

# TAMWORTH HEALTH SERVICES PLAN 2008-2012

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# Document Administration

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## 2. Document Approval

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Colleen Wilson Health Strategies Pty Ltd prepared the initial draft of this Plan for Hunter New England (HNE) Health, in collaboration with HNE Health's Strategic and Clinical Services Planning Unit, and following extensive consultation with representatives from the community, health service staff and management, and other service providers.

Any reference made to information contained within this Plan must be done so with acknowledgement to HNE Health.

This is considered a living document that will require regular review over time in the rapidly evolving environment of contemporary health service development and delivery.

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# 1. Executive Summary

## 1.1. Introduction

Tamworth Health Services (THS) comprise hospital-based and community health services working collaboratively to provide a comprehensive range of health services to Tamworth, the surrounding areas and beyond. THS fulfil two roles in providing this range of health services:

- A full range of health services up to district level to the immediate catchment area of the Peel Cluster and the northern part of the Upper Hunter Cluster;
- The major rural referral hospital for the northern part of HNE Health (which covers the area of the former New England Area Health Service) providing a range of services including Maternity, Acute Renal Services, Acute Mental Health Inpatient Services, Surgery, Cardiology and Critical Care. The services catchment covers the McIntyre, Peel, Mehi, Tableland and Upper Hunter Clusters.

Higher level tertiary services are provided in Newcastle (mainly at the John Hunter and Mater Hospitals) and at Sydney centres (mainly St Vincent's Hospital).

It has been identified that current building infrastructure is, in many cases, beyond its useful life, preventing the evolution of models of care and hampering the delivery of contemporary health services. Modern facilities are designed to allow flexible and multi-functional use of space to maximise service sustainability, efficiency and the effective use of available resources. Throughout this plan, modes of service delivery such as co-location of related services to enable staff to work across areas, ability to 'swing' beds for changing needs, provision of multipurpose clinic rooms and the ability to coordinate services across modalities (i.e., hospital and community health), that support sustainable, efficient and cost-effective service provision are considered. The Plan outlines service models and associated facility requirements that will ensure Tamworth Health Services are well-placed to meet the challenges of the future.

The proposals for service development and delivery included in this Plan are consistent with the strategic directions of HNE Health as articulated in the Area's Strategic Plan – *A New Direction for Hunter New England Health Service Strategic Plan – Towards 2010*. Strategies for the future provision of health services in Tamworth also support and align with initiatives included in HNE Health area wide Clinical Services Plans.

## 1.2. Aims of the Health Services Plan

The first stage in the planning and development of new infrastructure to accommodate future health services is to develop a Health Services Plan (HSP). The HSP identifies NSW Health directions and policy requirements, HNE Health strategic directions and community needs, and describes the services to be provided in the future and how they will be provided.

The purpose of the HSP is to ensure the delivery of integrated, accessible and quality health services for all people living in the Tamworth area and the wider catchment.

The Health Services Plan (HSP):

- Identifies the characteristics of the future population of THS catchment including the expectations of the community;

- Identifies the future health service needs of the communities within the catchment area within an Area-wide context;
- Proposes the main aims and objectives of the future service models;
- Proposes models of care for the future provision of services consistent with NSW Health policies and HNE Health strategic directions. The strategies proposed complement initiatives already in place across the health sector in line with current and emerging trends in health service delivery.
- Describes the resources required for the future to deliver the range of required services.
- Identifies the importance of establishing partnerships with key groups/agencies (such as General Practitioners, the private sector and community organisations) as critical for future service provision. Actual and potential partners are many and diverse, and, are mentioned in the following relevant sections.

### **1.3. Management of the Process**

The Tamworth Health Services Plan Steering Committee managed the process of the development of the HSP. The committee included representatives from HNE Health and THS. (See **Attachment A** for membership details)

### **1.4. Consultation**

This HSP has been developed after extensive consultations which included:

- Two public meetings in Tamworth, seeking input from local residents about the future delivery of health services. The community was asked to offer suggestions about how health service delivery could be improved and what models might best suit the local area into the future;
- More than 40 meetings with management and staff from THS, including hospital and community health staff across all service areas;
- Meetings with associated service providers and external stakeholders including the Tamworth Aboriginal Medical Service, Tamworth Regional Council, Barwon and North West Slopes Divisions of General Practice and local General Practitioners, NSW Ambulance Service, Clinical Schools at the Universities of Newcastle and New England, Coledale Neighborhood Centre and aged care providers;
- Meetings with volunteer organisations such as the Tamworth Hospital Auxiliary and Friends of Nioka
- Meetings with HNE Health representatives to confirm future service directions;
- A meeting with representatives of the Peel Community Forum;
- Updates provided to local State and Federal Members of Parliament;
- A meeting with Statewide Services Development Branch, NSW Health, to ensure compliance with all relevant strategic and policy directions.

### **1.5. People and Health Facts**

In 2006 the characteristics<sup>1</sup> of the Tamworth area population were:

- Total population of 77,725 people (77,722 in 2001 - showing neither a significant decrease nor increase).
- 33.8% of the population 24 years of age or less.
- 15.3% of the population 65 years or older, an increase of 1.8% over 2001.
- 13.1% of the total population made up of Aboriginal and Torres Strait Islander people a much higher percentage than the NSW rate of 4%.

- 4.4% of people in the Tamworth area born overseas - most coming from Europe, the Pacific Region and South-Eastern Asian Countries.
- 1.6% of people speaking a language other than English at home.

Compared to the NSW population the population of the Tamworth area has:

- A higher number of Aboriginal and Torres Strait Islander people;
- A lower percentage of people born overseas;
- A higher number of people over the age of 70 years.

Overall, the Tamworth area population is predicted to grow to:

- 78,284 by 2011 (an increase of 0.7%)
- 79,235 by 2016 (an increase of 1.9%)

The increase in population over the next 10 years does not appear to be significant with less than 2% growth projected.

The Australian Bureau of Statistics (ABS) measures social disadvantage using the Index of Socio-Economic Disadvantage (SEIFA)<sup>1</sup>. In 2006 the SEIFA index for Tamworth Statistical Local Area (SLA) was 960, compared to 1077 for Armidale and 929 for Moree Plains. The median rating for NSW is 978 and for Australia 1000. Tamworth sits in the middle third of SLAs in NSW for social disadvantage. This means that one third of SLAs score higher and one third score lower.

In the Tamworth area in 2006:

- There was a low level of unemployment. Tamworth has a large industrial and business service base which provides opportunities for employment.
- The crude death rate (8.6%) was higher than NSW (6.9%) but lower than Australia overall (12.9%).
- The two main causes of death in 2006 were cardiovascular disease (35.8% males and 42.6% females) and cancer (31.2% males and 25.4% females).
- The main reasons for hospitalisation were respiratory disease (including asthma and bronchitis), chest pain, abdominal pain and cardiovascular symptoms.

## **1.6. Current Health Services at a Glance**

- Tamworth Hospital is a Rural Referral Hospital providing:
  - A range of emergency, acute, non-acute and community/primary health services to the people of the Tamworth area and its environs. In the northern part of HNE Health there are 20 public hospitals that provide services to their local communities. There are also two private hospitals (in Tamworth and Armidale) which supplement the available public health services.
  - higher levels of service (up to delineated Level 5) to the population of the northern part of HNE Health, through participation in HNE Health area networks, for specialty services which include:

<sup>1</sup> Australian Bureau of Statistics, *Index of Socio-Economic Disadvantage, 2006*

- Emergency Resuscitation and Trauma Retrieval,
  - Surgical and Medical Services,
  - Maternity and Neonatal Services,
  - Acute Mental Health Services,
  - Burns Services,
  - Rehabilitation Services (including Brain Injury Services),
  - Cardiac Diagnostic and Interventional Services,
  - Diagnostic Imaging Services,
  - Nuclear Medicine,
  - Palliative Care Services,
  - Cancer Care Services.
- Community Health Services are provided to the Peel Cluster of HNE Health through networks and service partnerships. Services are based in Tamworth and provided outreach to other centres.
  - The Population Health Unit based in Tamworth ensures the provision of a range of public health and health promotion services to the northern part of HNE Health.

In 2006/07 THS:

- Provided 13,927 acute inpatient separations – both day only and overnight but excluding renal dialysis, chemotherapy and unqualified neonates;
- Provided 345 subacute separations;
- Had a total of 971 births;
- Treated 43,550 people in the Emergency Department (2007/08);
- Delivered 173,281 non-admitted patient occasions of service (NAPOOS) from the Tamworth Hospital and Community Health Centres (excludes emergency presentations and drug and alcohol and oral health occasions of service).

For inpatient services:

- The average length of stay was 4.5 days;
- The occupancy rate was 73.3%;
- Almost 49% of all surgical activity was performed on a day only basis.

## **1.7. Planning Priorities**

There are three significant demographic trends in the northern part of HNE Health that are relevant for Tamworth and will affect both the utilisation of health services and the type of health services that will need to be offered in the future:

1. A stable population with significant numbers of children and young people who require a full complement of both community and hospital-based services.
2. The number of people aged 65 years or older across the northern part of HNE Health is increasing from 27,406 (15.3% of the total population) in 2006 to 34,218 (19.2%) in 2016. This increased ageing of the population will continue to 2021 when there will be 38,152 people (21.3% of the total population) 65 years of age or older.
3. A significant population of Aboriginal and Torres Strait Islander peoples (14,479 or 8% of the total population of the northern part of HNE Health in 2006) who suffer higher levels of social disadvantage and ill health than other groups in the community.

## 1.8. Future Directions

The directions discussed here were identified through the consultation process and are consistent with the policy and directions outlined in the State Plan – A New Direction for NSW, the State Health Plan - Towards 2010, the NSW Rural Health Plan 2002 and with HNE Health strategic directions. These directions will ensure health services in the northern part of HNE Health continue to provide contemporary and effective care. To this end, it is important they are given careful consideration in the capital planning process.

These directions will affect the way that services will be delivered in the future and are largely responsible for proposed changes to the scope of services for Tamworth defined in later sections of this HSP.

### 1.8.1. Increasing Ambulatory Care Services

Services that were traditionally provided as a multi-day inpatient episode of care are increasingly being provided through a day only or 'ambulatory' episode of care. This model of care reduces the disruption to the everyday life of patients and their families and improves the effective use of available resources.

Increased use of ambulatory models of care requires stronger partnerships with other service providers including general practitioners, community health services, home-based service providers such as HACC and Meals on Wheels and non-government organisations to ensure the patient and their families are fully supported during the recovery period.

Ambulatory Care Services in rural areas often encounter problems in achieving the same rates of activity as in urban areas due to the distances people live from health services. Often it is considered appropriate to keep someone in hospital as an inpatient longer than necessary to ensure they are close to emergency care should something go wrong. Innovative approaches to service provision are required to ensure that people in rural areas can also benefit from access to ambulatory care services.

*Recommendation: Increase the range of surgical services provided on a day-only basis through the adoption of new technologies and techniques and the provision of residential accommodation close to the health service so patients, once discharged, can remain close for clinical interventions post surgery if required.*

### 1.8.2. Managing Chronic Care

Most people with chronic conditions such as diabetes, heart disease and renal disease can be and are managed within the primary/community care setting. The General Practitioner and Community Health Services are key providers in maintaining this community based support.

Ensuring that people with chronic disease fully understand and are empowered to manage their condition is a major priority. This focus has strong linkages with Aboriginal health and population health programs. The primary aim of chronic care programs is to assist people to attain their highest level of independence and to live a fruitful life in which their disease is managed to minimise its potential adverse effects.

*Recommendation: Develop improved understanding of self-management of chronic disease and implement training programs to improve chronic disease self management. This recommendation reflects a key initiative of the HNE Health Area Strategic Plan and is a key direction for NSW Health to improve the health of the community. An Area Chronic Diseases Plan was completed in 2006 and provides direction for the further development of this strategy.*

*Recommendation: Strengthen the transition of people with chronic disease from hospital to home with the development of a multidisciplinary approach involving rehabilitation, community-based services and ongoing support, in partnership with the patient, family, carers and other service providers, to assist people to better manage their chronic illness.*

### **1.8.3. Health of Aboriginal and Torres Strait Islander people**

The northern part of HNE Health has a large number of Aboriginal and Torres Strait Islander people. Compared to non-Aboriginal communities, Aboriginal and Torres Strait Islander people have documented poorer health status and lower health outcomes potential. Improving access to health services, providing services closer to where people live and assisting Aboriginal and Torres Strait Islander people (especially children and families) to improve their health outcomes is a priority for HNE Health and THS. Services such as the Aboriginal Mothers and Babies Service which is achieving improvements in health outcomes for Aboriginal mothers and their babies will continue to be supported.

*Recommendation: Develop strategies in partnership with Aboriginal Health Officers and the Tamworth Aboriginal Medical Service including cultural respect training for staff, the development of culturally appropriate services and programs to improve health outcomes.*

### **1.8.4. Focus on Primary Prevention and Population Health**

The population health approach to health service provision recognises the importance of looking at the community as a whole, and developing strategies that prevent illness rather than only providing services once disease has manifested. This approach also promotes the development of environments that are conducive to good health e.g. clean water, good sanitation and clean air.

Population health strategies require a long term view. Benefits are often realised many years after changes are made e.g. reduction in the number of people developing diabetes in middle age due to good eating and exercise habits developed in childhood. A population health approach requires public health services to work closely with other agencies, service providers and community groups as many factors that create and maintain good health are outside the traditional boundaries of the public health system.

*Recommendation: Encourage the community to adopt healthy lifestyle strategies through programs such as Fresh Tastes @ School - Canteen Program, Quit for Life, and exercise and obesity management programs. These should ideally be developed in partnership with other service providers and agencies such as local GPs, Tamworth Regional Council, fitness centres and weight management groups.*

### **1.8.5. Developing Early Intervention Services**

The further development of early intervention and prevention services to complement secondary and tertiary services for vulnerable families and communities is a key objective of the State Health Plan and HNE Health's Area Strategic Plan. There is substantial national and international evidence that supports investment in the early years, particularly for vulnerable families, to improve health outcomes, for both families and communities. Early intervention and prevention services are provided by HNE Health and in collaboration with partner agencies.

*Recommendation: Ensure there is a focus on early intervention and prevention strategies especially for vulnerable families and communities.*

### **1.8.6. Improved Coordination of Care**

The multiplicity and complexity of the health system makes it essential for strategies to be put in place to ensure a seamless patient journey across the continuum of care. THS will continue to develop a multidisciplinary team approach to provide a high quality coordinated service that supports integrated care planning, improves communication and minimises duplication of effort. This approach requires strong collaboration between health services and other important service providers such as GPs.

An example of this approach is HNE Health's plan to introduce a *Referral and Information Centre* to provide a single point of contact for patients, carers, general practitioners and other health providers. The *Referral and Information Centre* will include triaging of patient/carer needs, commencement of comprehensive assessments, organising appointments and ongoing contact for patients with chronic illness, including mental illness.

*Recommendation: Redesign systems across the continuum of care, from pre-admission to post discharge. Focus services on a planned approach to admissions and improving liaison processes with, and discharge information to, service partners particularly GPs.*

### **1.8.7. Strengthening Workforce Capacity**

Scarcity of health professionals across all disciplines is a major challenge for contemporary health services in Australia and overseas. Health services must review and examine how staff work and the types of staff necessary to deliver services if they are to address this issue. Workforce plans that include innovative workforce development and skill mixes as well as packages of incentives to attract staff to THS will need to be developed. Succession planning is also a critical factor as the average age of the health professional is increasing.

*Recommendation: When designing future services develop workforce plans at the same time to ensure achievable staff establishments. These plans should include strategies for training, ongoing education, university linkages and innovative staff mixes especially for services in remote areas.*

*Recommendation: Promote and extend GP Procedural Training Programs in Maternity, Anaesthetics and Mental Health, as well as Surgical Education and Training to support services in smaller centres.*

### **1.8.8. Developing e-Health Strategies**

Innovative communication systems exist which can facilitate increased access for patients to information and services, and for staff to education, consultation and clinical expertise. These modalities are being introduced or extended in the northern part of HNE Health where they will deliver demonstrable benefits due to the distance from major referral centres and the dispersed nature of communities and towns in the catchment area. Currently telehealth technology is used to support clinical service delivery and staff development initiatives across Tamworth Health Services. Currently there are four telehealth sites on the Tamworth Hospital campus located in Mental Health, Community Health, Rehabilitation and Outpatients. Tamworth has a key role in the 'Connecting Critical Care' telehealth project which aims to enhance service delivery and communication between rural and metropolitan tertiary facilities for the care and treatment of critically ill patients. This project links Moree to Tamworth Rural Referral Hospital and Tamworth to Royal Prince Alfred Hospital using telehealth technology. Future applications will include the transfer of live feed (video-conferencing) images and data, and/or remote automated treatments via robotics or other systems.

*Recommendation: Ensure that e-Health opportunities are explored in current and future services planning to improve access, operational efficiency and service quality.*

### **1.8.9. Information Management**

The ability to collect information and generate reliable and timely reports to inform health service delivery is a valuable and essential tool for contemporary health services. A uniform approach across health services is also essential.

This will be achieved in THS by planning services based on evidence based best practice and establishing data systems to inform decision-making. Linking information management systems with external service partners (most importantly GPs) is also seen as a high priority to streamline the patient journey in and out of hospital.

*Recommendation: Generate reliable, relevant and user-friendly information to inform the planning, delivery, monitoring and evaluation of health services through:*

- *Establishing data systems that facilitate decision-making*
- *Training and capacity building of staff to improve data collection, collation, analysis, interpretation and use at all levels of the service.*
- *Developing key performance measures for service and program managers.*
- *Continuing the development of electronic community health information (e.g. CHIME and others) including electronic referral to and from other providers i.e., General Practitioners, HACC Services and other non-government organisations.*
- *Ensuring access to Area-wide information management systems that support service delivery.*

### **1.8.10. Building Partnerships and Service Integration**

Partnering with other service providers and intersectoral agencies is a high priority for HNE Health and THS and should be considered in all aspects of the planning, implementation and delivery of health services. It is recognised that a large proportion of health services provided to the community are delivered by other service providers. It is also recognised that non-health agencies such as councils and community groups are key stakeholders in prevention, early intervention and self-management strategies that support healthy life choices by the community. Effective service networks are the key to providing cost-effective services and achieving good health outcomes. This includes working with government and community support agencies, public and private providers, and the community to develop policies, programs and health services that promote service sustainability, networks and good outcomes.

An example of a key partnership is the relationship between GPs and community nurses. Community nurses not only deliver services but are also essential in coordinating other service partners, to ensure people are adequately supported at home. A working relationship with the GP, who is often the primary service provider, is a critically important part of maintaining people in the community. Providing support and information to GPs is also another important component of the relationship. This integrated and multidisciplinary approach to community-based service delivery is essential in ensuring the sustainability and effectiveness of services and reflects NSW Health and Commonwealth policy directions for future service delivery<sup>2</sup>.

*Recommendation: Strengthen the scope and effectiveness of community services through stronger partnerships with Aboriginal Community Controlled Health Services, Divisions of General Practice and general practitioners, and practice nurses to improve the delivery of palliative care, chronic and complex care, and aged care services.*

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<sup>2</sup> NSW Health, Integrated Primary and Community Health Policy 2007-12

## **1.9. Proposed Future Health Services**

THS will continue to provide the current range of services with the following service enhancements to ensure the needs of the communities of Tamworth, surrounding areas and beyond are met in accordance with THS defined roles and responsibilities:

- Fulfil the role of a Major Rural Referral Hospital with a range of Level 5 services.
- Enhanced range of speciality services to place services closer to where people live including community based services, maternity, cardiology, cancer services and mental health services.
- Increased focus on services provided to Aboriginal and Torres Strait Islander people in partnership with Aboriginal and Torres Strait Islander communities and organisations.
- Increased focus on ambulatory care services including community and post acute care services to reduce the disruption to people's lives.
- Increased multi-day and day only beds and chairs to meet population demand.
- Introduction of home-based renal dialysis training in Tamworth.
- Community Health Services collocated with hospital based services and general practitioners to improve the patient journey.
- Introduction of Radiotherapy Services in Tamworth to serve the northern part of HNE Health as a component of an integrated cancer care service and supported by statewide planning.
- Expansion of the medical oncology service in Tamworth to better serve the northern part of HNE Health as one component of an Integrated cancer service.
- Increased services for children, young people and families including a focus on early intervention and prevention initiatives such as sustained home visiting.
- Active participation in service networks across HNE Health to increase access to cancer, mental health, chronic care, drug and alcohol and renal services.
- Development of a Rural Oral Health Centre to support dental training in conjunction with university programs.

