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# *NSW Infrastructure*

## *Health Infrastructure Baseline Report*

*Infrastructure NSW*

*June 2012*

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## 1 Key highlights

- The NSW Government has \$10.4 billion in health assets (fair value) - about 73 per cent is building value, 16 per cent land value and the remainder plant and equipment and infrastructure systems.<sup>1</sup>
- The infrastructure is diverse and much of it is ageing with 40 per cent of assets more than 50 years old.
- Investment in infrastructure expands capacity but significant investment is also required to reconfigure existing facilities.
- Infrastructure investment can support contemporary, lower cost models of health care. For example ICT applications in health can enable increased delivery of lower cost care outside of hospital.
- Even allowing for expansion of less capital intensive models of care such as hospital in the home, the Ministry of Health forecasts the demand for additional hospital beds will grow at 200 acute beds and 75 sub-acute beds per annum to 2021
- A NSW Health review indicated that replacing, reconfiguring and maintaining the existing asset base (i.e. without any growth in services) would cost about \$865 million per annum and catering for service growth would be an additional \$365 million per annum – a total of more than \$1.2 billion per annum in real terms.
- Supporting infrastructure for new facilities can also increase the total capital spend. For example Roads and Maritime Services advise substantial investment in transport infrastructure is needed given existing levels of congestion as well as increased demand resulting from the proposed Northern Beaches Hospital development.
- The NSW Government has committed \$4.7 billion over the next 4 years to fund priority projects across metropolitan and regional NSW including developing hospital infrastructure at Campbelltown (\$139 m), Blacktown/Mount Druitt Hospital (\$270m) Dubbo Base (\$79.8 m), Port Macquarie Base (\$110 m), Wagga Wagga Base (\$270 m), South East Regional Hospital at Bega (\$170m), Tamworth Regional Referral Hospital (\$220m), Lachlan Health Service, Parkes & Forbes hospitals, Hornsby Ku-ring-gai hospitals (\$120m), Royal Prince Alfred North West Precinct development including Missenden Mental Health (\$67m), Prince of Wales Hospital New Cancer and Advanced Treatment Centre (\$76.6 million), and a new St George Hospital Emergency Department (\$35.5 million).
- The private sector contributes to state health infrastructure provision (e.g. through public private partnerships to build public hospitals), however NSW has a higher proportion of private patient activity (about 16% of separations) in public hospitals compared to the other most populous States and relatively fewer private hospital beds. Despite this, the private sector has reported spare capacity in existing hospitals which provides an immediate opportunity to purchase some services from the private sector without the need for capital expenditure.
- While \$4.7 b in capital expenditure has been committed by the NSW Government over the next 4 years but there is a gap of \$3b for the following 6 years if NSW Health's desired level of expenditure is compared to historic trends.

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<sup>1</sup> NSW Government Budget Papers 2011-12, Infrastructure Statement, Budget Paper No. 4.

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- There is evidence of capital under-expenditure in NSW especially when comparisons are made with other States and an increased capital budget is recommended. However, strategies have been identified that can help reduce demand, particularly for hospital based care, and to deliver infrastructure more efficiently in partnership with the private sector.

### **Suggested strategies**

There are two broad groups of strategies proposed for this sector to better manage demand and to increase the supply of infrastructure at an efficient cost:

1. **Increasing use of innovative models for out of hospital care to reduce demand on infrastructure with the same or better clinical outcomes**
  - New models of care drive the need for different infrastructure (other than hospital beds). These needs can be met by ‘repurposing’ community health centres and other existing assets, more use of hospital in the home and greater use of technology e.g. to provide remote and proactive monitoring of patients in non-hospital settings.
  - These infrastructure strategies lower both capital and operating cost with the same or better clinical outcomes and can flatten the growing demand curve for services provided in health facilities
2. **Greater use of private partnerships to purchase services for public hospital patients for greater efficiency and to improve the competitive characteristics of the health market**
  - In the short term this strategy involves purchasing services for public hospital patients and exploits existing under-used infrastructure in the private sector. This strategy will reduce capital costs to Government by deferring the need for capital expenditure.
  - A new facility design will involve mixed private and public providers co-located in health precincts and specialist centres, where both public and private facilities are operated by the private provider. This new model of PPP, in which government partners with private providers of infrastructure and services, offers significant benefits and lower risk than the PPP models previously applied in NSW.
  - In the long term, this strategy will reduce capital costs to Government, improve the competitive characteristics of the NSW health market and increase productivity across the health sector.

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## 2 Introduction

Infrastructure NSW (INSW) is conducting a high level stocktake of NSW's social infrastructure including the health sector to inform the development of strategies for improved social infrastructure provision. This stocktake is to inform the 20 year NSW State Infrastructure Strategy. PwC has been engaged to assist in this task.

### **Purpose of this report**

In this report we seek to:

- Establish a baseline of the existing asset base and existing strategies and patterns of investment
- Provide high level responses to the following questions:
  - How is infrastructure currently planned and managed?
  - What is the condition of the existing assets?
  - What is the current capacity and ability to meet demand?
  - How is the infrastructure performing?
  - What are the critical gaps?
  - What strategies can be employed to improve the provision of health infrastructure in NSW?

### **Scope of this report**

The scope of this report includes:

- Baseline information on NSW's existing public health infrastructure
- Analysis of past public and private funding trends for health infrastructure in NSW
- Projected demand for health services (particularly hospitals) and NSW Health's plans for meeting this demand
- Current forecasts of NSW government expenditure over the next 20 years
- A high level overview of non government health infrastructure and service provision
- Priorities and strategies for improving health infrastructure in future

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## 3 The health system in NSW

The following section provides an overview of the health system in NSW with a focus on the public and private hospitals sectors. While other elements, such as private specialists, general practice and other health providers deliver important services and are a large part of the health system, they have not been analysed in detail.

### 3.1 Public sector

- NSW has 226<sup>2</sup> public hospitals controlled by a Local Health District (LHD) or a public health organisation. They represent the vast majority of assets by fair value and also represent the highest usage patterns of NSW Health's physical assets. Hospitals are also the most affected by changes in clinical practice and in patient service demand thus represent an overwhelming proportion of asset related service planning initiatives.
- 143 community health centres operate across the state and aim to provide a broad range of primary health services and health promotion activities to local populations, particularly those who have or are at risk of the poorest health and have the greatest economic and social needs.
- 87 child and family health centres aim to promote the health of infants, children and their families.
- There are 21 affiliated Health Organisations which are other health facilities such as Hammond Care Health and Hospitals in Greenwich and the War Memorial Hospital in Waverly registered under Schedule 3 of the Health Services Act 1997.<sup>3</sup>
- 10 oral health clinics deliver dental services in clinics based in schools, community health centres and hospitals across the state. The services provided include general dentistry such as examinations, fillings, and dentures. There are two Teaching Hospitals - the Westmead Centre for Oral Health and the Sydney Dental Hospital that also provide specialist services in their clinics and through outreach programs in rural public dental clinics. The specialist services include paediatric dentistry, oral and maxillofacial surgery, endodontics, periodontics.
- Public nursing homes are facilities at which residential care is provided. NSW Health has gradually been reducing its delivery of stand alone residential aged care facilities and it is anticipated the remaining homes will be closed or transferred to other operators.

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<sup>2</sup> Australian Institute of Health and Welfare.

<sup>3</sup> NSW Health Services and Facilities, accessed on 12 April at < [http://www.health.nsw.gov.au/pubs/2010/pdf/annualreport10\\_295-358.pdf](http://www.health.nsw.gov.au/pubs/2010/pdf/annualreport10_295-358.pdf)>.

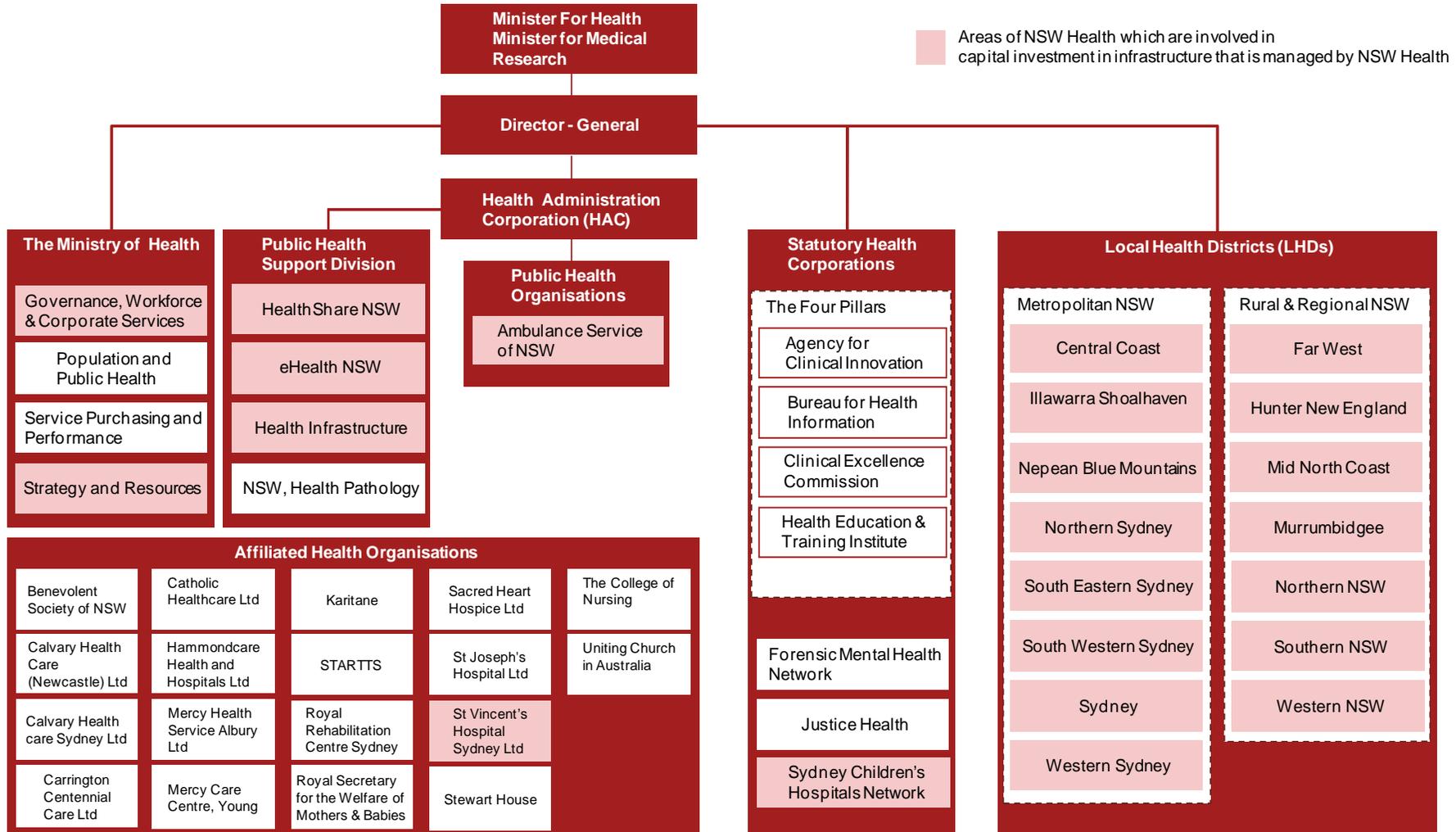
### 3.1.1 Existing governance arrangements

Significant reform to funding, planning and delivery of services in the health sector is being implemented following the 2011 National Health and Hospitals Network Agreement between the State and Federal Governments. In addition, the NSW Government has established 15 Local Health Districts (LHDs), two specialist health networks, Sydney Children's Hospitals Network (Randwick and Westmead) and Justice and Forensic Mental Health; the St Vincent's Network; and the Ambulance Service of NSW. LHDs will have increased governance over areas such as clinical service and infrastructure planning compared to their predecessors (formerly 8 Area Health Services).

- The National Health and Hospitals Network Agreement 2011 between the NSW and Commonwealth Governments changed the dynamic of healthcare funding and governance in NSW.
- A key change is the standardisation of national payments to health services on the basis of activity (known as Activity Based Funding or ABF). Funding will be jointly provided by the Commonwealth and State Governments with the Commonwealth gradually increasing its share of the total by paying for 50% of growth from 2015.
- ABF will be underpinned by a Nationally Efficient Price (NEP) for specific health activity. The NEP is to be established from 1 July 2012 and, together with agreed activity volumes, become the driver of health payments from 2015.
- A number of new national bodies have been established to assist in implementing these changes, including the Independent Hospital Pricing Authority (IHPA) which is responsible for setting the NEP and new National Health Funding Authorities that will administer funds to LHDs.
- The Funding Authority will receive deposits from States and the Commonwealth on the basis of agreed activity volumes and the NEP and then make payments to LHDs.
- Earlier health reform arrangements had proposed changes to capital responsibilities however the National Healthcare Agreement 2011 continues the historical responsibilities of the States for system-wide public hospital capital planning and management.
- In response to both the national agreement and the NSW Government's priorities, NSW has restructured its health system. The reforms include:
  - Department of Health changing to the Ministry of Health with a change in role and responsibilities.
  - The transfer of some functions from the Department of Health to the "Four Pillars" (Health Education and Training Institute, Agency for Clinical Innovation (ACI); Bureau of Health Information (BHI); and, the Clinical Excellence Commission (CEC).
  - The creation of 15 Local Health Districts and three Health Networks to replace 8 Area Health Services.
- The transition from the Department of Health to the Ministry of Health has meant a greater focus on the provision of Westminster functions supporting the Minister and the Government; regulatory functions, statewide and strategic planning facilitation and coordination, public health functions (disease surveillance, control and prevention) and performance monitoring of hospitals and health services.
- Each LHD or Network is comprised of public hospitals and health services with a geographic or functional connection, which are large enough to operate efficiently and provide a reasonable range of hospital services, and small enough to enable the LHD to be effectively managed to deliver high quality services.

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- Each LHD is governed by a Chief Executive Officer (CEO) and a Board comprised of a professional membership of clinicians, healthcare management experts and community representatives.
  - Each LHD is responsible for clinical governance, operational performance management, clinical services development and coordination, financial management, communications and service planning within the LHD.
  - The Ministry of Health has an overarching role as the system manager responsible for managing LHDs role within statewide strategic planning and the monitoring of the state's hospital performance.
  - Part of the transition to ABF involves the LHD negotiating an annual Service Agreement with the Ministry of Health. The Service Agreement will specify services to be provided and funded and the base level performance criteria to be used by the Ministry.
  - The new roles of the four pillars have been designed to promote an evidence-based approach to the development of models of care and quality service delivery, transparency of budgetary and performance information and promote further avenues for clinical engagement.
  - As new structures and roles are being bedded down in NSW, there is a risk that local level planning decisions may not align with those undertaken at a state level by the Ministry or its separate delivery body (NSW Health Infrastructure) overseeing delivery of infrastructure investments. Accountabilities, roles and delegations of authority need to be made very clear to avoid paralysis in decision making and to allow effective planning and delivery.

**Figure 1 – Organisation map of NSW health system**



Source: Adapted from diagram provide by the NSW Ministry of Health

## LHDs, Health Infrastructure and the Ministry of Health each have roles in asset planning and delivery

### *Asset & Facility Management Model – Core Accountabilities*

Local Health District (LHD)	Health Infrastructure (HI)	Ministry of Health (MoH)
<p>Accountable for services to their population catchments within geographic boundaries including:</p> <ul style="list-style-type: none"> <li>• Coordination and management of planning and delivery of capital investment works up to \$10M.</li> <li>• Service planning (also a responsibility of MoH).</li> <li>• Asset systems implementation and management</li> <li>• Facilitation of FF&amp;E for all projects.</li> <li>• Hospital commissioning of capital projects, site OH&amp;S and building commissioning.</li> <li>• Implementation, compliance and reporting against state policies or regulations</li> <li>• All industrial issues and media/communication issues arising from capital investment, asset and portfolio management within the LHD (including consultation with MoH and HI depending on nature of issue).</li> </ul>	<p>Accountable for procurement of major works and system-wide infrastructure development:</p> <ul style="list-style-type: none"> <li>• Procurement of major works over \$10M, based on LHD and statewide service planning.</li> <li>• Property support services including disposals, where related to a major work, retail, and car parking management.</li> <li>• Coordination and development of technical guidelines for health facilities (Australian Health Facility Guidelines) in consultation with the NSW Health system and other jurisdictions.</li> <li>• Project risk management service to LHDs for all capital investment projects over \$1M.</li> <li>• Establishment and maintenance of pre-qualified contractor schedule in line with the Treasury capital procurement default system.</li> </ul>	<p>Accountable for statewide policy and planning for services:</p> <ul style="list-style-type: none"> <li>• Health policy, statutes, regulation, risk management, standards, resource allocation, reporting and investment prioritisation.</li> <li>• Strategic portfolio planning and property acquisition and disposal.</li> <li>• Inter-Government negotiation.</li> <li>• Management, development and implementation of the Government’s Total Asset Management policies within the NSW Health system.</li> <li>• Development of the Capital Investment Strategic Plan</li> <li>• Coordination of capital and infrastructure investment programming and reporting.</li> <li>• Approval and promulgation of capital and total asset management policy, including the Australian Health Facility Guidelines.</li> <li>• Provision of service planning guidelines and tools and support for LHD planning.</li> <li>• Review of planning by LHD in regard to system wide issues.</li> </ul>

Source: NSW Ministry of Health

An overview of the existing NSW Health planning process is provided at Appendix A.

