13.0 Health infrastructure

Summary

- Like health systems around the world, the NSW health system is facing considerable challenges to meet growing demand driven by an ageing population, lifestyle diseases and new care technologies.
- The NSW Government is delivering a prioritised capital program that will establish pro-actively planned 'health care precincts' with easy access to related private and public health services delivered by both government and non-government providers.
- It is recommended that the Northern Beaches Hospital be developed using this approach.
- Infrastructure NSW recommends that a proportion of new hospital beds be in smaller, specialist medical facilities (rather than multi-purpose hospitals) to improve efficiencies in delivery to public patients and cut waiting times.
- Meeting the challenges requires significant reform of soft infrastructure by introducing full-service procurement, with potentially significant improvement to the health sector's productivity, and implementing innovative models of care.
- Infrastructure NSW recommends repurposing community health centres to deliver a greater range of services in the community.
- Partnerships with the private and not-for-profit sector in the repurposing of these facilities will expand the delivery of new care models such as eHealth programs.
- Infrastructure NSW recommends long term reform to service purchaser models to achieve a better mix of services, while including the private sector. In the short term, Infrastructure NSW recommends investigation of excess capacity in the private sector and options to purchase full hospital services for public patients from the private sector to cut waiting times.
- NSW Health has infrastructure for support services such as medical imaging, pathology, pharmacy and surgical instrument sterilisation services and non-clinical services, car parking and nursing homes that are best provided by others. Infrastructure NSW recommends a targeted program to recycle capital to health priorities.

13.1 Health snapshot

- Like health systems around the world, the NSW health system is facing considerable challenges to meet growing demand driven by an ageing population, lifestyle diseases and new care technologies. NSW Health's goals are to improve health outcomes and meet the growth in demand for health services.
- Demand for health care is forecast to grow by nearly 50 percent in the next 20 years, due to the ageing population and lifestyle diseases.
- Supply of new hospital beds is estimated at around 275 beds per year (around 200 for acute care and 75 for sub-acute care). Without reform, this will put significant pressure on NSW's capital and operating budget. Infrastructure NSW has identified initiatives from other states and around the world that meet health sector outcomes with lower capital investment and therefore less embedding of fixed costs.
- The NSW Government has announced a program of major new hospital works to start in 2012 and 2013 and NSW Health investment of around $10 billion is planned for the next 10 years.

- The Government has $10.4 billion in health assets – 211 public hospitals, 143 community health centres, 87 child and family health centres and four nursing homes.
- Health capital expenditure is less than 10 percent of total State infrastructure investment, but total health expenditure represents 27 percent of the entire NSW budget.
- Public hospitals account for almost all the capital and 60 percent of the health operating budget.
- Capital and operating expenditure doubled from 2001 to 2010 – an average growth rate of seven percent per annum. NSW's capital expenditure per capita had been 24 percent lower than the average of the rest of Australia (in the decade to 2010).
- Health capital budget is around $1 billion per annum. Health's future capital requirements will be considered as part of a broader Asset Strategy Review, for the 2013-14 Budget process.
- NSW has a smaller private health sector than Victoria or Queensland; if NSW had about the same number of public hospital and private hospital beds per 1,000 residents, it would have 2,179 less public hospital beds and 3,200 more private beds.
- NSW Health has a higher proportion of private patients in public hospitals than any other state – 16 percent in NSW compared to nine percent in Victoria and five percent in Queensland; this in turn discourages private investment.

13.2 Supply and demand

In responding to the growth in demand, Infrastructure NSW recommends that the management of existing hospital assets needs to be reformed first, while there is contemporaneous investment in renewal of health infrastructure. There is a need for the private sector to be used more efficiently, including in the deliverance of new care models.