## 1.10. Proposed Services Profile – Tamworth Rural Referral Hospital

The following table presents current and future bed/chair/places/trolley capacities for Tamworth Hospital to meet the projected service demand and models of care described in this HSP.

**Table 1: Beds, Chairs and Places – Tamworth Hospital – 2008 – 2016**

Beds/Bed Equivalents	Current (Staffed and Available as at 30 June 2008)	Proposed 2016
ICU	7	16
High Dependency	6	
Coronary Care	6	8
Medicine	55	110
Surgical	54	
Paediatrics	15	18
Maternity	20	15
Special care cots	7	12
Rehabilitation	22	26
Transitional Living Unit	3	.3
Palliative Care	6	6
Perioperative/ Day Only (Medical /Surgical/EDO)	22	24
Short Stay Unit	0	6
Mental Health Acute	25	25
Mental Health Sub Acute	16	16
<b>Sub total beds</b>	<b>264</b>	<b>285</b>
Emergency Treatment Bays	20	26
Emergency Resuscitation Treatment Bays	2	3
Renal chairs	10	17
Chemotherapy chairs	8	14
Dental chairs	4	8
<b>Sub total chairs and cots</b>	<b>44</b>	<b>68</b>
<b>Other Hospital Treatment Areas</b>		
Operating Suite/Procedure Rooms	4	6
Operating Theatre Recovery Places	8	12
Cardiac Catheter Lab	7	7
Labour Birthing Rooms	3	4
Bassinettes	20	15
<b>Sub total Other Treatment Areas</b>	<b>42</b>	<b>44</b>
<b>Grand Total</b>	<b>350</b>	<b>397</b>

Sources: aIM2005, SiAM v.1, Chemotherapy Guidelines – NSW Health, HNE Health Renal Services Plan 2007-2011, MH.CCP, Version 1.11, NSW Health Radiotherapy Guidelines, Operating Theatre Planning Tool.

Details of bed/chair/places/trolley calculations are included in *Attachment E: Inpatient Activity Projections* and *Attachment F: Service Delivery Units*.

Details of other proposed service capacities are listed below.

- To support the range and levels of services proposed for Tamworth Hospital, HNE Health Diagnostic Imaging Services will need:
  - 4 general x-ray rooms (one configured to accommodate fluoroscopy);
  - 4 ultrasound machines;
  - One (1) angiography room;
  - Space for two (2) CT scanners;

- Access to the privately run Medical Resonance Imager at Castlereagh Radiology
- Nuclear Medicine Services will maintain the use of two (2) gamma cameras.
- The Cardiac Catheter Service will continue to provide diagnostic and interventional procedures. It is proposed that a proportion of interventional and diagnostic procedure outflows to St Vincent's Public Hospital in Sydney will be reversed.
- It is planned to integrate current and proposed cancer treatment components into an Integrated Cancer Care Service to serve the northern part of HNE Health as detailed in the HNE Health Area Cancer Services Plan, 2006-2010. The service will include:
  - 14 chemotherapy chairs.
  - A two linear accelerator service, with initial fit out for one linac and associated equipment, including orthovoltage.
  - A range of community/primary health and allied health services to create a multidisciplinary cancer care service.
- As emergency presentations are projected to grow from 43,550 in 2007/08 to 43,773 presentations by 2016/17 , the Emergency Department will need:
  - 3 resuscitation bays.
  - 26 treatment bays.
  - 2 isolation rooms.
  - 4 consultation rooms.
  - 6 bed short stay unit.
  - Mental Health Consultation Area.
  - Early Pregnancy Unit and Early Pregnancy Assessment Service.
  - Multifunctional spaces to provide privacy and accommodate a range of services/procedures.
- Creation of an Ambulatory Care Service to include:
  - Reception and final stage recovery area for day surgical procedures;
  - Day medical procedure areas (including renal dialysis – 17 chairs) to accommodate all day medical procedural requirements;
  - Community and Primary Health Services;
  - General practitioner Primary Health Clinic (and including after hours services);
  - All outpatient clinics;
  - Ambulatory Allied Health Services;
  - Diagnostic imaging;
  - Pharmacy Services;
  - Pathology Services;
  - Any other services accessed by the public on a day-only basis.
- Operating Suite of six (6) multifunctional operating rooms (major, minor, day procedures, endoscopies and emergencies).

**Section 5** discusses current health services and provides more information to support this proposed Services Profile.

## 2. Socio-Demographic Factors

### 2.1. Location

The HNE Health area is made up of eight (8) clusters with Tamworth the main centre of the Peel Cluster. The Peel Cluster and the northern part of the Upper Hunter Cluster form the immediate catchment area of Tamworth Health Services. The three (3) Clusters in the northwest of the Area – Mehi, McIntyre and Tablelands Clusters — in addition to the immediate catchment area, form THS rural referral catchment.



**Figure 1: HNE Health Area Map**

The above map shows the clusters and the location of hospitals, community health centres and multipurpose services by cluster.

## 2.2. Population

### 2.2.1. Population Census Summary

As previously stated THS provide district level services to the Peel Cluster and a range of speciality services to the people of the Peel, Mehi, Tablelands, McIntyre and Upper Hunter (northern part only) Clusters. In considering future service demand generally and more particularly for speciality services such as maternity, cardiology, cancer and mental health, population projections for both the local immediate catchment and the larger northern area need to be taken into account.

**Table 2: Projected Population- northern part of the HNE Catchment, 2001 to 2016**

HNE Health Cluster	2001	2006	2011	2016
Peel*	77,722	77,725	78,284	79,235
McIntyre	21,513	21,142	20,659	20,281
Mehi	30,770	30,021	29,388	28,891
Tablelands	51,167	50,432	50,197	50,187
<b>Totals</b>	<b>181,172</b>	<b>179,320</b>	<b>178,528</b>	<b>178,594</b>

Cumulative change (%)	0.00%	-1.02%	-1.46%	-1.42%
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Source: Transport and Population Data Centre (TPDC), NSW SLA Population Projections, 2001 to 2031, 2005 Release, Detailed Data – Version 1.0, 2007(Latest issue from NSW, October 2007).

\* Data for the Peel Cluster includes the population of Liverpool Plains Shire (part of the Upper Hunter Cluster)

**Table 2** shows that overall the population of the northern part of HNE Health will decrease by 1.4% by 2016. In contrast **Table 3** shows that the population of the Peel Cluster will increase by around 2% by 2016.

**Table 3: Population Projections – Peel\* Cluster SLAs, 2001 – 2016**

Statistical Local Area	2001	2006	2011	2016
Gunnedah (A)	12,405	11,976	11,605	11,293
Liverpool Plains (A) – Pt A	7,265	7,101	6,971	6,867
Liverpool Plains (A) – Pt B	746	744	717	689
Tamworth Regional (A) – Pt A	42,510	43,526	44,755	46,239
Tamworth Regional (A) – Pt B	11,489	11,164	11,152	11,174
Walcha (A)	3,307	3,214	3,084	2,973
<b>Totals</b>	<b>77,722</b>	<b>77,725</b>	<b>78,284</b>	<b>79,235</b>

Cumulative change (%)	0.00%	0.00%	0.72%	1.95%
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Source: Transport and Population Data Centre (TPDC), NSW SLA Population Projections, 2001 to 2031, 2005 Release, Detailed Data – Version 1.0, 2007(Latest issue from NSW, October 2007).

\* Data for the Peel Cluster includes the population of Liverpool Plains Shire (part of the Upper Hunter Cluster)

### 2.2.2. Population by Age Projections

**Table 4** shows that between 2006 and 2016:

- The number of children and adolescents (0-14) years will decrease significantly (by 11.9%).
- The number of young people from (15-24) years will also decrease by 5.2%.
- The number of adults aged (25-64) years will increase slightly by 1.6%

- Older persons aged 65 years and over will increase during that period by 27.7% from 11,892 to 15,181 in 2016, which will necessitate the development of additional appropriate aged care services.

**Table 4: Population Projections by Age, Peel\* Cluster, 2001-2016**

Age Group	2006	2011	2016
0-14 years	15,755	14,616	13,874
15-24 years	10,508	10,459	9,960
25-64 years	39,570	39,987	40,220
65 years and over	11,892	13,222	15,181
<b>Totals</b>	<b>77,725</b>	<b>78,284</b>	<b>79,235</b>

Source: Transport and Population Data Centre (TPDC), NSW SLA Population Projections, 2001 to 2031, 2005 Release, Detailed Data – Version 1.0, 2007 (Latest issue from NSW, October 2007).

\* Data for the Peel Cluster includes the population of Liverpool Plains Shire (part of the Upper Hunter Cluster)

### 2.2.3. Aboriginal and Torres Strait Islander People

There were 14,479 people of Aboriginal and Torres Strait Islander heritage in the northern part of HNE Health in 2006 accounting for 8% of the total population<sup>3</sup>. This figure could be potentially higher. The Australian Bureau of Statistics has advised that in the 2001 Census 0.03% of the population failed to advise if they were or were not of Aboriginal and Torres Strait Islander heritage. Underreporting by Aboriginal and Torres Strait Islander people has been noted to decrease over the past few decades but is still identified as a factor that needs to be taken into account when planning services.

Comparison of the population of Aboriginal and Torres Strait Islander people to the Non-Aboriginal and Torres Strait Islander population shows:

- Higher proportions of children and young people;
- Lower proportions of people aged 45 years and over.

These factors are known to be due to higher birth rates amongst Aboriginal and Torres Strait Islander women and the shorter life span of Aboriginal and Torres Strait Islander people due to poorer health outcomes.

In 2006 only 9.9% of Aboriginal and Torres Strait Islander people completed Years 11 and 12 of secondary school compared with 24.2% of the non-Aboriginal and Torres Strait Islander population. The median weekly income for Aboriginal and Torres Strait Islander families was \$400-\$499 compared to \$600-699 for non-Aboriginal and Torres Strait Islander families. The mean household size for Aboriginal and Torres Strait Islander households was 3.8 people compared to 2.1 for non-Aboriginal and Torres Strait Islander households.

<sup>3</sup> Report of the Chief Health Officer, NSW Health Department, 2006

**Table 5: Aboriginal and Torres Strait Islander population, northern part of HNE Health, 2006**

Cluster	Aboriginal residents	% total population
McIntyre	953	5%
Mehi	4,719	16%
Peel*	5,541	7%
Tablelands	3,266	6%
<b>Totals</b>	<b>14,479</b>	<b>8%</b>

Source: NSW Health, Report of the Chief Health Officer, Public Health Division, Report of the Chief Health Officer, NSW Health Department, Sydney, 2006. Available at: <http://www.health.nsw.gov.au/public-health>  
Cited as: Australian Bureau of Statistics. <i>30 June 1991-30 June 2009. Experimental projections of the Aboriginal and Torres Strait Islander Population.</i> Catalogue no. 3238.0. Canberra: ABS, 2004. Note: Aboriginal population as at 30 June each year.

\* Data for the Peel Cluster includes the population of Liverpool Plains Shire (part of the Upper Hunter Cluster)

**Table 5** above presents the numbers of Aboriginal and Torres Strait Islander people living in the northern part of the Area in 2006. It should be noted that the Aboriginal and Torres Strait Islander population across Australia grew by 16% in the period between the 1996 and 2001 Census<sup>4</sup>. Three-quarters of this increase was attributed to 'natural' increases (births, deaths, migration). The remaining 4%, however, is unexplained and attributed to factors such as improved Census data collection and increased self-reporting.

By 2009 the Aboriginal and Torres Strait Islander population across Australia is expected to grow by 14%.

### 2.2.4. Multicultural Populations

People from culturally and linguistically diverse (CALD) communities often suffer from ill health and poorer socio-economic status, and may have higher health needs than the general population due to:

- Lack of access to services resulting from poor language skills, lack of information and unfamiliarity with the social systems of their adopted home;
- Past histories of torture and abuse;
- Different cultural perceptions of health and illness.

To ensure people from CALD communities can access appropriate services in a timely manner and participate in decisions regarding their care, health care interpreters should be utilised whenever necessary.

**Table 6** below presents data on country of birth of people living in the Tamworth area. Currently overall numbers are small with people mainly from Australia or other English-speaking countries.

<sup>4</sup> Australian Institute for Health and Welfare, 2003

**Table 6: Country of Birth – Tamworth area, 2001-2006**

Country of birth	% total population	
	2001	2006
Australia	91.0%	89.5%
United Kingdom	2.0%	1.7%
New Zealand	1.0%	1.5%
Europe	0.5%	1.2%
USA	0.1%	0.2%
China	0.1%	0.1%
Other countries or not stated	5.3%	5.8%
<b>Totals</b>	<b>100%</b>	<b>100%</b>

*Australian Bureau of Statistics, Community Profile, Tamworth, Cat. No. 2034.567.157*

## 2.3. Determinants of Health Status

### 2.3.1. Socio-Economic Advantage/Disadvantage

There is a large amount of evidence demonstrating that people on lower incomes, with lower educational levels and higher likelihood of unemployment generally have poorer health outcomes than their more affluent counterparts in the population.

As well, there are disparities between rural and metropolitan areas in terms of socioeconomic status particularly in relation to income levels. It is well accepted that the health status of those who live in rural and remote areas is poorer than those living in urban or metropolitan communities. This disparity in health status relates to a number of issues including differences in income levels and access to transport and health services. In Australia, the greatest disparities in health outcomes and life expectancies are between the Aboriginal and non-Aboriginal populations. (The profile of the Aboriginal population of the Peel, McIntyre, Mehi and Tablelands clusters has been discussed previously in Section 2.2.3.)

The Australian Bureau of Statistics (ABS) issues an index of socio-economic disadvantage which assesses indicators related to income, educational achievement, employment, access to a motor vehicle and quality of dwellings to determine the degree of disadvantage experienced by communities across Australia. Australia overall has a rating of 1000, communities within Australia are assessed against this average rating.

**Table 7: Index of Relative Socioeconomic Disadvantage by Peel Cluster SLAs, 2004**

	Index of Relative SE Disadvantage
Gunnedah (A)	951
Quirindi (A)	981
Tamworth (C)	964
Walcha (A)	993
NSW median	978
Australian median	1000

*Source: ABS SEIFA data (HOIST) Epidemiology and Surveillance Branch, NSW Health*

**Table 7** shows all SLAs in the Peel Cluster are slightly below both the NSW and Australian median values.

### 2.3.2. Unemployment

The Australian Government report (April 2007)<sup>5</sup> on unemployment advised that the rate in the northern area of NSW had dropped from 5.6% to 5.5% over the March quarter of 2007. In this period unemployment rates were 6.0% for NSW and 5.0% for Australia overall.

### 2.3.3. Environmental Factors

Environmental factors such as air and water quality, food nutrition value, sanitation levels are elements that impact on our health status. Within Tamworth, while air pollution is not a major issue, water quality (which has been affected by the drought) and sanitation are issues that need to be monitored, especially in smaller remote communities, to ensure they are not adversely impacting on health status.

Another problem that confronts rural communities, especially those in remote areas, is the difficulty in accessing affordable fresh fruit and vegetables all year round. Recent studies have shown that while we think of rural areas as having an abundance of affordable fresh meat, fruit and vegetables this is not always the case. Poor nutrition can be an endemic problem due to lack of availability and affordability.

### 2.3.4. Behavioural

Increasing evidence demonstrates the link between poor behavioural choices and poor health status. Smoking, poor diet, lack of exercise and high alcohol and other drug consumption are all factors that predispose us to disease later in life.

The following table presents the incidence of some lifestyle related illnesses/behaviours for residents of the Tamworth area compared to NSW overall.

**Table 8: Incidence of Life Style Illnesses/Behaviours in the Tamworth LGA**

Behaviour	Raw Estimate of Standardised Incidence Ratio	
	Tamworth	Median for NSW
Illness attributed to smoking	94.8	105.1
Incidence of smoking while pregnant	165.7	142.2
Illness attributed to Alcohol	141.2	103.6

Source: NSW Health, Report of the Chief Health Officer (2006): Indicators by LGA, 2004

The above table shows that while the Tamworth area is lower for illness attributed to smoking it has a higher incidence of smoking while pregnant and illness attributed to alcohol.

### 2.3.5. Mental Illness

One in five people in Australia suffer from mental illness<sup>6</sup>. The group with the highest incidence of mental illness within the Australian population are Aboriginal and Torres Strait Islander people.

An accepted method of determining the population at risk of mental illness is through the application of the *NSW Health Mental Health Clinical Care and Prevention (MHCCP) Model*. MHCCP is a population-based model used to determine the number of people in certain age categories who are likely to have a diagnosis of mental illness

<sup>10</sup> Department of Employment and Workplace Relations, Australian Government, NSW Quarterly Regional Labour Market Report: April 2007 prepared by the NSW Labour Economics Officer, DEWR, May 2007

<sup>6</sup> Caldwell TM, Jorm AF, Dear Keith BG, Suicide and mental health in rural, remote and metropolitan areas in Australia, The Medical Journal of Australia, 2004; 181 (7 Suppl):S10-S14

and the severity of that mental illness. Future projections for the incidence of mental illness are based upon population changes rather than any change in the incidence of mental illness. The figures tend to be conservative and do not consider expected increases in incidence particularly of anxiety and depression in the community over the same time period. **Table 9** shows incidence of mental illness in the Peel Cluster 2006-2016 using the MHCCP model.

**Table 9: People with Mental Illness or at Risk of Mental Illness, Peel Cluster, 2006 – 2016**

Population Group	Total Numbers		
	2006	2011	2016
Children 0-1 year at risk	67	64	63
Preschool children 2-4 years	350	333	327
Primary School children 5-11 years	1,307	1,199	1,129
Adolescents 12-17 years	1,193	1,122	1,036
Adults 18-64 years	8,403	8,488	8,474
Older People 65 years +	1,529	1,700	1,952
<b>Totals</b>	<b>12,849</b>	<b>12,906</b>	<b>12,981</b>

Source: NSW Health, MH-CCP, Version 1.11, 2000 and Transport and Population Data Centre (TPDC), NSW SLA Population Projections, 2001 to 2031, 2005 Release, Detailed Data - Version 1.0, 2007(Latest issue from NSW Health, October 2007).

Overall, the projections for the future show a decline in incidences of mental illness for most age groups except for older people aged 65 years and over. Of the total number of people from the Peel Cluster who are at risk of mental illness, projections show that 2,028 people are at high risk of experiencing severe mental illness while 3,546 are likely to experience moderate mental illness. It is estimated that by 2016 approximately 7,400 people will require some form of early intervention for mental health problems. Future mental health service development will need to consider targeted service provision to specific needs groups and enhanced services for older people.

### 2.3.6. Mortality Trends

In 2004 the mortality rate for HNE Health overall was 706.2 per 100,000 population while for NSW it was 533.2 per 100,000 population.<sup>7</sup> Outer NSW regional and remote area rates were 720 per 100,000 populations demonstrating the health disadvantage of living in rural and remote areas. The two main causes of death were cardiovascular disease (36.5% males and 43.0% females) and cancer (29.2% males and 24.7% females). Chronic respiratory disease was the next most common cause of death accounting for 7.1% of deaths in males and 6.0% of deaths in females.

### 2.3.7. Avoidable Deaths

In 2004, the rate of avoidable deaths, for Tamworth LGA was 112.1 per 100,000 population which is lower than the NSW overall value of 121 per 100,000 population<sup>8</sup>.

### 2.3.8. Major Causes of Hospital Admissions

In 2004/05 the major causes of hospitalisation in Tamworth<sup>9</sup> in decreasing order of incidence were maternal conditions/birth, unintentional injury, digestive system diseases, cardiovascular disease, nervous system disease, malignant neoplasm's and mental disorders.

<sup>7</sup> ABS mortality data and population estimates (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

<sup>8</sup> NSW Health, Chief Health officer's Report, 2006,

<sup>9</sup> Report of the NSW Chief Health Officer, 2006

### 2.3.9. Major causes of hospital admission by age group

For the **0-4 year's age group** the major cause of admission was respiratory disease.

For the **5-14 years age group** the major causes were respiratory and digestive diseases followed by accidental injury.

For males aged **15-25 years** the most frequent admissions were for accidental injury and poisoning, much of the latter related to alcohol and drug use.

For females aged **15-44 years** the most frequent reason for admission was maternal conditions related to birth.

In the **45-64 years age group** circulatory and digestive diseases were the main reasons for admission, followed by malignant disease. Mental illness accounted for 3.5% of admissions in this age group.

In the **65+ years age group** the main reasons for admission were cardiovascular disease, digestive illness, cancer and eye disorders.