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### 3.1.2 Complications of Commonwealth and State roles in NSW

- While the National Health and Hospitals Network Agreement 2011 will change the structural and governance underpinnings of the health system, the respective roles of the Commonwealth and states in the delivery of health services mean that a number of historical impediments and related incentives across the health care system remain factors in capital and asset planning decisions.
- Some of these challenges include:
  - Lack of capacity to leverage the whole health asset base because different levels of Government have levers for different parts. This means LHDs can only plan for those activities for which they are responsible and have funding. For example, Commonwealth funding for GP services limits LHDs capacity to enhance the interface between GP and hospital-based care and community care.
  - Lack of a coherent set of incentives for efficient allocation of capital. The Commonwealth's contribution of 50 per cent of efficient growth in activity using ABF from 2015 is not matched with a capital contribution to funding which means it doesn't have the incentive to consider the user cost of capital when deciding the growth it will fund. This means any resulting additional capital must be funded by the state.
  - Workforce development challenges due to a combination of factors with some under Commonwealth control, such as university places and some with greater state control e.g. the number of training places in teaching hospitals and the implications of ABF on teaching, training and research.
  - Incentives for public health services to attract private revenue (through both private health insurance and non-admitted Medicare Benefits Schedule sources) in order to attract and retain specialist medical providers which can adversely affect the competitive characteristics of the health market by reducing market share for private providers.
- Notwithstanding initiatives that change the respective roles, such as the introduction of Medicare Locals and increased clinical placement funding, these and other problems, without intervention, constrain progress towards more sustainable and integrated capital and operational planning.

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## 3.2 Non-government sector

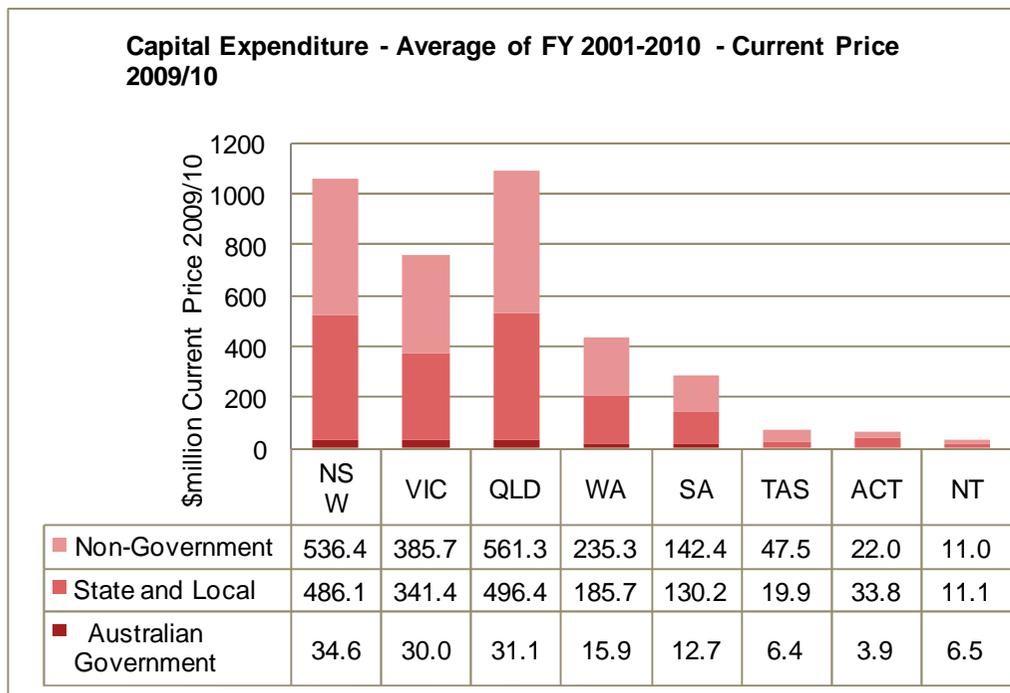
- The private and not-for-profit sectors provide a broad spectrum of health services including through private hospitals, medical practitioners, pharmaceutical retailers, dental practitioners and administration and research. These services are provided in a range of settings (hospitals, homes, consulting rooms, retail settings etc).
- The non-government sector provides most nursing home services and most non-hospital care in Australia although a proportion of this is funded by Government e.g. through medicare claims, Commonwealth activity funding, private health insurance rebates and subsidies for pharmaceutical. The non-government sector funds around 30.1% of Australian health expenditure – most of this is from private individuals (e.g. through health insurance and out-of-pocket expenses and through compulsory motor vehicle third-party and workers compensation insurers).<sup>4</sup>
- Supporting infrastructure is diverse and widely dispersed and apart from private hospitals, comprehensive statistics are not available – some information about GPs and private hospitals is provided below. However, of the \$5.0 billion health capital expenditure (Australia wide) in 2009-10, over 40% was by the non-government sector. This ratio has fluctuated between 40 to 70% over the last 10 years (usually a larger share than either the state or Australian governments) – it reflects who directly incurs a capital investment but does not account for the final funder e.g. funds may be indirectly re-couped from government for some facilities through charging for provision of services.<sup>5</sup>

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<sup>4</sup> AIHW, Health Expenditure Australia 2009-10, p. 22.

<sup>5</sup> AIHW, Health Expenditure Australia 2009-10, p. 79.

**Over the past decade 56% of all capital investment in health has been delivered through the private sector in NSW – this includes all expenditure on health infrastructure (not just hospitals)**



Source: Australian Institute of Health and Welfare, Health Expenditure Australia, 2009-10

- AIHW attributes capital expenditure to the entity that incurs the expense rather than the ultimate funder i.e. if under a public private partnership, the private provider incurs the capital expense of a new hospital, the expenditure is attributed to the non-government sector rather than the public sector.
- The relatively high ratio of private expenditure in NSW can be attributed to use of PPP models for some public hospitals over the last decade and in particular the 4 projects outlined later in section 9.

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### 3.2.1 GPs

- There were 2,731 GP practices (and more than 7,400 GPs) operating in NSW on 30 June 2010 and 45% of these were solo practices.<sup>6</sup> NSW has the highest proportion of solo practices of any state.
- Local networks of general practices for geographical areas are called divisions – there are 34 of these in NSW.
- GP services provide primary care and prevention and early intervention programs. Most divisions of GPs have programs or activities targeting specific health issues such as immunisation for youth and young people and Indigenous Australians, type II diabetes programs, mental health, injury prevention for older people or screening programs e.g. breast cancer screening.<sup>7</sup>
- GPs can be a central point for a collaborative approach to coordinating patient care between specialists and primary health care providers.<sup>8</sup> Mental health programs are the most common but initiatives with hospitals e.g. quality use of medicines and admission/discharge notifications and other primary care providers e.g. chronic disease management are also common.<sup>9</sup>

### 3.2.2 Private hospitals

- Private hospitals are privately owned and operated institutions (either for profit or by the not for profit sector) that cater for patients who are treated by a doctor of their own choice.<sup>10</sup>
- They operate under activity based fee-for-service contracts with private health insurers, which result in incentives for additional activity. They therefore prioritise maximising efficient throughput and ensuring sustainable and high utilisation of capacity (and therefore capital decisions are made accordingly).
- Private hospitals do provide services to public patients for some Medicare eligible patients who elect to be treated as a public patients and under agreements with public hospitals – in 2010/11, this accounted for less than 1% of separations (episodes of care for admitted<sup>11</sup> patients) from private hospitals in NSW. In addition separations funded by the Department of Veterans Affairs accounted for 4.6%<sup>12</sup>

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<sup>6</sup> Primary Health Care Research and Information Service 2011, *Summary Data Report of the 2009-2010 Annual Survey of Divisions of General Practice*, p. 7

<sup>7</sup> Primary Health Care Research and Information Service 2011, *Summary Data Report of the 2009-2010 Annual Survey of Divisions of General Practice*, p. 19

<sup>8</sup> Primary Health Care Research and Information Service 2011, *Summary Data Report of the 2009-2010 Annual Survey of Divisions of General Practice*, p. 31

<sup>9</sup> Primary Health Care Research and Information Service 2011, *Summary Data Report of the 2009-2010 Annual Survey of Divisions of General Practice*, p. 31

<sup>10</sup> Some hospitals which deliver public hospital services are privately owned. These are classified as public as they operate on behalf of and funded by government.

<sup>11</sup> An admitted patient is a patient who undergoes a hospital's formal admission process to receive treatment and/or care. This treatment and/or care is provided over a period of time and can occur in hospital and/or in the person's home (AIHW definition).

<sup>12</sup> AIHW Hospital Statistics, 2010-11, p. 179

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- Elective procedures can be accessed relatively sooner in private hospitals with the benefits of private ward accommodation and choice of doctor subject to a patient's insurance cover and/or willingness to pay.
  - There are 179 private hospitals in NSW – 87 acute and psychiatric hospitals (licensed by the NSW government – 67 of these are for profit) and 92 free standing day hospital facilities (approved by the Australian Government Department of Health and Ageing).<sup>13</sup>
  - Private hospitals often serve a range of specialties, usually dependent on their ability to attract surgical staff. There are also a small number of large, full-service private hospitals that offer a comparable range of specialties to those in large public hospitals.
  - About two thirds of NSW private hospitals and beds are in the Sydney metropolitan area.
  - The Ministry of Health (the Private Health Care Unit) is responsible for licensing private hospitals and private day hospitals and mandates a range of operational and quality requirements including building regulations (referenced to the Building Code of Australia), provision of specialty services as well as safety and quality considerations.
  - The majority of patients who use private acute and psychiatric hospitals have private health insurance (88.1% in NSW)<sup>14</sup>
  - In 2010/11, there were more than 1 million separations from private hospitals – 39% of the NSW total<sup>15</sup>
  - Private hospitals accounted for about 27% of patient days and around 50% of same day separations.<sup>16</sup>
  - The number of separations has been growing faster in private hospitals (averaging 5.8% per annum since 2006-07) than public hospitals (2% per annum).<sup>17</sup>
  - Across Australia, separation rates from private hospitals are higher in major cities compared to regional and remote areas.<sup>18</sup>
  - Additional information about acute/psychiatric hospitals and the types and number of care units in private hospitals is provided in the table on the following page.

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<sup>13</sup> ABS Private Hospitals 4390.0, 2009-10, p. 10

<sup>14</sup> ABS Private Hospitals 4390.0, 2009-10, p. 27

<sup>15</sup> AIHW Hospital Statistics, 2010-11, p. 145

<sup>16</sup> AIHW Hospital Statistics, 2010-11, p. 175. A 'separation' is defined by AIHW as a n episode of care for an admitted patient which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending in a change of type of care (for example, from acute to rehabilitation).

<sup>17</sup> AIHW Hospital Statistics, 2010-11, p. 145

<sup>18</sup> AIHW Hospital Statistics, 2010-11, p. 154

**Private hospitals provide around 25% of hospital beds, account for close to 1 million patient separations (episodes of care) and have capacity to provide a wide range of care in specialty units**

**Characteristics of NSW private hospitals, 2009-10**

<b>Number of hospitals:</b>	<b>179</b>	<b>Operating theatres (acute):</b>	
Acute	78	No. of hospitals with operating theatres	60
Psychiatric	9	No. of operating theatres	340
Freestanding day hospital	92	<b>Operating theatres (day surgery):</b>	<b>245</b>
<b>Available beds:</b>		No. of hospitals with operating theatres	62
Acute	6083	No. of operating theatres	93
Psychiatric	501	<b>No of hospitals with specialised wards or units:</b>	
Day (beds/chairs)	1581	Labour wards	18
<b>Patient separations:</b>		Hospitals with psychiatric wards/beds (no.)	17
Acute and psychiatric ('000)	742	Emergency Department	4*
Day hospital ('000)	225	Separate Intensive Unit and/or separate Coronary Care Unit	26

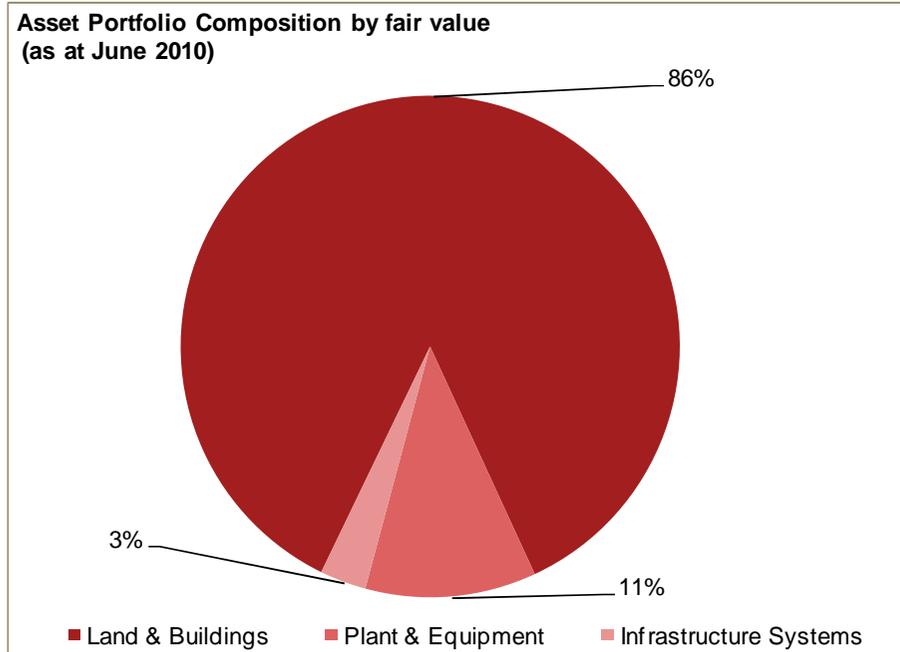
\* This number is sourced from ABS. NSW Health advises it is only aware of two private emergency departments in NSW.

Source: ABS 4390.0, Private Hospitals, Australia 2009-10

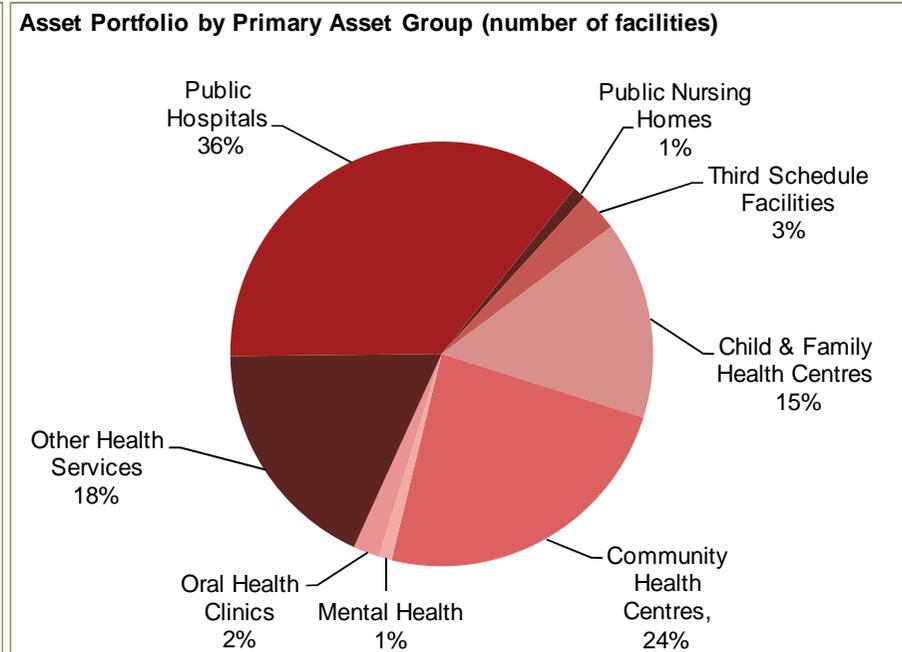
## 4 NSW Health's asset portfolio

### 4.1 Existing asset base

The asset base of the NSW public health system is extensive, varied and functionally diverse. The assets have an estimated \$19 billion replacement value or \$10.4 billion fair value.



