NSW Government strategies, including the NSW State Health Plan and the Premier's and State Priorities.

5.11   Aligned to the NSW Health Performance Framework, the Purchasing Framework is underpinned by goals and principles; a clear description of the outcomes, measures and targets to be used; and the expected performance levels of health services operating under this remit.

5.12   The Purchasing Framework is informed by the directions and strategies within the NSW State Health Plan and is underpinned by the following principles:
  o   Patients and carers are at the forefront of all our decisions
  o   Safety and quality of healthcare
  o   Integration of health services across all sectors will reduce duplication and fragmentation
  o   Diversity and innovation in the health system is a crucial mechanism to achieve better outcomes
  o   Collaborative and open relationships will build respect and increase transparency

5.13   Local health district and specialty health network activity targets for service delivery and budgets are determined with regard to the size and health needs of the local population, and provision of services to residents outside the local area.

5.14   The Purchasing Framework outlines the activity model, which determines the activity to be purchased by volume and mix for the respective year.

5.15   Activity targets are developed and adjusted with consideration given to factors appropriate to each health service and service type, rather than a simple extrapolation from historical activity data. These factors are reviewed and negotiated on an annual basis, with data sets, methodology and business rules used to calculate activity targets specific to identified service streams.

5.16   Provisional activity estimates for ABF service streams are provided to local health districts and specialty health networks by the Ministry of Health. These are used to discuss and negotiate activity targets prior to their finalisation and inclusion in local health district / specialty health network Service Agreements. This is done within the limits of the NSW state budget.

5.17   Performance against these activity targets is monitored on an ongoing basis, in line with the NSW Health Performance Framework. Significant variation from target will trigger performance discussions between the Ministry and the relevant local health district / specialty health network. All health services are reported on monthly in a transparent manner that is provided to all local health district and specialty health network Chief Executives and other senior executive.

Service Agreements and Service Compacts

5.18   Under the National Health Reform Agreement[8] (entered into by all states, territories and the Commonwealth in 2011), Service Agreements are required to be established between the NSW Government and each local health district and specialty health network.[9].

5.19   The Ministry of Health and local health districts / specialty health networks operate as a purchaser – provider relationship.

5.20   Each local health district and specialty health network negotiates an annual Service Agreement[10] with the Ministry of Health which outlines the number and broad mix of services which will be purchased and/or funded, the volume and price of ABF

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[8] http://www.federalfinancialrelations.gov.au/content/npa/health/_archive/national-agreement.pdf
[9]   See   also   Section   126   of   the   *NSW   Health   Services   Act   1997*
http://legislation.nsw.gov.au/inforce/59d71b18-59e1-693c-e068-b6c6de1d2851/1997-154.pdf
[10] http://www.health.nsw.gov.au/Performance/Documents/service-agreement-generic.pdf

services, and/or block funding as appropriate for some services. Service Agreements articulate which health strategies, targets and goals are to be pursued to achieve local and state-wide initiatives as well as what measures will be used to monitor performance at both a state and national level.

5.21   Service Agreements provide transparency and consistency around funding, service levels, and required performance levels. The annual Service Agreement negotiation process is undertaken collaboratively between the Ministry and local health districts / specialty health networks. This involves clinician and management engagement to align state and local priorities and drive accountability at the service delivery level.

5.22   Improvement in healthcare delivery and patient outcomes are driven through the Purchasing Framework, as well as enabling local health districts and specialty health networks to deliver on broad health system and Government objectives.

5.23   Local health districts and specialty health networks are accountable for the delivery of health service activity as well as achieving clearly defined levels of performance and outcomes of service.

5.24   Key performance indicators (KPIs) are outlined within the Purchasing Framework, with performance thresholds for each. Performance is assessed in terms of whether the district or network is meeting the performance target set for each individual KPI. It will be classified as either 'Performing' (performance at, or better than, target); 'Underperforming' (performance within a tolerance range); or 'Not Performing' (performance outside the tolerance threshold).

5.25   KPIs are designated into one of two categories:

- o 'Tier One' – Generates a performance concern when the performance of the health service is outside the tolerance threshold for the applicable reporting period

- o 'Tier Two' – Generates a performance concern when the performance of the health service is outside the tolerance threshold for more than one reporting period.

5.26   In addition to KPIs, a range of Service Measures are also included within Service Agreements to assist health services to improve provision of safe and efficient patient care. These are supported by a Data Dictionary[11] which provides transparency around definitions and targets.

5.27   Both KPIs and Service Measures are grouped into the domains of:

- o Service Access and Patient Flow
- o Population Health

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[11] http://www1.health.nsw.gov.au/pds/ActivePDSDocuments/IB2016_036.pdf

- o People and Culture
- o Integrated Care
- o Finance and Activity
- o Safety and Quality
- o Mental Health Reform
- o Maternal, Child, Youth and Family Services

5.28 The Ministry of Health provides local health districts and specialty health networks with a monthly report that outlines performance against KPIs and service measures within service agreements. This information is provided at the local health district / specialty health network level as well by facility. This provides transparency around health service delivery and performance and is utilised by districts and networks, Board Chairs, the Ministry, Health Portfolio Ministers, and other Government agencies when required (e.g. Department of Premier and Cabinet and Treasury).

5.29 Schedule A of the Service Agreement outlines they key strategic priorities for NSW Health for the corresponding financial year. Delivery of these priorities is a responsibility of all NSW Health entities.

5.30 Schedule B of the Service Agreement outlines the services and facilities under the governance of, or supported by, the local health district or specialty health network. This schedule contains directions for local health districts and specialty health networks in relation to their responsibility to deliver services and support for key NSW Health and broader NSW Government priority areas. This includes:

- o Establishing and maintaining an appropriate balance in the provision and use of resources for health protection, health promotion, health education, and treatment services.
- o Implementing the *NSW Aboriginal Health Plan 2013-2023*.
- o Strengthening and further improving the health and wellbeing of children, young people and families.
- o Undertaking research and development relevant to the provision of health services.
- o Undertaking teaching and training functions in the context of the *NSW Health Professionals Workforce Plan 2012-2022*.

5.31 Schedule C of the Service Agreement outlines the inclusions of health service level reporting to the Administrator of the National Health Funding Pool for in-scope services. The Administrator requires all jurisdictions to provide patient data on actual hospital services delivered[12]. This requires rigorous data collection across the state

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[12] http://www.publichospitalfunding.gov.au/administrator

to enable submission of this data biannually. This has a direct impact on the level of Commonwealth funding received, and assists to ensure that the delivery of health services is efficient.