## 2.4. Activity Summary

**Table 10: Summary of Activity, Tamworth Hospital, 2003/04 to 2006/07**

	2003/04	2004/05	2005/06	2006/07
Acute Separations	13077	13788	13877	13927
% Day Only - acute separations	29.2%	30.9%	30.2%	30.2%
Subacute Separations	361	466	447	345
Births	699	710	810	971
Occupied Beddays	71,277	74,175	73,728	69,890
Available Beddays	94,427	94,506	94,742	96,458
Average Available Beds	258	258.9	259.9	264.3
Occupancy	76.6%	72.2%	77.3%	73.3%
Daily average patients including babies	197.5	204.9	200.6	193.8
Daily average patients excluding babies	192.9	200.4	196.0	188.6

Sources: HIE and FlowInfo Version 9.2. Excludes chemotherapy, renal dialysis, unqualified neonates and unallocated separations

Note: In this Plan, in calculating bed requirements to 2016 a bed occupancy rate of 80% has been used unless otherwise stated. It was decided that a rate of 80% was appropriate even though the average occupancy over the last four years has been 75%

**Table 11: Summary of Day Only and Overnight+ Acute Separations, Tamworth Hospital by Service Related Group, 2003/04 and 2006/07**

Medical Speciality	Overnight Separations		Day Only Separations	
	2003/04	2006/07	2003/04	2006/07
Acute Definitive Geriatric Medicine		2	70	73
Cardiology	969	1039	62	97
Dermatology	25	22	21	11
Endocrinology	120	141	24	30
Gastroenterology	220	299	48	37
Haematology	139	161	119	50
Immunology & Infection	261	274	24	30
Interventional Cardiology	8	80	19	81
Medical Oncology	148	142	61	40
Neurology	319	381	71	77

Non Subspecialty Medicine	376	300	198	153
Pain Management	28	25	11	29
Renal Medicine	118	199	48	49
Respiratory Medicine	655	633	20	67
Rheumatology	31	4	14	5
<b>Totals</b>	<b>3,417</b>	<b>3,702</b>	<b>810</b>	<b>829</b>

Surgical/Procedural Specialty	Overnight Separations		Day Only Separations	
	2003/04	2006/07	2003/04	2006/07
Breast Surgery	64	49	42	47
Colorectal Surgery	133	149	20	24
Dentistry	10	4	103	102
Diagnostic GI Endoscopy	75	47	707	655
ENT Surgery	244	231	115	123
Extensive Burns	8	7	0	0
Gastroenterology	54	39	49	58
Gynaecology	277	285	314	324
Head & Neck Surgery	52	47	16	6
Non-Specialty Surgery	318	362	70	57
Ophthalmology	32	36	594	662
Orthopaedics	789	748	261	232
Plastic & Reconstructive Surgery	81	80	143	173
Tracheostomy	47	48	0	0
Upper GI Surgery	150	157	0	0
Urology	275	326	162	201
Vascular Surgery	97	40	5	3
<b>Totals</b>	<b>2,926</b>	<b>3,031</b>	<b>2,660</b>	<b>2,850</b>

Source: FlowInfo Version 9.2. Excludes chemotherapy, renal dialysis, unqualified neonates and unallocated separations

**Table 12: Sub-Acute Separations, Tamworth Hospital, 2005, 2011 and 2016**

Category	Overnight Separations		
	2005	2011	2016
Maintenance	22	23	30
GEM Psychogeriatrics	3	3	5
Palliative Care	109	111	119
Rehabilitation	336	338	412
<b>Grand Total</b>	<b>470</b>	<b>475</b>	<b>566</b>

Source: SiAM v.1

**Table 13: Non-Admitted Patients Occasions of Service (NAPOOS), Tamworth Health Service, 2006/07**

Centre	Tamworth Hospital	Tamworth Community Health	
Community/Primary Health	15,458	35,647	
Clinics	38,137	3,572	
Procedural (Chemotherapy etc)	2,970	0	
Mental Health	0	7,803	
Allied Health	6,536	1,266	
Clinical Support & Diagnostic	61,884	7	
<b>Subtotal</b>	<b>124,985</b>	<b>48,643</b>	
Emergency attendances			43,550
<b>Total NAPOOS</b>			<b>217,178</b>

Source: Non-Admitted Patient Data Collection, 2006/07

Details of NAPOOS are included as **Attachment C**.

## 2.5. Patient Flow Effects

The *HNE Health Area Healthcare Services Plan*<sup>10</sup> identifies the need to increase cluster self-sufficiency by reversing outflows. The success of a flow reversal strategy is dependent on identifying the reasons for the outflows and developing services to address the need. For the Tamworth area, this will require the development of some additional speciality and non-speciality services e.g. in maternity and coronary care.

Within the HNE Health catchment area only the Greater Newcastle and Peel Clusters experience positive net flows. Other effects include:

- People from the Mehi and Tableland Clusters use THS at a much higher rate than expected given the range of services available in their local areas.
- People attend THS from as far away as Dubbo for specialist services such as chemotherapy, surgery and diagnostic cardiology.
- People outflow from the northern areas of the Hunter New England to Queensland, Newcastle and Sydney for higher level services but also for some non-tertiary services such as general surgery and general medicine which could be accessed in Tamworth.

It is still expected that people will continue to come to Tamworth from the Mehi and Tableland Clusters for specialist services such as at risk maternity, cardiology and acute adult mental health services.

### 2.5.1. Patient Inflows

The following table presents data on place of residence of people admitted to Tamworth Hospital. (Please note: the immediate catchment area for THS is defined as the eight SLAs of Tamworth, Parry, Gunnedah, Quirindi, Manilla, Barraba, Nundle and Walcha ).

**Table 14: Place of Residence of Patients Attending Tamworth Hospital, All Separations, 2003/04 – 2006/07**

Place of Residence (SLA)	Separation				% total for 2006/07
	2003/04	2004/05	2005/06	2006/07	
Tamworth	9,576	9,628	9,670	9,476	51.4%
Parry	1,574	1,641	1,681	1,808	9.8%
Gunnedah	1,201	1,278	1,426	1,500	8.1%
Quirindi	732	835	846	683	3.7%
Manilla	536	591	710	633	3.4%
Barraba	284	298	298	335	1.8%
Nundle	281	325	262	299	1.6%
Walcha	178	244	234	151	0.8%
<b>Subtotal Immediate Catchment</b>	<b>14,362</b>	<b>14,840</b>	<b>15,127</b>	<b>14,885</b>	<b>80.8%</b>
Narrabri	799	711	746	749	4.1%
Armidale Dumaresq	591	454	291	250	1.4%
Inverell	456	449	411	447	2.4%
Moree Plains	456	373	342	343	1.9%
Bingara	217	209	205	201	1.1%
Yallaroi	208	228	201	214	0.7%

<sup>10</sup> Hunter New England Health, A New Direction for Hunter New England Health Service Strategic Plan Towards 2010, 2007

Place of Residence (SLA)	Separation				% total for 2006/07
	2003/04	2004/05	2005/06	2006/07	
Guyra	195	104	82	80	0.4%
Glen Innes	154	181	132	160	0.9%
Murrurundi	126	125	143	108	0.6%
Uralla	111	159	57	80	0.4%
Scone	85	59	75	80	0.4%
Severn	65	163	51	34	0.2%
Tenterfield	20	28	24	42	0.2%
Muswellbrook	18	10	21	23	0.1%
Remainder HNE Health	47	53	56	66	0.4%
<b>Subtotal HNE Health</b>	<b>17,922</b>	<b>18,167</b>	<b>17,978</b>	<b>17,795</b>	<b>96.6%</b>
Coonabarabran	177	147	117	106	0.6%
Walgett	79	71	72	80	0.4%
Remainder	382	402	368	448	2.4%
<b>Grand Total</b>	<b>18,560</b>	<b>18,787</b>	<b>18,535</b>	<b>18,429</b>	<b>100%</b>

Source: FlowInfo Version 9.2 - Statewide Services, NSW Department of Health, 01/07/03 to 30/6/06, Hunter/New England locals plus inflows. Patient Group (s): Acute, Acute in Comm NA Hosp.

**Table 14** shows that in 2006/07, of total separations 80.8% were for residents of the immediate catchment area of Tamworth Hospital. The remaining 19.2% of separations were for people from other SLAs in the Hunter New England and other areas, particularly Coonabarabran and Walgett.

### 2.5.2. Patient Outflows

**Table 15** presents data on the number of patients from the immediate Tamworth catchment area that travel outside the Hunter New England health area to access hospital services. The main outflows over the past four years have been to tertiary hospitals in Sydney including St Vincent's Public, Westmead, Royal North Shore, Prince of Wales and Westmead Children's Hospitals as well as hospitals in Queensland.

**Table 15: Out of Area flows for Residents of Tamworth Hospital's immediate catchment area, 2003/04 to 2006/07**

Centre/Hospital of Treatment	Separation				% total for 2006/07
	2003/04	2004/05	2005/06	2006/07	
St. Vincent's – Public	256	203	197	191	12.7%
Westmead (all)	126	152	145	124	8.3%
Unidentified Queensland Hospital	102	116	103	103	6.9%
Prince of Wales	126	109	101	92	6.1%
Royal Prince Alfred	81	86	95	89	5.9%
Children's Hospital Westmead	126	110	88	89	5.9%
Royal North Shore	138	136	109	87	5.8%
Sydney Children's	65	65	57	86	5.7%
Sydney/Sydney Eye	55	45	36	48	3.2%
Nepean	52	35	43	39	2.6%
Concord	30	37	24	20	1.3%
Coffs Harbour	31	19	19	20	1.3%
Royal for Women	29	48	31	17	1.1%
Other	442	459	446	496	33.0%
<b>Total Public Hospital Separations</b>	<b>1,659</b>	<b>1,620</b>	<b>1,494</b>	<b>1,501</b>	<b>100%</b>

Source: FlowInfo Version 9.2

In addition, there were over 5,000 separations reported for private facilities each year from 2003/04 to 2006/07 for residents of Tamworth's immediate catchment area with 6,161 separations in 2006/07.

It should be noted that the sufficiency for residents of Tamworth's immediate catchment area attending hospitals within the area (Tamworth, Gunnedah, Manilla, Barraba, Quirindi, Walcha and Werris Creek hospitals) is 85.6%. It is proposed that this level of self-sufficiency for public hospital separations be maintained and possibly increased in the future.

**Table 16** presents data on intra-Area flows (excluding Tamworth Hospital) and shows that the majority of these flows from the immediate Tamworth catchment area are to John Hunter, Armidale and Calvary Mater Newcastle hospitals. The main reasons for admission to other HNE facilities were for Diagnostic GI endoscopy, Orthopaedics, Obstetrics, Medical Oncology, Haematology and Neurosurgery.

**Table 16: Intra-area flows for Residents of Tamworth Hospital's immediate catchment area, 2003/04 to 2006/07(excluding Tamworth Hospital)**

Hospital	2003/04	2004/05	2005/06	2006/07
John Hunter	355	429	452	574
Armidale	342	348	327	334
Calvary Mater Newcastle	38	20	30	55
Maitland	30	32	14	27
Manning	6	17	18	18
Royal Newcastle	45	37	25	0
Other HNE hospitals excl. Tamworth	4470	3944	4169	3947

Source: Flowinfo Version 9.3

The table below presents the main reasons by SRG that residents of Tamworth's immediate catchment area were hospitalised outside the HNE Health area for the four years 2003/04 to 2006/07.

**Table 17: Top 20 Outflow separations for residents of Tamworth's immediate catchment area to public hospitals outside HNE Health by SRG, 2003/04 to 2006/07**

SRG	Number of Separations			
	2003/04	2004/05	2005/06	2006/07
Interventional Cardiology	218	158	129	124
Non Subspecialty Surgery	133	105	111	140
Orthopaedics	111	107	82	128
Respiratory Medicine	99	65	81	75
Non Subspecialty Medicine	93	120	96	87
Cardiology	77	86	77	76
Neurosurgery	70	68	91	79
Medical Oncology	64	46	35	29
Ophthalmology	63	53	51	57
Gynaecology	56	52	49	42
Obstetrics	54	65	61	27
Neurology	50	50	64	50
Urology	49	42	32	32
Cardiothoracic Surgery	48	47	41	44
Gastroenterology	41	58	47	60
Plastic and Reconstructive Surgery	39	51	45	46
Psychiatry -- Acute	37	47	38	38
Diagnostic GI Endoscopy	33	27	23	25
Rehabilitation	30	37	32	42

SRG	Number of Separations			
	2003/04	2004/05	2005/06	2006/07
Haematology	27	46	37	34
Other SRGs	267	290	272	266
<b>Grand Total</b>	<b>1,659</b>	<b>1,620</b>	<b>1,494</b>	<b>1,501</b>

Source: FlowInfo Version 9.2

The top five outflow SRGs in 2006/07 were non sub-specialty surgery, orthopaedics, interventional cardiology, non-subspecialty medicine and neurosurgery. The following current and proposed service enhancements are likely to increase Tamworth Hospital's self-sufficiency in providing appropriate services for local residents:

- The recent introduction of interventional cardiology services (February 2008).
- Expanding cancer services provided locally including the introduction of radiotherapy services (as recommended in the draft Statewide Radiotherapy Plan)
- Increasing maternity services to level 5

## 2.6. Service Networks

The *Guide to the Role Delineation of Health Services, Third Edition, NSW Health*, identifies a Rural Referral Hospital as a service which fulfils the role of a hub in a network of services, supporting smaller centres and linking with other rural referral hospitals.

Tamworth Hospital and Community Health Services have historically played a key role in supporting health services throughout the northern part of the Hunter New England. In accordance with the NSW Rural Health Plan 2002, this role is being further enhanced through the formalisation of service networks to:

- Improve access to all levels of acute hospital and community based services;
- Enable the sharing of resources;
- Promote the coordination of services across all levels of complexity;
- Provide clinical support to professional staff;
- Ensure a continuity of patient/client care.

HNE Health relies on networking between services and facilities to provide comprehensive accessible health care to residents. Where applicable in the Plan, discussions regarding current and future service provision have included descriptions of service networks and the broader referral role that Tamworth Hospital, in particular, has in the northern part of the Hunter New England area. The patient flow data indicates that there are significant inflows from all SLAs across the northern area, with the most significant inflows from Narrabri, Inverell, Moree and Armidale. These inflows are generally for patients who require more complex care, once stabilised however they are transferred back to their local facility for further treatment. Similarly patient outflows from Tamworth are for services that are either not provided locally or where a higher level of service is required eg, obstetrics, medical oncology and neurosurgery. Some of the proposed service developments outlined in this Plan are intended to strengthen the service networks within HNE Health and thereby decrease the outflows to public hospitals outside the area.

Another important service network in the northern part of the Area exists between Tamworth and Armidale Hospitals. Since the creation of HNE Health in January 2005, both facilities have been managed by a single General Manager and joint Executive Management Committee, to improve the range and quality of services provided by both facilities. Networking has enabled a range of services to be provided at higher levels across both sites including critical care, acute stroke management, renal, palliative care and cancer/oncology services. It is proposed to continue the development of this

networking relationship to ensure that quality services can be maintained at both hospitals.

To support these facility-based service networks, HNE Health is implementing a phased introduction of clinical services networks/streams across the area in which THS is an active participant:

- **Area Clinical Networks/Streams currently in operation**
  - Aged Care and Rehabilitation Services
  - Renal Services
  - Cancer Services
  - Palliative Care Services Stream (part of the Cancer network)
  - Children, Young People and Families
  - Women's Health and Maternity Services
  
- **Area Clinical Networks/Streams in development**
  - Critical Care and Emergency Services
  - Mental Health/Drug and Alcohol Services
  - Stroke Services
  - Cardiac Services
  - Diabetes Services

These Area Clinical Networks/Streams are designed to improve the coordination of service delivery and build staff capacity across the area to ensure equitable provision of high quality, clinically effective care. Area Clinical Networks link groups of health professionals from primary, secondary and tertiary care across the area to work together in a coordinated manner. These networks shift the emphasis from separate institutions to a system of integrated care for the consumer across HNE Health.

## **2.7. Transport**

### **2.7.1. Transport Networks**

During the consultation process, the lack of adequate transport networks was identified as a major issue to accessing health services locally and in other centres.

A range of emergency transport networks exist for persons requiring referral from smaller centres to Tamworth and for persons needing to be transferred to Newcastle or Sydney for higher level care.

HNE Health is currently implementing the *HNE Health, Transport for Health – Implementation Plan, (March 2007)* to ensure a transport network is in place so that people can access services whenever required for non-urgent reasons.

Tamworth sits on the junction of the New England and Oxley Highways. Key road travel distances are as follows:

- 4 hours to Newcastle;
- 6 hours to Sydney;
- 5.5 hours to Brisbane;
- 1.5 hour to Armidale;
- 4 hours to Moree.

### 2.7.2. Commercial Transport Services

Current commercial transport services in Tamworth include:

- Two flights three days a week (on weekdays) between Newcastle and Tamworth.
- Four flights a day between Sydney and Tamworth on weekdays and three flights on the weekends.
- Coaches between Tamworth, Moree, Armidale, Glenn Innes, Manilla, Barraba, Bingara, Warialda, Inverell, Gunnedah, Walcha, Werris Creek, Quirindi and Newcastle.
- CountryLink rail services link all main centres in the northern part of HNE Health with Newcastle, Sydney and Brisbane.
- Taxi services operate in Tamworth and on a booking basis outside the immediate Tamworth area.

### 2.7.3. Community Transport Services

- HACC transport, operated by volunteers, provides transport within and between Tamworth and surrounding villages for frail aged and disadvantaged people with a disability.
- The Tamworth Aboriginal Medical Service provides transport services from home to medical appointments and treatment sessions for Aboriginal and Torres Strait Islander people.

Health related transport services provide transport (car and bus) for people to attend clinics, health related appointments and to access renal dialysis services. Clients using these services are asked to make a contribution (as per the NSW Health Transport for Health Policy) with the amount dependant on distances travelled. If a client is unable to pay the full cost then it is either decreased or waived.

### 2.7.4. Emergency Transport Services

Persons needing urgent care have access to road and Air Ambulance, Care Flight (neonatal, paediatric), Westpac Rescue Helicopter and the Royal Flying Doctor Service to transport them to the most appropriate health service.

**Table 18: Summary of Current Transport Services available in Tamworth, 2007**

	Tamworth
Ambulance Station	Yes
Helipad	Hospital Site
Airport	Yes
Patient Transport Vehicle	Yes
Train Station	Yes
Taxi Service	Yes
Taxi Voucher System	Yes
Bus Service within the city	Yes
Inter Town Bus Service	Yes
Health related transport	Yes
HACC Transport	Yes
Community Transport	Yes

Source: Tamworth Regional Council Social Plan, 2006.

## **2.8. Tamworth Regional Council Social Plan**

The Tamworth Regional Council, like other councils in the area, is a proactive council that is highly supportive of any initiative that brings positive benefits to the citizens it serves. The Council has developed a comprehensive Tamworth Local Plan<sup>11</sup> in consultation with communities in the area which recognises the rights of every citizen to access a range of public health services and support that promotes independence and a healthy life.

The plan addresses a whole of life spectrum with special consideration given to children, youth, women, people with disabilities, groups on low incomes, Aboriginal and Torres Strait Islander people and people from Culturally and Linguistically Diverse Communities especially refugees. Key service areas include the provision of mental health services, access to services by people in regional villages, transport and social inclusion. Most of the proposed strategies and recommendations reflect those identified by THS as needing to be addressed in the near future. Many of the initiatives involve partnering with other agencies, including THS and HNE Health, to achieve improvements to people's living environment.

## **2.9. Local Industry**

Tamworth is a thriving community with infrastructure capable of supporting sophisticated, modern industries. A skilled, stable and highly productive workforce is also available.

Major companies located in the city include the international food group Goodman Fielder Wattie (with approximately 500 employees); John White Maltings, (who process barley for much of Australia's beer production); and Baiada Poultry.

Tamworth Airport is also the site of one of the world's largest and finest pilot training facilities, the Australian Air Academy. The academy has the capacity to train 226 young people to be second officers over an intensive 14 month course.

The city is also the centre of a large grazing and cropping area with an extensive livestock auction facility. Products include barley, cattle (beef and dairy), cotton, eggs, fruit (citrus, stone, apples, pears etc), lucerne, hay, maize, millet, olives, pigs, poultry, rye, sheep (fat lambs and wool), sorghum, wheat and vegetables.

## **2.10. Tourism**

Tamworth has developed a vibrant tourist industry in recent years and the city's revenue from tourism has increased to over \$73M annually. Tamworth is perhaps best known as the Country Music Capital of Australia. Tamworth is conveniently located sharing country hospitality with over 265,000 visitors each year. The annual Country Music Festival attracts an estimated 50,000 extra people to the city over a period of ten days in January each year. Attendances to the ED at Tamworth Hospital swell during this time and require the allocation of extra staff to manage the additional workload.