13.2.1 Demand growth

The demand for health care and costs of services are increasing faster than the rate of population growth due largely to:

- an ageing population – while population is forecast to grow by 30 percent by 2031, the forecast demand for health services may grow by 49 per cent[1]
- average health expenditure per person over 65 years of age is four times more than for those under 65. The Productivity Commission projected ageing will account for about half the increase in health expenditure as a proportion of GDP[2]
- increasing prevalence of lifestyle diseases such as obesity and diabetes;
- increased use of high cost and advanced technologies with shorter capital cycles
- community expectations for certain care models and ready access to service options. Health needs are increasingly related to lifestyle factors requiring the system to change from a focus on treating illness to more illness prevention and ultimately over time the maintenance of wellness.

To meet forecast demand, NSW Health predicts an additional 200 acute beds and a minimum of 75 sub-acute beds are needed each year over the next 10 years[3]. This represents growth of only 1.5 percent per annum in the number of beds – lower than growth in demand because as models of care change, bed numbers decrease in relevance as more services are provided out of hospital.

1 PwC 2012, Health Baseline Report.
2 Productivity Commission 2005, Economic Implications of an Ageing Australia.
3 NSW Health.

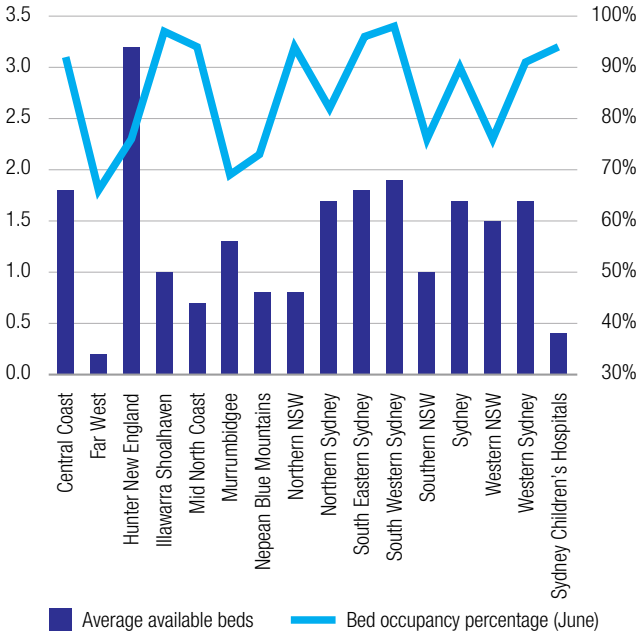
13.2.2 Managing existing hospital capacity to meet demand

NSW has 211 public hospitals with around 20,000 hospital beds.

Occupancy rates are increasing – the state average increased to 89.1 percent in 2011 compared to 85.1 percent in 2008. Occupancy above 85 per cent leads to increased waiting times for patients in emergency.

The occupancy and availability are shown in Figure 13.1.

Figure 13.1 Bed occupancy and available beds at 30 June 2011 by Local Health District per '000 people



Source: NSW Auditor General.

NSW also has more public hospital beds per capita than other states, NSW has a higher number of public hospital beds per 1,000 residents (2.7 compared to 2.4 in Victoria, Queensland and WA) and fewer private hospital beds (1.0 compared to 1.4 in Victoria and Queensland and 1.6 in WA).

The reasons for more investment in public hospitals in NSW, and relatively fewer private beds include:

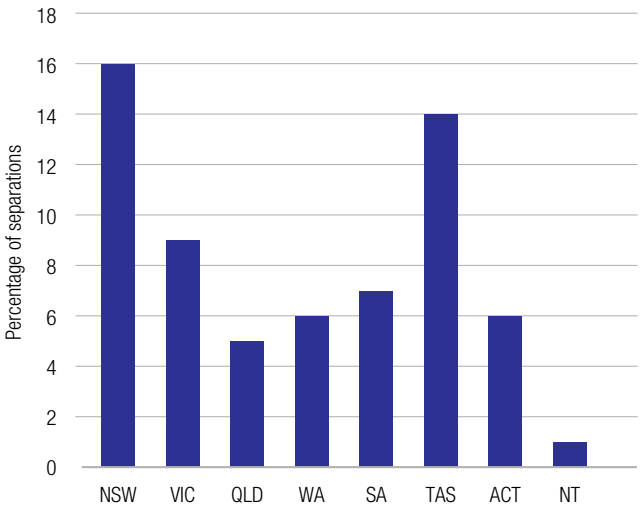
- site availability and constraints of planning system
- admitting specialists' rights of practice at hospitals
- lack of availability of services at accessible private hospitals
- NSW public hospital procedures encourage admitted patients to use their private health insurance.