Monitoring, Evaluation and Performance Reporting

5.32   A variety of tools exist to provide access to data and information in order to engage the system in performance improvement work, supported by the System Performance Support Branch, System Management Branch, and System Purchasing Branch (all within the System Purchasing and Performance Division at the Ministry).

5.33   The performance reporting function allows the Ministry to be an effective health service purchaser and system manager through high-quality data, analysis and performance reporting; and to ensure that NSW Health meets its state and national reporting obligations and maintains high standards of public accountability and transparency.

5.34   The monthly report described in section 5.28 is the primary formal reporting tool that is used to report on local health district and specialty health network performance against Service Agreements (down to hospital level). It is combined with Finance, Workforce and Business Services Reports to create a monthly report on the performance of the health system.

5.35   This report is discussed by the Finance and Risk Committee on a monthly basis which is chaired by the Secretary, NSW Health. This report is used by local health districts and specialty health networks to facilitate transparent discussion about the performance of health services and identify areas of concern to determine appropriate actions or strategies to address these.

5.36   Monitoring, Evaluation and Performance Reporting is discussed extensively in Section 6 of this submission.

Performance Management: NSW Health Performance Framework

5.37 The NSW Health Performance Framework[13] sets out how the Ministry of Health monitors and assesses the performance of public sector health services in NSW. It includes the performance expectations of local health districts, specialty health networks, Pillars and support organisations operating under the Health Administration Corporation. These expectations cover the achievement of levels of health improvement, quality and safety, service delivery and financial performance, as outlined in Service Agreements or Service Compacts.

5.38 The Performance Framework was first implemented in 2009 (previously called the NSW Health Performance Management Framework) and is now well accepted across the NSW public health system. The creation of the Framework, and amendments over time, has been done in consultation with health services through engagement with clinicians and managers who are at the forefront of healthcare delivery.

5.39 The Performance Framework continues to evolve to reflect changes in strategic direction and priorities within the NSW public health system.

5.40 The Performance Framework is a key component of the annual cycle in establishing Service Agreements and Service Compacts between the Ministry of Health and local health districts, specialty health networks, and other support organisations.

5.41 To support the achievement of performance expectations across the system, the Performance Framework sets out processes around performance improvement, responses to performance concerns and management processes, in accordance with NSW Government policy. This provides an integrated process for performance review and assessment, with the overarching objectives of keeping people healthy and improving access to timely, quality, patient-focused healthcare across NSW public health services.

5.42 The operation of the Performance Framework moves through a process with four key components:

- o 'Performance Assessment' applies to both the strategic priorities and KPIs.
- o 'Response Framework' determines what action is required to resolve any performance issue.
- o 'Escalation/De-escalation Process' determines when a performance issue is to be escalated or de-escalated.

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[13] http://www.health.nsw.gov.au/Performance/Documents/performance-framework.pdf

o 'Operational Processes' that support the performance assessment and response cycle.

5.43 The processes of performance assessment and response are transparent and clearly articulated in the Performance Framework. This includes how health services are monitored, the process for performance review, and the response to performance which is below set tolerance levels.

5.44 Robust governance processes are in place to support responses to performance that is below tolerance levels, including the escalation and de-escalation of local health districts and specialty health networks. These processes do not occur in isolation at the Ministry; however, include the relevant health service in dialogue to ascertain concerns and develop remedial actions.

5.45 The Performance Framework and associated Service Agreements contain Key Performance Indicators, Service Measures, and Other Monitoring Measures against which local health districts and specialty health networks are measured and monitored. This is supported by a detailed Data Dictionary which provides transparency to health services around targets and definitions across all measures covered by the Service Agreement.

5.46 The Performance Framework outlines additional processes of performance monitoring and review. This includes the distribution of monthly performance reports to health services; the conduct of quarterly performance review meetings with health services; determination of actions to address performance concerns; and the provision of monthly health service performance updates to the Secretary, NSW Health and the Minister for Health.

5.47 The performance review processes support continual monitoring of health service performance. If issues are identified outside of standard reporting or meeting schedules, these will be responded to as appropriate.

5.48 Health services promptly report any emerging or potential performance concerns to the Ministry of Health, in line with processes which are mandated through NSW Health Policy Directives, such as the Incident Management Policy[14].

5.49 The establishment and maintenance of a culture of performance improvement is a requirement of all NSW public health services. This includes promoting the NSW Health Performance Framework; identifying concerns and implementing appropriate supporting mechanisms to facilitate long-term sustainable health service delivery; supporting staff to have an effective performance improvement role; and ensuring all staff understand their performance responsibilities.

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[14] http://www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2014_004.pdf

5.50   Local health districts and specialty health networks have internal performance frameworks in place in support of this overarching Performance Framework.

6. Public transparency, continuous system-wide improvement, and local engagement in data and analytics

6.1   The detail in this section covers the following two components of the Inquiry's terms of reference:

   b. *The extent to which efficiency and effectiveness is sustained through rigorous data collection, monitoring and reporting*

   c. *The adequacy of the provision of timely, accurate and transparent performance information to patients, clients, health providers, and health system managers.*

6.2   NSW Health makes significant investments in data governance (systems, classifications and quality), reporting and engaging patients, clients, clinicians and health system managers with health information.

6.3   The provision of transparent performance information about health service delivery throughout NSW Health is the responsibility of various stakeholders, including the Ministry of Health and Bureau of Health Information at a state-wide level, and local health districts and specialty health networks at a local level.

Data Governance

6.4   Data governance is the exercise of authority, control and shared decision-making (planning, monitoring and enforcement) over the management of data assets. It involves high-level planning and control over data management[15].

6.5   With devolution, data governance is essential to the effective and efficient capture and reporting of health information. It enables ongoing engagement of patients, clients, health providers and health service managers to inform policy, planning, operations, performance improvement and increased transparency into the performance of the health system.

6.6   Data governance within NSW Health:

   o Ensures data assets are adequately funded, justified, affordable, and aligned with strategic directions and strategic business information requirements.

   o Provides a broad range of NSW Health stakeholders with the opportunity to participate in decision-making, recommendations and the strategic directions relating to data assets.

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[15] Data Management Association, DAMA-DMBOK Functional Framework, Version 3.02, 2008

- o Provides stakeholders with a sense of ownership of data asset related decisions and strategic directions.
- o Produces higher quality data assets that are better understood and better utilised.
- o Provides appropriate escalation points for data governance related matters.
- o Improves communications about data governance related matters throughout NSW Health.
- o Reallocates business, technology, reporting and analytic resources to align with rapidly changing demands for business information.
- o Improves the interactions between Information Technology Governance and Data Governance.
- o Increases transparency and accountability.