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<sup>11</sup> Tamworth Regional Council, Tamworth Social Plan, 2006

## 2.11. Implications for Services Planning

Population and socio-demographic characteristics of Tamworth and its surrounding areas identify several issues that need to be taken into account when planning health services for the future. This information must be considered in conjunction with trends in health service delivery, the impact of technological advancements and community expectations. Key issues that should be considered in developing future health services include:

- A growing elderly population who will require enhancement of aged care services.
- A significant Aboriginal and Torres Strait Islander population who require the development of targeted chronic disease and health promotion and disease prevention programs to improve their health outcomes and support them in accessing appropriate and timely health care. This will include the development of culturally appropriate programs to address maternal and child health, chronic disease and men's health.
- Disparities in health status in some rural and remote communities associated with socio-economic disadvantage will require an ongoing focus on addressing health inequities and improving access to health services.
- Implementation of the *HNE Health, Transport for Health – Implementation Plan, (March 2007)* to improve transport options for people in need to access services when required for non-urgent reasons.
- The delivery of integrated population health services ie, preventative care in areas such as smoking cessation, to address the significant incidence of avoidable illness and disease due to poor life/behavioural choices.
- The development of some additional specialty and non-specialty services such as maternity, cardiology and cancer services to increase self-sufficiency and reverse outflows.
- The strengthening of the rural referral role of Tamworth Hospital to improve the coordination of service delivery and build staff capacity ensuring equitable provision of high quality, clinically effective care.

### 3. Outcomes of Community Consultations

In the development of this plan, extensive consultations were undertaken with a wide range of internal and external stakeholders (as listed in section 1.4) to ensure key groups had the opportunity to have input into strategies for the future provision of health services in Tamworth. During the consultation process, members of the community were invited to comment on how health service delivery could be improved and what models might best suit the local area into the future.

The following issues were identified by community representatives and have been considered in developing the directions for service provision described in this plan and outlined in section 1.8.

#### 3.1. Capacity Building

- **Lack of health professionals** prepared to live and work in rural communities (including GPs, nurses, obstetricians, surgeons and anaesthetists).
- **Poor maternity facilities - Current substandard facilities are major barrier to women delivering in Tamworth.**
- Need to increase the capacity and range of **mental health services** especially community-based services including specialist assessment and treatment, supported accommodation, vocational training, respite care and living skills training.
- Need to increase **networking with Newcastle** to improve access to higher level services.
- Increased **medical technologies** required to improve access to services (such as mental health services, pathology, information management and education opportunities);
- **Upgrade of hospital infrastructure** to a modern facility that meets community expectations. Key issues raised were the lack of adequate public parking and the need to walk up a hill to get to the entry and then follow circuitous routes to access services.
- Increased and improved **community transport capacity** especially between smaller centres;
- **An acute Stroke Service in Tamworth** to ensure a prompt response and to aid a fuller recovery.
- **Radiotherapy Services** in Tamworth so people do not have to travel. It was reported that some people choose not to have treatment due to the disruption travelling for treatment causes the family.
- Increased **dental services** - poor oral health is a major issue.

#### 3.2. Health Professionals

- Increased **cultural competency and sensitivity** of staff to improve service outcomes and the hospital experience for clients. This was a high priority for Aboriginal and Torres Strait Islander people.
- Initiatives to **attract and retain staff** through providing clinical development opportunities, rights of private practice, accommodation, study leave etc.

- The employment of more Aboriginal and Torres Strait Islander staff to ensure services are culturally appropriate and the health facility is 'Aboriginal and Torres Strait Islander friendly'.

### 3.3. Needs of Special Groups

- The needs of **people with disabilities** who require a wide range of services to maintain health and independence.
- Specific programs to encourage **Aboriginal and Torres Strait Islander people** to access health services.
- Increased **vocational and social skills for people with mental illness** to build their self-esteem.
- More **supported accommodation** for people with mental illness to assist them to remain in the community.
- More **services for young people** especially for suicide prevention, drug and alcohol use, teenage pregnancy and dysfunctional families.
- **Subsidised travel** - the Isolated Patients Travel and Accommodation Assistance Scheme (IPTAAS) does not cover trips under 100 kms which disadvantages some persons who need to travel to a larger centre for services.

### 3.4. Communication

- Increased communication to keep the community informed of available services and necessary information.
- Improved relationships with GPs so that admission and discharge procedures go smoothly.

### 3.5. Changed Service Models

The community identified the need for the following changes to how services are provided:

- Increased focus on **social aspects of health** and community-based services;
- Stronger focus on **rehabilitation and recovery**;
- Need to **change GP referral patterns** to encourage referrals to local hospitals to promote sustainability;
- Improved **transfer of care**;
- Improved **General Practitioner relations and support**;
- Improved **service links** between inpatient, aged care and community health services to improve the patient journey.
- Improved **links between mental health, drug and alcohol and general health services**;
- Increased focus on **disease prevention and health promotion**.
- Increased focus on **early intervention and prevention strategies** for children and vulnerable families.

## 4. Future Directions

### 4.1. Policy Framework

#### 4.1.1. The State Health Plan: A New Direction for NSW 2007

NSW Health's vision is *Healthy people – Now and in the future.*

There are four goals:

- To keep people healthy
- To provide the health care that people need
- To deliver high quality services
- To manage health services well

Priority areas for future action are contained within the following seven strategic directions:

- Make prevention everybody's business
- Create better experiences for people using the health system
- Strengthen primary health and continuing care in the community
- Build regional and other partnerships for health
- Make smart choices about the costs and benefits of health services
- Build a sustainable health workforce
- Be ready for new risks and opportunities

Of relevance to Tamworth, NSW Health has committed to developing new models of service delivery for rural communities and to building a sustainable workforce by implementing programs to place additional medical and clinical staff in regional, rural and remote areas facing workforce shortages.

#### 4.1.2. NSW Health Rural Health Plan 2002

This plan addresses three fundamental issues that significantly affect the delivery of health services in rural and remote areas:

- Attracting and retaining health care professionals
- Providing certainty and security for services provided in rural areas
- Providing services closer to where rural people live

The Rural Health Plan identifies Tamworth as one of six (6) regional areas with a Major Rural Referral Hospital providing subspecialty and specialised services closer to where people live and enabling networked linkages to Metropolitan Referral Hospitals to facilitate access to enhanced expertise in rural areas and transfer of patients to higher level services when required.

The Rural Health Plan also proposes specific strategies for the development of cancer services (including radiotherapy) and cardiac diagnostic and interventional services in regional centres. Tamworth was the first service to develop Cardiac Catheterisation Services based on the Rural Health Plan recommendations with services commencing there in 2005.

The *Report of the Rural Health Implementation Coordination Group* was also released in 2002. This report emphasises the role of formalised networks in the linkage of health services across a range of sites and settings in an Area or across Areas to provide an

appropriate, effective, comprehensive, and well coordinated response to health needs. Networking offers opportunities in structure, certainty, growth, development and recognition for rural health services.

#### **4.1.3. A New Direction for Hunter New England Health Service Strategic Plan, Towards 2010**

This Plan is HNE Health's overarching strategic document outlining the Area's vision, objectives and strategic initiatives for the next 5-10 years. The Plan aims to build on the strengths of the organisation and further develop the capability of HNE Health into the future.

The HNE Health Service Strategic Plan reflects priorities identified in the NSW State Plan and is closely aligned to the NSW State Health Plan. The Plan outlines specific initiatives to be implemented to ensure high quality health services that are responsive to the needs of health consumers and the community continue to be provided.

HNE Health is committed to achieving the seven Strategic Directions identified in the State Health Plan. The Area's Strategic Plan identifies strategies and initiatives to achieve these directions and measures to assess how well we are performing in achieving them. Key focus areas that have been identified are:

- Communities and Patients;
- External partners;
- Internal Networking and Processes;
- Resource Accountability; and,
- Our People, Culture and Capability.

The Tamworth HSP reflects HNE Health Strategic Directions.

#### **4.1.4. HNE Health Area Healthcare Services Plan, 2006-2010**

This Plan is HNE Health's highest level services planning document. It outlines the direction of clinical services development and delivery across the Hunter New England area over the next 5-10 years. The Plan presents details of the directions and development of clinical services across the Area, and of the clinical services delivered within the Area's geographic clusters.

The HNE Health Area Healthcare Services Plan identifies Tamworth as developing as a Level 5 maternity service to serve the northern part of HNE Health, increasing the networking of emergency services with Armidale and reversing identified flows from Newcastle back to Tamworth where appropriate.

## **4.2. Clinical Governance**

Clinical governance is based on the principle that all staff, clinicians and managers alike are jointly accountable for the quality of patient care and standards of care delivery. Clinical governance is the framework by which this accountability is ensured and demonstrated.

Clinical governance is focussed on addressing systems' issues as the primary basis of achieving quality improvement. Quality and patient safety is managed, monitored and evaluated by:

- creating an environment that promotes use of best evidence in patient care and encourages data-based decision-making (evidence-based practice);
- having robust systems to identify incidents and risks;

- monitoring, evaluating and reporting on health and quality outcomes;
- and, by encouraging staff and patients to provide feedback and input into the quality and safety agenda.

The components of the *HNE Health Clinical Governance Framework* are broad, and include clinical effectiveness, clinical ethics, patient safety and incident reporting, executive support service (including complaints management), clinical audit, clinical risk management, patient satisfaction, introduction of new procedures/clinical innovations, policy development and management, quality improvement and safety alerts. Specific clinical areas of focussed activity include Infection Prevention and Control, Quality Use of Medicines, Blood Watch (Blood Transfusion Improvement Program), Patient Identification and Correct Site Procedures, and Clinical Communication. All of these issues will be important considerations in the design and delivery of future health services.

### 4.3. Role Delineation Profile

In order to fulfil the requirements of the NSW Rural Health Plan and HNE Health Area Healthcare Services Plan Tamworth Hospital is categorised as a Rural Referral Hospital. The role delineation profile provides details of the services and levels of services provided at Tamworth Hospital.

The full profile and a Submission Report prepared in accordance with the Role Delineation Tool (Version 1.2) are included as **Attachment D**. A summary of proposed changes to role delineation follows:

**Cardiothoracic Surgery** will need to be available at level 5 to support the introduction of Interventional Cardiology. It is proposed that this support be provided through networking with John Hunter Hospital.

**Coronary Care Services** need to increase from Level 4 to Level 5 to support the role delineations for Cardiology, Emergency and Diagnostic Imaging Services. To achieve this there needs to be a Director of Cardiology/General Medicine, medical officers on site 24/7, medical registrar on call 24/7, isolation facilities, formal audit and review procedures, RN/CNC input and the availability of invasive monitoring.

**Dermatology** is proposed to increase to a Level 5 service. Moving to a level 5 service requires the appointment of a Specialist Dermatologist, Medical Registrar on call 24/7 and linkages with a Radiation Oncology Service (either currently in place or available via the Cancer Services Clinical Network).

**Diagnostic Imaging** will move from Level 5 to Level 6 with the commencement of Interventional Cardiology later in 2007. This is an initiative from the NSW Rural Health Plan that has been progressed in Tamworth with the opening of the Cardiac Catheter Laboratory for diagnostic procedures in 2005.

**Gastroenterology** is also to increase to a level 5 service and has the necessary components to do so via the support of Area Clinical Networks.

**HIV/AIDS** is to increase to a level 4 service to enhance service provision in the northern part of HNE Health. This requires enhancing linkages between hospital and community with GPs and other government agencies, as well as establishing stronger partnerships with Palliative Care Services and developing enhanced health promotion and education programs.

**Health Promotion** will increase to level 5 to reflect the focus on disease prevention and health promotion advocated by HNE Health. This will involve developing closer

links with other service providers, especially GPs, and improved linkages between community health and hospital services. Enhanced links with tertiary education institutions is also required.

**Medical Oncology Services provided** at Level 5 as part of the development of Integrated cancer care services.

**Multicultural Health** needs to increase from level 1 to level 3 to support the increasing numbers of people from CALD communities (including refugees) moving into the northern part of HNE Health. This increase involves enhanced access to ethnic health workers, interpreter services and cultural awareness training.

**Neonatal Services** will increase from level 3 to level 4 to support the increased delineation of Maternity Services. This will be achieved by a combination of expanded/enhanced and networked services.

**Neurology** at level 5 is supported through networking with neurosurgical services at JHH.

**Nuclear Medicine** is a level 4 service. Networking with Nuclear Medicine at JHH supports Level 5 ENT, Endocrinology/Renal Medicine and Clinical Haematology/Oncology Services.

**Maternity Services** will be increased to level 5.

**Radiation Oncology** at Level 5 - It has been recognised by HNE Health that there is sufficient demand to justify the introduction of Radiation Oncology Services at Tamworth. This is discussed and described in detail under **Cancer Care Services**.

The proposed role changes outlined above will require resources and their implementation will need to be considered in light of other service priorities and the availability of funding.

## 5. Current and Future Health Services

The following section includes details of specific services of THS. Service roles and activities are described and future directions are proposed in accordance with HNE Health strategic directions. Projected inpatient activity described under each service is included in **Attachment E**. A complete list of all current and projected Service Delivery Units (beds, chairs, trolleys etc) is included as **Attachment F**.

### 5.1. Hospital-Based Services

Tamworth Hospital operates at the level of a rural referral hospital and provides a range of critical care, acute care, maternity, rehabilitation and ambulatory care services to its immediate catchment and the northern part of HNE Health. Tamworth Hospital is the main provider of hospital-based health services in the northern part of HNE Health providing predominantly level 5 services including emergency, medical, surgical, maternity and paediatric services with specialities including orthopaedics, cardiology (including diagnostic cardiology), acute mental health, ophthalmology and rehabilitation services.

Tamworth Hospital currently has 350 beds/chairs/trolleys/places made up of:

- 19 beds for ICU/CCU/HDU,
- 166 beds for medical, surgical, perioperative, maternity and paediatrics,
- 27 neonatal cots (seven (7) cots at level 3),
- 25 acute mental health beds,
- 16 beds for the confused and disturbed elderly and older people with mental illness,
- 6 beds for palliative care,
- 22 beds for rehabilitation and 3 beds for transitional living (brain injury services),
- 20 emergency treatment bays and 2 emergency resuscitation treatment bays
- 8 chairs for chemotherapy,
- 10 renal dialysis chairs,
- 4 dental chairs,
- 4 operating suites/procedure rooms,
- 8 operating theatre recovery spaces,
- 7 trolleys for the cardiac catheter lab and,
- 3 Labour birthing rooms.

#### 5.1.1. Inpatient Services

At present Tamworth Hospital provides inpatient beds for acute medical/surgical, critical care, rehabilitation, maternity, acute adult mental health, palliative care, transitional living (brain injury) and the confused elderly.

In 2006/07 there were 14,955 total inpatient separations at Tamworth. Day only activity accounted for 28.4% of total separations. Surgical and procedural specialities accounted for 39.3%, while medical specialities accounted for 60.7% of all separations.

Medical specialities with the highest activity were Cardiology (7.6% of total separations), Respiratory Medicine (4.7%) and Neurology (3.1%).

Surgical specialities with the highest activity were Orthopaedics (6.6% of total separations), Ophthalmology (4.7%), Diagnostic GI Endoscopy (4.7%) and Urology (3.5%).

Details of inpatient separations by Service Related Groups (SRGs) are included as **Attachment B**.

The HNE Area Healthcare Services Plan identifies the need to ensure there are sufficient inpatient beds to meet demand into the future. Key drivers of demand for beds are the ageing of the population and increased activity.

**Table 19** presents current bed numbers for specific functions across acute and sub-acute modalities. Due to the poor functionality of the existing physical facilities there is no flexibility in managing beds across services to meet variable/seasonal demand.

**Table 19: Tamworth Hospital – Bed Count – July 2008**

Ward/Unit	Bed Type	2006
<b>Acute Beds</b>		
W1	Orthopaedic	28
W3	Medical	30
W4	Surgical	32
W8	Medical/Surgical	19
W9	Maternity	20
W10	Paediatrics	15
ICU/CCU/HDU		19
Banksia Unit	Adult Acute Mental Health	25
<b>Total Acute Beds</b>		<b>188</b>
Neonatal cots (7 Level 3 and 20 nursery)		<b>27</b>
<b>Sub-Acute Beds</b>		
Hilltop Lodge	T-BASIS/Older Person's Mental Health	16
Nioka	Palliative care	6
W11	Rehabilitation	22
	Transitional Living	3
<b>Total Sub- Acute Beds</b>		<b>47</b>

Source: Tamworth Hospital Centre Information, 2008.

Note: This table does not include day surgery beds/chairs, chairs for chemotherapy or renal dialysis or Emergency Department treatment bays.

#### **5.1.1.1. Acute Beds**

It is proposed that future redevelopments or new facilities will be designed to enable flexibility in bed management in response to varying service demands and over time. For example the demand for maternity and paediatric inpatient beds fluctuates during the year. The ability to 'swing' bed usage according to need is recommended.

Any projections of acute bed numbers need to take into account current activity and the need for flexibility in the future to respond to changing demands, changes in models of care and the effects of reversing some identified flows for surgical, maternity and other specialities from John Hunter Hospital in the near future.

Actual 2003/04 and 2006/07 activity data and the aIM 2005 Projection Tool have been used to determine future demand for acute adult medical and surgical beds (including drug and alcohol) by 2011/12 and 2016/17. Paediatric, maternity, neonatal and mental health bed demands were removed and have been calculated separately. Similarly requirements for chemotherapy and renal dialysis have also been calculated separately. The resulting projected bed numbers account for acute (including critical care) adult multi-day inpatient capacity. Average lengths of stay estimated by aIM 2005 for 2016/17 were also utilised in these calculations. The outcomes of this exercise are presented in Table 20.

**Table 20: Tamworth Hospital – Actual and Projected Beds, Chairs and Places 2008-2016**

Beds/Bed Equivalents	Current (Staffed and Available as at 30 June 2008)	Proposed 2016
ICU	7	16
High Dependency	6	
Coronary Care	6	8
Medicine	55	110
Surgical	54	
Paediatrics	15	18
Maternity	20	15
Special care cots	7	12
Rehabilitation	22	26
Transitional Living Unit	3	.3
Palliative Care	6	6
Perioperative/ Day Only (Medical /Surgical/EDO)	22	24
Short Stay Unit	0	6
Mental Health Acute	25	25
Mental Health Sub Acute	16	16
<b>Sub total beds</b>	<b>264</b>	<b>285</b>
Emergency Treatment Bays	20	26
Emergency Resuscitation Treatment Bays	2	3
Renal chairs	10	17
Chemotherapy chairs	8	14
Dental chairs	4	8
<b>Sub total chairs and cots</b>	<b>44</b>	<b>68</b>
<b>Other Hospital Treatment Areas</b>		
Operating Suite/Procedure Rooms	4	6
Operating Theatre Recovery Places	8	12
Cardiac Catheter Lab	7	7
Labour Birthing Rooms	3	4
Bassinettes	20	15
<b>Sub total Other Treatment Areas</b>	<b>42</b>	<b>44</b>
<b>Grand Total</b>	<b>350</b>	<b>397</b>

Sources: aIM 2005, SiAM v.1, Chemotherapy Guidelines – NSW Health, HNE Health Renal Services Plan, MH.CCP, Version 1.11, NSW Health Radiotherapy Guidelines, Operating Theatre Planning Tool.  
Please note: Tables 1 and 19 present the same data

The beds estimated in **Table 20** include all acute adult medical and surgical beds including those required for intensive care, coronary care and high dependency. The numbers exclude paediatric and maternity bed requirements which are estimated separately. The estimates have been calculated at 85% occupancy. Detailed calculations taken from aIM 2005 that informed this table are included as **Attachment E**. Bed allocations across the categories of acute medical/surgical and critical care components are presented in **Attachment F**.

### 5.1.2. Medical Services

THS provide a comprehensive range of medical services to the Tamworth area and for some specialities to the northern part of HNE Health. The following table presents the specialities and inpatient activity for Tamworth Hospital for 2006/07 and projected activity to 2011/12 and 2016/017.

In **Table 21** significant increases are projected for Cardiology, Gastroenterology, Immunology and Infections, Respiratory Medicine and, Non-sub Specialty Medicine. Changes from multi-day to day stay management are most likely for Dermatology, Haematology and Immunology and Infection.