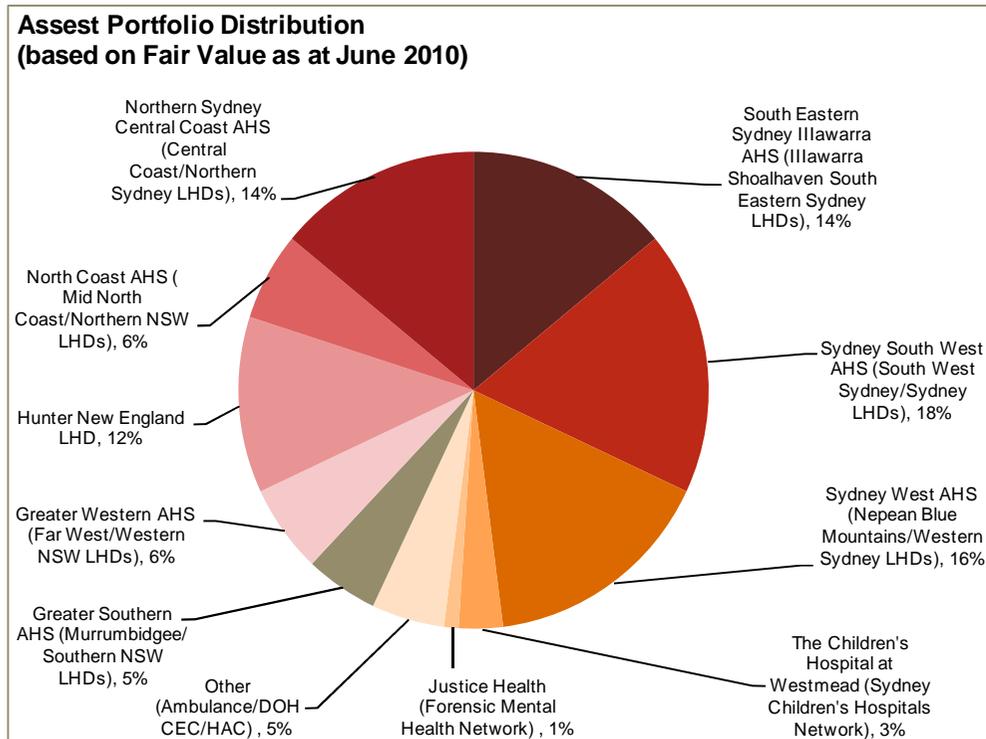
Source: NSW Department of Health Annual Report 2009-10



Note: Third schedule facilities are administered by charitable institutions or religious bodies that appoint their own governing bodies and receive extensive subsidies from the NSW Government.

Source: 2011 Local Health District Audit of Capital Infrastructure, Equipment and Technology

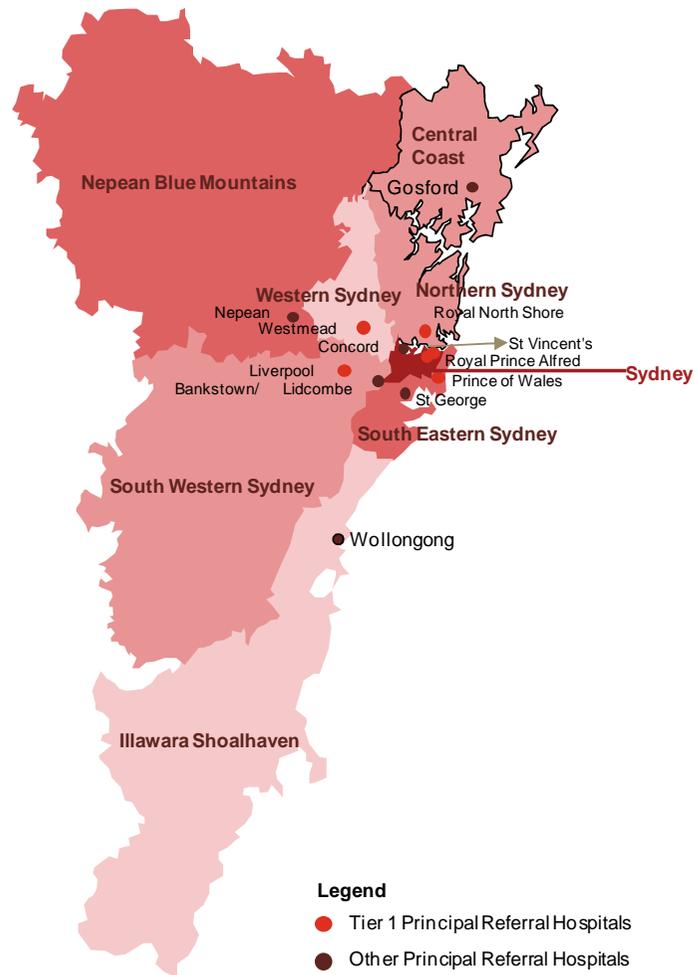
Health facilities are widely distributed across the state but concentrated where the population is with the majority of facilities by fair value located in metropolitan areas. The graph below shows the distribution of assets across the former Area Health Services.



Source: NSW Department of Health Annual Report 2009-10

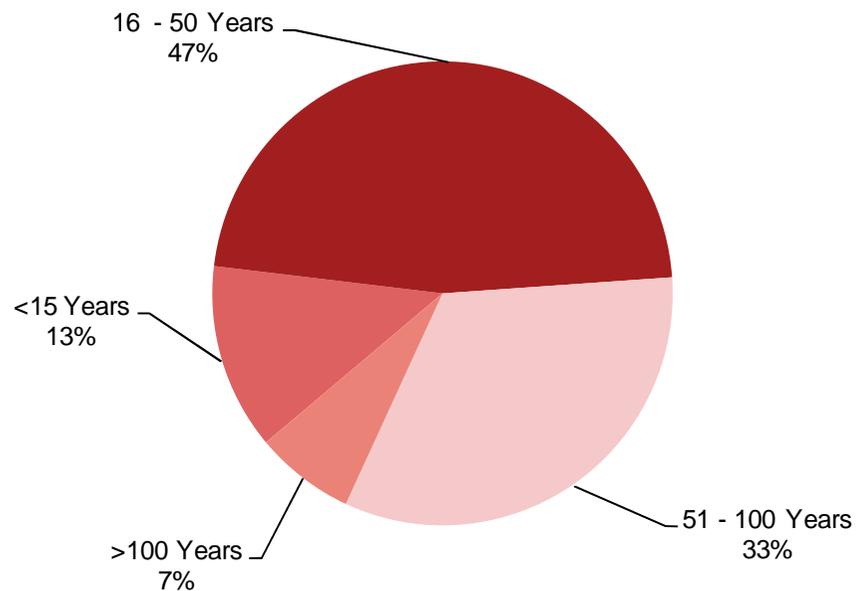
NSW's largest hospitals (principal referral hospitals) are concentrated in the metropolitan region (refer map below) with one in Newcastle. Over time, some of these have become health care 'campuses' with a mix of new and old facilities and the full spectrum of health services and associated research and tertiary training centres available in close proximity

### Location of Principal Referral Hospitals



## Ageing infrastructure and its location impacts on the functionality, efficiency, and ultimately the quality and safety of health care delivery

Average Age Profile of Health Facilities



Source: 2011 Local Health District Audit of Capital Infrastructure, Equipment and Technology

- Structural inflexibility and the long life cycle of health facilities contrasts with their rapidly changing service delivery requirements. Their configuration often reflects the practice of health care and patient populations of the past and even relatively new hospitals have faced facility based difficulties in keeping pace with changing methods of health services delivery.
- A significant proportion of the NSW Government's health asset portfolio is ageing with 40% of the NSW health facilities being greater than 51 years and 87% being aged more than 15 years. The ageing stock is often inflexible and tends not to meet current functional requirements.
- A significant proportion of buildings are of heritage significance placing constraints on its reuse and adaptability.

## 5 Comparisons of hospital infrastructure provision with other states

- Comparisons of public hospital size, availability of speciality services and the beds available in major cities, regional and remote areas suggests there may be some scope for reconfiguration of services in NSW (the NSW percentage of the national total can be compared to a 33% share of the national population). Closer analysis of differences in reporting between states is needed to confirm this.
- NSW has more separate intensive care units and emergency departments and proportionately more public hospital beds than other states (although the large difference in emergency departments appears to reflect reporting differences between states). NSW has more than twice the number of public hospital intensive care units of Victoria and nearly four times Queensland.
- Delivery of some speciality services in other states is consolidated in fewer locations even across geographically large areas. Consolidation of speciality services in centres of excellence can improve the quality of care as these centres have greater capacity to attract a critical mass of specialist clinicians, facilitate high standards of training and invest in advanced speciality equipment.

### Comparison of public hospital size and key speciality services, 2010-11

<i>Hospital size</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>WA</i>	<i>SA</i>	<i>National</i>	<i>NSW percentage of National</i>
10 or fewer	29	40	74	43	11	212	14%
More than 10 to 100 beds	148	72	72	34	60	395	37%
More than 100 to 500 beds	40	35	19	15	7	121	33%
More than 500 beds	9	4	5	2	2	24	38%
Total	226	151	170	94	80	752	30%

<i>Specialty services</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>WA</i>	<i>SA</i>	<i>National</i>	<i>NSW percentage of National</i>
Intensive Care Unit	38	18	10	4	4	80	48%
Hospitals reporting emergency department presentations*	86	39	26	17	8	187	46%

Source: AIHW, Australian Hospital Statistics 2010-11

\* This includes all hospitals reporting emergency department presentations rather than only those included in the ABS definition of an emergency department which may reflect different reporting practices in each state and result in an overestimate of the NSW proportion (refer p. 113 of Australian Hospital Statistics). NSW has 34% of emergency departments if the ABS definition is used.

**NSW has more public hospital beds per capita than other states but less private beds with the proportion of same-day separations (episodes of care) relatively low from public hospitals and high from private hospitals**

***Number and activity of public hospitals, 2009 - 10***

	Number of hospitals	Number of hospital beds*	Number of hospital beds per 1,000 residents	Number of separations	Number of separations per 1,000 residents	Proportion same-day separations
New South Wales	226	19,607	2.7	1,542,968	204.3	44.7
Victoria	150	13,186	2.4	1,424,663	248.8	56.8
Queensland	170	10,911	2.4	922,970	204.8	50.9
Western Australia	95	5,376	2.4	505,909	222.8	53.3
South Australia	80	4,859	2.9	383,055	217.3	45.3
Tasmania	24	1,359	2.7	101,673	188	50.4
ACT	3	907	2.6	88,356	263.6	53.9
Northern Territory	5	694	3	99,694	486.8	63.2
<b>Australia</b>	<b>753</b>	<b>56,900</b>	<b>2.6</b>	<b>5,069,288</b>	<b>221.4</b>	<b>50.8</b>

Source: AIHW, Australian Hospital Statistics 2009-10

\* Number of hospital beds is the average number of beds which are immediately available for use by an admitted patient within the establishment

***Number and activity of private hospitals, 2009 - 10***

	Number of hospitals	Number of hospital beds	Number of hospital beds per 1,000 residents	Number of separations	Number of separations per 1,000 residents	Proportion same-day separations
New South Wales	173	6,967	1.0	960,706	126.2	70.1
Victoria	161	7,501	1.4	885,776	153.3	66.3
Queensland	106	6,359	1.4	844,953	185.7	67.9
Western Australia	55	3,436	1.6	381,300	166.8	68.4
South Australia	56	2,308	1.4	270,015	147.6	65.4
Tasmania	8	948	1.9	n.p.	n.p.	n.p.
ACT	12	392	1.1	n.p.	n.p.	n.p.
Northern Territory	2	127	0.5	n.p.	n.p.	n.p.
<b>Australia</b>	<b>573</b>	<b>28,038</b>	<b>1.3</b>	<b>3,461,715</b>	<b>149.5</b>	<b>67.7</b>

n.p. : Not available for publication

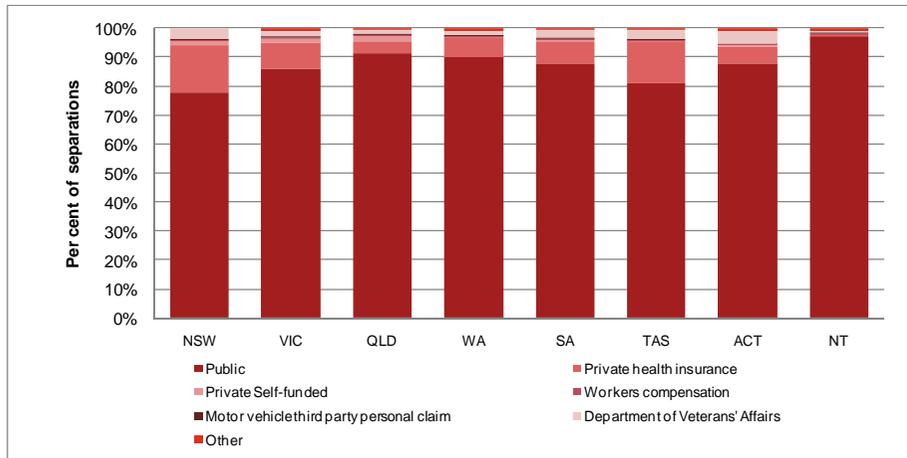
Source: Australian Hospital Statistics 2009-10 (AIHW) and ABS Private Hospitals, 4390.0  
2009/10 data has been used as 2010/11 private hospital data had not been released at the time of writing.

The number of public hospital beds provided in NSW is high relative to other major states across major cities, regional and particularly remote locations.

Number of average available public beds per 1,000 population resident in area	NSW	Vic	Qld	WA	SA	National	NSW percentage of National
Major cities	2.6	2.3	2.3	2.4	2.8	2.5	104%
Regional	3.1	2.7	2.6	2.2	3.3	2.8	111%
Remote	5.6	3.0	4.2	2.8	6.7	3.9	143%
<b>Total</b>	<b>2.8</b>	<b>2.4</b>	<b>2.5</b>	<b>2.4</b>	<b>3.1</b>	<b>2.6</b>	<b>104%</b>

NSW has actively sought to increase the proportion of patients admitted as private patients in public hospitals in order to increase operating revenue from private sources. A portion of these admissions could also be contributing to greater demand for capital funding from the NSW Government.