6.7   NSW Health has mature data governance processes across clinical and corporate data assets which include processes to engage across districts, networks, pillars and shared services as well as governs changes to ICT systems and ensures appropriate data collection, quality checks and reporting.

6.8   Data is collected each time a health service is delivered to a patient. Coding enables the extraction of that data from clinical and corporate systems so that it may be aggregated and combined with other sources automatically to support decision-making and continuously improve health services.

6.9   At a state level this data is then used to report against Service Agreements, publically report on performance, make purchasing decisions, and inform research into best practice models of care (such as that conducted by the Agency for Clinical Innovation and the Clinical Excellence Commission).

6.10   Data is available at all organisational levels throughout NSW Health. The timeliness of data updates is dependent on the specific data and ranges from real-time availability to quarterly or annual reporting. Some data can take extended periods of time due to its nature, such as confirmation of a coroner's inquiry.

6.11   Access is granted to individuals on a risk-based approach to ensure adherence to the *Health Records and Information Privacy Act*[16] and other relevant privacy legislation. The NSW Health Delegations Manual[17] provides an essential framework for delegated authority for the disclosure of information and access to data.

6.12   A number of programs are underway to continue to improve the timeliness of data availability to ensure NSW Health leverages new technologies, maximises the use of its data assets to drive improvements, and is able to deliver on Government

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[16] http://www.legislation.nsw.gov.au/#/view/act/2002/71
[17] http://www.health.nsw.gov.au/policies/manuals/Pages/combined-delegations.aspx

directions in the area of Open Data, Data Centre Reform, Financial Management Transformation and Whole of Government ICT Strategy.

6.13   Recent successes in the deployment of new clinical systems (such as electronic medical records across the care continuum), and corporate systems (such as Finance and Rostering Systems) with many more on the horizon (electronic medication management and intensive care) has meant a new level of sophistication is required.

6.14   NSW Health is undertaking a review and revision of data governance processes and associated frameworks to ensure practices remain contemporary in the context of data governance accountabilities.

Public Reporting

6.15   As part of the NSW Health response to the Garling Report, the Bureau of Health Information (BHI) was established in 2009 as a statutory health corporation under the *Health Services Act 1997*.

6.16   The BHI's function is to support the accountability of the healthcare system in NSW. Specifically the BHI:

- o Prepares and publishes regular reports on the performance of the NSW public health system, including the safety and quality, effectiveness, efficiency and responsiveness of the system to the health needs of the people of NSW.
- o Provides an annual report to the Minister and Parliament on the performance of the NSW public health system.
- o Publishes reports benchmarking the performance of the NSW public health system with comparable health systems.
- o Establishes and maintains a website providing information and analysis on the performance of the NSW public health system, including tools for data analysis.
- o Develops reports and tools to enable analysis of the performance of health services, clinical units and clinical teams across the NSW public health system.
- o Advises the NSW Ministry of Health on the quality of existing data sets and the development of enhanced information analysis and reporting to support performance reporting to clinicians, the community and Parliament.
- o Undertakes and/or commissions research to support the performance by the Bureau of its functions.
- o Liaises with other bodies and organisations undertaking reporting on the performance of the health systems in Australia.

o Provides advice to the Minister for Health and the Secretary of the Ministry of Health on issues arising out of its function.

6.17 The BHI has developed a conceptual Performance Measurement Framework which guides its work on the measurement and public reporting of performance information. This Framework has six constructs: accessibility, appropriateness, effectiveness, efficiency, equity and sustainability[18].

6.18 The BHI publishes a suite of independent reports and data, including:

o those which look at key performance indicators of the system (e.g. activity and timeliness measures);

o self-reported experiences of patients of NSW Health;

o performance comparison of NSW Health to other countries;

o analyses of selected performance areas, highlighting opportunities to improve healthcare management;

o technical considerations and discussion of data issues relevant to healthcare performance measurement and reporting.

6.19 BHI reports are published under the following series: Healthcare In Focus; Hospital Quarterly; The Insight Series; Patient Perspectives; Snapshot Reports; Spotlight on Measurement; and Data Matters. Many reports are published with accompanying performance profiles at hospital, local health districts / specialty health network, and/or hospital peer group level. This allows patients, clients, health providers and health system managers the ability to view locally relevant information, and compare performance with other similar facilities.

6.20 The BHI provides information via 'Healthcare Observer' which is an interactive online tool which enables patients, clients, healthcare providers and health service managers the ability to explore, discover and compare information about the performance of the NSW healthcare system.

6.21 The BHI manage the NSW Patient Survey Program, which gathers information from patients about their experiences in hospitals and healthcare facilities. Each month, thousands of people in NSW are asked to report their recent experience with the public healthcare system as part of the NSW Patient Survey Program. Results of this survey program are available via Healthcare Observer at a local health district / specialty health network, hospital, peer group, and state-wide level.

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[18]

http://www.bhi.nsw.gov.au/__data/assets/pdf_file/0013/217030/Spotlight_on_measurement_APR_2013.pdf

6.22   There is recognition that people have varying levels of health and data literacy, and may prefer information in differing formats. The BHI caters to varying audiences through its responsive website; presenting basic performance and summary information documents; providing advice on how to read and interpret common graphs; and presenting key findings in engaging formats such as infographics and animations.

6.23   The annual BHI work plan is agreed between the BHI and Ministry of Health. Since its establishment in 2009, the quantum of reports has been steadily increasing and the data available expanding in breadth and depth. This demonstrates the maturity of BHI infrastructure and capability as an organisation and the availability of new high quality information sources within NSW Health that have been shared with the BHI to increase transparency and accountability. Since BHI's establishment in 2009, more than 65 reports have been published. In 2017, the BHI will publish more than 10 reports and/or data sets.

6.24   A Service Compact is held between the Ministry of Health and the BHI, as well as a Memorandum of Understanding ('MOU'). This supports the cooperative relationship between both parties and the sharing of sources of data and information.

6.25   The establishment of the BHI supports the provision of transparent and independent NSW public health system data and information to the NSW Health system and to the public.

6.26   The performance of the NSW public health system is reported publically through various other channels.

6.27   Local health districts and specialty health networks each have their own public websites which provide information on health service performance, such as the publishing of annual reports and Board minutes. Health service and performance information is provided to staff and local communities through a range of events and forums, as well as being on display and available within healthcare facilities.