In regards to private patients in public hospitals, public hospital CEOs have incentive to capture this revenue for both operating revenue and medical workforce retention reasons but do not have sufficiently clear accountability for long term capital implications.

Local Health Districts and hospitals are proactive in seeking private patient revenue as a means of generating additional operating income. While a proportion of patients who elect to be private patients in public hospitals are admitted through emergency departments and would most likely be treated in a public hospital whether or not they were a public or private patient, another group of patients are elective admissions and could have been served in either public or private facilities. NSW has a higher proportion of private patients in public hospitals than any other state – 16 per cent in NSW compared to nine percent in Victoria and less than five percent in Queensland, as shown in Figure 13.2 below.

Infrastructure NSW has concluded that these practices unnecessarily increase the demand for investment in public hospitals. Less use of public hospital beds by private patients would provide additional hospital beds for public care, reducing waiting times and reduce the need for new capital expenditure.

Figure 13.2 Share of public hospital separations funded from private health insurance, 2010-11



Source: AIHW.

Infrastructure NSW recommends that NSW Health review the current practice, including the role of private revenue targets, and reduce the high proportion of private hospital patients in public hospitals to free up hospital capacity for public patients. The current reliance on income from the privately insured patients would need to be replaced with public funding over the next five years.

13.2.3 Major new hospital works

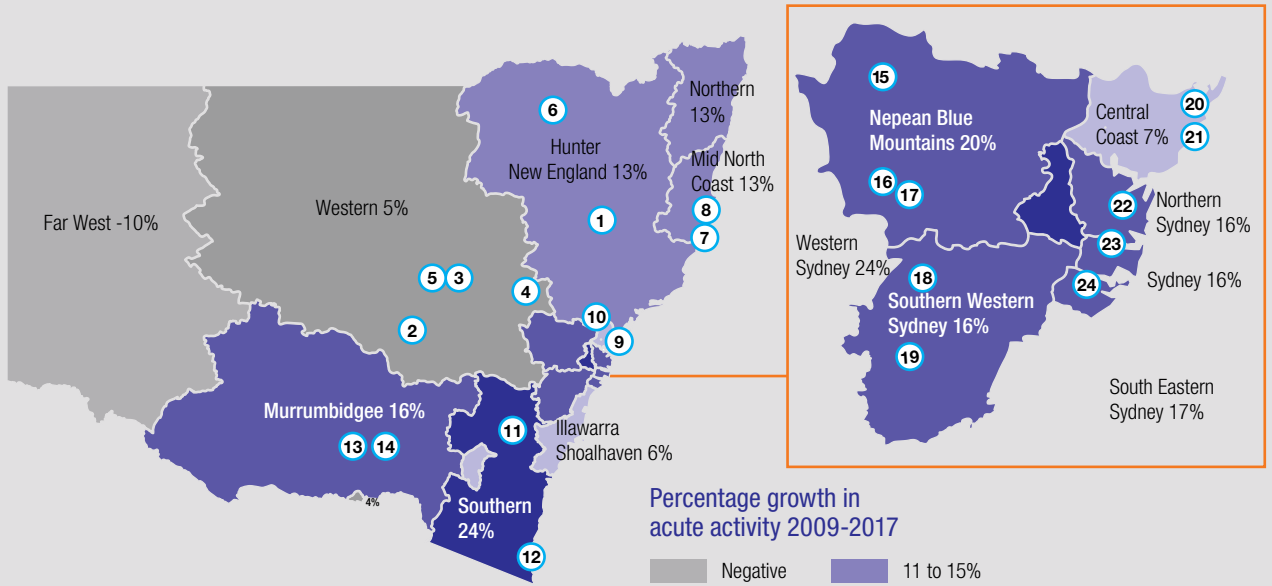
Infrastructure NSW concurs with the Commission of Audit's conclusion that 'facilities are run down'[4]. There is a clear need for ongoing planned and systemic investment and management of health infrastructure, a regular program of renewal to extend life and to upgrade to modern standards for efficiency in delivering contemporary acute health care services.