**Share of public hospital separations by patient funding source, 2010-11**



Source: Australian Hospital Statistics 2010-11 (AIHW)

- About 16% of patients in NSW public hospitals elect to be admitted as private patients compared to 9% in Victoria and 5% in Qld
- This is effective in capturing revenue that would otherwise need to be substituted with public funding – for example in the case where patients admitted through an emergency department elect to be admitted as private patients.
- However, for other types of admissions (particularly elective surgery) it also contributes to barriers to growth or entry of the private sector.
- Maximising private revenue can relieve pressure on public hospital operating revenue but is unlikely to be adequately accounting for the cost of additional capital required for these services in the public system
- Hospital CEOs have incentive to capture this revenue for both financial and medical workforce reasons, but may not have sufficiently clear accountability for managing the long term capital implications

**Private hospitals in NSW also provide less accident and emergency care compared to the other major states**

**Accident and emergency treatment in private hospitals 2009-10**

	<i>Number of hospitals treating accident and emergency cases</i>	<i>Number of hospitals with an emergency department<sup>19</sup></i>	<i>Number of accident and emergency patients treated</i>
NSW	6	4 *	62,619
VIC	14	6	143,147
QLD	10	8	141,317
WA	3	3	124,280
TAS, SA, NT & ACT	n.p	n.p	n.p
<b>Australia</b>	<b>41</b>	<b>26</b>	<b>526,931</b>

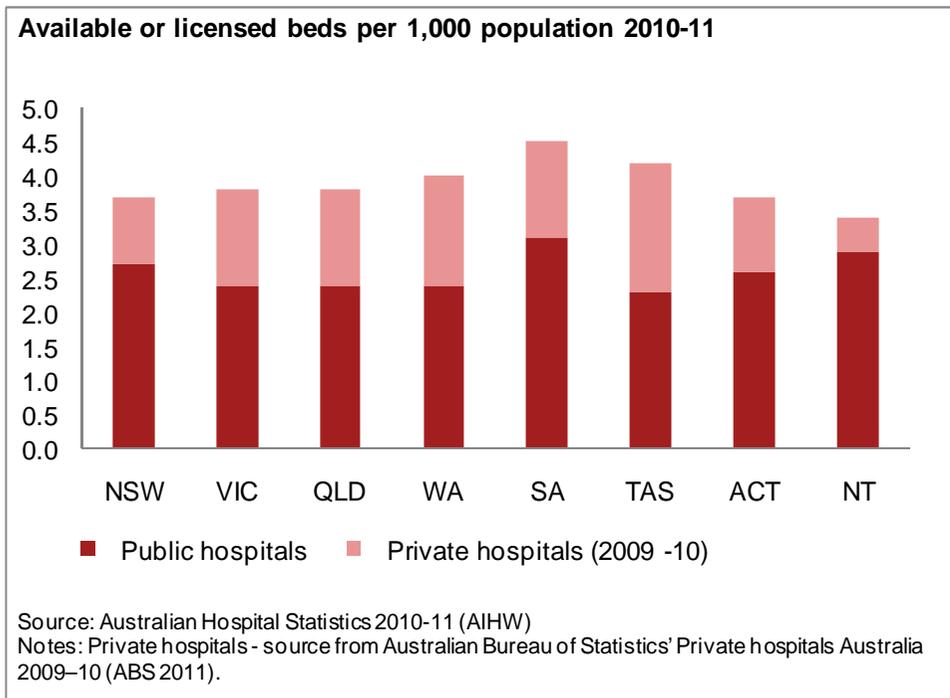
*n.p.* : Not available for publication but included in totals where applicable, unless otherwise indicated

\* NSW Health has advised that only two hospitals in NSW currently have an emergency department - An emergency department is defined by the ABS as a department that provides levels 4 to 6 of emergency services as defined by the guide to the Role Delineation of Health Services, 3rd edition, New South Wales, Department of Health

Source: ABS, Private Hospitals, Cat. no. 4390.0

<sup>19</sup> An emergency department is defined by the ABS as a department that provides levels 4 to 6 of emergency services as defined by the guide to the *Role Delineation of Health Services, 3<sup>rd</sup> edition, New South Wales, Department of Health*

**If NSW had about the same number of public hospital and private hospital beds per 1,000 residents as Vic and QLD it would have 2,179 less public hospital beds and 3,200 more private beds – this is equivalent to around 9 less major public hospitals and around 13 additional private hospitals (of 250 beds each)**

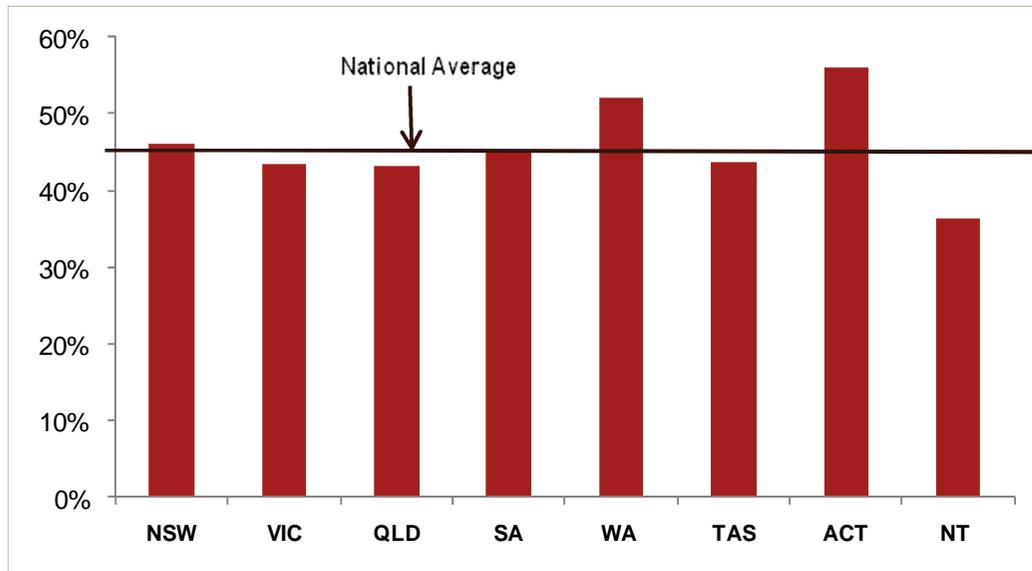


Source: Australian Hospital Statistics 2009-10 & 2010-11 (AIHW)

Notes: The number of private hospital beds is not published in AIHW 2010-11

**The differences in private hospital service provision in NSW cannot be explained by rates of private health insurance which are slightly higher at 46.0% than the national average of 45.3%**

**Privately insured persons as a percentage of population, 2010-11**

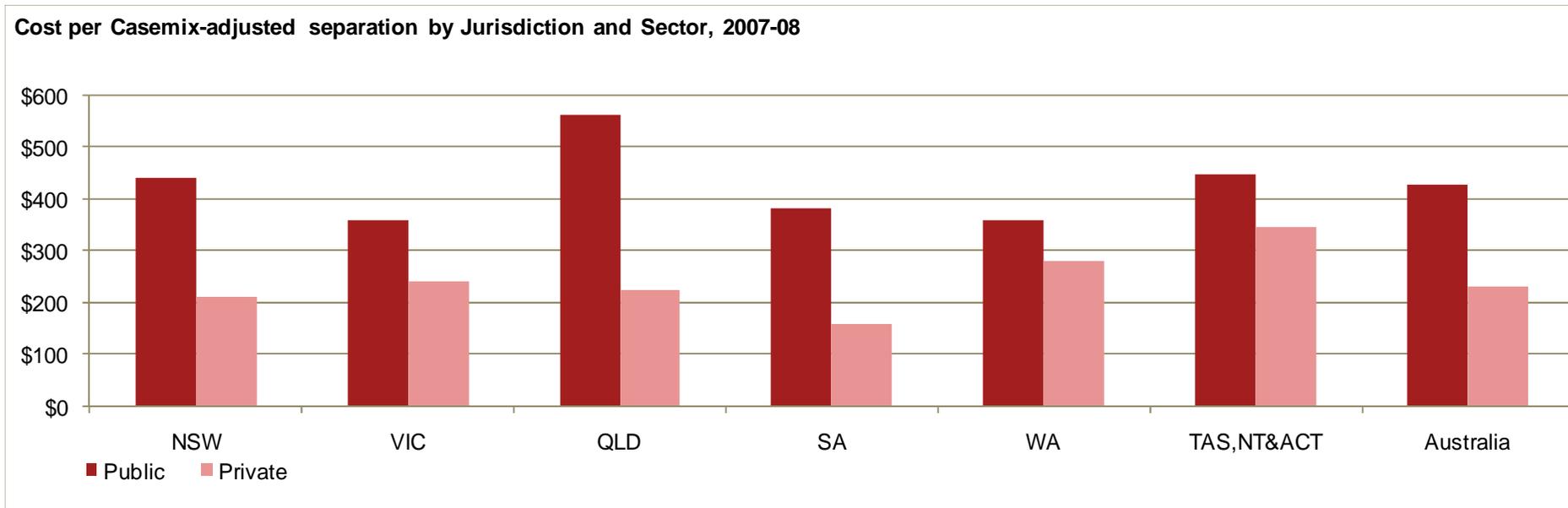


Source: Private Health Insurance Administration Council, Membership and Coverage Data Tables December 2011

### **Limitations of private and public hospital comparisons**

- These comparisons of private and public hospital activity between states are blunt but help to identify whether or not there is additional opportunity for private sector providers to increase the supply of private services in NSW
- The comparisons do not account for where demand is and whether it is feasible to locate private hospitals in areas that match demand
- Attracting clinicians and other staff to particular locations is also critical to the success of private operations which can limit the range of locations suitable for private sector services

**The Productivity Commission developed estimates (with significant caveats around the available data) that show the capital cost per casemix adjusted separation is much lower for private hospitals than public hospitals suggesting that private sector capital investment will deliver better value.**



Source: Productivity Commission Research Report - Public and Private Hospitals, December 2009.

Note: Data for Tasmania, the Northern Territory and the ACT are aggregated to protect the confidentiality of the small number of hospitals in each of these jurisdictions.

Caveats: the Productivity Commission noted the relative significance of individual items within the general hospital category differed between the public and private sectors. To some degree, this could reflect differences in how costs are allocated between different items, rather than genuine variation in the composition of costs. The extent of this issue is unknown.

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### **Despite relatively less private beds in NSW, private sector hospital providers advise that some existing capacity is underutilised**

- Two large private sector providers, Ramsays and Healthscope provided information to INSW about potential capacity within the private sector, to support provision of public services. As closer links are developed between public and private providers there is potential to coordinate capacity and develop opportunities for private participation.
- Examples include:
  - Potential to use the 162 beds and 4 operating theatres at Baulkham Hills Private Hospital immediately for NSW public health requirements in a key growth corridor
  - Additional opportunities for Nepean Private Hospital to assist Nepean Public Hospital on waiting list initiatives – these hospitals are collocated
  - Proposals to substantially expand private facilities at Prince of Wales and Campbelltown private hospitals with operators willing to partner with public hospitals to deliver services in high demand or new specialty areas
  - Utilising a potential 140 beds for rehab, surgical and medical services at Mount Wilga, Hunters Hill and Macarthur hospitals
- In total, about 600 available beds have been identified. Further exploration of these opportunities may allow NSW Health to expand service delivery capacity in the short term without a capital spend and subject to availability of recurrent funding.

## 6 Trends in demand

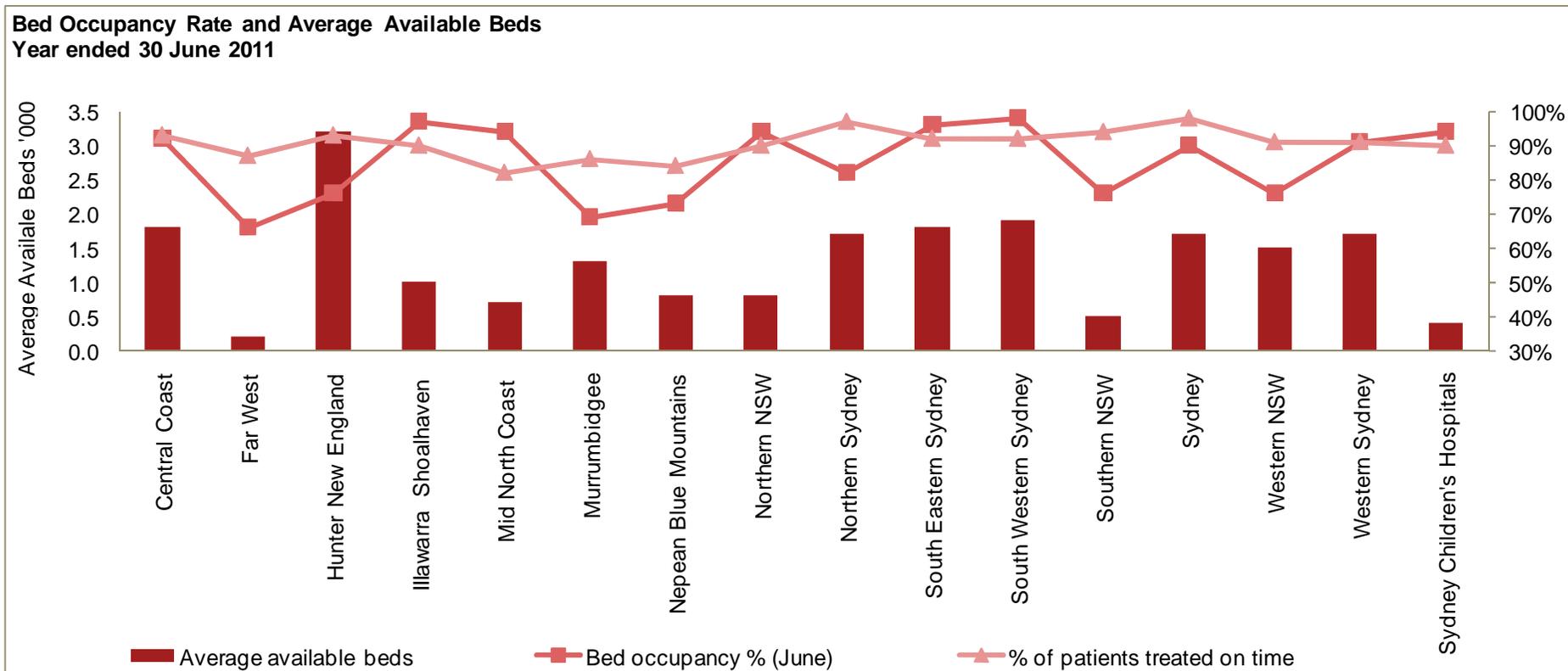
### **NSW Health is facing a number of major challenges in the provision of effective and efficient health services**

- The NSW population is expected to grow by two million people (29.3 per cent) between 2006 and 2031. Growth in bed-days for acute activity is expected to grow by 49% over this period.
- NSW Health advised there is a projected demand of around an additional 200 acute and 75 sub-acute overnight beds per year to 2021 in the public sector. This estimate is based on historical activity adjusted for some changes in service delivery approach and assuming an 85% bed occupancy rate. This is about equivalent to population growth which reflects some effective management of demand given growth in acute bed days is projected to substantially exceed population growth. These projections can be adjusted to reflect local assumptions about service delivery.
- The private sector will also need to invest in capacity to meet projected demand for health services.
- There will be a 12.7% increase in the number of people in NSW over the age of 65 compared to the number in 2006 by 2016. In terms of hospital beds, the highest level of growth in demand will occur for people aged 70-84 years and people aged 85 years and over.
- Older people are higher users of hospital services and have specific needs which impact on the capacity and nature of health facilities and therefore capital investment – this driver will be of significance in the coming decade

A 2010 review of NSW acute inpatient projections shows:

- Day only separations are projected to increase from 0.58 million to 0.80 million between 2008-09 and 2021-22, an annual average growth rate of 2.7%
- Overnight separations are projected to increase from 0.78 million to 0.91 million between 2008-09 and 2021-22, an annual average growth rate of 1.4%
- Bed days for overnight separations are projected to increase from 3.99 million to 4.96 million between 2008-09 and 2021-22, an annual average growth rate of 1.7%
- Average length of stay is an important driver of capacity requirements and therefore capital investment, with projected increase by an annual average of 0.4% between 2008-09 and 2021-22
- For sub-acute overnight separations, there is projected to be an average annual growth rate of 3.1%

Within NSW, the metropolitan bed occupancy rate is significantly higher than most rural areas and overall bed occupancy rates are increasing – the state average increased to 89.1% in 2011 compared to 85.1% in 2008. The % of elective surgery patients treated on time tends to be higher where there are more available beds and lower bed occupancy but this is not a consistent trend across all LHDs.



Source: New South Wales Auditor-General's Report Financial Audit, Volume 10, 2011 – Focusing on Health and Bureau of Health Information – Elective Surgery Hospital Quarterly, April to June 2011

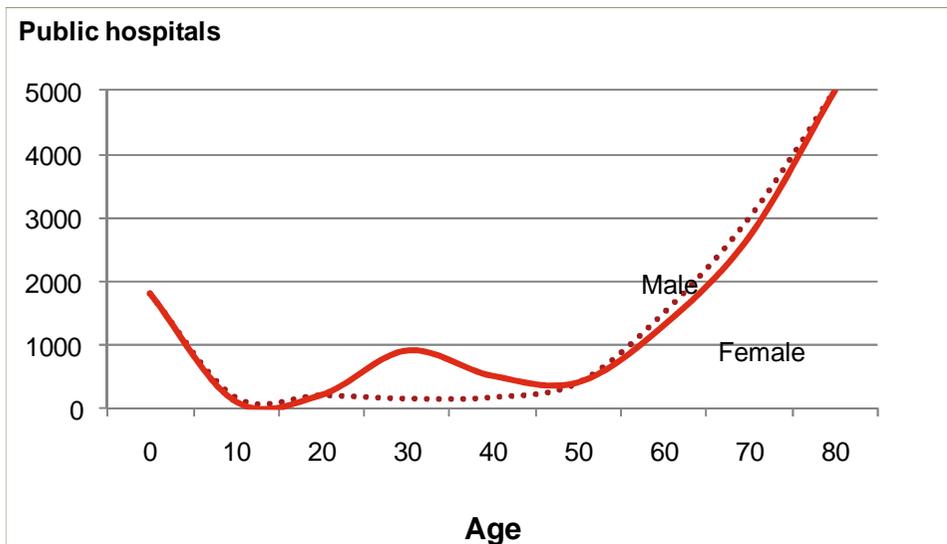
- The bed occupancy rate is the percentage of open and occupied beds that are available during the reporting period. It measures the use of hospital resources by inpatients and is based on major facilities.