6.28   NSW Health publishes an Annual Report that outlines the functions and activities of NSW Health over each financial year. The report includes performance and achievements of all local health districts, specialty health networks, and other entities that comprise NSW Health.

6.29   The Clinical Excellence Commission reports on a number of Safety and Quality indicators through its eChartbook.

6.30   HealthStats NSW is a NSW Government website that is a publically available website resource that provides data and information on a range of health-related topics.

6.31   The Audit Office of NSW is the independent auditor of the NSW public sector and reports directly to Parliament on the performance of the public sector. The Audit

Office undertakes performance audits, financial audits, and special reviews of NSW Health.

6.32 The Australian Institute of Health and Welfare (AIHW) is a major national agency established by the Commonwealth Government to provide reliable, regular, and relevant information and statistics on Australia's health and welfare. A number of these report performance data for the NSW public health system, including annual reports for admitted patient care; emergency department care, and elective surgery. NSW Health reports on a greater number of public health services compared to other jurisdictions, demonstrating the breadth and strength of the data governance, collection and reporting mechanisms in place.

6.33 The Australian Government Productivity Commission releases an annual *Report on Government Services (RoGS)* that provides information on the equity, effectiveness, and efficiency of government services in Australia. This report includes a volume on health which covers primary and community health, ambulance services, public hospitals, and mental health management.

6.34 The Australian Commission on Safety and Quality in Health Care (ACSQHC) has released an *Australian Atlas of Healthcare Variation* which highlights variation in healthcare provision across Australia. The ACSQHC collaborated with Australian, state and territory Governments, specialist medical colleges, clinicians, and consumer representatives to develop the Atlas. It is the first time that data from the Medicare Benefits Schedule (MBS), Pharmaceutical Benefits Scheme (PBS) and Admitted Patient Care National Minimum Data Set (APC NMDS) have all been used to explore variation across different healthcare settings.

6.35 NSW Health's performance reporting to national agencies informs evaluation of health programs on a national level and influences policy decisions on the future direction of the Australian healthcare system.

Health System, Local Health District/Specialty Health Network, and Hospital Performance Reporting and Improvement

6.36 Each local health district and specialty health network uses data on the services it provides at a patient level in a format that can be interrogated and analysed with respect to its performance at a clinician, clinical team, ward, hospital, district or any other useful levels of disaggregation.

6.37 Local health districts and specialty health networks have advanced programs of work and teams engaged in performance reporting, analytics and engaging clinicians with

health performance and activity data which enables delivery on state and local priorities and allows local responses and approaches to issues raised by patients, clients, the system manager, community, health providers or identified through public reporting. The use of data at this local level drives efficiency, effectiveness and performance improvement.
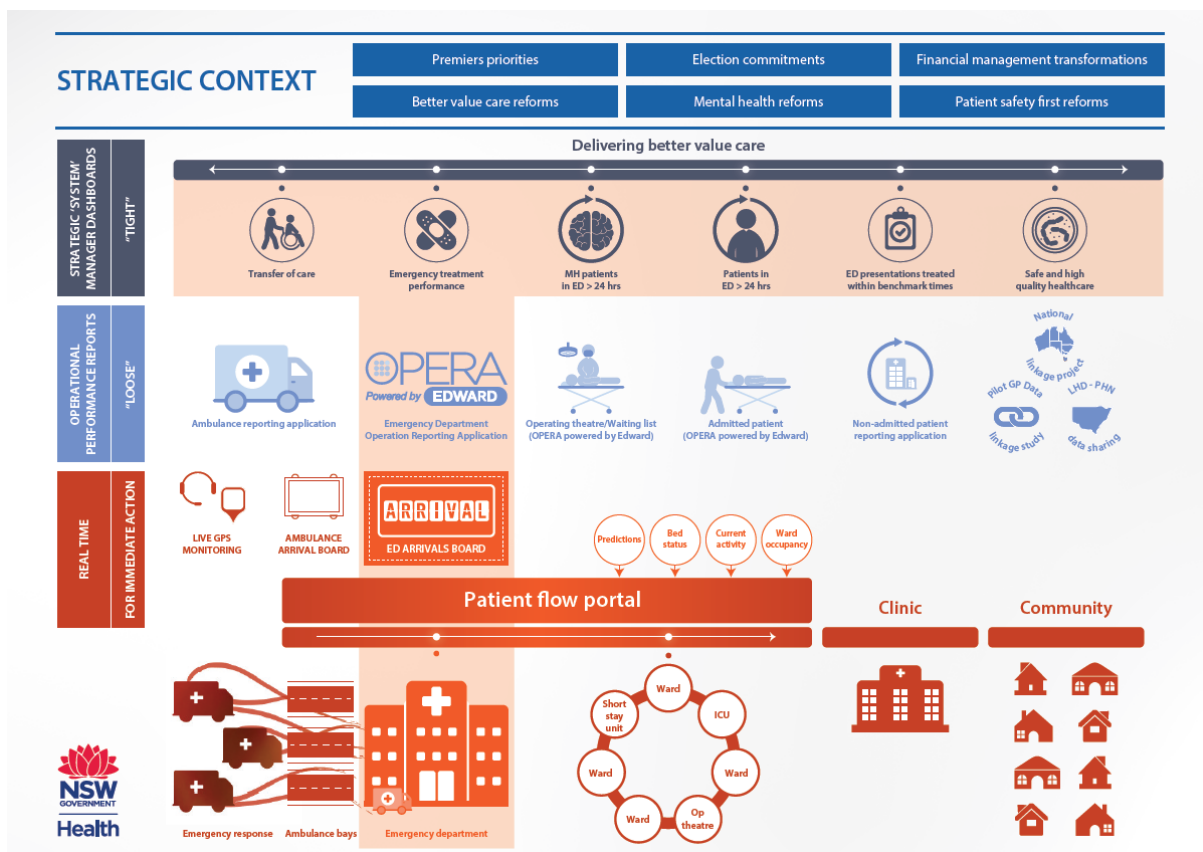
6.38   Local health districts and specialty health networks have utilised the NSW Health Performance Framework as the basis for local planning, accountability and reporting frameworks. This ensures alignment of local strategies to broad NSW Health system objectives. Districts and networks utilise KPIs and Service Measures from within their Service Agreements to 'trigger' when remedial actions are required to address areas of performance concern. The ability of all districts and networks to access their source data systems then allows for analysis of concerns at a more granular level.

6.39   Within the Ministry of Health, the System Purchasing and Performance Division provides the front end of 'system management', and acts as an important interface with local health districts, specialty health networks, the pillars, and other health organisations to support and monitor overall system performance. The Division also coordinates the purchasing arrangements with districts and networks for their service delivery.