**Table 21: Medical Services – Inpatient Separations, 2006/07 – 2016/17**

Medical Specialty	Overnight+ Separations				Day Only Separations			
	2003/04	2006/07	2011/12	2016/17	2003/04	2006/07	2011/12	2016/17
Cardiology	969	1039	1,031	1,087	62	97	101	126
Dermatology	25	22	21	19	21	11	24	25
Endocrinology	120	141	133	143	24	30	50	54
Gastroenterology	220	299	278	323	48	37	73	90
Haematology	139	161	143	149	119	50	138	158
Immunology & Infection	261	274	283	304	24	30	33	38
Interventional Cardiology <sup>1</sup>	8	80	100	120	19	81	800	1000
Medical Oncology	148	142	140	137	61	40	83	101
Neurology	319	381	334	349	71	77	89	101
Non Subspecialty Medicine	376	300	674	694	198	153	202	212
Pain Management	28	25	24	21	11	29	11	11
Renal Medicine	118	199	122	129	48	49	66	78
Respiratory Medicine	655	633	689	728	20	67	29	34
Rheumatology	31	4	29	28	14	5	18	20
<b>Totals</b>	<b>3,417</b>	<b>3,700</b>	<b>4,001</b>	<b>4,231</b>	<b>740</b>	<b>756</b>	<b>1,717</b>	<b>2,048</b>

Sources: FlowInfo, Version 9.2 for 2003/04 and 2006/07 data; aIM 2005 for 2011/12 and 2016/17

NB: Interventional Cardiology figures for 2011/12 and 2016/17 have been increased beyond those recommended by aIM 2005 to reflect future activity of the Cardiac Catheter Unit.

The following sections describe proposed enhancements for medical services required to address current and emerging demands.

### 5.1.2.1. Cardiology Services

The majority of patients requiring cardiology services are admitted as a consequence of an acute emergency presentation. Patients identified as an intermediate risk (or higher) of an acute cardiac event require rapid medical assessment, electrocardiography, pathology and stress testing services prior to admission to the Coronary Care Unit.

The HNE Cardiac Services Plan 2008-2012 identifies a range of emergency department initiatives such as 24/7 chest pain evaluation areas, Cardiac Assessment Nurses, and 24/7 access to stress testing, to improve the initial management of these patients.

Currently stress testing services are only available during business hours. Similarly, thallium and sestamibi (nuclear) stress testing and imaging is only available in business hours.

In the past people from rural and remote areas of NSW had to travel to Newcastle, Sydney and other major centres to access diagnostic and interventional cardiac procedures. Most referrals from the Tamworth area historically have been to John Hunter Hospital and St Vincent's Hospital, Sydney, however people from rural and remote areas are underrepresented in the numbers accessing these services. The NSW Rural Health Plan identified this as unacceptable and a network of Cardiac Catheter Laboratories was proposed, one of which was to be located in Tamworth. In 2004 a Cardiac Catheter Laboratory was established at Tamworth and in the first year performed catheterisations on 600 patients, 60 of whom were Aboriginal and Torres Strait Islander people. No data is available to demonstrate whether this level of demand was due to reverse flows from Newcastle and Sydney or new cases that previously went untreated.

The Cardiac Catheter Service has recently been expanded to provide interventional cardiac procedures as well as diagnostic procedures. While most coronary occlusions identified during catheterisation will be able to be treated locally, it is still likely that some high risk patients will need to be transferred to Newcastle due to the seriousness of their condition or their need for revascularisation via Coronary Artery Bypass Grafting, a surgical procedure available only within the Hunter New England at John Hunter Hospital. Strong links with key service providers at St Vincent's Hospital and the John Hunter Hospital currently facilitate patient transfer or future bookings.

**Table 22: Projected Increases in Interventional and Diagnostic Cardiac Procedures, for the immediate catchment area**

ESRG	2003/04	2011/12	2016/17
Invasive Cardiac Investigative Procedures	26	175	222
Other Interventional Cardiology	1	27	35
<b>Grand Total</b>	<b>27</b>	<b>202</b>	<b>257</b>

Source: aIM 2005

Note: In this table the immediate catchment area includes data for Bingara

The projected increases in interventional and diagnostic cardiac procedures in the above table have been modelled in aIM2005 using a scenario based on the following assumptions about the future demand for services from residents of the Peel Cluster and of the surrounding areas of Gunnedah, Quirindi, Werris Creek, Walcha and Bingara:

- Increase in the Relative Utilisation rate for *ERSG 129 Other Interventional Cardiology*, to meet the unmet demand for residents of Tamworth plus Parry and Gunnedah older than 15 years. Residents of these SLAs have standard separation rates (SSR) well below the state average.
- Increase in the Relative Utilisation rate for *ERSG 121 Invasive Cardiac Investigative Procedures*, to meet the unmet demand for residents of Peel Plus Bingara SLAs (Barraba, Bingara and Manilla, Gunnedah, Tamworth and Parry, Walcha, Nundle and Quirindi), for residents older than 15 years. Residents of these SLAs have standard separation rates (SSR) well below the state average.

It is proposed that a proportion of outflows to St Vincent's Public Hospital for interventional and diagnostic cardiac procedures will be reversed as follows:

- Reverse 90% of ESRG 121 (Invasive cardiac investigative procedures) flows for Peel plus Bingara residents (Barraba, Bingara and Manilla, Gunnedah, Tamworth and Parry, Walcha, Nundle and Quirindi) treated at St Vincent's Public Hospital to Tamworth Hospital.
- Reverse 60% of ESRG 129 (Other Interventional Cardiology) flows for Peel plus Bingara residents treated at St Vincent's Public Hospital to Tamworth Hospital.

It should be noted that Tamworth has the only rural Cardiac Catheter Service in north west NSW. Therefore, the above estimates are likely to be an under estimation as the service treats patients from a much wider catchment area. The projections in Table 21 are based on likely demand from Tamworth's immediate catchment area only. These figures will need to be reviewed next August- at the end of the service's first year of operation as an interventional facility. A full years' data will provide the basis for a more accurate projection of future demand. Currently, the estimated number of diagnostic cases for the service is between 400 and 600 plus around 100 interventional procedures per year.

The type of follow up required by cardiac patients following discharge from hospital is identified via discharge summary and usually includes referral to rehabilitation, their local GP and specialist.

The increase in acute cardiac activity at Tamworth has implications for cardiac rehabilitation services across the wider catchment area. At this early stage, the demand for cardiac rehabilitation services is growing. Cardiac rehabilitation services are available to all cardiac patients across the northern part of the Hunter New England regardless of their location.

It is noted that the Cardiac Catheter Laboratory could be utilised more fully if numbers of clinical staff were increased along with increased access to associated infrastructure including non-admitted beds, inpatient beds with monitoring capacity and radiology services. These proposed increases in staff and infrastructure align with initiatives in the HNE Health Cardiac Services Plan 2008-2012.

To support interventional cardiac procedures Cardiothoracic Surgery and Coronary Care Services need to be increased to level 5 services. The former will be achieved through networking with the John Hunter Hospital and the latter through local service enhancements.

In the future it is proposed to introduce pacemaker implantation and consider electrophysiology studies and defibrillator implantation. Consideration is also being given to the development of acute, outpatient and community based heart failure services as outlined in the HNE Health Cardiac Services Plan 2008-2012.

Information on the Coronary Care Unit is in section 5.1.5.3.

#### **5.1.2.2. Acute Stroke Unit**

A five bed Acute Stroke Unit, located in the Medical Ward of Tamworth Hospital, was opened on 1 July 2008. Patients are admitted to the unit under one of the general physicians and all are reviewed by the neurologist.

Currently access to continuous cardiac monitoring to determine the cause of stroke is not available. To streamline bed management and improve access to continuous cardiac monitoring for acute stroke and coronary care patients the co-location of such patients in a vascular acute care environment is planned.

A program of rehabilitation commences for stroke patients in the Unit. Patients may be discharged from the Acute Stroke Unit to the Rehabilitation Unit or home, depending on their level of disability. If discharged home, community support and outpatient appointments are organised as part of the discharge planning process.

#### **5.1.2.3. Cardiac Rehabilitation Service**

At Tamworth Cardiac Rehabilitation programs are offered that address:

- Developing exercise tolerance;
- Returning to work and normal activities of average daily living;
- Psychosocial support;
- Tailoring of each program to match the patient's needs.
- Support linkages to the local GP and/or Rehabilitation Co-ordinators in smaller centres;
- Encouraging Aboriginal and Torres Strait Islander patients to participate for as long as the service is required. Much support has been provided by Aboriginal Liaison Officers based in Tamworth and other centres.

Key issues that need to be addressed in the future include:

- Poor referrals/discharge summaries back from metropolitan centres.
- The appointment of an Outpatients Cardiac Rehabilitation Co-ordinator (currently a 0.6 FTE is SAP (Sustainable Access Program) funded to end of 08/09 financial year).
- The appointment of a Heart Failure Nurse Specialist.
- The need to increase capacity for outpatient services to meet increasing demand.
- Improved networking between major and regional centres.
- The self-sufficiency of local Cardiac Services to improve the provision of an integrated services model.
- Resourcing for health promotion, disease prevention and early intervention initiatives.
- Building relationships with Aboriginal Health Services through the Aboriginal Liaison Officers and community-based Aboriginal Health Education Officers.

#### 5.1.2.4. Renal Services

*HNE Health Renal Services Plan 2007-2011*<sup>12</sup> identifies the need to enhance renal services, especially for Aboriginal and Torres Strait Islander people who experience renal disease at four times the rate of Non-Aboriginal and Torres Strait Islander people. As well, services need to be enhanced to address the increasing demands of an ageing population.

It is projected that end stage renal disease (ESRD) will continue to affect 6% of the overall population of Tamworth reflecting Australia-wide trends and an ongoing need for renal dialysis services. The significant number of Aboriginal and Torres Strait Islander people currently living in the Tamworth area and those projected for the future, need to be taken into account when calculating demand for renal services, especially renal dialysis services.

THS provide comprehensive renal services including:

- Disease prevention/health promotion/early detection program.
- A Renal Dialysis Service at the Tamworth Hospital that:
  - Operates 11 dialysis stations up to two shifts per day, six days per week  
Provides acute dialysis services for ICU and other inpatients under the care of nephrologists and to satellite or home dialysis patients who may be acutely unwell
  - Provides outpatient clinics

A referral service for the McIntyre, Mehi and Tablelands Clusters with specialist Nephrologists on site

- A Community and Outreach Support Service for home dialysis across the Peel, McIntyre, Mehi and Tablelands Clusters with approximately 50-60% of patients requiring dialysis currently managed on home dialysis therapies.
- A multi-disciplinary team approach which includes social work, dietetics, occupational therapy, pharmacy and physiotherapy.
- Therapeutic plasma exchange program (plasmapheresis) managed in the Intensive Care Unit.
- Access to vascular surgery for vascular access provided by a visiting vascular surgeon once a month

Patients requiring transplantation are referred to Newcastle and Sydney. Home Haemodialysis Training is currently provided from Charlestown. Recruitment is underway for a home dialysis training nurse which will allow for home dialysis training

<sup>12</sup> Hunter New England Health, Renal Services Plan, 2007-2011 (draft), April 2007

to be delivered in Tamworth,. The introduction of home dialysis training will address the concern that a number of people who could undertake home dialysis training do not take up this option because they need to travel to Charlestown for training which is costly in terms of family time and resources.

Recruitment is also underway for a nurse practitioner and clinical nurse consultant to establish a new program to improve the management of chronic disease in Aboriginal people –these positions will be located in Armidale or Tamworth. The main focus of the program is on renal disease.

Key issues for current services include:

- Lack of adequate and convenient transport for patients needing to attend centre based haemodialysis;
- Poor functionality and lack of space;
- Increasing patient acuity;
- Demand for outreach services which is stretching current resources.

Demand for dialysis services is projected to grow at 5.2% per annum across the total population. As previously noted Aboriginal and Torres Strait Islander people have rates of renal disease which will further increase demand for dialysis services. It is also likely that the number of people on home dialysis will drop from 60% (current rate) to 50% over time due to the ageing of the population and the unsuitability of some environments for home dialysis.

**Table 23** presents the actual and projected numbers of people requiring dialysis and the number of chairs required to deliver that service based on current guidelines. It should be noted that these projections have been developed in the absence of agreed statewide projections.

**Table 23: Projected Demand-Renal Dialysis Services, Peel Cluster, 2006 – 2016**

Year	Population	No. people requiring dialysis	Home based services (50%)	Centre based services (50%)	Centre-based chairs required @ 85% occupancy	% persons requiring dialysis
<b>Non-Aboriginal &amp; Torres Strait Islander population</b>						
2006	72,184	36	22	14	6	0.05%
2011	71,912	44	22	22	9	0.06%
2016	72,586	53	26	26	10	0.07%
<b>Aboriginal &amp; Torres Strait Islander population</b>						
2006	5,541	11	3	8	4	0.20%
2011	6,372	13	4	9	5	0.21%
2016	6,649	16	5	11	5	0.24%
<b>Totals for 2006</b>		<b>47</b>	<b>25</b>	<b>22</b>	<b>10</b>	
<b>Totals for 2011</b>		<b>57</b>	<b>26</b>	<b>31</b>	<b>14</b>	
<b>Totals for 2016</b>		<b>69</b>	<b>31</b>	<b>38</b>	<b>15</b>	

Source: HNE Health Renal Services Plan, 2007-2011

In projecting the number of chairs that will be required, the following parameters were taken into account:

- The required number of people requiring dialysis will constitute 0.05% of the total population (NSW Health).
- Aboriginal and Torres Strait Islander people have a rate for dialysis four times higher than the Non-Aboriginal and Torres Strait Islander population.
- Future growth in the need for dialysis is 5.2% per annum (NSW Health as per HNE Health Renal Services Plan, 2007-2011) for the overall population.

- The number of people on home dialysis will decrease to from 60% to 50% with Aboriginal people being more likely to be dialysed in-centre (70%).
- Centre-based dialysis will operate 6 days per week, 2 sessions/chair/ day.
- 90% of people requiring dialysis will need 3 sessions per week.
- 10% of people requiring dialysis will need sessions every day.

While the above table suggests that 15 chairs (@ 85% occupancy) will be needed by 2016 it is proposed that this number be increased to 17 chairs to provide an in-centre training capacity and to accommodate people from other clusters who may need in-centre dialysis in Tamworth due to the complexity of their condition.

The following strategies are proposed long-term to enhance renal services to meet increasing future demand:

- Increasing the scope of the early detection and disease prevention/health promotion programs, especially amongst Aboriginal and Torres Strait Islander people to reduce the incidence of End Stage Renal Disease. This will occur under the Integrated Chronic Care for Aboriginal People program mentioned earlier.
- Increasing renal health positions including nurse practitioner positions that work between the hospital and the community.
- Influencing the provision of transport services to ensure access for all patients who need dialysis.
- Developing a home-based haemo-dialysis training program at Tamworth to encourage more people to dialyse at home.
- Expanding the Plasmapheresis Service to meet the increasing demand (estimated at 17% per annum).
- Enhancing the development of TeleHealth linkages for the Tamworth Unit and satellite units in the northern part of HNE Health so that they operate as a networked service, and introducing TeleHealth linkages with people in their homes to improve access.

### **5.1.3. Integrated Cancer Care Services**

Improving access to cancer services is a key priority for HNE Health to meet the increasing demand for cancer services. It is projected that by 2011 there will be 1,095 new cases of cancer who will require cancer services in the northern part of HNE Health and 1,216 by 2016.

Adopting a population based benchmark does not account for the rising proportion of new cancer cases in the population. For example in the HNE Health catchment area between 2001 and 2016 it is projected that the population will increase by 7.5% (from 814,146 to 875,580) while the incidence of cancer will increase by 52.8% (from 4133 to 6317).

In the northern part of HNE Health a decrease in population is expected between 2001 and 2016 (181,172 to 178,594) but the incidence of cancer will increase by 23% (from 986 to 1,216).

Effective cancer services require the provision of a multi-faceted service delivered by a multidisciplinary team. For THS an Integrated Cancer Care Service covering hospital-based, community and home-based services is proposed which includes:

- Haematology/Oncology services;

- Chemotherapy services;
- Surgical services;
- Radiotherapy services (proposed new service);
- Allied Health support services;
- Access to Pain Management Services;
- Access to Palliative and Bereavement Services;
- Access to psycho-oncology services.

Cancer Australia and the Cancer Institute of NSW are currently working collaboratively to develop a northern NSW Cancer Network. This project, which is due for completion in June 2009, has the following key deliverables:

- A service directory for northern NSW;
- Referral pathways by tumour streams;
- Standardised cancer treatments;
- A shared professional development program and
- A quality improvement framework.

The Tamworth Integrated Cancer Care Service will be part of the HNE Health Cancer Network ensuring safe and sustainable services are provided closer to where people live.

#### **5.1.3.1. Haematology/ Medical Oncology Services**

For the past 23 years, THS had the services of a part-time haematologist and a 'fly-in' medical oncologist from Prince of Wales Hospital, Sydney. In 2006/07 these services accounted for 293 separations of which around a third were day only admissions. This number is projected to increase to 509 separations by 2011/12 and 551 by 2016/17. On 30 June 2008, this service ceased. Currently haematology and medical oncology services are being provided by part time staff specialists. HNE Health is actively recruiting the necessary specialist staff to ensure sustainable services can be provided in Tamworth.

#### **5.1.3.2. Chemotherapy Services**

Chemotherapy services are provided primarily on an outpatient basis and it is expected that the demand for these services will increase as the population ages. Tamworth Health Services currently have eight chemotherapy chairs.

It should be noted that chemotherapy is not the only chair-based infusion service provided to outpatients. Other services include plasmapheresis and drug infusions. It is anticipated that future treatments and improved technologies will involve the increased use of this mode of treatment and hence an increase in the number of chairs will be required.

Projected requirements for Chemotherapy chairs were calculated using the *NSW Service Planning Guideline for Intravenous Chemotherapy Services*<sup>13</sup>. The *Guideline* provides a methodology for determining demand for chemotherapy services and the number of chairs required to meet that demand. The following table identifies the number of chairs required to 2016 to meet the demand for chemotherapy services from residents of the northern part of HNE Health.

<sup>13</sup> NSW Health, Statewide Services Development Branch Planning Series, Service Planning Guideline for Intravenous Chemotherapy Services, December 2007

**Table 24: Chemotherapy Chair Requirements to 2016**

	<b>2011</b>	<b>2016</b>
New Cases of Cancer per annum	1,095	1,216
Proportion with chemo indication 40%	438	486
Plus 25% retreatment	548	608
Patient Chemo Visits per patient (10) Sub Total	5475	6080
Patient Chemo Visits per chair per year (/285)		
<b>Total Chairs</b>	<b>19</b>	<b>21</b>

Sources: HIE 2007 and NSW Health Chemotherapy Guidelines

Table 24 indicates that, using the 2007 methodology for calculating chemotherapy chair requirements, 21 chairs will be required by 2016 for residents of the northern part of HNE Health. Currently Armidale has 4 chemotherapy chairs while Tamworth has 8 chairs. Based on the incidence of cancer by LGA, the majority of chairs will be needed in Tamworth to serve residents of the Peel, Mehi and McIntyre Clusters. It is therefore recommended that 14 chemotherapy chairs be based at Tamworth Hospital with the remaining 7 chairs located in other hospitals across the northern part of HNE Health.

Currently there are no waiting lists for chemotherapy at Armidale and Tamworth. It should also be noted that the HNE Health Area Cancer Network is reviewing the number and distribution of chemotherapy chairs across the Area to provide services closer to people's homes where appropriate.

### **5.1.3.3. Radiation Oncology**

In 2005 residents (302 referrals in total) of the New England area accessed the following centres for radiation oncology services<sup>14</sup>:

- Prince of Wales Hospital, Sydney (39% of referrals)
- Queensland Hospitals (19.5%)
- Calvary Mater Hospital, Newcastle (17%)
- St Vincent's Hospital, Sydney/Mater Hospital, Crows Nest (13%)
- Others (11.5%)

In 2006, there was a significant decrease in the number of referrals for radiation oncology from the northern part of HNE Health to both Prince of Wales Hospital and the Calvary Mater Newcastle. The reasons for this decrease are unclear. It is likely that some people may be reluctant to access treatment due to the distances and costs involved or people may be choosing other treatment options such as chemotherapy or surgery due to their availability locally. Whilst it is acknowledged that travel to access current services can be difficult, approximately 91% of new patients treated at Calvary Mater Newcastle in 2007 were residents of the Hunter New England area.

A radiation oncologist currently flies from Prince of Wales Hospital to Tamworth one day a week for consultation. For radiotherapy treatment people travel primarily to Prince of Wales Hospital but also to Calvary Mater Hospital in Newcastle.

It is proposed that centre-based radiation oncology services be introduced to Tamworth. Radiotherapy services are planned on the basis of cancer incidence, population projections and benchmark treatment rates. By 2011 there will be sufficient demand in the northern part of HNE Health to justify the establishment of radiation oncology services.