- In June 2011, the bed occupancy rate ranged from a high of 97.7% (South Western Sydney Local Health District) to a low of 66.1% (Far West Local Health District). The metropolitan bed occupancy rate was significantly higher than most rural areas which is expected due to population size and distribution issues
- The Australian Medical Association (NSW) argues that bed occupancy rates above 85% lead to increasing wait times in emergency departments for patients needing beds and increasing cancellation of elective (planned) surgery.

### An ageing population has significant impact on health service demand

As the general population ages the demand for services and associated costs, increases significantly. Studies on end of life related health costs show that:

- The proportion of total health costs incurred by those in the last year of life is significant.
- Expenditure per person over 65 also averages four times that for people under 65 and in 2005 the Productivity Commission projected ageing will account for about half the increase in health expenditure as a proportion of GDP
- Alternative models of care are especially important for catering for this group in the most appropriate setting.



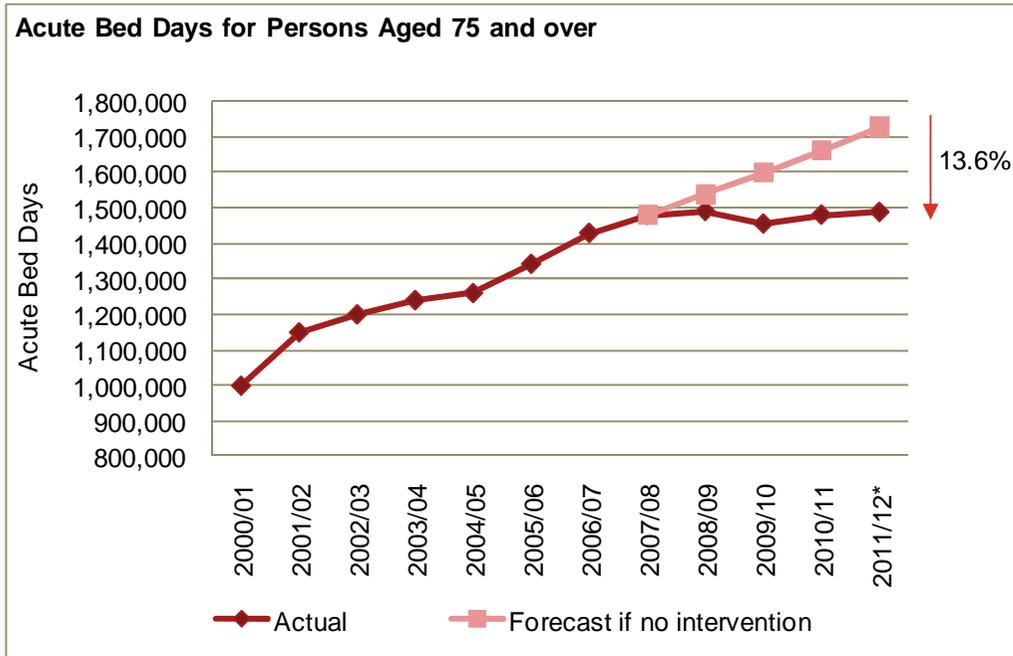
A 2007 NSW study found:

- Care of people aged 65 years and over in their last year of life accounted for 8.9% of all hospital inpatient costs
- Average inpatient costs increased greatly in the 6 months before death, from \$646 per person to \$5545 in the last month before death
- The highest average costs in the last month of life were for people who died of injuries
- Population ageing is likely to result in a shift of the economic burden of end-of-life care from the hospital sector to the long-term care sector

Source: Kardamanidis, K., Lim, K., Da Cunha, C., Taylor, L. K., Jorm, L. R. (2007) – *Hospital costs of older people in New South Wales in the last year of life*, MJA, Volume 187, Number 7, p. 383.

Source: Productivity Commission (2005) *Economic Implications of an Ageing Australia*

**Ministry of Health data show new models of care are having an impact on growth in the demand curve**



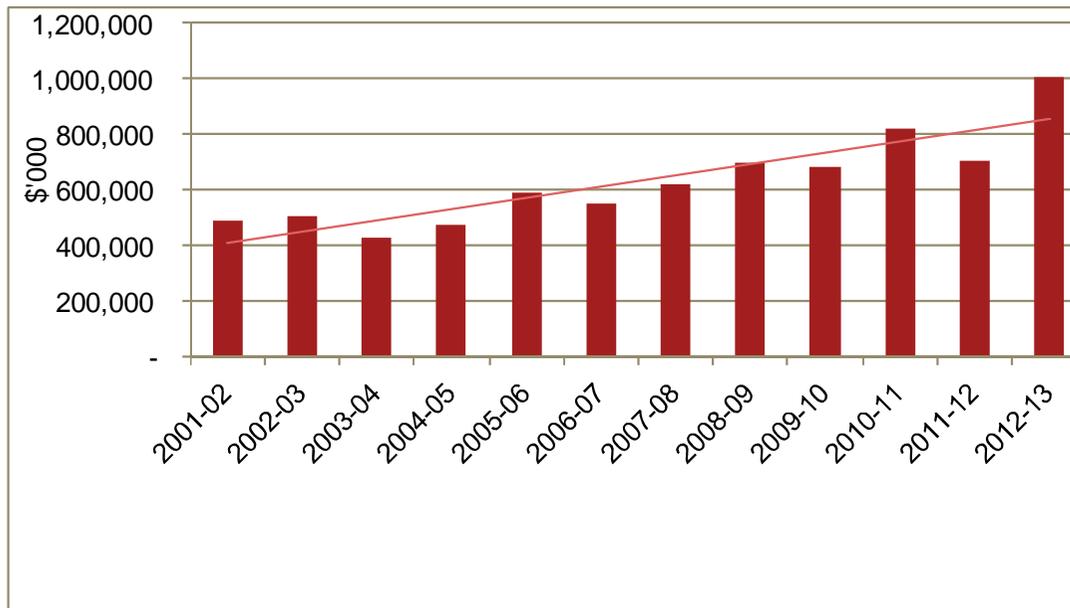
Source: Ministry of Health

- Strategies for reducing acute bed days to date have included Hospital in the Home, short stay wards and community support packages to improve patient care and reduce demand, especially for older people.
- The predicted requirement for additional acute and sub-acute hospital beds is about equivalent to the rate of population growth despite the forecast that demand will outstrip population growth because of an ageing population. This reflects an ongoing shift to alternate models of care.
- Additional information about how alternative delivery models can affect demand is provided in section 8.

## 7 Trends in investment

The trend in NSW Government capital expenditure in health has been steady growth over the last 10 years. Based on priority projects it has identified, NSW Health would like to significantly grow capital expenditure over the next 10 years. \$4.7 b has been committed by the NSW Government over the next 4 years but there is a gap of \$3b for the following 6 years if the desired level of expenditure is compared to historic trends.

### Health capital expenditure 2001 to 2012-13



- The Government has already committed \$4.7 billion from 2012/13 to 2015/16 to address priority investments and deliver on its election commitments
- Calculations of future funding gaps are based on Health's preliminary assessment of desirable priority projects.
- The gap between forecast expenditure and continuing the historic growth trend is \$3 billion for the six years beyond the forward estimates to 2021-22.

Source: 2001/02 to 2013/14 provided by NSW Treasury. Forecasts from 2014/15 based on NSW Health advice on priority projects

## 7.1 Historic investment

**Per capita expenditure in NSW has been 24% lower than the Australian average between 2007-08 and 2009-10 and may indicate relative underinvestment.**

### Total State Capital spend per capita (\$)

<i>Year</i>	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Australia</i>
2007–08	88.6	56.1	151.3	105.3	72.0	68.0	97.8	49.6	92.9
2008–09	94.5	92.0	194.1	155.5	119.9	51.4	149.3	61.4	121.7
2009–10	90.5	27.7	241.6	205.9	166.0	64.8	210.0	182.7	125.2
<b>Three year average</b>	91.2	58.5	196.3	156.4	119.7	61.4	153.1	98.6	113.5
Relative to NSW	100%	64%	215%	171%	131%	67%	168%	108%	124%

Source: Data supplied by NSW Treasury, originally derived from AIHW Health Expenditure Data

### Capital expenditure over the past 15 years has been concentrated on larger and higher volume hospitals

- There are 39 hospitals in NSW that are designated as ‘major hospitals’, these include Principal Referral Hospitals (Category A1), Paediatric Specialist Hospitals (A2), Ungrouped Tertiary Referral Hospitals (A3), Major Metropolitan Hospitals (BM), and Major Non-metropolitan Hospitals (BNM)
- NSW Treasury has reviewed large capital works completed over the last 15 years which highlighted that there has been capital investment in all of the 39 major hospitals during the period, with all hospitals except Manly, Mona Vale and Fairfield, having undergone major refurbishment or redevelopment. New hospitals built during the period included Auburn, Royal Hospital for Women, Queanbeyan and Orange Hospitals.
- Other major redevelopments are currently underway and due for completion between 2012-15 including:
  - Nepean Hospital redevelopment (stages 3 & 3A) - \$139m (part Commonwealth Health and Hospital Funded (HHF))
  - Liverpool Hospital redevelopment Stage 2 (due 2012) - \$397m
  - Narrabri Hospital redevelopment due 2012 - \$38m (part HHF funded)
  - Royal North Shore Hospital redevelopment due 2012 - \$951m

**NSW Treasury indicative estimates of expenditure in major hospitals over the last 15 years**

<i>Hospital</i>	<i>Type</i>	<i>Completed</i>	<i>Cost (\$m)</i>
<b>Principal Referral</b>			
Blacktown	Redevelopment and expansion	2000	96
Concord	Refurbishment & redevelopment (and part of reconfiguration of inner west hospitals)	2003	57
		2005	64
Gosford	Redevelopment and expansion	2007	122
John Hunter	Redevelopment and expansion	2002	109
		2007	
Liverpool	Redevelopment, refurbishment and expansion	1998	192
		2004	24
		2005	42
		2012	397 (due 2012)
Nepean	Redevelopment and expansion	1998	99
		2001 (Stage 2)	69
		2013 (Stage 3)	139 (due 2013)
Prince of Wales	Refurbishment & Redevelopment	1998	147
		2000	16
		2002	93
		2003	21
Royal Hospital for Women	New hospital	1998	47
Royal North Shore	Refurbishment & New Hospital	2002	55
		2006	
		2012	951 (due 2012)
Royal Prince Alfred	Redevelopment (and part of reconfiguration of inner west hospitals)	2007 (Stage 1)	297
		2010 (Stage 2)	47
St George	Refurbishment and expansion	1998	155

<i>Hospital</i>	<i>Type</i>	<i>Completed</i>	<i>Cost (\$m)</i>
		2001	15
		2005	5
		2014	35 (due 2014)
St Vincent's	Redevelopment	2002	80
Westmead	Redevelopment and expansion	2006	34
		2007	132
Wollongong	Refurbishment and expansion	2000	166
		2004	
		2009	
<b>Paediatric Specialist</b>			
Sydney Children's	Refurbishment	2013	27 (due 2013)
Westmead Children's	Refurbishment	2005	19
<i>Tertiary Referral</i>			
Calvary Mater Newcastle	Redevelopment and expansion	2009	200
Sydney & Sydney Eye	Redevelopment	1993	32
		2003	
<b>Major Metropolitan</b>			
Auburn	New Hospital	2009	145
Bankstown/Lidcombe	Refurbishment	2009	4
		2010	3
Blacktown	Redevelopment	2000	93
Campbelltown/Camden	Redevelopment and expansion	2002	251
		2005	
		2016	
Canterbury	Redevelopment (and part of reconfiguration of inner west hospitals)	1999	75
Fairfield	Refurbishment	2002	3

<i>Hospital</i>	<i>Type</i>	<i>Completed</i>	<i>Cost (\$m)</i>
		2006	1
Hornsby and Ku-ring-gai	Refurbishment	2003	16
Manly District	Refurbishment	2006	2
		2011	2
Mona Vale and District	Refurbishment	2005	4
		2009	2
Sutherland	Redevelopment & Refurbishment	1997	84
		2004	
		2008	
Wyong	Refurbishment, redevelopment and expansion	2004	11
		2009	94
<b>Major non-metropolitan</b>			
Coffs Harbour Base	Redevelopment	2002	81
Dubbo Base	Redevelopment	1997	20
		2000	
		2002	
Lismore Base	Refurbishment (new Mental Health Unit)	2007	38
		2009	
Maitland	Refurbishment	1998	27
		2011	10
Manning Base	Redevelopment	2008	15
Orange Base	New Hospital	2011	260
Port Macquarie Base	Refurbishment	2009	2
		2014	110
Shoalhaven and District	Redevelopment	2000	57
Tamworth Base	Refurbishment	2001	4
		2011	10

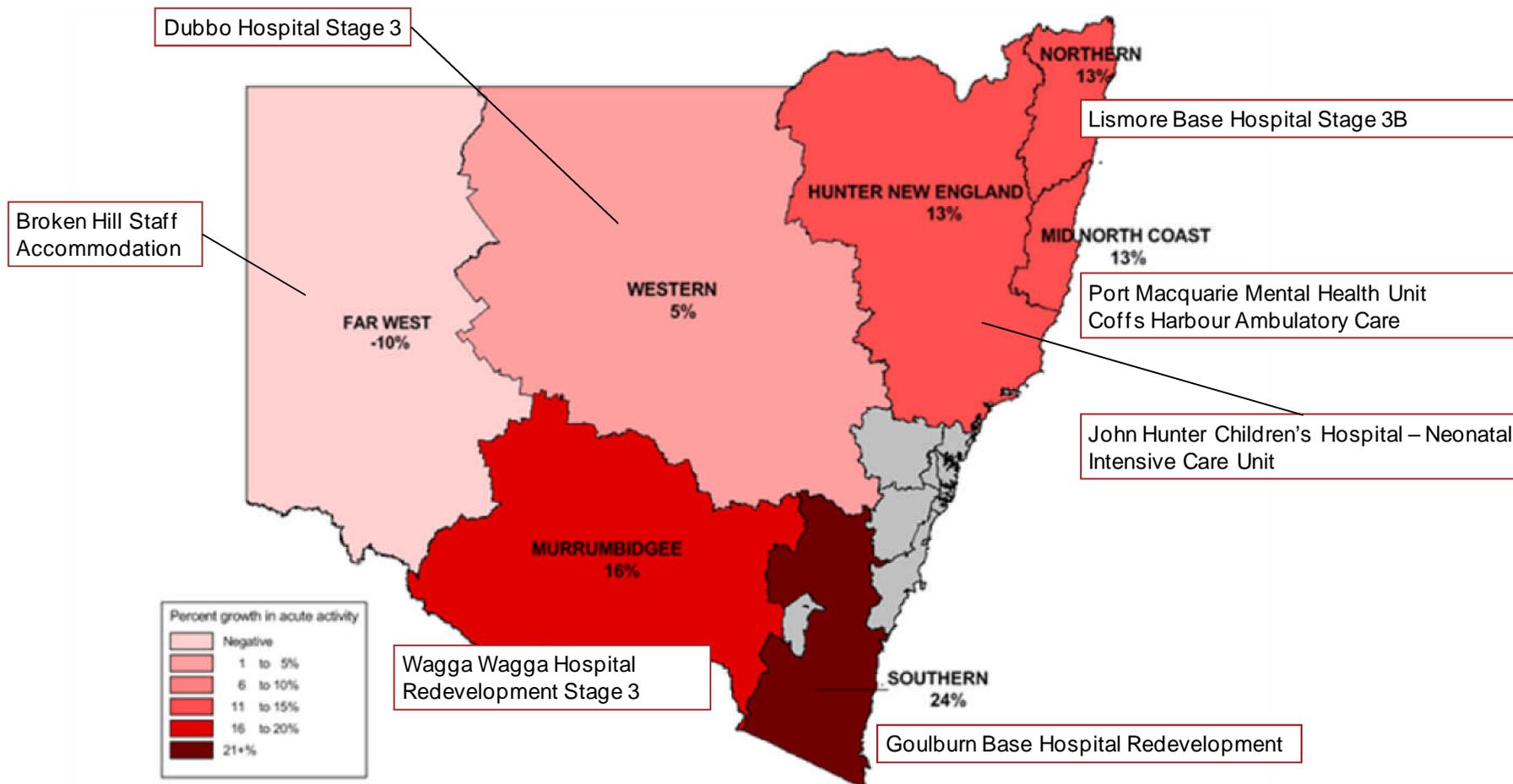
<i>Hospital</i>	<i>Type</i>	<i>Completed</i>	<i>Cost (\$m)</i>
		HHF & State redevelopment planned for 2016	220
The Tweed	Refurbishment	1997	46
		2003	
		2007	
Wagga Wagga Base	Redevelopment	2016	297