6.40   At the state level, performance reporting is the primary role of the Health System Information and Performance Reporting (HSIPR) Branch within the System Purchasing and Performance Division at the Ministry of Health. A variety of tools exist to provide access to data and information in order to engage the system in performance improvement work, supported by the System Performance Support Branch, System Management Branch, and System Purchasing Branch (all within the System Purchasing and Performance Division at the Ministry). The performance reporting function allows the Ministry to be an effective health service purchaser and system manager through high-quality data, analysis and performance reporting; and to ensure that NSW Health meets its state and national reporting obligations and maintains high standards of public accountability and transparency.

6.41   The monthly report described in section 5.28 is the primary formal reporting tool that is used to report on local health district and specialty health network performance against Service Agreements (down to hospital level). It is combined with Finance, Workforce and Business Services Reports to create a monthly report to Government on the performance of the health system. This report is discussed by the Finance and Risk Committee on a monthly basis which is chaired by the Secretary, NSW Health, and is used by local health districts and specialty health networks locally to facilitate

discussion around areas of concern and determine appropriate actions or strategies to address these.

6.42   On a quarterly basis, local health districts and specialty health networks are provided with information regarding performance against specific mental health performance indicators. A Clinical Benchmarking Tool is also available within NSW Health to support improvements in mental health care and engagement with clinicians.

6.43   With recent availability of a number of new analytical tools on the market to present data in ways that can enable real time interrogation, the Ministry (through HSIPR Branch), Pillars, Shared Service Providers and local health districts / specialty health networks are advancing new and innovative tools to engage stakeholders with health information. The Analytics Framework[19] is expected to further embed, accelerate and drive continued innovation in this area over the next five years.

Figure 1: Example of NSW Health Reporting Landscape

6.44   A number of performance dashboards are in place across NSW Health. These performance dashboards are regularly updated for multiple stakeholder groups to

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[19]

http://www.ehealth.nsw.gov.au/__data/assets/pdf_file/0020/303752/NSW_Health_Analytics_Framework.pdf

provide transparency of the health system's performance across multiple domains. Many of these dashboards are monitored on a continual basis by the Ministry in its capacity as 'system manager'.

6.45   Web-based applications (such as the Health System Performance Application) have also been developed to allow users to report data against key performance indicators. Such applications can be used as data visualisation tools and allow users to view performance on a weekly and monthly basis and also provide analysis over time through a range of selected filters.

6.46   At a state level, NSW Health is investing in its Health System Performance Applications, data infrastructure (enterprise data warehouse) and Patient Flow Portal to support more timely decision-making and drive improvement across the health system. Health services across the state are utilising these tools and infrastructure which supports clinicians and managers to make timely decisions on patient care through the use and application of data.

6.47   NSW Health services have access to the Activity Based Management (ABM) Portal. The ABM Portal provides clinicians and managers with timely, accessible and clinically meaningful information. The Portal allows nominated NSW Health staff to transparently benchmark and compare their service's performance against internal data with their own hospital, with peer facilities, or on a state-wide basis. Data that is captured and able to be accessed in the Portal covers activity and cost domains. This assist local health districts and specialty health networks to improve their delivery of healthcare services and patient safety and experience outcomes by:

- o   Examining areas of best practice and using this information to improve performance across the state
- o   Identifying opportunities to improve financial efficiency
- o   Monitoring the impact of performance improvements
- o   Driving innovative decision-making

6.48   For Activity Based Management, all NSW Health services ensure that internal data quality assurance systems align with the data collection, assessing, monitoring and reporting structure outlined in the *NSW Health Data Quality Assurance Framework for Activity Based Management[20]*. This supports a best practice approach to data quality and has been identified as a foundational aspect for building readiness and capability within NSW Health within the context of ABF.

6.49   NSW Health collects information on patient experience through multiple surveys, such as the Adult Admitted Patient Survey and Emergency Department Patient

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[20] http://www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2016_030.pdf

Survey. These surveys provide important insights into how patients think and feel about the healthcare they receive. Results of surveys are transparent and are utilised by local health districts and specialty health networks to pinpoint where improvements can be made.

6.50   NSW Health is using technology to support the healthcare system as it changes and evolves, embedding eHealth into everyday models of care that help link patients, service providers and communities in a connected, smarter healthcare system. For example, the electronic medical record (eMR) captures patient data and enables clinicians to order tests, schedule surgery and prepare discharge summaries electronically.

6.51   NSW Health continues to work collaboratively with the Australian Digital Health Agency and the Commonwealth to enable the effective and efficient transfer of relevant clinical information between public hospitals, private providers and the primary care sectors. This has included continued investment in HealtheNet,[21] which acts as an interface between NSW Health information systems and the My Health Record[22]. This continued investment in eHealth and system integration is providing clinicians with secure and timely access to a patient's recent medical histories. The Australian Digital Health Agency recently announced that patients in NSW will be the first to be able to view their pathology results in the My Health Record, demonstrating NSW Health's continued commitment in this area.

6.52   NSW Health is leveraging information and communication technology (ICT), data and analytics to assist staff across all levels of the health system to make informed decisions. eHealth's suite of corporate systems and analytics tools provide dashboards and reporting relating to workforce, logistics and finance. These state-wide systems and tools support reporting and management of the NSW Health workforce. Workforce reporting is incorporated into monthly reporting cycles and shared with local health districts and specialty health networks to support operational decision-making, such as for the deployment of staff, particularly for premium labour (e.g. overtime and agency staff usage).

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[21] http://www.ehealth.nsw.gov.au/programs/clinical/healthenet
[22] https://myhealthrecord.gov.au/internet/mhr/publishing.nsf/content/home

7. Achievement of improvements in healthcare delivery and health system objectives

7.1   The detail in this section covers part D of the Inquiry's terms of reference:

      d.   *The extent to which the current framework drives improvements in the health care delivery system and achieves broader health system objectives.*

7.2   Achieving improvements in healthcare delivery requires a coordinated, strategic and multifaceted approach. The NSW public health system has evolved over time to delineate roles, responsibilities and accountabilities of all NSW Health entities.

7.3   Each NSW Health entity plays a pivotal role in driving improvement across the system.

Improvements in the NSW public health system

7.4   The Service Agreements and Service Compacts in place across NSW Health organisations entail key performance indicators and service measures across key performance domains which are actively monitored and reported against at a local and state level. Many of these measures are reported publically, such as through the Bureau of Health Information, the Australian Institute of Health and Welfare, NSW Auditor General Reports, HealthStats NSW, and the NSW Health Annual Report.