<sup>14</sup> NSW Health, Radiotherapy Management Information System, 2005

**Table 25** presents data on projected demand and the number of linear accelerators required to meet this demand. It should be noted that in NSW radiotherapy services are developed with a minimum of two bunkers and that generally services commence operating one machine with service capacity reviewed and increased based on utilisation and projected demand. **Table 25** suggests that to establish a radiation oncology service at Tamworth for the northern part of HNE Health two linear accelerators will be required by 2011. However, further work will need to be undertaken within the context of statewide planning for Radiotherapy Services as it is likely that outflows to other public services and to private services will continue after the service is established.

Other important considerations include a CT-simulator and planning systems, appropriate staffing and sufficient operating funds. Appropriate linkages to the Calvary Mater Newcastle for quaternary level treatment and other support services (such as MDT participation, leave coverage, academic and teaching services) will also be required.

**Table 25: Demand Projections for Radiation Oncology, northern part of HNE Health, 2011 -2016**

	2011	2016
New cases of Cancer per annum	1,095	1,216
Persons requiring radiation oncology (52.3%)	573	636
Persons requiring retreatment (25%)	143	159
Total persons requiring radiation oncology per annum	716	795
No of linear accelerators required (rounded up)	2	2

Sources: HIE 2007 and NSW Health Radiotherapy Guidelines

#### **5.1.3.4. Breast Screening Services**

Breast screening Services are provided by HNE Health. The service will continue and possibly be enhanced in the future with the establishment of more outreach clinics in smaller centres. It has been suggested that breast screening services, which are located in a separate building on the Tamworth Hospital site, should be considered for collocation in the redesign of THS.

#### **5.1.3.5. Cancer Services Staffing**

The development of an Integrated Cancer Care Service including new onsite Radiation Oncology Services requires an additional, specialised workforce. Future staffing needs for any new service will be identified in detail when the service is planned. NSW Health Guidelines have been developed to determine the number of radiation therapists, medical physicists and radiation oncologists required.

As noted above, a radiation oncologist from Prince of Wales (POW) Hospital travels to Tamworth and provides a clinic once a week, with the patients then travelling to receive their treatment at POW. As well, a medical oncologist from Calvary Mater Newcastle provides a weekly clinic at Tamworth. The Oncology clinical nurse consultant from Tamworth attends HNE Cancer Network Medical Oncology Stream meetings which discuss area wide oncology issues.

#### **5.1.4. Surgical Services**

A comprehensive range of Surgical Services are provided at Tamworth Hospital on a 24/7 basis. The most common procedures currently performed at Tamworth are:

- Diagnostic Gastrointestinal Endoscopy;
- Intraocular lens implants;

- Orthopaedic procedures;
- Gynaecological procedures;
- ENT;
- Urology.

**Table 26** shows significant projected increases in activity in some specialities notably Ophthalmology, Diagnostic GI Endoscopy, Orthopaedics and Urology. For the future enhancements are required to:

- Increase endoscopy services in general and Endoscopic Retrograde Cholangio-pancreatography (ERCP).
- Introduce endovascular surgery as part of general/vascular surgery.
- Increase operating suite/day procedures capacity.
- Increase diagnostic imaging services.

**Table 26: Surgical and Procedural Services – Inpatient Activity – 2006/07 – 2016/17**

Surgical/Procedural Speciality	Overnight+ Separations				Day Only Separations			
	2003/04	2006/07	2011/12	2016/17	2003/04	2006/07	2011/12	2016/17
Breast Surgery	64	49	67	68	42	47	42	42
Colorectal Surgery	133	149	139	144	20	24	37	48
Dentistry	10	4	7	6	103	102	116	124
Diagnostic GI Endoscopy	75	47	68	64	707	655	846	929
ENT Surgery	244	231	189	159	115	123	105	102
Extensive Burns	8	7	7	6	0	0	0	0
Gastroenterology	54	39	51	50	49	58	52	52
Gynaecology	277	285	243	221	314	324	281	262
Head & Neck Surgery	52	47	48	47	16	6	22	26
Non-Specialty Surgery	318	362	296	288	70	57	82	92
Ophthalmology	32	36	30	27	594	662	857	1069
Orthopaedics	789	748	795	816	261	232	315	350
Plastic & Reconstructive Surgery	81	80	78	76	143	173	187	217
Tracheostomy	47	48	57	64	0	0	0	0
Upper GI Surgery	150	157	139	133	0	0	0	0
Urology	275	326	267	260	162	201	223	257
Vascular Surgery	97	40	90	87	5	3	6	7
<b>Totals</b>	<b>2,926</b>	<b>3,031</b>	<b>2,863</b>	<b>2,839</b>	<b>2,660</b>	<b>2,850</b>	<b>3,340</b>	<b>3,784</b>

Sources: FlowInfo Version 9.2 and aIM 2005

In 2006/07, the majority (almost 94%) of surgical and procedural services were provided to adults, with only around 6% of surgery performed on children aged 16 years and under. The main types of surgery and procedures performed on children are presented in the table below. Tamworth has a role delineation of level 4 for Paediatric Surgery. Therefore, it is expected that the majority of complex paediatric surgical cases will continue to be referred to a tertiary hospital.

**Table 27: Surgical and Procedural Services – Inpatient Activity – for children aged 16 years and under, 2006/07 – 2016/17**

Surgical/ Procedural Specialty	Overnight+ Separations				Day Only Separations			
	2003/04	2006/07	2011/12	2016/17	2003/04	2006/07	2011/12	2016/17
Dentistry	7	2	5	3	52	45	58	62
Diagnostic GI Endoscopy	7	3	4	3	7	3	7	7
ENT Surgery	133	111	98	81	95	93	78	71
Non-Specialty Surgery	42	51	33	28	37	27	30	25
Ophthalmology	6	6	5	4	22	4	18	15
Orthopaedics	52	49	41	36	16	19	19	20
Plastic & Reconstructive Surgery	4	2	3	2	15	10	11	9
Urology	10	6	7	6	9	7	7	6
Other	16	36	12	14	6	9	2	3
<b>Totals</b>	<b>277</b>	<b>266</b>	<b>208</b>	<b>175</b>	<b>359</b>	<b>217</b>	<b>230</b>	<b>218</b>

Sources: FlowInfo Version 9.2 and aIM 2005

#### 5.1.4.1. Burns Treatment

Tamworth has historically provided a burns treatment service for the northern part of HNE Health. The two (2) bed burns unit accepts patients with extensive burns in keeping with the *NSW Health Severe Burns Injury Service – Burns Transfer Guidelines, 2004*. In recent years Tamworth Hospital has also developed an Outpatient Burns Service aimed at reducing the number of people with burns who need to be managed as inpatients.

While two (2) dedicated beds are currently available for burns cases requiring hospitalisation, **Table 28** shows that less than one (1) bed is required to cope with current activity. Projection data demonstrates a small decrease in demand by 2016/17. It is proposed that the number of beds for intensive care/high dependency be sufficient to provide care for burns patients and that there are no dedicated burns beds.

**Table 28: Tamworth Hospital – Burns Activity, 2003/04 – 2006/07**

	2003/04	2004/05	2005/06	2006/07
Separations	20	22	25	25
Beddays	44	52	92	54
ALOS (days)	2.2	2.4	3.7	2.2

Source: FlowInfo Version 9.2

#### 5.1.5. Critical Care Services

Critical Care and Emergency Services operate as an integrated service at Tamworth Hospital which enables sharing of staff and other resources across specialties and a coordinated approach to patient management. It is recommended this model of care be continued. Critical care services are therefore presented together in the HSP. The model of care is recognised by the *Australian College of Emergency Medicine* and won an award in 2005 for excellence in critical care. Strong relationships also exist with the Burns Service, Cardiac Services, Maternity, Spinal Surgery and Neurosurgery services.

Tamworth and Armidale Rural Referral Hospitals form the New England Rural Critical Care Network, part of the state wide Rural Critical Care Network. For the Peel, Tablelands, McIntyre and Mehi clusters, this network has responsibility for developing and implementing: continuing education; critical care skills; Area clinical guidelines, policies and procedures; medical retrieval services and a clinical support service, as well as monitoring the network's performance in critical care.

### 5.1.5.1. Emergency Services

The Emergency Service at Tamworth Hospital provides services to the Tamworth area and retrieval services for the northern part of HNE Health. In 2007/08 there were 43,550 presentations to the Emergency Department (ED). Of these, 28.4% were children (0-16 years), and 7.7% were people 75 years of age or over.

**Table 29: ED Presentations by Triage Category, 2003/04 to 2007/08**

Category	2003/04	2004/05	2005/06	2006/07	2007/08
1. Immediate Life-Threatening	173	176	179	173	202
2. Imminently life-threatening	2,237	2,517	2,738	2,833	3,154
3. Potentially life-threatening	7,708	8,616	9,990	10,406	10,954
4. Potentially serious	18,719	19,887	19,747	19,419	20,732
5. Less urgent	8,378	7,107	7,110	7,319	8,508
<b>Totals</b>	<b>37,215</b>	<b>38,303</b>	<b>39,764</b>	<b>40,150</b>	<b>43,550</b>

Source: HIE, Business Objects 2008

**Table 30: Total ED Presentations by Age Group, 2003/04 to 2007/08**

	0-16 years	17-64 years	65-74 years	75+years	Total
2003/04	10,792	21,451	2,213	2,760	37,215
2004/05	10,296	22,578	2,391	3,038	38,303
2005/06	9,101	23,213	2,500	4,950	39,764
2006/07	11,082	23,445	2,468	3,155	40,150
2007/08	12,360	25,130	2,690	3,370	43,550

Source: HIE, Business Objects 2008

Tamworth Hospital, Taree Hospital and the major retrieval service based at John Hunter Hospital comprise HNE Health's emergency retrieval network. Tamworth Hospital is one of the three busiest hospitals for severe trauma in rural NSW, with 51 admissions post severe trauma during 2002-2004<sup>15</sup>.

The Emergency Retrieval Service catchment area extends to the Queensland border and as far west as Brewarrina and Lightning Ridge. A new twin engine helicopter has recently been purchased. In 2005/06 there were 120 secondary retrievals, 100 primary retrievals by paramedic and 15 primary retrievals with a doctor in attendance.

Tamworth Hospital also acts as the Disaster Retrieval Centre for the northern part of HNE Health. Staff are trained in-house by a Disaster Co-ordinator and regular exercises are conducted to maintain readiness.

Improved emergency mental health services are now available in the Tamworth Emergency Department (ED) through the Rural Mental Health Access Project. During the day and evening (8am – 11pm Monday to Friday) there are Mental Health Clinical Nurse Consultants on-call for the ED. The Community Mental Health Team also consults to the ED as required. All after hours admissions for patients with mental illness come through the ED. Mental Health Services have a single room allocated in the ED to ensure confidentiality and provide appropriate accommodation.

There are relatively low rates of private health insurance in Tamworth. Substantial numbers of people on fixed incomes combined with a lack of after hours GP services people presenting to the ED to access primary health services. In 2006 the top nine (9) diagnostic groups for ED presentations in order of decreasing frequency were:

<sup>15</sup> Hunter New England Health, Critical Care and Emergency Services Plan, Draft October 2006, P.26.

- Upper respiratory tract infection
- Abdominal pain
- Chest pain
- Ankle pain
- Gastroenteritis – viral
- People for review following a primary presentation
- Tonsillitis
- Urinary tract infection
- Viral infection

Many presentations are for conditions that could have been adequately treated by a GP rather than in an ED. It is proposed that capacity for an after hours GP/primary health clinic be included in the design for a new ED in the future.

An Early Pregnancy Unit and an Early Pregnancy Assessment Service supported by Maternity Services commenced in early 2008 to improve the management of pregnant women (especially those in early pregnancy) who present to the ED.

**Table 31** presents ED activity for 2007/08 and projected activity to 2011/12 and 2016/17. Adjustments have been made for:

- Population changes over time with separate projections for children and adults. The latest population figures from NSW Health show that the population of the northern part of HNE Health will remain constant while the population of the Peel Cluster will increase by 2%.
- Increased retrieval rates due to an enhanced service model. Retrievals are expected to increase by 5% per annum reflecting current trends and an anticipated reduction in the capacity of smaller centres to manage critically ill patients.

**Table 31: Current and Projected Attendances – Tamworth ED, 2006-2016**

	Actual	Projected		Comments
	2007/08	2011/12	2016/17	
Attendances - Adult	31,190	31,920	32,726	The projected number of ED attendances has been calculated by applying the current rates of presentation for adults and children to the population projections for Tamworth's immediate catchment area.
Attendances – Children (0-16 years)	12,360	11,614 (0-14 yrs)	11,047 (0-14 yrs)	
<b>Totals</b>	<b>43,550</b>	<b>43,534</b>	<b>43,773</b>	
Additional Retrievals	0	59	118	Estimated increase of 5% per annum additional to population changes due to increased capacity of the service and reduced critical care capacity of outlying areas.

Source: HIE 2008

Note: The decrease in the expected number of attendances by children reflects the projected decrease in the population aged 14 years and younger.

#### 5.1.5.1.1. Short Stay Unit

A Short Stay Unit under the control of the ED would have the several benefits:

- Ability to prevent some admissions for people who only require a period of observation;
- Improved management of patient loads in the ED;

- Ability to hold patients who require further tests and investigations but do not warrant an acute admission;
- Short stay period to coordinate services to permit the person to return home with the necessary supports in place.

It is estimated by local practitioners that 10% of paediatric patients (who currently make up 26% of attendances) and 2% of adult patients would be suitable for a short stay admission. It should be noted that generally these patients are not admitted and remain in ED until discharged. The Short Stay Unit will be designed to accommodate both adult and paediatric patients in accordance with relevant guidelines. The following table demonstrates the effect of this level of activity and the beds required in the short stay unit to manage this activity.

**Table 32: Tamworth Hospital, Short Stay Unit Projections, 2011, 2016**

	Projected		Explanation
	2011	2016	
Anticipated beddays	1,577	1,597	Estimated as 10% of paediatric admissions and 2% of adult admissions who could avoid admission through a short stay.
Beds required	6	6	@ 85% activity

Source: Tamworth Hospital ED data on current and future trends in service delivery, 2007.

It is therefore proposed to collocate a six (6) bed Short Stay Unit with the ED, under the management of the ED, to enable the provision of these services.

#### **5.1.5.1.2. Future Emergency Service Strategies**

Future strategies planned for Tamworth ED include:

- Mental health nurses working seven days per week from 8am – 11pm to improve access to mental health services.
- Improved amenities and enhanced management for people.
- A GP-friendly ED with one point of contact, electronic admissions forms and discharge summaries as well as familiarisation visits.
- Short Stay Unit – (6 beds under ED control) for observation, minor procedures and diagnosis confirmation.
- Increased capacity of the Aged Services Emergency Team (ASET)/nurse from five (5) days per week to seven (7) days per week.
- Enhanced Medical Imaging Services with capacity for General X-Ray, CT and Ultrasound, and access to MRI.
- Enhanced counselling and interpreter services for people from CALD communities.
- Additional administrative support to free up clinical staff.
- Appointment of a CNC – Retrieval/Trauma.
- Semi-separate paediatric area to ensure observation is not compromised especially while waiting.
- Improved transfer of care including electronic link to GPs.
- Appropriate allied health coverage in the Emergency Department
- Development of workforce strategies to ensure adequate FACEM (Fellow of the Australian College of Emergency Medicine) cover
- Onsite Helipad to ensure the efficiency and responsiveness of retrieval processes.
- Inclusion of a GP/primary care clinic area.
- Enhancement of the Early Pregnancy Unit and Early Pregnancy Assessment Service supported by Maternity Services.

### 5.1.5.1.3. Current and Future ED Physical Capacity

The ED has recently been refurbished and has 23 treatment bays (eight monitored) including two for resuscitation, a procedures room and plaster room. Concern has been expressed about the current inadequacy of this number of treatment spaces. Considering the service profile described above, **Table 33** provides information on the number of treatment spaces required for the future.

**Table 33: Emergency Department – Current and Future Treatment Spaces 2006 -2016**

Treatment Bays	2007/08	2011/12	2016/17
Resuscitation Bays	2	3	3
Treatment bays	23	26	26
<b>Total Treatment Spaces</b>	<b>25</b>	<b>29</b>	<b>29</b>

Source: HIE 2008

The total numbers of proposed treatment bays for 2011/12 and 2016/17 were calculated using 1 treatment bay per 1,460 presentations. The treatment spaces proposed are indicative only and should be tested in consultation with staff prior to the commencement of any capital planning.

The proposed six bed Short Stay Unit is additional to the number of treatment places in the above table. In addition to treatment bays and Short Stay Unit, space for the following functions will need to be included in the Emergency Department:

- Consultation rooms (4 for 2016/17)
- Mental Health Assessment/Consultation Area
- Multifunctional spaces to provide privacy and accommodate a range of services/procedures
- Space will be required for a plaster sink and trap

### 5.1.5.2. Intensive Care/High Dependency Services

Tamworth Hospital currently has seven (7) ventilated beds and four (4) HDU beds. It is the only Level 5 Intensive Care Unit in the northern part of HNE Health and as such plays an integral role in the Rural Critical Care Network.

Demand for ICU/HDU services is expected to increase over time due to:

- Introduction of Cardiac Catheter procedures and increase in interventional cardiology;
- Increasing age of surgical patients who require ICU/HDU post surgery;
- Increasing complexity of surgical procedures.

In planning Intensive Care/High Dependency Services, the level of services available at facilities such as Tamworth Hospital are considered in an Area-wide context. **Table 34** presents information on the number of ICU/HDU beds (taken from the HNE Critical Care and Emergency Services Plan 2006) currently available across the Area and the numbers of beds that will be required to meet demand to 2016. Location of beds across the Area is based on clinical need/ability, population projections and role delineation.

**Table 34: ICU/HDU Beds Currently Available and Additional Beds Required across HNE Health to 2016**

	2006	2011	2016
ICU/HDU beds currently available	51		
ICU/HDU beds required	59	62	64
Additional beds required	8	11	13

Source: HNE Critical Care and Emergency Services Plan (October 2006)

The Area's Intensive Care Services Stream advises that Tamworth will need a 16 bed ICU/HDU unit by 2016. This Plan supports that recommendation and further recommends that intensive care and high dependency beds at Tamworth be used in a flexible manner to meet changing needs with staffing numbers being adjusted as required based on patient acuity.

### 5.1.5.3. Coronary Care

The Tamworth Hospital currently has six (6) coronary care beds that are collocated with Intensive Care/High Dependency. Bed utilisation is in excess of 85% occupancy. The progressive ageing of the population and the increase in cardiology services (diagnostic and interventional) planned for Tamworth Hospital are likely to increase the demand for these beds.

HNE Health advises that preliminary funding has been given to perform 110 stents in 2008. While it is not yet possible to determine the exact scope of activity that will be generated by interventional procedures (including the reversal of flows from John Hunter Hospital), nor the roll-on effect on coronary care beds, it is likely that demand for this service and therefore beds will increase in the future.

The following table projects activity for cardiac related diagnoses and procedures that may impact on coronary care beds in the future and is provided as a guide to support the case for extra capacity.

**Table 35: Actual and Projected Cardiac Activity, Tamworth Hospital, 2003/04 – 2016/17**

ESRG	Separations			Beddays		
	2003/04	2011/12	2016/17	2003/04	2011/12	2016/17
111 Chest Pain	233	325	390	471	592	672
112 Unstable Angina	158	149	140	645	496	426
113 Heart Failure and Shock	132	126	124	1,028	906	898
114 Non-Major Arrhythmia and Conduction Disorders	139	170	192	330	389	436
115 AMI W/O Invasive Cardiac Inves Proc	171	182	192	1,017	995	1,065
119 Other Cardiology	198	181	173	771	671	617
121 Invasive Cardiac Inves Proc	26	800	1000	43	1,304	1,500
129 Other Interventional Cardiology	<5	150	200	7	900	1,200
<b>Totals</b>	<b>1,058</b>	<b>2083</b>	<b>2411</b>	<b>4,312</b>	<b>6,253</b>	<b>6,814</b>

Source: aIM 2005

**Table 35** was generated using the aIM 2005 Projection Tool with adjustments made to two ESRGs (Invasive Cardiac Procedures and other Interventional Cardiology) to reflect likely future activity based on past activity, population changes and current service directions. The projections suggest an increase in separations of 96.8% from 2003/04 to 2011/12 and an increase of 128% from 2003/04 to 2016/17. **Table 36** applies the percentages using aIM projections of day only and multi-day bed requirements (using aIM projections) to determine the number of beds that will be required for cardiac activity in 2016/17.