Source: Table provided by NSW Treasury (data has not been verified)

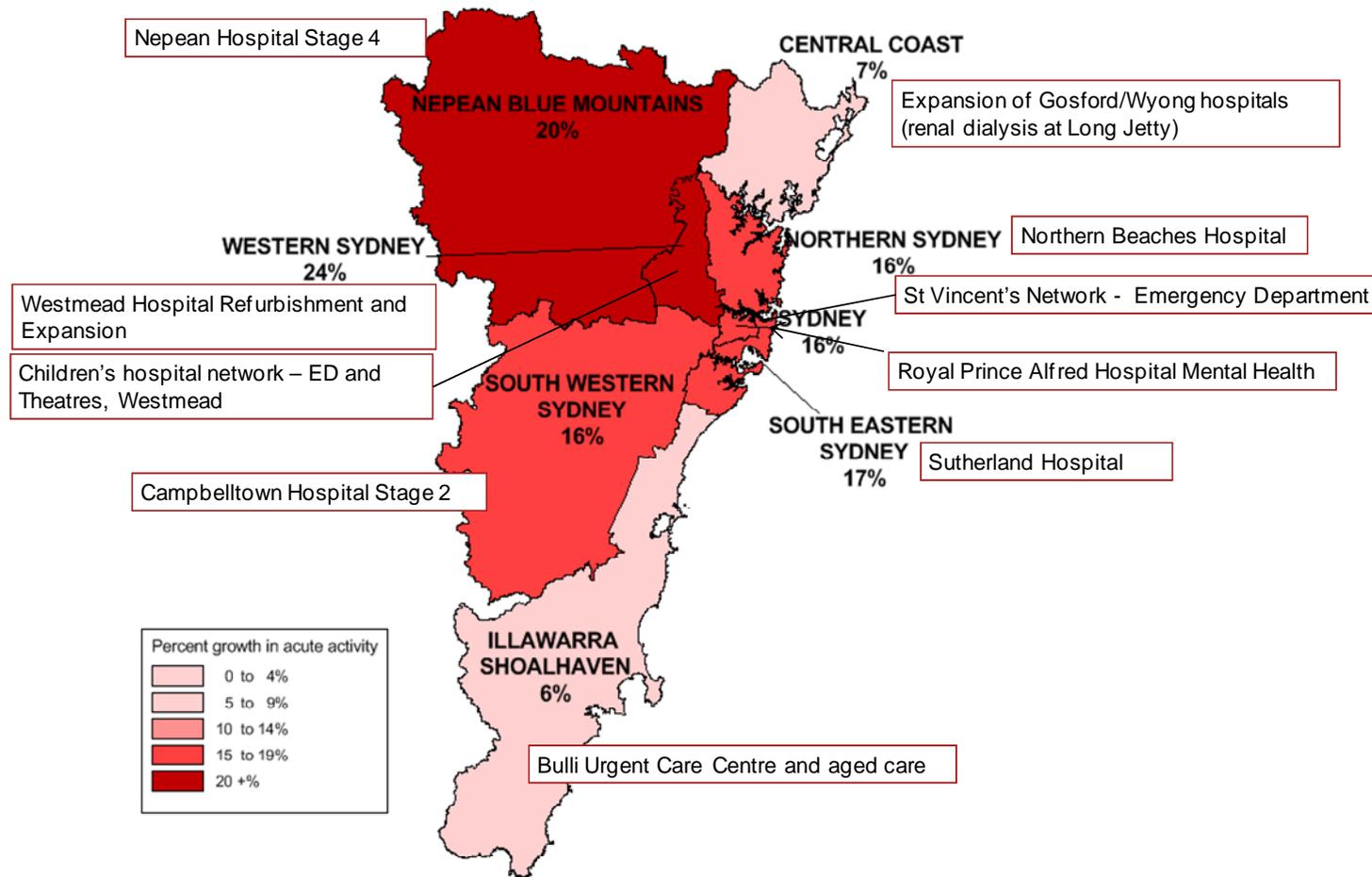
## 7.2 NSW Health's prioritised capital program

NSW Health's prioritised capital program over the next 10 years to meet expected growth in demand and to reconfigure assets includes the highest priority projects shown in the maps and as well as those listed in the table below (see appendix A for an overview of NSW Health's prioritisation process).

### Projected growth in rural acute activity by LHD of residence 2009-2017 and highest priority projects



**Projected growth in metropolitan acute activity by LHD of residence 2009-2017 and highest priority projects**



Note: Projected growth estimates provide by Ministry of Health, alM2010, Excludes chemotherapy, renal dialysis, unqualified neonate, ED only and Hospital in the Home admitted services

NSW Health's prioritised investments from 2011 to 2020 include the projects shown in the table below, a state-wide ICT program and two reform programs:

- Multi-purpose Strategy – a staged program to provide clinics for treatment that would otherwise require hospital beds.
- Ambulance Reform – a program to redistribute ambulance centres according to need and introduce helicopter facilities in some hospitals

Indicative costs are provided in the table for some projects – these are preliminary estimates, particularly for the projects commencing beyond 2015 which have not been subject to detailed cost estimation. The projects may also change as strategic planning by LHDs occurs.

### Potential Major Health Projects 2011 – 2020

<i>Location/Facility</i>	<i>Health Policy Election Promise \$ Million</i>	<i>Major Capital Submission \$ Million</i>
Blacktown/Mt Druitt Hospitals Stage 2	125	270
Wagga Wagga Hospital Redevelopment	125	270
Northern Beaches Hospital	125	29
Tamworth Hospital Redevelopment	100	220
Port Macquarie Hospital	75	110
Dubbo Hospital Redevelopment	50	80
Westmead Medical Research – Westmead Millennium Institute & Children's Medical Research Institute	30	55
Hornsby Ku-ring-Gai Hospital Stage 1	50	120
Parkes Health Service	42	n.a.
Forbes Health Service	25	n.a.
Maitland/Lower Hunter Strategy	20	n.a.
South East Regional Hospital Bega	10	170
Ambulance Reform	n.a.	n.a.

<i><b>Location/Facility</b></i>	<i><b>Health Policy Election Promise \$ Million</b></i>	<i><b>Major Capital Submission \$ Million</b></i>
Multi-purpose Strategy Stages (stage 6)	n.a.	n.a.
Northern NSW Regional Plan – including planning of expansion of Lismore Base Hospital & Byron District Hospital	HF	n.a.
Morrisett health care facility	n.a.	n.a.
Bankstown/Lidcombe Hospital	n.a.	n.a.
Goulbourn Base Hospital Redevelopment	n.a.	n.a.
Liverpool Hospital	n.a.	n.a.
Campbelltown Hospital Stage 2	n.a.	n.a.

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**\$4.7 billion has been committed over the next four years and includes delivery and/or planning of the Government's election commitments**

Investments over the next four years include:

- Developing hospital infrastructure at Campbelltown (\$139 million), Dubbo Base (\$79.8 million), Port Macquarie Base (\$110 million), Wagga Wagga Base (\$270 million), South East Regional Hospital at Bega (\$170m), Tamworth Regional Referral Hospital (\$220m), Lachlan Health Service, Parkes & Forbes hospitals, Hornsby Ku-ring-gai hospitals (\$120m), Royal Prince Alfred North West Precinct development including Missenden Mental Health (\$67m), Prince of Wales Hospital new Cancer and Advance Treatment Centre (\$76.6 million), and a new St George Hospital Emergency Department (\$35.5 million).
- Planning for future projects (\$7.6m) including Hunter Valley hospital, Multi Purpose Strategy Stage 5 and Northern Beaches hospital.
- An additional \$55 million to expand the Royal North Shore Hospital to include 60 extra beds and relocate maternity, mental health and other services that were left out of the previous plans bringing the total estimated cost of this project to \$144.4 million
- Funding to progress a number of Ambulance Service initiatives (\$130.4m) including the Rural Ambulance stations program, Ambulance infrastructure and medical equipment replacement.
- Upgrades and equipment replacement at Cessnock, Maitland, Kurri Kurri and Wansey and acquisition of land at Waratah
- Upgrades to car parking at Blacktown, Nepean, and Wollongong hospitals (these will be progressed through a self-funding approach which may also occur at other sites)
- Progress the \$170 million Electronic Medication Management project to improve medication safety and continue the implementation of the Community Health and Outpatients Information System.

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## 7.3 Operating versus Capital expenditure

- Capital expenditure has averaged around 5% of the NSW Government's health budget over the last 5 years – in 2012/13, the recurrent allocation is \$17.3 billion and the capital allocation \$1 billion (5.8% of the total).
- Activity levels and recurrent health expenditure drive the health budget rather than capital expenditure. While capital investment expands capacity, a significant amount is also required to refurbish and reconfigure existing assets. Targeted capital expenditure (e.g. in ICT or in refurbishing or reconfiguring existing assets) can enable implementation of delivery of lower cost models of care and increase the efficiency of the health system.
- Activity based funding to be implemented under the National Health Care Agreement does not include a capital component. The Commonwealth Government will fund 50% of efficient growth in activity but will not make a contribution to capital. ABF funding will increase transparency of where operating funds are allocated but will not apply to capital funds. The Commonwealth Government will not have the same incentives as the State for considering the capital implications of service growth as the State will need to fund capital expenditure.
- During the last decade or more there has been mounting pressure for a change from the current system of centralised capital funding, which is claimed to have been influenced by subjective factors and political preferences, rather than efficiency. In 2002, Deeble<sup>20</sup> noted that this has resulted in: "...pressure for shifting decision making closer to the final users of capital – where costs and benefits are, presumably, better known – and ultimately for such apparently self-regulating devices as capital charging... Except for significant building works and major medical equipment, the central authorities are not in a position to question the hospitals' (and/ or regional) decisions and rarely do so seriously now."
- The concept of user cost of capital was included in earlier proposals for national health reforms and is well understood in economic regulation. It means that the cost of capital is converted into an annualised cost, and is apportioned over a future period when an asset is to be utilised.
- A User Cost of Capital model funded by the Commonwealth and State Governments would enable LHNs to 'transfer' their capital allocation into an annuity stream that allows for alternate approaches to be implemented. For example rather than the construction of a physical asset (and the associated costs to operate and maintain), using the capital allocation as an annual payment which could be used to provide a remote or home based service or to purchase services from a private provider without needing to make a capital investment.

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<sup>20</sup> John Deeble (2002), 'Capital investment in public hospitals', Australian Health Review, Vol. 25, No. 5, pp.53-54.

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## 8 The future of health services in NSW

Health service delivery in 20 years will not be the same as it is today. Changes in delivery are rapid – some health care that could only be provided in hospitals 20 years ago is now provided to many people in the home, many procedures that used to require hospital stays can now be performed in day surgeries.

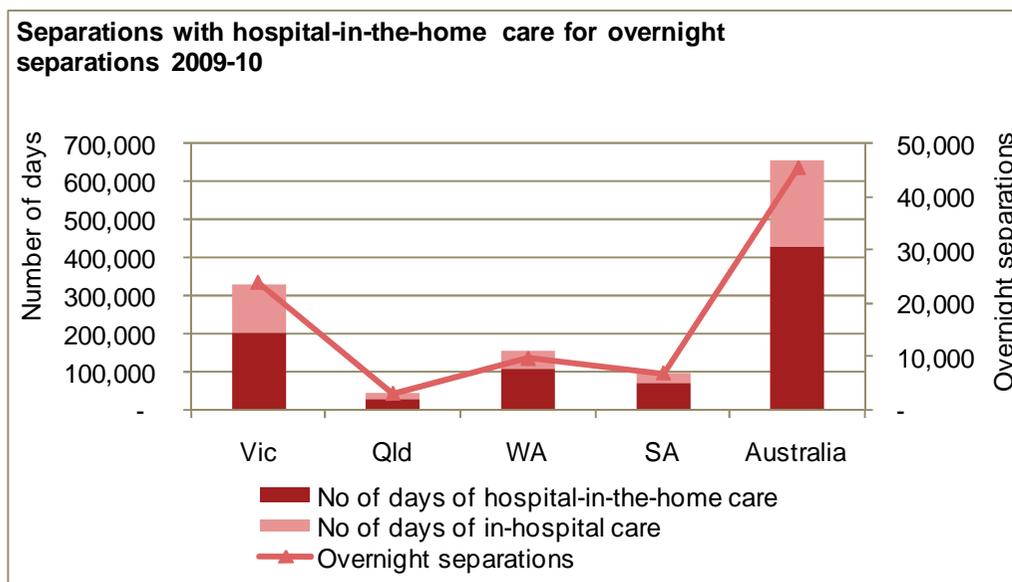
While predicting these changes with any certainty is difficult there are some trends and technologies already impacting care that provide the direction in which services will change over the next 20 years. These changes need to more heavily inform the assessment of benefits when investing in health infrastructure. Given existing trends and emerging practice around the world, health care in 20 years (or less) is likely to be characterised by:

- Increased use of technology to reduce the need for clinicians and patient's physical presence at a facility – this is likely to include remote monitoring devices, telehealth and home care providers and improved electronic administrative systems that allow real time transmission of information between carers, patients and their clinicians.
- Delivery of care in alternate settings – not just in the home, but potentially more care in non hospital setting such as nursing homes, potentially increasing the capability of care staff within these settings
- Greater integration between acute services and GPs, community health providers and mobile teams of clinicians to provide preventative and out of hospital care
- Greater concentrations of 'centres of excellence' to provide improved clinical outcomes for patients and training environments for clinicians
- Stronger links between metropolitan and rural and regional hospitals including through greater use of technology to promote equitable access to care
- Growth of smaller specialist health facilities that adapt quickly to changes in care in their specialty
- Co-location of a range of services in health 'precincts', which will facilitate easy access, promote networking of clinicians, and provide increased choice for particular services.

## 8.1 Hospital in the home

Alternative models of care such as Hospital in the Home (HITH) provide care in a lower cost setting whilst generating higher patient and carer satisfaction

- HITH is a service program that provides active treatment for certain conditions in the patient's home. The services are focused on treating patients in their home that would otherwise require acute hospital in-patient care.<sup>21</sup> GPs are a critical part of these services and often play a coordinating role.
- In Australia HITH programs exist in most states and territories although they are developed to different levels. The Australian Institute of Health and Welfare (AIHW) reports that in 2010-11 a significant proportion of patient days across all hospitals were hospital-in-the-home days.
- Separations that incorporate hospital-in-the-home care can also involve in-hospital bed days with HITH programs enabling either the displacement of in-hospital care or an opportunity to reduce in-hospital length of stay and transferring part of a separation to hospital-in-the-home.



Source: AIHW (2010-11). Australian hospital statistics 2010-11. Table S7.17.

Note: Only Vic, Qld, WA and SA reported data on hospital-in-the-home activity.

<sup>21</sup> Shepperd, S., & Iliffe, S. (2001). Hospital at home versus in-patient hospital care. *Cochrane Database Syst Rev*, 3, CD000356

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## **There is increasing evidence of HITH services providing significant advantages**

Benefits of HITH include:

- providing equivalent care in a lower cost setting
- avoiding treatment costs that would otherwise be incurred as a result of hospital acquired or associated infections
- avoided Emergency Department (ED) presentations and ambulance transfers where transfer to an acute hospital ED is unnecessary
- improved hospital operational efficiency as a result of ensuring that the case mix of in-hospital services aligns with the services that can only be provided in a hospital setting.

## **Various empirical studies on home hospital models identify a wide range of impacts across various stakeholder groups, including patients with various diagnoses and from different age groups, their families, carers, and acute hospital services**

- Board et al. (2000)<sup>22</sup> showed the HITH group costs per separation were significantly lower than the control group hospital separation with no significant difference in clinical outcomes, and comparable or better user satisfaction. Given the favourable clinical outcomes the HITH model produces at a lower cost, the cost-effectiveness of the care mode is high, and the allocative efficiency favourable.
- Frick et al. (2009)<sup>23</sup> showed the costs of the HITH intervention were significantly lower than those of usual acute hospital care (\$5081 vs \$7480). Laboratory and procedure expenditures were lower across all study sites and at each site individually. There were minimal significant differences in health service utilisation between the study groups during the 8 weeks after the index hospitalisation. As-treated analysis results were consistent with Hospital at Home costs being lower.
- MacIntyre et al. (2002)<sup>24</sup> showed the cost of episodes of acute care containing a HITH component were overall 9% less expensive than in-hospital care while pure-HITH was 38% cheaper than matched in-hospital care.
- Private service providers advise that cost savings are greater where there is a higher density of patients which reduces travel time for clinicians so they can visit more patients in a day.