7.5   Table 1 below provides a brief snapshot of a number of activity, performance and service measures, and the change over the four-year period from 2011-12 to 2015-16.

Table 1: Overview of demand and performance changes over time

Volume & Efficiency	2010-11	2015-16	Avg. annual growth rate (for applicable period)
ED presentations*	2,486,026	2,733,853	1.9%
Admissions*	1,629,572	1,886,668	3.0%
Non-Admitted Service Events* (ˇ)	Not comparable	13,478,446	-
Admissions from an elective surgery waiting list**	204,820	217,817	1.2%
Average cost per NWAU (estimated)	$4,164	$4,478 (2014-15)	1.9%
Average length of stay - acute (LOS)*	3.5 days	3.2 days	-1.2%
Performance Measures			**Avg. annual growth rate**
Emergency Treatment Performance (ETP)*	59.9%	74.2%	2.8 % points
ED presentations seen within clinically recommended timeframe**	76%	81%	1.0 % points
Elective Surgery Access Performance (ESAP)**	91.3%	97.1%	1.2 % points
Transfer of Care (TOC)*** (±) (measure commenced April 2012)	80.8% (2012-13)	87.4%	1.7 % points
Ambulance response times (minutes)(#)	10.6	11.0	0%
Safety and Quality Indicators			**National Avg.**
Adverse events arising during hospital stay (proportion of separations)** (^)	Not available	8.5% (2014-15)	10.1% (2014-15)
Unplanned Readmissions – Cataract extraction** (ˣ)	Not available	2.5 (2014-15)	3.1 (2014-15)
Falls (per 1,000 separations) ** (^)	Not available	5.6 (2014-15)	4.5 (2014-15)
Staphylococcus aureus bacteraemia (SAB) (infections per 10,000 occupied bed days)**	1.2	0.75	0.73 (2015-16)

Source: NSW Health Annual Reports
**Source: AIHW
***Source: Ministry of Health
(ˇ) Measure changed in 2015-16 so is not comparable to prior years
(±)Transfer of Care reported from 2012-13 vs. 2015-16. 2012-13 result aligned to current TOC definition.
(#) Priority category 1 median response time for potentially life-threatening cases
(^) Reported for 2011-12 vs. 2014/15
(ˣ) Per 1,000 separations, unplanned/unexpected readmissions within 28 days. NSW Health is below the national average for all 7 procedures reported by AIHW 2014-15.

7.6   It is evident from the snapshot table above that NSW Health continues to improve the delivery of healthcare despite ever increasing demand.

7.7   A number of other key achievements of the last financial year – including those delivered by local health districts, specialty health networks, and pillars – are detailed in the NSW Health Annual Report 2015-16[23].

7.8   Such examples of NSW Health's performance demonstrate the ability of the system to work collectively to deliver high-quality and safe patient care. Investment continues to be made to improve access to services as well as the patient outcomes from these services.

Volume and Efficiency

7.9   Increasing activity in NSW public hospitals continues year-on-year. In 2015-16, NSW Health delivered services for more than 2.7 million emergency department attendances and 1.9 million inpatient episodes of care. Despite demand increases, the performance of the NSW public health system continues to improve.

7.10   In 2016-17, the NSW Government invested an extra $375 million to meet patient demand for hospital and emergency department services. This includes providing an additional 79,000 emergency department attendances and 43,200 hospital admissions (including elective surgery for 4,500 more patients).

7.11   Australian jurisdictions implemented ABF at various times, with NSW Health commencing from 1 July 2012, aligned to the National Health Reform Agreement. Figure 2 demonstrates a flattening of the NWAU cost curve over recent years, with the growth rate slowing at a national level. NSW Health shows a similar flattening, with an annual growth rate of 0.8% over the three-year period from 2011-12 to 2014-15.

7.12   NSW Health continues to achieve efficiencies in financial performance. The system-wide adoption of ABF as a platform for purchasing and benchmarking financial performance has been the precursor for some significant gains:

     o   NSW Health operates below the National Efficient Price per National Weighted Activity Unit (NWAU). As our cost curve flattens, NSW Health is delivering more services whilst constraining the cost of goods and services as well as the retention of the wages cap. The Independent Hospital Pricing Authority (IHPA) has shown that NSW has the second-lowest unit cost per NWAU for public hospital services.
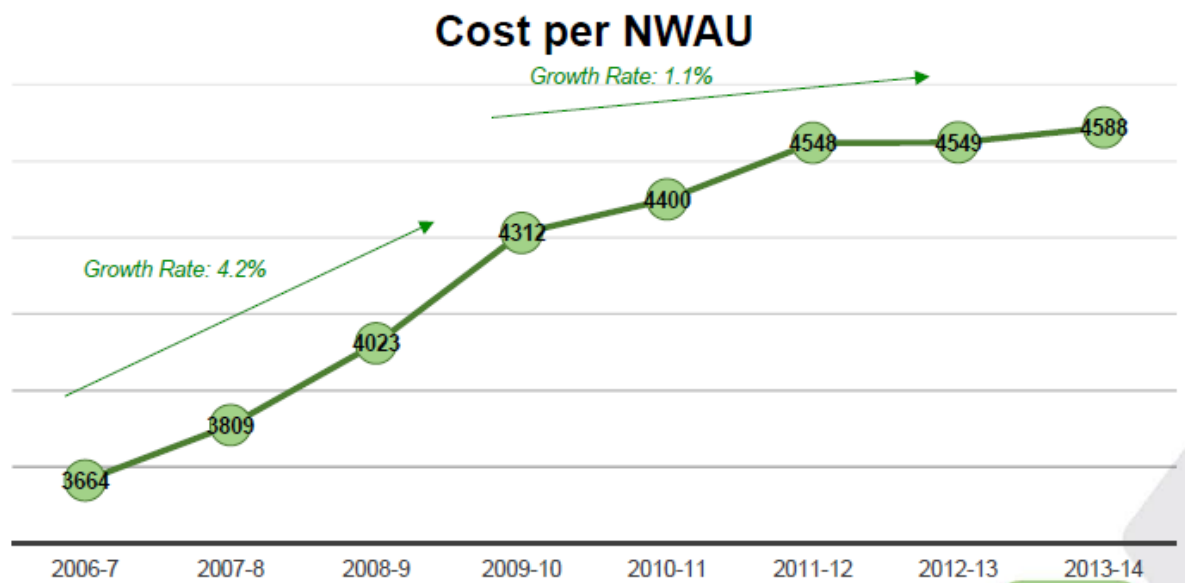
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[23] NSW Health Annual Report 2015-16

- o Transparency and accountability at local levels of management throughout local health districts and specialty health networks has been heightened. Clinicians are engaged in determining costs and this has driven the ability to benchmark across the system.