**Table 36: Projected Cardiac Multi-Day Bed Activity, Tamworth Hospital, 2016**

ESRG	Beddays	Day Only rate	Multi beddays
Chest Pain	672	14.1%	578
Unstable Angina	426	2.9%	413
Heart Failures	898	80.0%	180
Non-Major Arrhythmia and Conduction Disorder	436	24.9%	327
AMI W/O Invasive Procedure	1,065	2.6%	1,038
Other Cardiology	617	6.9%	574
Invasive Cardiac Procedures	1,500	30.8%	1,038
Other Interventional Cardiology	1,200	90.0%	120
<b>Totals</b>	<b>6,814</b>		<b>4,268</b>
<b>Beds required @ 85% occupancy</b>			<b>14</b>

Source: aIM 2005

aIM 2005 projection data suggests a need for 14 beds to support cardiac activity. It is estimated that around 40% of cardiac admissions would be admitted to a medical bed, the remaining 60% would require admission to CCU. Therefore, a total of 8 CCU beds are required.

Further information on Cardiology Services is provided in section 5.1.2.1.

#### 5.1.5.4. Operating Suite/Day Procedures Services

The Operating Suite at Tamworth Hospital performed 6,982 procedures in 2005/06, 42% as day procedures. The number of cases has remained relatively consistent over the last 10 years however day only procedures have increased from 37.5% in 1996/97 to the present 42% during that time.

Tamworth Hospital currently has four (4) operating rooms and one (1) endoscopy procedure room. All surgical activity is undertaken in the theatres while a range of day procedures (mainly endoscopies) are undertaken in the procedure room. With such a small number of rooms available this division of functions reduces flexibility.

The following table presents the numbers of actual and projected surgical cases for the Tamworth Hospital.

**Table 37: Projected Operating Suite Activity, 2006-2016**

	2006	2011	2016
Cases per annum <sup>1</sup>	7,080	7,567	7,995

Source: Tamworth Hospital Centre data, aIM2005 Tool and NSW Health Major Non Metropolitan Hospitals' average procedure times.

Note1: Calculated from aIM 2005 as provided by HNE Health

The NSW Health Operating Theatres Requirements Projection Model, May 2007 was used to project the number of multifunction operating rooms required to 2016/17.

The following assumptions were used in the model:

- The aIM scenario generated by NSW Health in consultation with the Area included an increase in Interventional Cardiology
- Tamworth Hospital was allocated individually
- All clinical groups were included
- 2 theatre types were specified; operating theatre and procedure room
- The default time in theatre reference table was selected
- The default rate of use of theatre reference table was selected

- Theatre availability and utilisation operating theatres and procedure rooms was selected for all activity (i.e. urgent and non-urgent) as follows; 240 days, 8 hours availability per day, 65% utilisation.

It should be noted that theatre availability and utilisation for urgent and non-urgent activity were also modelled separately using the same parameters described above. A preliminary review indicated that considering urgent and non-urgent activity separately did not change the number of theatres required.

The results of the modelling are reported in Table 38.

**Table 38: Tamworth Hospital Operating Theatre Requirements, 2016/17**

	2003/04	2011/12	2016/17	Number required (rounded up)
Operating Theatres	3.2	3.4	3.6	4
Procedure Rooms	1.0	1.1	1.2	2

Sources: *AIM 2005 and NSW Health Operating Theatre Tool*

**Table 38** indicates that four (4) multifunctional operating theatres plus two (2) procedures rooms will be required to meet future demand.

Additional to this demand are projected increases in activity at Tamworth Hospital to meet its future enhanced role:

- Increase in Caesarean sections and other surgical activity related to a Level 5 maternity service.
- Future enhancements proposed to Gastroenterology and other surgical subspecialties
- Increased surgical procedures required by an ageing population.
- New techniques and technologies that result in increased surgical interventions.
- Projected escalations of emergency surgery reflecting current trends.

Therefore, it is proposed that six (6) multifunctional operating theatres/procedure rooms be provided for Tamworth Hospital.

There are currently 8 operating theatre recovery beds at Tamworth. In the future the demand for recovery beds will increase due to a number of factors, including an increase in the number of operating suites/procedure rooms from 4 to 6, an increase in the number of day surgery procedures (which have increased 42.3% from 2003/04 to 2006/07) and the increase in the maternity role delineation to level 5 which is likely to result in more emergency Caesarean Sections being performed. Generally recovery beds are calculated at the rate of two recovery places per operating suite/procedure room. Therefore, it is proposed to increase the number of operating theatre recovery places from 8 to 12 beds in the future.

#### **5.1.5.5. Day Surgery Requirements**

In the future there will be increased numbers of surgical procedures provided on a day only basis. In the four years from 2003/04 to 2006/07, there has been an increase of 42.3% in day surgery activity at Tamworth Hospital. This trend is expected to continue into the future with the move towards minimally invasive surgery, more day only cases and implementation of 23 hour wards. The move to this model of care is currently hampered by the lack of suitable physical facilities to support such a change in service delivery. An increase in the capacity for day surgery is required for Tamworth to meet

this increasing demand. It is proposed that Day Only beds/chairs will be multi-use and available for ambulatory care procedures such as blood transfusions. Using the aIM 2005 Projection tool to project day surgery activity, **Table 39** presents the number of day surgery places/trolleys/chairs required for the future.

**Table 39: Tamworth Hospital, Current and Projected Day Surgery Beds/Chairs/Trolleys, 2006/07 – 2016/17**

Surgical	Separations		
	2006/07	2011/12	2016/17
Adult	2,850	3,111	3,566
Paediatric	359	230	218
<b>Total Separations</b>	<b>3,209</b>	<b>3,341</b>	<b>3,784</b>
<b>Day/Only surgical beds/chairs</b>	<b>15</b>	<b>15</b>	<b>17</b>

Sources: 2006/07: Flowinfo, version 9.2, aIM 2005 for 2011/12 and 2016/17.

In addition there will be a need for medical day only beds/chairs. Table 40 presents the number of medical day only beds/chairs required for the future.

**Table 40: Tamworth Hospital Current and Projected day Only Medical Beds/Chairs, 2006/07 – 2016/17**

Medical	Separations		
	2006/07	2011/12	2016/17
Adult	1,146	1,046	1,208
Paediatric	211	214	224
<b>Total Separations</b>	<b>1,357</b>	<b>1,260</b>	<b>1,432</b>
<b>Day/Only medical beds/chairs</b>	<b>6</b>	<b>6</b>	<b>7</b>

Sources: 2006/07: Flowinfo, version 9.2, aIM 2005 for 2011/12 and 2016/17.

Day only beds have been calculated assuming that the day procedures unit will operate from Monday to Friday and beds will be utilised at 85% occupancy. In total, Tamworth Hospital will require 24 day only beds/chairs by 2016/17.

## 5.1.6. Maternal and Child Health Services

### 5.1.6.1 Maternity Services

The HNE Health Area Healthcare Services Plan (November 2006) identified that maternity services at Tamworth Hospital will be increased from a level 4 to a level 5 service. This will allow selected high risk mothers to be cared for closer to where they live and the service to cover the full continuum of care from antenatal to birthing to post natal and child development services.

There is a comprehensive health promotion and early intervention program for mothers and babies provided through Families NSW. Further enhancements of these positions in the Tamworth area will ensure that all families receive universal home visits and ongoing home visits for vulnerable families. There are also increasing numbers of Aboriginal and Torres Strait Islander mothers accessing antenatal care.

Outreach clinics are operated from Tamworth to Quirindi with future clinics planned for other centres.

Currently approximately 90 mothers a month are admitted to Tamworth Hospital due to complications or pregnancy related illnesses (usually over 22 weeks gestation). Post

natal stays average 3.02 days. There is an early discharge policy for mothers who live within 20 km of the Tamworth Hospital. Aboriginal Mothers Maternity Services and Mothers and Babies Groups are provided from the Coledale Neighbourhood Centre and the Tamworth Aboriginal Medical Service. Special clinics for pregnant teenagers (with up to 45 attendees at any one time) are to be continued. A community program targeting under-age pregnancy is to be developed in the near future.

An Early Pregnancy Unit and an Early Pregnancy Assessment Service supported by Maternity Services commenced in early 2008 to improve the management of pregnant women (especially those in early pregnancy) who present to the ED. Both the Early Pregnancy Unit and Assessment Service are located adjacent to the main part of the Emergency Department.

A recent survey of Maternity Services conducted by NSW Health indicated that the Tamworth services are working well and local management and staff are keen to enhance services further.

### 5.1.6.1.1 Birthing Services

In 2005/06 there were 810 births at Tamworth Hospital and 971 births in 2006/07. Of the 2006/07 births 73.5% of mothers came from the Tamworth or Parry Local Government Areas while 89.8% of mothers came from within the Peel Cluster and Liverpool Plains Shire. Of all births 12.2% were to mothers with Aboriginal and Torres Strait Islander heritage. The rate of Caesarean Section was 27.5%. In 2006/07, as well as separations for births, there were 311 antenatal separations and 48 postnatal separations. In total these separations accounted for 3,9717 beddays.

Births at the Tamworth Hospital have increased over time as shown in **Table 41**. The rate of births has exceeded estimates and the fertility rates are higher in contrast to trends for the rest of NSW.

**Table 41: Maternity Activity, Tamworth Hospital, 2003/04-2006/07**

	Separations			
	2003/04	2004/05	2005/06	2006/07
Vaginal Births	491	524	579	709
Caesarean Births	178	186	231	262
<b>Total Births</b>	<b>699</b>	<b>710</b>	<b>810</b>	<b>971</b>
Antenatal Admissions	361	366	361	311
Postnatal Admissions	40	31	49	48
<b>Total Separations</b>	<b>1,066</b>	<b>1,106</b>	<b>1,209</b>	<b>1,312</b>
<b>Fertility rates – Tamworth</b>	<b>1.92</b>	<b>1.98</b>	<b>2.03</b>	<b>2.09</b>
<b>Fertility rates – NSW</b>	<b>1.79</b>	<b>1.78</b>	<b>1.79</b>	<b>1.80</b>

Sources: FlowInfo version 9.2, Australian Bureau of Statistics, Cat No. 3301.0 2006.

While the numbers of births at Tamworth Hospital and fertility rates for Tamworth are higher than the NSW average it is not anticipated that they will be sustained at these levels into the future due to a number of factors:

- A review of population projections over time shows a decrease in women of child-bearing age (down by 8% by 2016).
- The rates of child-bearing by Aboriginal and Torres Strait Islander mothers, which have been higher than Non-Aboriginal and Torres Strait Islander mothers in the

past, are starting to decline according to 2007 ABS data. In many cases the high fertility rates in this group of mothers boosts the birth rates in some regional areas.

- The proposed introduction of an Obstetrics Model of Care will see an increase in home births by CNC Midwives for mothers at low risk of complications.

It is also noted that Tamara Private Hospital in Tamworth has recommenced maternity services (from 1 July 2007) which will impact on the number of births at Tamworth Hospital.

While the above factors argue against an increase in maternity activity at Tamworth there are several other factors that will contribute to increasing activity including:

1. Increasing maternity services to level 5 to allow the care of higher risk mothers at Tamworth.
2. Increasing numbers of women who have higher rates of risk factors and antenatal and post natal complications than the general female child-bearing population - teenage births, women over 35 years and Aboriginal and Torres Strait Islander mothers.

#### **5.1.6.1.2 Introduction of Level 5 Maternity Services**

As previously stated, mothers from the northern part of HNE Health who have a higher risk of maternity complications are currently referred to other centres (usually John Hunter Hospital) for antenatal care and delivery. In the future with a level 5 maternity service, more mothers will have the option of receiving care and birthing at Tamworth Hospital. The effects of this change have not yet been fully investigated.

The *NSW Health Mothers and Babies Report, 2004* advises that 88.1% of mothers in NSW had an antenatal complication with 56.2% of these being at term and 31.9% being preterm. The report advises that women at highest risk of complications are teenage mothers (4% of total births), women over 35 years (19.9% of births) and Aboriginal and Torres Strait Islander mothers, all of whom are represented in significant numbers in the current maternity profile of Tamworth Hospital.

Implications for Tamworth Hospital are:

- There are significant numbers of women in the high risk categories in the northern part of HNE Health i.e. teenage mothers, women over 35 years and Aboriginal and Torres Strait Islander women.
- Larger numbers of mothers from the northern part of HNE Health who are currently being referred to higher level services will be able to deliver closer to where they live. For the purposes of the HSP this figure has been estimated as an additional 10% of activity by 2016/17.

#### **5.1.6.1.3 Actual and Projected Inpatient Activity**

At present the maternity service has a bed base of 20 beds with an average of 18 available beds over the last year. Table 42 presents data on maternity activity at Tamworth Hospital from 2003/04 to 2006/07 and Table 43 provides information on projected numbers of births for the immediate catchment area to 2016.

**Table 42: Maternity Activity at Tamworth Hospital, 2003/04 to 2006/07**

	2003/04	2004/05	2005/06	2006/07
<b>Vaginal births</b>				
Separations	491	524	579	709
Bed days	958	1053	1161	1265
Average LOS	3.7 days	3.6 days	3.4 days	3.0 days
<b>Caesarean births</b>				
Separations	178	186	231	262
Bed days	1800	1869	1943	2114
Average LOS	5.4 days	5.7 days	5.0 days	4.8 days
Caesarean rate	26.6%	26.2%	28.5%	27.0%

Source: FlowInfo v9.2

**Table 43: Projected number of Births for the immediate catchment area, 2006-2016**

Year	Projected births
2006	1,046 (actual births=1,058 (ABS))
2011	1,002
2016	967

Source: NSW Health

It should be noted that the above table includes all births for residents of the Peel Cluster and Liverpool Plains Shire in both public and private hospitals.

**Table 44: Projected number of Births at Tamworth Hospital, 2011 and 2016**

SLA	2006		Projected births for Tamworth Hospital	
	Actual Births <sup>#</sup>	% born at Tamworth Hospital	2011	2016
Tamworth Regional	698	100%	678	674
Gunnedah	193	20%	37	35
Liverpool Plains	72	67%	46	44
Walcha	38	28%	10	9
Moree Plains	236	5%	13	13
Narrabri	184	12%	21	19
Gwydir –Bingara	19	21%	4	4
Armidale-Dumaresq	270	1%	3	3
Inverell	199	2%	4	4
Uralla	57	2%	1	1
Tenterfield	78	1%	1	1
<b>Total</b>			<b>818</b>	<b>807</b>
Total percentage of births at Tamworth Hospital from these SLAs			92.5%	92.5%
Additional births expected at Tamworth Hospital from other SLAs (7.5%)			66	61
Total births expected at Tamworth Hospital			884	868

Source of birth projections: NSW Health

Note: <sup>#</sup> Actual births reported by the Australian Bureau of Statistics (ABS) for 2006

The projected numbers of births in the above table have been calculated by applying a birth rate to the projected population numbers for women aged 15 to 49 years living in the northern part of HNE Health. The birth rate that was applied was calculated based on the number of actual births for the female population from that area for 2006 (ABS data). The proportion of births at Tamworth Hospital by SLA was then applied to the total projected number of births by SLA to produce the 2011 and 2016 projections. For example, in 2006, 20% of births for women from Gunnedah occurred at Tamworth

Hospital and it is assumed that in the future, 20% of births to Gunnedah women will continue to occur at Tamworth Hospital.

Currently, the majority of maternity transfers from Tamworth to tertiary hospitals are due to threatened premature labour of less than 34 weeks. When the role delineation for maternity services is increased to level 5, Tamworth Hospital will be able to manage women in premature labour from around 32 weeks gestation. Therefore, it is anticipated that 50% of the outflows to John Hunter Hospital and 20% of the outflows to Sydney Hospitals could be reversed. **Table 45** shows that for 2006/07, 22 maternity transfers to John Hunter and other tertiary hospitals could have potentially been managed at Tamworth.

**Table 45: Maternity Outflows for women residents of the northern clusters of HNE Health (Peel, Mehi, McIntyre, Tablelands and the northern part of Upper Hunter) to tertiary hospitals in NSW, 2003/04 to 2006/07**

Hospital		2003/04	2004/05	2005/06	2006/07
John Hunter	Separations				
	Vaginal Births	12	18	32	22
	Caesarean births	18	14	25	16
	Total Beddays	269	451	411	280
	Reverse 50% of separations	15	16	28	19
Tertiary Hospitals in Sydney (public)	Separations				
	Vaginal Births	19	17	19	9
	Caesarean births	27	19	14	7
	Total Beddays	316	260	215	90
	Reverse 20% of separations	9	7	7	3

Source: FlowInfo V.9.2

The following table presents the estimated number of maternity beds required for future services at Tamworth.

**Table 46: Projected Number of Maternity Beds for Births at Tamworth Hospital, 2011 and 2016**

	2011	2016
Projected number of births	884	868
Reversal of outflows (based on 2006/07 supply projected for 2011 and 2016)	22	21
<b>Total projected births</b>	<b>906</b>	<b>889</b>
Projected number of Caesarean births (27%)	245	240
Average length of stay	5.3 days*	5.3 days*
Estimated Caesarean Beddays	1,299	1,272
Projected number of Vaginal births (73%)	661	649
Average length of stay	3.5 days <sup>#</sup>	3.5 days <sup>#</sup>
Estimated Vaginal Beddays	2,314	2,272
Estimated Total Beddays for births	3,613	3,544
<b>Number of Maternity beds for births at 75% occupancy</b>	<b>13</b>	<b>13</b>

Source: FlowInfo V.9.2

Notes:

\* the average length of stay for caesarean births over the past 4 years has been used

# A longer length of stay has been used to account for separations for high risk women and women who live outside the Tamworth area who may need to stay in hospital longer

**Table 47: Antenatal and Postnatal Beddays 2006/07, 2011 and 2016**

	2006/07	2011	2016
Projected Beddays for Antenatal admissions	444	414	353
Projected Beddays for Postnatal admissions	137	78	66
Total Beddays	581	492	419
<b>Number of Maternity beds for antenatal/postnatal at 75% occupancy</b>		<b>2</b>	<b>2</b>

Source: aIM 2005

The total number of maternity beds required for antenatal, postnatal and birthing services to 2016 at Tamworth Hospital will be 15 beds. There will also be a need for 15 bassinets in the maternity unit.

### 5.1.6.2 Services for Children, Young People and Families

HNE Health provides services for children, young people and families as part of an Area-wide network guided by a clinical services plan which has recently been endorsed. Key directions for the service include:

- Improved care for children presenting to emergency services through training, skills development and the introduction of clinical practice guidelines;
- Enhanced paediatric staff attraction and retention strategies;
- Establishment of paediatric palliative care, gastroenterology, plastics and reconstructive and rehabilitation services;
- Integration of Maternity and Child and Family Health services for vulnerable families;
- Increased focus on disease prevention and early intervention in all services;
- Strengthening violence prevention services.

Services for children in HNE Health area are also supported by the Northern Child Health Network (NCHN). The NCHN is one of three paediatric networks in NSW and covers an area of 165,570 square kilometres extending from the southern reaches of the Hunter area to the NSW/Queensland border.

#### 5.1.6.2.1 Current Service Profile

The proportion of children 14 years and under in the Tamworth population is projected to drop from 20.3% in 2006 to 18.7% in 2011. By 2016 there will be 31,272 children under 14 years accounting for 17.5% of the overall population. While the numbers continue to decrease this age group still constitute a significant proportion of the population who require access to specialised services.

A wide range of services are currently provided to children, young people and families by HNE Health and a many other public, private and community organisations. Within THS there are designated children's services e.g., Child Protection Services, as well as

services with specific components that focus on the needs of children e.g., in mental health services -Child and Youth Mental Health.

Services for children, young people and families are also located in areas that are accessible to families:

- Tamworth Community Health Centre;
- Coledale Neighbourhood Centre;
- Tamworth Aboriginal Medical Service;
- Kathleen Cottage, South Tamworth;
- Schools.

**Table 48** shows the activity for child-related services in the community. It should be noted that children are also treated as part of other family-focused services.

**Table 48: Community Health Services NAPOOS - Child and Adolescent, 2006/07**

Service	NAPOOS
Mental Health - child & adolescent	359
Child & Family Services	9,233
Child Protection Services	165
Families First (initial and follow-up visits)	382
SWISH - Newborn hearing screening <sup>1</sup>	133
<b>Total</b>	<b>10,272</b>

Source: Non-Admitted Patient Data Collection, 2005/06

Note: Oral Health and Drug and Alcohol NAPOOS are not included in these figures.