NSW's capital health expenditure per capita has been consistently lower than any other state. Health capital expenditure as a proportion of total state government health expenditure in NSW in 2011-12 is five percent compared to 16 percent in Queensland and nearly 11 percent in Victoria.

The prioritised capital program over the next 20 years to meet expected growth in demand includes the major projects shown in Figure 13.3. The major hospital projects are those included in the 2012-13 Health Plans.

Infrastructure NSW, NSW Health and NSW Treasury are reviewing the capital plans to determine priorities for the 2013-14 budget.

Figure 13.3 Projected growths in rural acute activity and major hospital projects



New major health projects first 10 years

1. Tamworth Hospital Redevelopment Stage 2 Tamworth Stage 3 Redevelopment
2. Parkes and Forbes Health Service
3. Dubbo Hospital Stages 1 & 2
4. Gulgong Multipurpose Service
5. Dubbo Hospital Stage 3/4
6. Northern NSW
7. Port Macquarie Base Hospital
8. Kempsey Hospital Redevelopment
9. Morriset/Kestrel
10. Maitland (Lower Hunter Strategy)
11. Goulburn Base Hospital Redevelopment
12. South East Regional Hospital Bega
13. Wagga Wagga Hospital Redevelopment
14. Wagga Wagga Hospital Redevelopment Stage 3
15. Nepean Hospital Stage 4
16. Blacktown/Mt Druitt Hospitals Stage 2
17. Westmead Hospital Refurbishment and Expansion Stage 1
18. Liverpool
19. Campbelltown Hospital
20. Gosford/Wyong
21. Central Coast Growth Strategy
22. Hornsby Kuringai Hospital Stage 1
23. Northern Beaches
24. Rozelle

Demand growth Source: NSW Health; Excludes chemotherapy, renal dialysis, unqualified neonate, ED only and Hospital in the Home admitted services. Project Source: NSW Government.

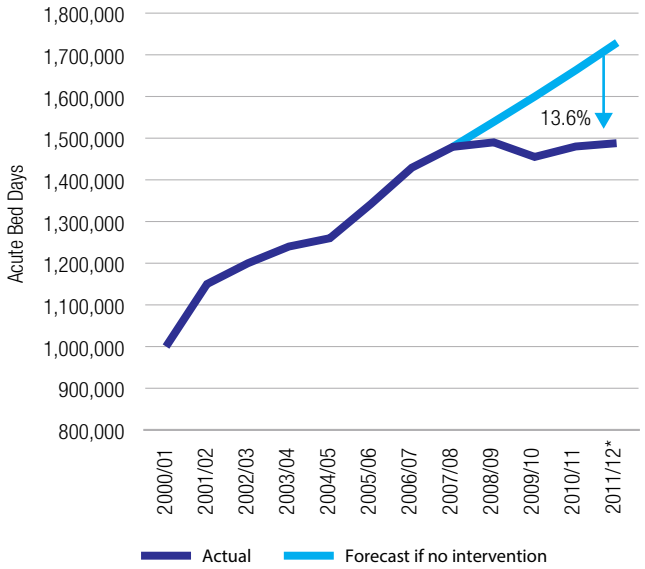
4 NSW Commission of Audit 2012, Government Expenditure, Final Report.

13.3 Changing the portfolio of health infrastructure

Contemporary models of care can deliver efficiencies in both operating and capital costs while maintaining and even enhancing quality outcomes for patients. These models lower demand for high-cost hospital services over time and will significantly change the portfolio of health assets needed in the future.