- o The ABF model has been leveraged as a 'strategic purchasing' tool through incentivising effective care, i.e. the activity volume purchased by the Ministry of Health relate directly to demand modelling for each local health district and specialty health network.

7.13 NSW Health is also leveraging Commonwealth investment to drive future efficiencies, including the National Disability Insurance Scheme (NDIS) and implementation of mental health reform.

7.14 The ability of NSW Health to deliver increasing health services to the community of NSW whilst decreasing our cost per NWAU demonstrates efficiency within the system which is driven through national agreements (e.g. NHRA) and NSW Health frameworks (e.g. Performance and Purchasing Frameworks).
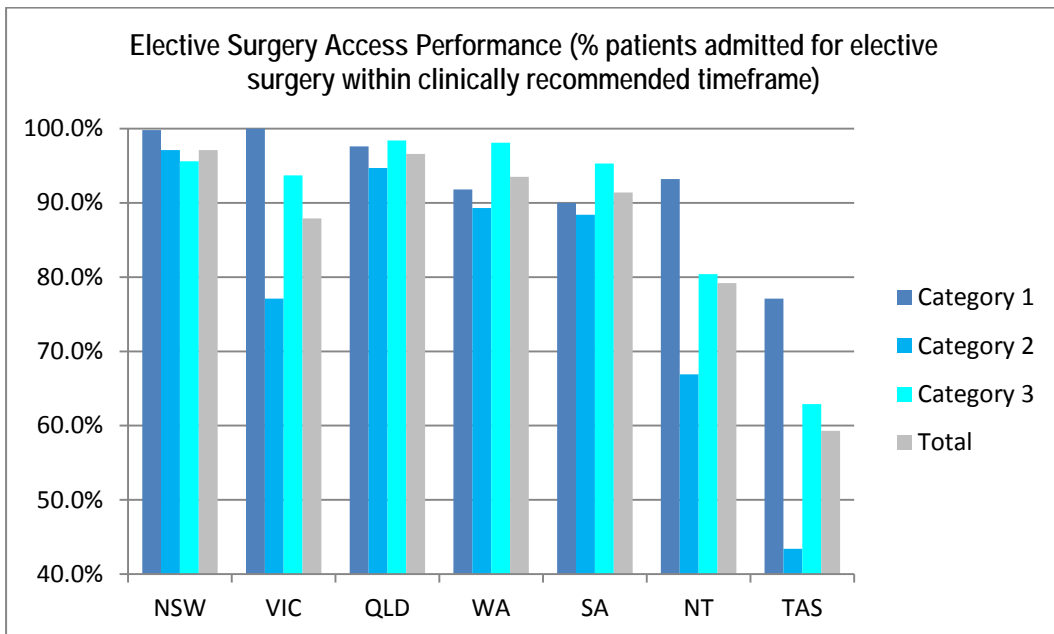
Figure 2: Cost per NWAU: National

Source: Shane Solomon, Chair, Independent Hospital Pricing Authority (IHPA): http://abfconference.com.au/program

Performance Measures

7.15   While the demand for public health services in NSW continues to grow, NSW Health is not only delivering more services, but is providing these services in a more timely, accessible and patient-centred way.

7.16   More people are being seen within benchmark times in emergency departments; more people are moving through our emergency departments within four hours; and on-time elective surgery performance remains the best in the country.

7.17   Transfer of Care performance has also increased dramatically from 79.0% of patients being transferred from ambulance to hospital within 30 minutes in 2012/13 to 83.4% in 2015/16[24]. The most recent BHI Hospital Quarterly Report for the October to December 2016 quarter showed further increases to 92.0%. This is above the benchmark target of 90%.

7.18   As reported by AIHW, NSW Health had the highest proportion of emergency department attendances[25] and delivered the highest volume of elective surgery[26] in the country in 2015-16. These reports also highlighted that NSW had the best results for elective surgery patients admitted within clinically appropriate timeframes, and was the only jurisdiction to meet all of the benchmarks for individual triage categories in emergency departments, as well as having the lowest median wait time for treatment to commence.

Elective Surgery Access Performance (% patients admitted for elective surgery within clinically recommended timeframe)

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[24] NSW Health Annual Report 2015-16
[25] Australian Institute of Health and Welfare, *Emergency department care 2015-16: Australian hospital statistics* (2016)
[26] Australian Institute of Health and Welfare, *Elective surgery waiting times 2015-16: Australian hospital statistics* (2016)

7.19   These achievements are commendable; however, it is recognised that there are still areas for improvement.

7.20   Through monitoring, reporting and management, NSW Health is able to identify performance concerns at all levels of the system and initiate remedial actions as required. This transparency about health service delivery in NSW acts as a driver for further improvement. The accountability for performance is cascaded throughout health services (from the 'system manager' at the Ministry, to local health districts and specialty health network executive teams, to hospitals and finally to clinical teams and individuals) and this also helps to support of culture of high performance and improvement.

7.21   The Performance and Purchasing Frameworks, as well as Service Agreements and Service Compacts, cascade throughout NSW Health. They drive improvements throughout the system through the linkage of NSW Health strategic priorities to purchasing decisions and performance expectations (and associated key performance indicators) so that change can be localised or systematised as appropriate to achieve the best outcomes for patients.

Safety and Quality

7.22   As a whole, Australia has a high-quality healthcare system, delivering some of the best health outcomes in the world for the population. Against a range of health indicators, Australia compares favourably with other developed countries[27].

7.23   As reported by the AIHW in the latest admitted patient care report[28] and compared to other Australian jurisdictions:

- o   The proportion of separations with a condition noted as arising during the episode of care in NSW was below the national average

- o   The rates for unplanned/unexpected readmissions within 28 days (for all selected procedures within the report) in NSW was below the national average

7.24   In NSW the Clinical Excellence Commission (CEC) was established in 2004 as one of the five key structural reforms outlined in the NSW Health Patient Safety and Clinical Quality Program (PSCQP) and as an evolution of the Institute for Clinical

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[27] Australian Institute of Health and Welfare: *OECD healthcare quality indicators for Australia 2015* (2016)
[28] Australian Institute of Health and Welfare, *Admitted patient care 2014-15: Australian hospital statistics* (2016)

Excellence. The CEC monitors NSW Health processes and performance, to provide assurance of clinical quality and safety improvement at a system-wide level. This is a central and distinct role of the CEC within the NSW health system.