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<sup>22</sup> Board, N., Brennan, N., & Caplan, G. (2000). A randomised controlled trial of the costs of hospital as compared with hospital in the home for acute medical patients. *Australian and New Zealand Journal of Public Health*, 24 (3), 305-311

<sup>23</sup> Frick, K., Burton, L., Clark, R., Mader, S., Naughton, B., Burl, J., et al. (2009). Substitutive hospital at home for older persons: effects on costs. *American Journal of Managed Care*, 15 (1), 49-56

<sup>24</sup> MacIntyre, C., Ruth, D., & Ansari, Z. (2002). Hospital in the home is cost saving for appropriately selected patients: a comparison with in-hospital care. *International Journal for Quality in Health Care*, 14 (4), 285-293.

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### Case-study: Silver Chain Home Hospital model (WA)

Silver Chain is the largest provider of community, clinical and health care services in Western Australia, assisting over 40,000 people each year. It attracts the majority of its funding from the Commonwealth and Western Australian Governments with a small proportion from patient fees as well as private donations.

- Silver Chain's Home Hospital model offers four service types:
  - Hospital at Home (HATH), which provides care in the home for patients who would otherwise require hospitalisation, are clinically stable, and require 24 hour medical governance.
  - Priority Response Assessment (PRA), which is a non-emergency service that provides advanced clinical assessments within four hours. This assessment may lead to the provision of short term acute care interventions to address an immediate need or admission to other services.
  - Post Acute Care (PAC), which provides care interventions for patients in the immediate post discharge period from hospital or a hospital in the home (HITH) program with medical governance generally provided by the patient's GP or referring consultant/specialist.
  - Community Nursing (CN), which provides care for patients not requiring 24 hour medical governance, as an alternative to admitting them to hospital. The patient is expected to have a short term episode requiring up to 28 occasions of nursing service.
- Conditions that are most frequently managed in home care include cellulitis, respiratory tract infections and anticoagulant therapy amongst others.<sup>25</sup>
- The Silver Chain Home Hospital is supported by the Friend in Need Emergency (FINE) scheme, an initiative of the Western Australian Government that commenced in 2008-09. In 2009-10 Silver Chain received \$16,732,500 under the FINE scheme towards developing Home Hospital. In 2010-11 \$22,066,293 has been allocated to support the Home Hospital services reaching full capacity.<sup>26</sup>

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<sup>25</sup> Department of Health. (2008). *Healthy@Home: an ambulatory vision for WA*. [http://www.health.wa.gov.au/hrit/imp\\_initiatives/ambulatory\\_vision.cfm](http://www.health.wa.gov.au/hrit/imp_initiatives/ambulatory_vision.cfm)

<sup>26</sup> Parliament of Western Australia. (2010, June 3). *Hansard daily transcripts: extract*.

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### 8.1.1 Technology driving alternate models of care

Alternative models of care are becoming more prevalent as the use of technology increases. As an example telehealth services are being used in various forms across the country as a means to avoid hospitalisation or expensive visits to the ED. In addition, devices allow patient's conditions to be checked and examined remotely on a regular basis by their healthcare provider.

BT have separately prepared a report on the applications of technology that can be effective in dampening demand for higher cost care and can help to reduce the gap in required capital funding.

### 8.1.2 Distribution of health services

#### Primary/local care

- Primary interactions with the health care system occur at a local level. As the primary coordinator of a patient's out of hospital care, general practitioners are integral to planning for primary health care and its effective and efficient integration with hospital-based services.
- With demand for health services being generated by a combination of population age and lifestyle based diseases, the interaction and collaboration of providers across the continuum of care is important in managing demand and providing opportunities for innovative care models which might require less capital intensive investments.
- Community health centres with a mix of GP, public health and private services such as diagnostics have potential to provide a convenient local access point to health services that facilitate integrated care.
- In the UK, Independent Sector Treatment Centres demonstrate the role of the private sector in providing elective surgery, diagnostic and other clinical services to National Health Service (NHS) patients. These facilities are owned and run by organisations outside the NHS. Involving the private sector was considered a viable alternative for creating additional capacity and provided greater choice to patients.
- As of September 2011, 252 facilities were opened under the NHS's LIFT scheme with an additional 35 under construction with a total value of all facilities of £2,039m.<sup>27</sup> A review of the LIFT scheme carried out in 2008 concluded it had been particularly successful as a catalyst for building healthy communities by helping to shift hospital based services into primary care.<sup>28</sup>

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<sup>27</sup> [http://www.dh.gov.uk/prod\\_consum\\_dh/groups/dh\\_digitalassets/@dh/@en/documents/digitalasset/dh\\_130968.pdf](http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_130968.pdf)

<sup>28</sup> [http://www.dh.gov.uk/dr\\_consum\\_dh/groups/dh\\_digitalassets/documents/digitalasset/dh\\_091390.pdf](http://www.dh.gov.uk/dr_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_091390.pdf). Value to be further researched

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## Hospital based care

- NSW is well serviced with large full-service general hospitals – there has been significant investment in these sites historically and these hospitals will continue to deliver a high proportion of hospital based care over the next 20 years.
- Comparisons with other states (see section 5) do suggest there is scope for reconfiguration of other hospitals and consolidation of specialist units in centres of excellence.
- A broad state strategy for better leveraging capital investment at remaining and new facilities is to establish speciality centres of excellence in pro-actively planned ‘health care precincts’ with clusters of related health services delivered by government and non-government providers. This derives the benefits of both agglomeration and specialisation and complements the existing network of large general hospitals.
- Specialist centres, rather than having many general hospitals have the benefit of improving the quality of care where there is sufficient demand for services. Centres of excellence have greater capacity to attract a critical mass of specialist clinicians, facilitate high standards of training and invest in advanced specialty equipment.
- Given this approach, planning for a general hospital for the Northern Beaches hospital site is an opportunity to develop a model of developing the hospital in smaller building blocks, timed and designed to match health demand and to complement rather than duplicate specialist services that are provided (or planned for) other locations in surrounding areas.
- A precinct approach allows private operators to plan and establish services on the same site and derive the benefits of shared infrastructure, shared workforce and ancillary services.
- Planning for collocation of public and private facilities will also increase the attractiveness of private sector service provision with the benefits of:
  - Knowledge transfer across public and private sectors (both clinical and management where these services are co-located)
  - Labour pool sharing and recruitment and retention
  - Demand and labour matching
  - Scales of economy – e.g. sharing of infrastructure and reducing the capital cost per patient; or price savings through greater buying power through suppliers of services.

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## 9 Public Private Partnership options

- PPPs cover a range of broad partnerships between private contractors and government, in which the common characteristics are that the public sector contracts (usually on a long-term basis) with the private sector for the provision of a public service .
- One model is the Design, Build, Finance and Operate (DBFO) model in which the private sector is contracted to finance, rebuild or replace a public asset and maintain that asset for a concession period, usually between 20 to 30 years.
- An alternative model is a full service PPP where the private sector is contracted to provide a complete package of services and assets (either using assets already built or investing in new facilities).
- The cost of PPPs is ultimately borne by the public sector even if capital is initially raised by the private sector – in some cases public sector financing is more attractive or effective (as in the recent case of Midland Health Campus).
- PPPs are often explored because of potential benefits in delivering infrastructure on time and within budget together with risk transfer primarily related to whole of life asset management.
- A key issue in PPP delivery has been the inherent risk of change and poor contractual mechanisms that maintain (or improve) value for money when change is required to either infrastructure or service specifications.
- Predictable returns can enhance potential for attracting investment from a variety of funding sources – for example, Super Funds.

### **The Australian experience of PPPs<sup>29</sup>**

- A 2005 review of seven Australian PPPs between 1991 and 2000 highlights successes as well as failures: e.g. Port Macquarie Hospital PPP attracted significant opposition in political and health policy circles and three of the seven PPPs reverted to Government ownership before the expiration of contracts.
- At the time of the review, there had been no systematic evaluation of each of the seven projects against the stated objectives and actual outcomes.
- There have been no comprehensive evaluations undertaken to determine if the contracts are delivering services at a comparable or lower cost than the government sector.
- The major demonstrated benefit of these PPP hospital projects has constantly been health facilities delivered at a reduced initial capital cost over what government could deliver.
- Delivery timeframes for these hospitals were shorter due to the streamlining of the planning, design and construction process. Space was generally used more efficiently by the private operators.

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<sup>29</sup> Inquiry into Public Private Partnerships, Parliament of NSW (2005). Accessed at < [http://www.parliament.nsw.gov.au/Prod/parlment/committee.nsf/0/559147bd407cf0c1ca2570d200031f6e/\\$FILE/Sub.No.27.pdf](http://www.parliament.nsw.gov.au/Prod/parlment/committee.nsf/0/559147bd407cf0c1ca2570d200031f6e/$FILE/Sub.No.27.pdf)> (4 April 2012)

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- Another benefit has been the lifecycle maintenance built into the pricing of these projects. This allowed generous maintenance and replacement of facilities and equipment over the contract period, usually 20 years.
  - Financing and ownership structures were complex and complicated
  - There was no standardised approach – each state and each project differed in approach, contract requirements and project structure.

### **Interstate and overseas examples of private sector involvement**

- Public health systems around the world have had a mixed history in the collocation, transfer and partnership of services with the private sector – case studies are provided at Appendix B.
- In Australia, the first private provision of clinical services was contracted by NSW through the Port Macquarie project in 1994, with Victoria also implementing a co-location through the Melbourne Private Hospital in the same period.
- Since then, all state governments have pursued models of private involvement in public health service delivery (see table below), primarily as a means to increase or improve capital infrastructure. In addition, the Commonwealth has privatised the ‘war veterans’ hospitals in WA, Queensland and Victoria.
- Co-location projects have been used to enhance public infrastructure as well as reducing capital outlays due to the sharing of various services, for example shared plant or hotel type services. Private co-location is also used to reduce pressure on public services either through transfer or substitution. Furthermore, co-location generally provides a revenue stream for the public facility from these arrangements.
- The revenue stream provided by long term public service contracts is also attractive to the private sector, as an alternate to the varying returns from private health insurance contracts, and removing competitive barriers to entry.
- The NHS Local Improvement and Finance Trust (LIFT) program provides a contemporary model of models of infrastructure provision tailored towards local health needs. As of September 2011, 252 facilities were opened under the LIFT scheme with an additional 35 under construction. Total value of all the facilities is £2,039m. A review of the LIFT scheme carried out in 2008 concluded LIFT has been particularly successful as a catalyst for building healthy communities by helping to shift hospital based services into primary care (see Appendix A).

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**Four major PPPs have been delivered in NSW since 2004/05 with a total capital cost of over \$1.5bn. These have been DBFO rather than full service models.**

***Mater PPP***

Total project cost \$200m  
First Health PPP  
Brownfield and refurbishment  
Completed in 2009 on time and under budget

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***Long Bay PPP***

Capital project over \$150m  
Joint project with Department of Corrective Services  
Completed in 2008 ahead of schedule  
Challenges: construction in a secured environment

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***Orange PPP***

Capital cost: \$260m  
First Health PPP in regional NSW  
Redevelopment of the Orange Hospital, new mental health, new radiotherapy and oral health unit  
PPP procurement including provision of support services to the new facilities and the Bathurst Hospital constructed under conventional procurement

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***Royal North  
Shore PPP***

Capital cost of over \$1bn  
PPP procurement  
Clinical and operational efficiency  
Challenge and innovation at bid phase  
Sustainable design – environmental, economic and social  
Stage 1 completed in March 2011  
Future proof/expansion

## Summary of scope of operating and capital services contracted for Australian hospital PPPs

PPP	Operating Services					Capital services					
	Inpatient	Emergency	Rehab.	Community	Support	Part FFE	Full FFE	Maintain	Finance	Build	Design
Port Macquarie (1994)	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
La Trobe (1996)	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Joondalup (1996)	✓	✓	✓		✓		✓	✓	✓	✓	✓
Peel (1997)	✓	✓			✓					✓	✓
Mildura (1999)	✓	✓	✓		✓	✓		✓	✓	✓	✓
Recent Vic and NSW PFIs (2002-2010) <sup>1</sup>					✓	✓		✓	✓	✓	✓
Midland Health Campus <sup>2,3</sup>	✓	✓	✓		✓		✓	✓	✓	✓	✓

Note 1: Recent Vic and NSW PFIs include Mater Health (Newcastle), Long Bay Hospital, Royal North Shore, Orange & Bathurst, and Parkville Cancer Centre.

Note 2: MHC is considered a Design, Build, Operate and Maintain (DBOM) model where capital is provided by the State

Note 3: the table does not include the Fiona Stanley Campus project due to there not being asset or capital risk associated with what is primarily the outsourcing of all non-clinical services, which is being constructed through a managing contractor approach.

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## Successful PPP's have common elements

A high level thematic analysis of successful private involvement in public health service provision highlights three key features:

### Have appropriate expectations

- Recognise that a goal of complete risk transfer can come with additional cost or unintended systemic consequences.
- Approach contract management with a goal of stretching operational performance, with in-built controls to identify and avoid breaking points.
- Develop and evolve agreements that are fair, without compromising the ability of either party to deliver

### Be committed to success

- Develop and maintain appropriate goodwill towards the arrangements and a focus on the possible, within the Area, agency and critically in the political environment.
- Prioritise, develop, and constantly nurture positive working relationships between the provider and purchaser, and apply this trust in times where contractual constraints need to be overcome.
- Appreciate the complexities of both 'businesses', as demonstrating empathy is important in building trust and in developing solutions.

### Utilise the key strengths of the provider

- Private sector providers have demonstrated capability in their ability to respond to opportunities and deliver, and their abilities to act swiftly, and with agility.
- Utilise these skills, to the advantage and benefit of the system, rather than lamenting that the provider does not behave or respond *like the others*.

## Models for future PPPs in NSW

- The Port Macquarie full service PPP in the 1990s was generally not considered a success although detailed information has never been published.
- However, Joondalup Hospital in WA is widely regarded as a success and now has probably the busiest emergency department in WA and the new Midland Health Campus is to be operated on the same model.

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- In the UK, the private sector has been contracted to take over the management of an entire hospital after it incurred debts of £40 m with other hospitals in the UK known to be having similar discussions with the private sector.<sup>30</sup>
  - Although comparisons of costs of public and private operators can be contested, the Productivity commission found that private hospitals were less costly (especially excluding the medical and diagnostic costs not under the control of private sector management). Further, private sector labour productivity has improved relative to the public sector.<sup>31</sup>
  - The combination of more successful full service PPP models operating in other States and evidence of the private sector delivering care more efficiently in private hospitals suggests that full-service PPPs can deliver efficiencies especially where there is scope for
    - Co-location of public and private facilities with reduced capital outlays and shared services
    - Increased flexibility around industrial relations arrangements for both support and clinical staff.
  - Private health operators have expressed strong interest in full service procurement models in NSW based on a capital charge (if new infrastructure is required) and the efficient price per service, which could be benchmarked to the Nationally Efficient Price (NEP) to be set by the Commonwealth from July 2012.
  - There is scope for NSW adopt a full service PPP model on a lower risk, pilot basis by contracting services in the short term from existing private hospitals that are under-utilised.
  - The next step is to adopt the model on a larger scale. For example, the proposed Northern Beaches hospital could be built as a full-service PPP.

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<sup>30</sup> Sturgess, Gary, L. *Diversity and Contestability in the Public Service Economy*, p. 100.

<sup>31</sup> Productivity Commission Research Report - Public and Private Hospitals, December 2009

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## 10 Potential strategies for NSW

Two groups of strategies have been identified to improve value from investment in health infrastructure – measures that flatten the demand curve for services provided in facilities and measures that increase the efficiency of provision of additional infrastructure in partnership with the private sector.