NSW Health has introduced a range of contemporary models of care including Hospital in the Home (HITH), a multi-purpose centre strategy to repurpose short stay wards and community support packages to improve patient care and reduce hospital admissions, especially for older people. This has significantly reduced demand for acute bed-days by 13.6 percent in the last four years as shown in Figure 13.4 below.

Figure 13.4 Acute Bed Days for Persons Aged 75 and over



Source: NSW Health.

13.3.1 Non-hospital service reforms to date

HITH services provide acute and sub-acute care to patients with certain conditions, who may otherwise occupy a hospital bed in a lower cost setting. Various studies[5] show significantly lower costs, by:

- avoiding treatment costs that would otherwise be incurred as a result of hospital acquired or associated infections
- avoiding Emergency Department (ED) presentations and ambulance transfers where transfer to an acute hospital ED is unnecessary
- improving 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.

A 2009 study showed the cost of episodes of acute care containing a HITH component were overall nine percent less expensive than in-hospital care while pure HITH was 38 percent cheaper than matched hospital care with the same or better clinical outcomes[6].

NSW Health has actively stimulated the 'Hospital at Home' services sector and has invested in eHealth programs.

Information and communication technology (ICT) solutions have proven capability to support models of care that cost effectively shift some of the demand curve away from hospitals. Telemedicine, remote monitoring and other innovations in technology also provide a

5 PwC 2012, Health Baseline Report.
6 MacIntyre, C., Ruth, D., and Ansari, Z. 2002; cited by PwC.

platform for greater efficiency and enable improved care. Capacity for real time transfer of patient records between a patient's clinicians, removing scope for errors in administering medication, more efficient in-hospital administrative systems and capacity for remote treatment and diagnosis offer enormous potential for transforming health care service models.

13.3.2 Developing partnerships with the private sector (including not-for-profit) to increase out of hospital 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 (GPs) are integral to planning for primary health care and its effective and efficient integration with hospital-based services.

A combination of population age and lifestyle-based diseases generate demand for health services. As such, 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.

The Commonwealth 'Medicare Local' GP Service program targets better co-ordination of care and reducing the pressure on public hospitals as a result of providing services to patients who could be better cared for in non-acute settings. The GP Service Centres are operated by the private sector and deliver services that would otherwise be provided by public hospitals.

Partnerships with the private sector (including AHO and not-for-profit) to repurpose existing infrastructure would expand the delivery of new care models such as "Medicare Local" hospitals in nursing homes and eHealth programs more rapidly than would otherwise be the case. The private sector could become a co-investor in the repurposing of existing facilities and public health service provider from these facilities.

Recommendation Infrastructure NSW recommends repurposing community and family health centres to deliver new models of care and a greater range of services, integrating Medicare Local or other GP services with community and family health centres. A trial reconfiguration program is recommended as a first stage.

13.3.3 Changing the 'mix' – specialist medical facilities

Australia is now starting to adopt the concept of specialist medical facilities (mini specialist hospitals) which provide a limited range of medical treatments such as dialysis, cancer treatment centres, cardiology diagnostics, sleep disorder therapy and day surgery. These facilities are purpose built and operate more efficient delivery models. Efficiency is derived partially from the medical specialisation, use of cutting edge technology and the ability to attract specialist staff who wish to work in the given field.

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 at September 2011, 252 facilities were opened under the NHS's LIFT[7] scheme with an additional 35 under construction with a total value of all facilities of £2,039 million. 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[8].

The expansion of existing hospitals to cope with increasing demand can be curbed through NSW Health developing specialist standalone facilities, as described above, or through the purchases of such services from the private sector.

Infrastructure NSW supports further investigation and development of specialist medical facilities as alternatives for expanding existing hospitals, to improve efficiencies in delivery to public patients, cut waiting times and reduce capital costs.

7 Local Improvement Finance trust (LIFT).
8 PwC 2012, Health Baseline Report.

13.4 Full service procurement

Full service procurement is proposed for public health services to be delivered by the private sector. The proposed full-services procurement model is consistent with activity-based funding and increased accountability of Local Health Boards and is expected to significantly improve productivity in the health sector.