7.25 Since its establishment, the CEC has gained local, national and international recognition by developing and driving programs and initiatives in collaboration with clinicians, managers, consumers and health service partners. The diagram in Figure 3 below demonstrates the breadth of programs which have been delivered by the CEC over the years which have contributed to improvements in the safety and quality of healthcare delivered in NSW.

Figure 3: Quality and safety programs delivered by the CEC

7.26 The Agency for Clinical Innovation (ACI) was established as a board-governed statutory health corporation under NSW Health in 2010. The ACI is responsible for engaging clinicians and designing and implementing best practice models of care by working with doctors, nurses, allied health professionals, health managers, and consumers.

7.27   The ACI is building capability and sustained improvements across the NSW public health system through its clinician-led networks and expertise in service redesign and evaluation, implementation support and knowledge sharing. A key focus is building this capability in frontline staff at a local level, and empowering staff to lead innovative change within their healthcare facilities.

7.28   To support safety and quality improvements in healthcare delivery, the ACI works with clinicians to develop models of care which are evidence-based and patient-focused. These are flexible and able to be adapted across various health settings, such as across metro, rural, regional and remote areas.

7.29   The ACI's Health Economics and Evaluation Team (HEET) support ongoing improvement in healthcare delivery throughout NSW Health. The work undertaken by the HEET includes unwarranted clinical variation; undertaking statistical and economic analyses; and evaluation the cost effectiveness and efficiency of implemented programs and innovations.

7.30   At the national level, the Australian Commission on Safety and Quality in Health Care (the Commission) was initially established in 2006 by the Australian, state and territory governments to lead and coordinate national improvements in safety and quality in health care. The Commission works in partnership with patients, consumers, clinicians, managers, policy makers and healthcare organisations to achieve a sustainable, safe and high-quality health system.

7.31   Noting these achievements and the substantive investment in continuous improvement in NSW and at the national level (funded by all governments on a cost sharing basis), there are areas for improvements. For example:

 o Variation in the mix of patients and types of conditions for which patients present leads to difficulties in comparing individual hospitals; however, work to understand sources of potentially unwarranted clinical variation (such as the work of the BHI on 30-day mortality and unplanned readmissions for nine conditions) are allowing NSW Health to focus improvement efforts to reduce potentially unwarranted clinical variation.

 o The rate of separations for falls resulting in patient harm in hospital was higher than the national average[29]

7.32   The implementation of eHealth technologies are opening up new opportunities to improve the integration of care, utilise alerts or decision support tools and leverage Big Data to ensure risks are appropriately and proactively identified, and subsequently addressed to prevent incidence.

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[29] Australian Institute of Health and Welfare, *Admitted patient care 2014-15: Australian hospital statistics* (2016)

Strategies and reform for continued improvement in healthcare delivery and patient outcomes

7.33   A range of initiatives are in place throughout NSW Health to continually improve safety and quality outcomes for patients, leveraging advances in ICT, data and analytics to inform these efforts. These include state, LHD and localised initiatives against all NSW Health's 8 strategic directions and strategies in the *NSW State Health Plan: Towards 2021.*

7.34   Most notably these include Leading Better Value Healthcare and Integrated Care reforms.

Leading Better Value Healthcare

7.35   Leading Better Value Healthcare is an initiative that will redesign healthcare systems to derive better patient outcomes, encourage a more collaborative, whole-of-system approach, and deliver better value healthcare to our patients.

7.36   The Ministry, collaboratively with the Agency for Clinical Innovation (ACI) and Clinical Excellence Commission (CEC), have selected eight projects for immediate focus across our system. The models of care have been designed by clinicians, consumers and managers and have been extensively evaluated by the ACI using the Institute for Healthcare Improvement's quadruple aim methodology (delivering better patient outcomes, better patient experience, better provider experience and improved efficiency).

7.37   Each of the projects selected present an opportunity to reframe NSW Health as a world leading, sustainable, patient centred health system, through improving the care of people with the following conditions:
   o   Osteoarthritis
   o   Risk of osteoporotic refracture
   o   Chronic heart failure (CHF)
   o   Chronic obstructive pulmonary disease (COPD)
   o   Diabetes
   o   Risk of diabetes related foot complications
   o   High risk of falls
   o   End stage renal disease

7.38   Better Value Healthcare involve clinicians, Pillars, local health districts / specialty health networks and the Ministry of Health working together to improve the health of the public, provide efficient and effective care, and improve the experience of care.

7.39   It also includes a number of initiatives that will support enhanced patient care in the NSW public health system. There is strong governance in place across NSW Health to ensure that patients and their carers are at the centre of all decisions. Better Value Healthcare will systematise and further strengthen this governance, leveraging new technologies, evidence based practice and approaches to addressing uncovering unwarranted clinical variation.

Integrated Care

7.40   With an ageing population and a growing number of people living with chronic or complex health conditions, people's health needs are changing and demands on the health system are increasing. NSW Health is responding to these challenges by investing in new, innovative models of integrated care, transforming the health system to routinely deliver person-centred, seamless, efficient and effective care, particularly for people with complex, long term conditions. Integrated care reflects the whole of a person's health needs; from prevention through to end of life, across both physical and mental health, and in partnership with the individual, their carers and family. It requires greater focus on a person's needs, better communication and connectivity between health care providers in primary care, community and hospital settings, and better access to community-based services close to home.

7.41   Integrated care can benefit anyone with health needs, but is particularly important for people with complex and long term conditions, helping them to manage their own health, keeping them healthy, independent and out of hospital for as long as possible (when clinically appropriate). This includes people with chronic disease, frail and/or elderly people, people with disability, and those at the end of life.

7.42   The NSW Government has committed $180 million over six years to implement innovative, locally-led models of integrated care across the state to transform the NSW healthcare system. The NSW Health Integrated Care Strategy works across three closely related areas:

   o   Three Integrated Care Demonstrator Sites: Central Coast, Western Sydney and Western NSW Local Health Districts which have begun to implement large scale integrated care initiatives in partnership with other sectors to join up services for local populations.

o The Innovator Sites: All local health districts and specialty health networks that are not Demonstrators have been funded for local, discrete integrated care initiatives. Seventeen projects in total have been funded as Integrated Care Innovators.

o The State-wide Enablers for integrated care, including the information structure such as HealtheNet: the information technology system that links patient information between hospitals and primary care and tools to support integrated care such as patient reported measures and risk stratification tools.