### 10.1 Increasing use of innovative models for out of hospital to care to reduce demand on infrastructure with the same or better clinical outcomes

- New models of care drive the need for different infrastructure (other than hospital beds). These needs can be met by ‘repurposing’ community health centres and other existing assets, more use of hospital in the home and greater use of technology) e.g. to provide remote and proactive monitoring of patients in non-hospital settings).
- These infrastructure strategies lower both capital and operating cost with the same or better clinical outcomes and can flatten the growing demand curve for services provided in health facilities
- Specific initiatives should include:
  - 0 to 5 years:
    - > Targeted program to become the national leader in non-hospital solutions, together with opportunities of enhanced technology.
    - > 2 Integrate Medicare Local or other GP services with community and family health centres to provide working examples of the delivery of these services in health precincts.
  - To 10 years:
    - > Ensure that community health centres, GP networks and other existing infrastructure eg dedicated community and family health centres, are available to avoid hospitalisation

### 10.2 Greater use of private partnerships to purchase services for public patients for greater efficiency and improve the competitive characteristics of the health market

- In the short term this strategy involves purchasing services for public patients and exploits existing under-used infrastructure in the private sector. This strategy will lower the total cost to Government by deferring the need for capital expenditure (assuming the need for additional recurrent expenditure is not brought forward).

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- A new facility design will involve mixed private and public providers co-located in health precincts and specialist centres, where both public and private facilities are operated by the private provider. This new model of PPP, in which government partners with private providers of infrastructure and services, offers significant benefits and lower risk than the PPP models previously applied in NSW.
  - In the long term, this strategy will reduce health costs to Government, improve the competitive characteristics of the NSW health market and increase productivity across the health sector.
  - Specific initiatives in the short and medium terms are:
    - 0 to 5 years
      - > Contract provision of public hospital services and access available excess private capacity
      - > Health precincts and specialist centres of excellence with increased co-location of private and public facilities to share infrastructure and attract and retain medical staff
      - > Target exit from some activities including car parking, medi-hotels, technology intensive or non-clinical services.
    - To 10 years
      - > LHDs become purchasers of services in a healthy competitive market with regulated pricing, casemix and service requirements (inclusive of quality standards and outcomes to be achieved).
      - > Improve funding models to encourage recognition and management of the user cost of capital and negotiate with the Commonwealth to make capital contributions under the reformed funding model.

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## Appendix A. The current NSW health capital prioritisation process<sup>32</sup>

- Capital investment planning is currently based on linkages between endorsed state and Ministry objectives, population health needs, contemporary, evidence-based models of care and asset based solutions that meet identified needs.
- Consideration of service development and capital investment priorities is undertaken at many points in the planning process. Factors taken into account at both local and statewide levels include:
  1. Current and future demand;
  2. Changing models of care;
  3. Self sufficiency (where appropriate) and patient flows;
  4. Clinical frameworks and service networks;
  5. Statewide plans, policies, frameworks and performance targets;
  6. Workforce availability and skill mix;
  7. Clinician and consumer views;
  8. Availability, and the appropriate mix of primary, community and acute services;
  9. Major trends and drivers of change; and
  10. Government Decisions and Ministerial directions.
- The NSW Ministry of Health develops one, four and ten year capital plans within the Asset Acquisition Limits (AALs) advised by NSW Treasury
- The NSW Health Ten Year Capital Investment Strategic Plan is the result of a number of planning phases which include the following elements:
  1. **Broad Service Planning:** Local Health Districts develop a Healthcare Services Plan (HCSP), consistent with statewide directions and policies (Note:the LHDs are in the process of doing the first iteration of these plans)
  2. **Asset Strategic Planning:** Asset Strategic Plans are developed by each Health Service and the State to align asset needs with service requirements and to identify gaps for future investment needs
  3. **Statewide Planning and Prioritisation:** To assist the decision making processes, NSW Health has developed a capital investment prioritisation model, which is a generalised multifactor rating model, known as the CAPRI (Capital Assets Prioritisation) model. The model is an

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<sup>32</sup> Source: NSW Health Asset Strategy, February 2012

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Excel tool used to identify and provide an initial screen of projects with validated service needs. This allows capital investment proposals to be assessed against a number of criterion that are linked to the NSW Health system goals and infrastructure objectives providing a ten year view of priorities, overall. The model results in “groups” of priorities which are then subject to more detailed analysis and costings to determine new projects for the capital program. The outcome of the process forms the basis of the Capital Investment Strategic Plan, which is ultimately endorsed by Ministry Executives and the Minister for Health, prior to relevant Government investment processes.

- CAPRI uses qualitative information to screen need (as opposed to value derived) and uses defined criteria which map to overall corporate and state objectives. These include:
  1. Service realignment – accommodates need to address changing service delivery objectives, pressure points for demand and changing models of care
  2. Enhancement of access to a comprehensive range of services – responds to Government policies regarding access to priority areas of service delivery
  3. Targeted service – action required to achieve a statewide service strategy, or to enable Statewide or Selected Specialty Service Plans
  4. State of repair – responds to issues around the condition of infrastructure.
  5. Functionality – the extent to which functionality of the existing services on the site and/or building impact on service delivery, where investment will improve opportunities for improved safety or quality of service provision
  6. Efficiency – the extent to which efficiency and/or productivity is expected to be improved as a result of the project; for example dislocation of related services, or separation of elective and planned surgery.
  
- The weighting attributed to each criterion is adjusted over time to reflect current government objectives. This presents a risk when comparing future plans or project priorities across government changes or political cycles.
- No formal methodology is used to prioritise between asset classes
- The CAPRI model is used to varying degrees by LHDs to score projects and submit these scores to MoH as part of Asset Strategic Planning
- The initial assessment generated using CAPRI provides a preliminary guide to priorities which then require more detailed clinical and capital services planning followed by the development of Service Procurement Plans (SPP). NSW Health Process of Facility Planning guidelines are applied at this stage.<sup>33</sup> Project Definition Plans (PDP) are then developed where appropriate. An ICT Strategic Plan also identifies Information Technology requirements. These processes form the basis of the 10 year Capital Investment Strategic Plan (CISP)

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<sup>33</sup> See NSW Health Process of Facility Planning Guidelines (separate guidelines apply for projects valued less than \$10 million and projects valued at \$10 million and above at: [http://www.health.nsw.gov.au/assets/process\\_update.asp](http://www.health.nsw.gov.au/assets/process_update.asp))

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## Appendix B. PPP case studies

### **Case-study: Fiona Stanley (WA) may provide one alternate model of private sector involvement in the future, which focuses on non-core services**

#### **Characteristics**

- Non-clinical services at Fiona Stanley Hospital will be delivered by Serco Australia under an innovative contracting arrangement that sets a new benchmark for health infrastructure projects around the country.
- The contract between WA Health and Serco, which includes extremely strict targets for the private sector organisation, was signed in July 2011.
- The procurement strategy confirms that Fiona Stanley Hospital is owned by the State with the State responsible for the provision of all clinical services to the public
- The project objectives for the FSH are to: Deliver patient-centred care; Provide clinical support to general hospitals and community based services in the health service area; and Maximise the value for money of health care services by delivering sustainable, appropriate and localised health care
- The scope of services under the contract includes the vast majority of non-clinical services and is the most far reaching of any in Australia

#### **Lessons learnt and relevance for NSW**

- The private sector can participate in service delivery with an increasing scope that provides opportunity to transfer risks and extract additional value for the state
- The initial planning for such private participation needs close examination of the interface and interdependencies between public services that may at a high level seem unconnected. In addition the impact to public sector services by moving volume to the private sector needs to consider the impact to economies of scale and scope (such as multi-skilled workforce or regional/state services)

*Source: Government of Western Australia, Fiona Stanley Hospital: Summary of Facilities Management Services Contract, July 2011.*

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## Case-study: Joondalup (WA)

### Characteristics

- **Design Build Finance Operate (DBFO)** model of 84 bed Wanneroo Public Hospital and upgrade to a 335 bed hospital comprising 265 public beds and 70 private beds
- The facility, now operated by Ramsay Health Care, is one of only 2 early wave PPP's still in operation by the private sector. Recently Ramsay partnered with the Western Australian government to open significant extensions to the campus. Key issues included:
  - Annual volume agreements to manage volume risk to the operator (a failing of other full service PPP's)
  - Regular benchmark and value for money testing against local peer group hospitals
  - A transition of public services away from major tertiary, inner city sites to the new outer metro facility as part of a regional clinical service plan to improve local access and self sufficiency measures
  - ensuring that a viable private hospital would be eligible for full private health insurance rates
  - making arrangements for doctors to provide privatised public hospital services and for the transfer of public hospital staff to employment by a private operator.

### Lessons learnt and relevance for NSW

- Managing labour costs is crucial for a successful PPP. The hospital employs private employees, but provides compensation to ensure that pay is equal to that of civil servants working in a neighbouring hospital.
- Governments must remain responsible for the quality of care as citizens associate healthcare services with public services
- Continuing to operate with plans for further expansion
- Benchmark price arrangements
- significant goodwill and cooperative relationships, on the basis of clear contract management arrangements

*Source: PwC Health Research Institute, the (r)evolution of healthcare PPPs*

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## Case-study: New University Hospital, Coventry (UK)

### Characteristics

- 40-year contract to develop, own and operate two hospitals in Coventry, UK
- New 1212-bed acute hospital and a clinical sciences teaching and research facility, as well as a 130-bed mental health unit on the Walsgrave site in Coventry
- At the Hospital of St. Cross in Rugby, maintaining the existing estate
- The Skanska Innisfree consortium is also providing a range of services until 2042. These include catering, portering, laundry, security, waste management, transport, medical equipment, the helpdesk, car parking, telecommunications infrastructure management, building maintenance, energy management and overall facilities management.
- Construction value: £400 million  
Concession period: 2002 – 2042  
Construction period: 2002-2007  
O&M: 2007 - 2042

### Lessons learnt and relevance for NSW

- Managed Equipment Services (MES) contract was included within the overall project scheme since the initial bidding stage, which was a key success factor to the overall project for a number of reasons:
  - Input into the design and construction of the medical facilities to ensure that the infrastructure was suitable for final equipment selection;
  - Early establishment of a strong relationship with the Consortium and Trust;
  - Minimise the requirement for costly turnkey works following changes to equipment requirements;
  - Early establishment of relationship for service of existing medical equipment;
  - Early familiarisation with the Trust's existing asset register;
  - Early establishment of inter-consortium development and proposed operational processes;
  - Support in the management of change for UHCW.

#### Sources:

GE Healthcare, University Hospitals Coventry and Warwickshire NHS Trust, factsheet.

Skanska, accessed on 13 April at <[http://www.skanska.com/en/Projects\\_old/Display-project/?pid=162&lang=en-gb](http://www.skanska.com/en/Projects_old/Display-project/?pid=162&lang=en-gb)>

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## Case-study: Alzira (Valencia, Spain) – Hospital and Primary care services have saved government 25% of the cost of providing care

### Characteristics

- University Hospital and Primary Care, Alzira, Valencia, Spain (1999)
- New hospital, inpatient clinical services, primary care services
- Private sector finance, construct and operate the hospital building, and delivers the clinical services
- Citizens of the region have the choice to visit any hospital within the region, with their catchment hospital being responsible for 100% of the cost when that happens. Conversely, when outside patients attend the Alzira hospital, the operator only recovers 85% of that cost. This is a strong incentive to provide high quality services to maintain patient confidence.

### Lessons learnt and relevance for NSW

- Flexibility and transparency are vital. In 2003, the partnership was on the verge of failure, so the agreement was altered in two major aspects:
  - Initially, the contract was for hospital services only, but it was renegotiated to include primary care. This underlines the importance of structuring incentives. By managing primary care, the hospital operator can reduce unnecessary hospital admissions.
  - In addition, the government initially agreed to pay the hospital a capitated rate that increased annually with general inflation. However, medical costs were increasing at two to three percent above the inflation rate. Consequently, the contract was renegotiated so that payment increased in line with the rate of medical inflation.
- Unique feature to this contract is that the public sector role is reduced to being that of a commissioner of healthcare, as it funds healthcare services by paying the provider a capitation charge derived from the public health budget.

#### Sources

PwC Health Research Institute, *the (r)evolution of healthcare PPPs*

Stafford et al. 'Spanish healthcare Public Private Partnerships: the 'Alzira model' accessed at < [http://www.organizzazione.unina.it/cms7/proceedings/proceedings\\_stream\\_33/Stafford\\_et\\_alii.pdf](http://www.organizzazione.unina.it/cms7/proceedings/proceedings_stream_33/Stafford_et_alii.pdf)> (3 April 2012)

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## Case-study: Turks and Caicos Islands Health PPP as a way of securing skills in short supply

### Characteristics

- Design, build, equip, maintain and operate the two new hospitals in Grand Turk and Providenciales by a consortium led by Interhealth Canada as well as the provision of clinical services and a medical equipment service.
- The project was financed by a total debt and equity funding package of approximately \$124m. The deal also included provision of interest rate swaps and a price inflation swap.
- Opened in 2010

### Lessons learnt and relevance for NSW

- Full spectrum of care: one of the major differences with this PPP is that the provider manages the full spectrum of health services, across primary, secondary and tertiary levels, not just hospital care. This will ensure better continuity of care, allow the health system to adapt to changes over time, and help to manage healthcare costs. Since Interhealth Canada is responsible for all services, it can decide the most cost effective and appropriate means of provision, and adapt its delivery model to meet the changing needs of the population. It also means that TCI is not locked into hospital care at the expense of primary and community based services.
- Payment for clinical services is on a capitated formula, which provides a single payment to the provider to cover the full range of clinical services for the population. Capitation provides a good foundation for a long term partnership because it can adapt to changes in practice patterns, technologies, epidemiology and care modalities, which will inevitably occur during the course of the arrangement.

#### Sources

InterHealth Canada, *Turks and Caicos Islands Hospitals Project*, accessed at <http://www.interhealthcanada.com/projects/projects.asp?categorycode=ART00196&ID=ART00164&SubID=ART00189> (3 April 2012)

*Turks and Caicos Weekly News*, accessible at <http://tcweeklynews.com/hospitals-financed-with-m-ppp-project-p437.htm>

Neelam Sekhri Feachem et al. *The Turks and Caicos Islands: A Public Private Investment Partnership For an Integrated Health System*, accessible at <<http://www.hcredesign.com/pdf/NeelamSekhriFeachemTCIfinal.pdf>>

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### Case Study: The 'one-stop-centres' or Primary Care centres in the UK provides patients with specialist integrated health services<sup>34</sup>

- The NHS LIFT (Local Improvement and Finance Trust) initiative was established by the UK Department of Health in 2001, to deliver a new model of investment in primary care. A national program of public/private joint ventures was designed to transform inadequate, poorly planned capital investment in smaller scale community based health and social care into purpose-built public sector infrastructures. The infrastructure is owned by a LIFT company and leased to a variety of health service providers including public providers, non-profit organisations and some private operators
- By the summer of 2008, 47 LIFT companies had been established in the UK, working in partnership with local public sector organisations to provide bespoke, tailor made facilities. These companies have generated over £1,500 million investment to develop more than 225 new integrated community facilities, which include a wide variety of services delivered to promote healthier communities
- NHS LIFT is flexible in respect of the type of buildings it provides allowing for the building design to reflect the needs of the services. To date LIFT is providing a range of building types including re-provision of GP premises, one stop primary care centres, integrated health and local authority service centres, and community hospitals.
- The one-stop-shop principle is an important component of LIFT - allowing the patient to be treated in their locality in so-called 'One-Stop-Centres' or Primary Care Centres that are modern, convenient, easy to access and staffed by a wide range of healthcare professionals.
- As of September 2011, 252 facilities were opened under the LIFT scheme with an additional 35 under construction. Total value of all the facilities is £2,039m.<sup>35</sup>
- A review of the LIFT scheme carried out in 2008 concluded LIFT has been particularly successful as a catalyst for building healthy communities by helping to shift hospital based services into primary care.<sup>36</sup>

### Benefits of LIFT<sup>37</sup>

- Integration, co-location and strategic planning of health services and local government health related services.
- Saving of bid costs and procurement time on future schemes.
- Attracting quality bidders and value-for-money bids (attracting good quality bids for schemes with a capital value of less than £20million can be challenging)

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<sup>34</sup> <http://www.dh.gov.uk/en/Managingyourorganisation/NHSprocurement/Publicprivatepartnership/NHSLIFT/index.htm>

<sup>35</sup> [http://www.dh.gov.uk/prod\\_consum\\_dh/groups/dh\\_digitalassets/@dh/@en/documents/digitalasset/dh\\_130968.pdf](http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_130968.pdf)

<sup>36</sup> [http://www.dh.gov.uk/dr\\_consum\\_dh/groups/dh\\_digitalassets/documents/digitalasset/dh\\_091390.pdf](http://www.dh.gov.uk/dr_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_091390.pdf)

<sup>37</sup> <http://www.localpartnerships.org.uk/UserFiles/File/Publications/joining%20up%20to%20deliver%20integrated%20services.pdf>