13.4.1 Full service provision

Infrastructure NSW supports long term reform to an outsourced model where the NSW Government would buy public hospital services, on an activity basis using an efficient price per service model.

As noted above, NSW has more public sector and less private sector hospital beds than other states. The Productivity Commission developed estimates (with significant caveats around the available data) that show the capital cost of health care per casemix-adjusted separation is much lower for private hospitals than public hospitals, as shown in Figure 13.5.

Figure13.5 Cost per casemix-adjusted separation by Jurisdiction and Sector, 2007-08

Source: Productivity Commission.

These comparisons of private and public hospital activity between states are blunt but indicate that there are opportunities for lower costs by increasing the private sector's proportion of supply of public health services in NSW.

Infrastructure NSW has also found that there is under-utilisation of private sector infrastructure. Private providers have submitted that there are at least 300 'moth-balled' beds available for full-service procurement for public health use, without any substantial capital investment.

Whilst NSW Health/Local Health Districts already purchase services from the private sector, this mode of capital efficient procurement could be expanded and accelerated.

The recommendation for full service procurement of public health from private providers is very different to past Public Private Partnership (PPP) models. To date, PPP models have been used in NSW to deliver infrastructure and provide maintenance and some support services. The traditional PPP models reduced initial capital cost for government and provided capacity to accelerate infrastructure delivery as well as enabling outsourcing of ongoing maintenance and asset management to ensure facilities stay in near new condition.

In the long term, a 'buy' rather than 'build' strategy could significantly reduce costs by improving the competitive character of the NSW health market and expanding choices for the community.

The recommended full service procurement strategy and specialist precinct strategies will create momentum for redressing the imbalance. Private providers should also have greater involvement in the planning and prioritisation process to better identify possible market entry points.

Recommendation Infrastructure NSW recommends long term reform to service purchaser models for new public hospital capacity, to lower investment in capital intensive infrastructure and achieve a better mix of services.

In the short term, Infrastructure NSW recommends investigating excess capacity in the private sector and options to purchase full hospital services for public patients from the private sector.

13.4.2 Co-location in health precincts

NSW is already well serviced with large full-service general hospitals. The recommended strategy for better leveraging capital investment at current and new facilities, is to establish 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 benefits from both agglomeration and specialisation, and complements the existing network of large general hospitals.

Specialist centres, rather than having many general hospitals, provides 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 public hospital co-located with a private facility, 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 co-location 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.

Recommendation Establish pro-actively planned 'health care precincts' with clusters of related private and public health services delivered by both government and non-government providers. Potentially, the Northern Beaches Hospital will be constructed using this approach.

13.4.3 Exit from support infrastructure

There are also opportunities for NSW Health to better utilise existing capital stock by exiting some clinical support services at existing sites such as medical imaging, pathology, pharmacy and surgical instrument sterilisation services and non-clinical support services, including car parking.

The private sector is already set up to provide these services at an efficient price. A planned careful exit of these services will mean that NSW Health can provide more beds where needed at a lower cost through recycling capital or repurposing existing facilities.

Recommendation NSW Health to reconfigure or divest surplus assets associated with exit from some support services such as medical imaging, pathology, pharmacy and non-clinical services, including car parking and nursing homes, in a targeted program.

13.5 Recommended actions

	Recommendations	Years	Type	Cost and Funding Implications
57	**Construct Northern Beaches Healthcare Precinct, public and private facilities co-located**	0 – 5	Major project	Existing Government commitment
58	**Divest non-core assets such as pharmacies and car parks**	0 – 5	Asset utilisation	Potential capital savings
59	**Trial reconfiguration of existing health centres to support new models of care**	0 – 5	Asset utilisation	Cost of trial not material
60	**Evaluate provision of new public hospital capacity by private sector providers**	0 – 5	Review	Potential capital savings
61	**Upgrade and build new healthcare facilities in accordance with projected demand**	0 – 20	Program	Existing Government commitment. Program will reflect NSW Health preferred models of care