The rate of newborn hearing screening reported above is incorrect. All babies born at Tamworth Hospital (953 in 2006/07) are routinely screened. The incorrect data is most probably due to tests being undertaken in the Maternity Unit and not recorded as a non-inpatient service.

#### 5.1.6.2.2 Paediatric Services

As well as the large number of community health and other services for children and young people listed throughout this plan there is also a substantial range of services provided on an inpatient and outpatient (or ambulatory care basis) from Tamworth Hospital.

#### 5.1.6.2.3 Paediatric Inpatient Services

Paediatric inpatient services are part of a range of services provided to children and young people in the Tamworth area. Paediatric surgery and medicine are provided as level 4 services which will continue into the future. While the proportion of children 14 years and under in the population will drop from 20.3% in 2006 to 17.5% by 2016, there will still be a significant number of children who require services.

**Table 49** presents past and projected activity for paediatric inpatient services at Tamworth Hospital. The major reasons for admission in 2006/07 were definitive paediatric medicine, respiratory medicine and ear, nose and throat.

**Table 49: Tamworth Hospital, Actual and Projected Paediatric Activity, 2006/07 – 2016/17**

	Multi-day Separations			Day Only Separations		
	2006/07	2011/12	2016/17	2006/07	2011/12	2016/17
Paediatrics	1,599	1,728	1,645	427	465	462

Sources: Flowinfo version 9.2, aIM 2005

**Table 49** shows that paediatric inpatient overnight activity is likely to decrease slightly by 2016/17 while the day only paediatric activity is expected to increase slightly.

**Table 50** calculates the bed numbers required to meet future inpatient needs for children at the Tamworth Hospital based on the activity presented in table 40. An occupancy rate of 75% has been assumed for future activity.

**Table 50: Paediatric Bed Requirements, Actual and Projected, 2006/07 – 2016/17**

	2011/12	2016/17
Separations	2,193	2,107
Beddays	5,566	5,125
<b>Beds required</b>	<b>19</b>	<b>18</b>

Sources: Flowinfo version 9.2, aIM 2005

**Table 50** suggests that 18 beds will be required for paediatric inpatient activity by 2016/17.

Children with complex care needs (cerebral palsy, cystic fibrosis, muscular dystrophy, children requiring palliative care etc) are managed locally by the generalist paediatricians, general practitioners, paediatric nursing staff and child and family allied health staff from Tamworth Community Health service with consultancy input from tertiary specialists. Referrals are made to the three children's hospitals for specialist care. Referral patterns typically depend on existing relationships and networks between individual clinicians, the speciality services required, the availability of a bed (particularly in relation to ICU) as well as access to transport.

To support local paediatricians, the following subspecialty outreach clinics are currently provided in Tamworth:

- Neurology/brain injury (from John Hunter Children's Hospital) 3-4 times a year
- Endocrine/diabetes (from John Hunter Children's Hospital) 3 times a year
- Respiratory/Cystic Fibrosis (from John Hunter Children's Hospital) 2 times a year (1 clinic is provided in Armidale)
- Allergy/immunology (from John Hunter Children's Hospital) 2 times a year
- Cardiac – (from Westmead Children's Hospital) 10 sessions per year

A review of Paediatric Services at Tamworth conducted in 2008 identified that while the total number of referrals to the three children's hospitals has remained relatively constant between 2003/04 – 2006/07, there has been an increase in referral patterns to John Hunter Children's Hospital compared to the other Children's Hospitals - see **Table 51** below.

**Table 51: Number of Referrals to NSW Children's Hospitals 2002 to 2007**

Sum of Separations	Date of Separation				
	2002/03	2003/04	2004/05	2005/06	2006/07
Children's Hospital Westmead	58	46	64	42	36
John Hunter Children's Hospital	51	53	35	52	46
Sydney Children's Hospital	91	40	32	23	33
Total	200	139	131	117	115

Source: Patient Flow Info V9.2

### 5.1.6.2.4 Neonatal Services

Tamworth Hospital has a Special Care Nursery with seven (7) cots operating as a level 3 Neonatal Service. This will be developed as a level 4 Neonatal Service to support the level 5 Maternity Services proposed for Tamworth. The increase in the role delineation level will provide Tamworth with the ability to care for premature babies requiring ventilation which cannot be provided under the current role delineation.

**Table 52: Current Neonatal Activity at Tamworth Hospital, 2003/04 to 2006/07**

	2003/04	2004/05	2005/06	2006/07
Separations	328	328	378	400
Bed days	2289	2291	2719	2417
Average LOS	6.0 days	7.0 days	7.2 days	6.0 days

Source: FlowInfo v9.2

The above table shows that neonatal activity has been increasing over the past 4 years. Over that time, the Special Care Nursery has had an annual occupancy rate of between 95 and 100 percent with daily average occupancy as high as 150%. On average 34% of babies born in Tamworth Hospital require admission to the special care nursery. The current statewide average length of stay in a Special Care Nursery is 6.87 days. Using a length of stay of 7 days and based on the current pattern of service demand at Tamworth Hospital, 34% of babies born will require special nursery care, Table 53 below shows that by 2016 at 75% occupancy eight (8) special care nursery cots will be required.

**Table 53: Projected Neonatal Activity to 2016**

	2011	2016
Projected number of Births	906	890
Number of qualified babies (34%)	308	303
Total projected beddays (los 7days)	2,156	2,121
Projected beds (75% occupancy)	8	8

Source: FlowInfo V.9.2

Note : Qualified babies are those admitted to a Special Care Nursery

It is further projected that to reverse flows from John Hunter Hospital (50%) and Sydney Hospitals (20%) back to Tamworth and considering the consistently high occupancy rates, an additional 4 special care cots will be required. This will free up some special care capacity which will allow the transfer of babies from Neonatal Intensive Care Units to a Special Care Nursery closer to home.

In total, 12 special care nursery cots will be required for Tamworth Hospital by 2016.

During 2007/08, 38 back transfers were received from Neonatal Intensive Care Units (NICUs) in Newcastle, Sydney and Brisbane hospitals. Babies were then either discharged to their local District or Community Hospitals, or discharged to home. Transfers to Newcastle, Sydney and Brisbane NICUs are often determined by the availability of a neonatal bed. Staff from the Tamworth Maternity Unit report good communication between the various NICUs. A register of back transfers is maintained noting the Maternity Unit's capacity to accept or decline the request for transfer and advising the paediatrician on call of all admissions and requests for admission.

On discharge from Tamworth Special Care Nursery midwives visit the parents living in Tamworth at home on the day following discharge. A referral is also made to Child and Family Health Nurses and where appropriate, to the Child Development Service at Tamworth Community Health Service (staffed by paediatric allied health). Babies born

prematurely or extremely ill are automatically referred to the Child Development Service for assessment.

General paediatricians at Tamworth Hospital provide follow up assessment for graduates of the Special Care Nursery and refer to John Hunter Childrens Hospital or one of the other tertiary facilities for sub-speciality assessments if required.

#### **5.1.6.2.5 Paediatric Outpatient Services**

2006/07 activity data includes the provision of 5,749 non admitted patient occasions of service (NAPOOS) for Paediatric Medicine (including 4,663 NAPOOS that were privately referred). These NAPOOS also include outpatient outreach clinics to Gunnedah, Quirindi, Narrabri and Coonabarabran.

Paediatric outpatient clinics at Tamworth and outreach centres cover the specialties of diabetes, neurology, cardiology, genetics and respiratory medicine.

#### **5.1.6.2.6 Family and Child Health Services**

This service provides a link between hospital and community-based services delivering Universal First Home Visits, (under the guidelines of Families NSW), and follow-up postnatal visits. All mothers who are referred to the service are offered a home visit with 95% of visits occurring within 4 weeks of the baby's birth.

Early childhood clinics are held daily at Johnston House and the Kathleen Street facility. Weekly immunisation clinics are provided at Johnston House, Kathleen Street Clinic and Coledale Neighbourhood Centre. When developmental and other health issues are identified, accessing paediatric allied health services, including speech pathology, physiotherapy and psychology, and other specialist services such as paediatric psychiatry, lactation consultants, and the Family Care Cottage, can be problematic due to long waiting lists. There is also up to a 6 months wait for appointments to see a paediatrician for children referred due to concerns about their general development.

#### **5.1.6.2.7 Child Development Services**

The Child Development Service comprises a multidisciplinary assessment clinic staffed by a physiotherapist, speech pathologist, occupational therapist, social worker, psychologist and Child and Family Health Nurse. The clinic assesses and supports children from 0-5 years who are developmentally delayed, are at risk of being developmentally delayed or who were born prematurely. The clinic is held every Wednesday during school terms. Following the initial assessment a program of referrals and support services are developed to meet the individual needs of each child and their family.

In 2006/07, there were 387 occasions of service comprising clinic appointments and assessments provided outside clinic times. In 2007/08 activity increased by 5.4% with 408 occasions of service reported. There are no waiting times for this service with each child referred, evaluated for appropriateness of the referral and if appropriate, booked into the next available clinic appointment for their age. At present, appointments are available within two weeks for toddlers and one month for babies. Children and their families are referred as needed to individual disciplines within the team for therapy or follow up, i.e. to physiotherapy, occupational therapy, speech pathology, psychology, social work, child and family health nurse or the Family Care Cottage. Between January and May 2008, 25 children were referred for therapy or follow up. Children are also referred, as required, to other services provided by community health or to general practitioners and other services outside HNE Health

such as Early Intervention Services, Child Care Centres, Preschools, Brighter Futures, Department of Community Services and Department of Ageing, Disability and Home Care.

#### **5.1.6.2.8 Future Strategies**

The following strategies to strengthen service provision are proposed for the future:

- Strengthening of networks for services across the northern part of HNE Health to improve access and sustainability;
- Further development of partnerships with other agencies to ensure improved coordination and service integration;
- Improving partnerships with other agencies for out-of-home care provision for children and carers;
- Developing partnerships for children with disabilities between NSW Health and the Department of Ageing and Disability to reduce gaps in service provision;
- Integration with Mother and Child Services to produce a care continuum that supports the child and family from the antenatal through birth and postnatal periods to early childhood.

## **5.2 Clinical Support Services**

### **5.2.1. Anaesthetic and Pain Management Services**

A comprehensive anaesthetic service is provided at Tamworth Hospital. The service also provides consultation services to other centres in the northern part of HNE Health.

An important component of the anaesthetic service is the Pain Management Service. This service was started in 1997 to address the pain management needs of inpatients. The service has now extended to include chronic pain management.

The Pain Management Service is staffed by one (1) CNC and one (1) Registrar, and operates Monday to Friday from 9am to 5pm. In 1997 the service treated 600 patients. In 2004/05 this number had grown to 2,500 patients.

The scope of the service includes:

- Treating patients in an acute setting.
- Providing advice through consultation.
- Developing drug prescribing protocols.
- Epidural insertions.
- Chronic Pain Management Services which are conducted in consultation with a Physiotherapist, Occupational Therapist and/or Psychologist.
- Monitoring and evaluation procedures to ensure service effectiveness.

Strategies for the future for Pain Management Services include:

- Extending service operating hours to 9am-9pm, Monday–Friday, and 9am– 5pm on weekends.
- Formalising the current informal chronic pain management service with a multidisciplinary team, clear referral mechanisms and links with the community and General Practitioners to enhance access to the service.
- Increasing staffing to include CNC x 1.0 in a supervisory role, CNSs x 2, Registrars x 2 and an Administrative Assistant.
- Enhancing training role for clinical staff.

A staffing review is to be undertaken to ensure the growing demand for this service can continue to be met.

### **5.2.2. Pathology Services**

Pathology Services provide a regional service 24/7 covering Tamworth, Armidale, Glen Innes, Inverell and other smaller centres. Support is provided to smaller centres through collection, testing and advice, and, Telepathology linkages exist between these centres and Newcastle. Demand for pathology services is currently increasing at a rate of 10% per annum. Planned service expansions and the introduction of new services is likely to further increase demand.

Tamworth Hospital Pathology Services are now part of Pathology North which is one of four pathology service clusters in NSW based around tertiary centres. Pathology North which commenced on 1 July 2008, covers Northern Sydney Central Coast Area Health Service, North Coast Area Health Service and HNE Health. The major benefits for Tamworth include access to a larger number of clinical pathologists resulting in improved access to a wider range of tests and the creation of centres of excellence.

Symbion provides private pathology services in Tamworth and to Gunnedah Hospital and has a large referral base from areas outside Tamworth. Moree and Narrabri Hospitals are serviced by Sydpath Laboratories, part of St Vincent's Private Hospital in Sydney.

The Tamworth Pathology Service employs three clinical pathologists and two pathology registrars. There are approximately 180,000 requests dealt with annually, with a further 5% referred to other laboratories for specialised testing.

The Level 5 Pathology service provides:

- Biochemistry;
- Cytology, including fine needle aspirations;
- Clinical pathology;
- Microbiology;
- Histopathology, including frozen sections;
- Haematology, including bone marrow biopsies;
- Immunohaematology
- Teaching and research initiatives;
- Autopsy services;
- Computer IT services, including electronic downloads to GPs and specialists.

Future strategies include:

- Introducing Polymerase Chain Reaction (PCR) to assist medical diagnosis;
- Introducing blood film morphology to assist in the relating and interpretation of blood counts;
- Enhancing consultation role to clinical services;
- Increasing involvement in quality and safety programs e.g., the Transfusion Medicine Improvement Program.
- Increasing IT infrastructure.

### **5.2.3. Blood Bank Services**

A Blood Bank Service operates at the Tamworth Hospital. The service:

- Collects 10,000 units per annum;

- Performs 12 aphoresis procedures per month;
- Operates five days per week up to 50 weeks per annum;
- Operates six (6) beds.

The service is unable to meet current demand for plasma and requires review in the near future. It is proposed to continue the service in the future and to increase activity to meet demand.

#### **5.2.4. Pharmacy Services**

Pharmacy Services are currently delineated at level 5 to support the activities of THS and services throughout the northern part of HNE Health. All issues related to ordering, prescribing, dispensing, medication management, and, safety and legal requirements rest with this department.

The Pharmacy Service packs and dispatches medications to 130 separate sites. An on-call service is available 24/7 for emergencies - resulting in two to three call outs per week. There is also a compassionate supply scheme in place for patients with special needs.

The current service is limited to dispensing and supplying medications for inpatient and ambulatory care services due to the lack of staff. Lack of space also hampers operations and there is no manufacturing or aseptic preparation area on the current Tamworth Hospital site.

While the service complies with NSW Health requirements no Drug Utilisation Evaluation (DUE) processes are in place.

Drug incidence monitoring and reporting occurs across the northern part of HNE Health and it has been identified that improved procedures need to be introduced to ensure drug safety across all centres.

The pharmacy service currently trains around 20 students per annum. It is intended to increase numbers in the future to attract new pharmacists to the northern part of the Area.

Strategies for the future include:

- Increasing staffing levels to enable the pharmacy service to more fully participate in multi-disciplinary management teams and implement the range of new initiatives listed below.
- Enhancing Clinical Pharmacy Services - A pilot program at Tenterfield Hospital in collaboration with local GPs uses an assessment criteria format to undertake a medication chart review. Once the program has been evaluated it is intended to roll it out across the northern part of the area.
- Implementing key strategies from HNE Health's Quality Use of Medicine Program.
- Enabling enhanced compliance with mandatory Commonwealth requirements.
- Increasing involvement in HNE Health Renal Outreach Service to facilitate patient education both in hospital and centre-based via visits or TeleHealth methods.
- Introducing aseptic manufacturing which will be a mandatory requirement to support the proposed development of neonatal and oncology clinical services.

- Increasing patient education for the safe use of medications including warfarin, cardiac medications and all discharge medications.
- Developing research initiatives either alone or as part of statewide projects that will produce applicable results to improve medication management.
- Strengthening monitoring and evaluation processes and outcomes to increase the compliance of health service providers with safe medication practices.
- Advocating for the provision of a trained Pharmacy Assistant at all centres to manage the appropriate ordering, use and dispensing of medications.

### 5.2.5. Diagnostic Imaging Services

Diagnostic Imaging Services at Tamworth provide services to the northern part of HNE Health. Demand for these services has been increasing over recent years as seen in the table below.

CT examinations have increased significantly since 2004/05 as Table 54 indicates. Projected CT activity for 2008/09 is 6000 examinations based on monthly activity year to date. A second CT scanner would improve access to this service, especially for diagnostic cardiac imaging and other like services.

**Table 54: Diagnostic Imaging Examinations, 2002/03 to 2007/08**

	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
CT examinations	2284	2475	3624*	4240	5116	5585
Total Radiology, CT and Ultrasound examinations	22,781	23,113	29,507*	33,785	36,137	37,951
Annual percentage increase		1.5%	27.7%*	14.5%	7.0%	5.0%

Source: Radiology Information System (RIS)

\*Note: In 2004/05, a publically funded CT scanner replaced the co-located private CT scanner.

As well as the imaging services provided at Tamworth Hospital, Castlereagh Radiology Services in Tamworth offer private CT, MRI, general radiology and ultrasound services. In addition, Castlereagh Radiology provides MRI services for Tamworth Hospital inpatients, currently averaging 3 patients per week. Patients are transported to the service either by Ambulance or hospital transport. For non-insured hospital patients, Castlereagh Radiology invoices Tamworth Hospital. There are, however, significant limitations with this service, particularly for ICU patients as there is no wall oxygen or patient monitoring facilities. For critically ill patients, it is often safer to transfer them to John Hunter Hospital or for them not to have an MRI.

The following describes existing services and systems:

- General purpose Computerised Tomography (CT) Scanner
- General X-Ray X 3.
- Ultrasound machines X 2.
- Separate Angiography Room.
- Cardiac Catheter Laboratory adjacent to theatres.
- A private Medical Resonance Imager (MRI) located at Castlereagh Radiology.

- Picture Archiving and Communication System (PACS) that is part of an Area-wide network of electronic film management will be installed at Tamworth Hospital by mid October 2008.
- A Radiology Information System (RIS) which will be upgraded as part of the PACS roll out in October 2008.

In addition to the existing Diagnostic Imaging Services, the following additional facilities will be required to meet future demand:

- 1 additional General X-ray room, utilising digital radiography technology
- 2 additional Ultrasound machines
- Capacity for an additional CT scanner, to meet increasing demand
- 2-bed recovery area adjacent to the CT facilities for patients who have undergone interventional procedures
- 5-bed trolley bay area for patients waiting to undergo investigations
- Increase opportunities to work with Castlereagh Radiology in providing MRI services

The continued provision of MRI services in Tamworth is essential. As mentioned previously, MRI services are provided by the privately run Castlereagh Radiology. Future infrastructure planning for Diagnostic Services at Tamworth Hospital needs to include capacity to collocate MRI services, if required.

The Diagnostic Imaging Department should be located adjacent to 'soft space' such as courtyards or storerooms so that expansion for new modalities can occur in the future.

As with most rural centres, there are challenges around recruiting medical radiation scientists (radiographers, nuclear medicine technologists and ultrasonographers) to Tamworth. Modern infrastructure and access to relevant technologies are important factors in attracting and retaining staff in rural areas.

### 5.2.6. Nuclear Medicine

Currently Nuclear Medicine Services operate two (2) Gamma Cameras. Referrals are received from across the northern clusters of HNE Health. Referrals come through both Specialists and GPs.

It is noted that Nuclear Medicine will need to increase from a level 4 to a level 5 service in the future to support ENT, Endocrinology/Renal Medicine and Clinical Haematology/Oncology which will be operating as Level 5 services. The increase in role delineation will require accreditation with the ANZAPNM; provision of an on-call service for out-of-hours scans; adequate patient isolation to prevent contamination; dedicated research programs, and, outcomes and facilities for invitro tracer studies.

Since 2002/03 demand for Nuclear Medicine Services has remained static with around 3,000 examinations provided annually.

**Table 55: Nuclear Medicine Examinations, 2002/03 to 2007/08**

	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Total Nuclear Medicine examinations	3,174	3,313	3,155	3,134	2,945	3,091

Source: Radiology Information System (RIS), HOSREP software

It is proposed that services will be maintained at current levels into the future.

## **5.3. Integrated Community and Hospital Services**

### **5.3.1. Adolescent Health Services**

Adolescent Health Services operate as a level 4 service for the Peel Cluster and wider areas. An integrated multidisciplinary approach is utilised with hospital and community components working in partnership with other service providers including schools, GPs, other government departments, local NGOs and Aboriginal Community Controlled Health Services. The key focus is to provide early intervention strategies to address issues of significance for young people including sexual health, lifestyle choices, drug and alcohol use and mental health issues. There are specially developed programs for young people to engage them in making healthy life choices and to provide support for those choices.

The paediatric inpatient unit at the Tamworth Hospital has the capacity to admit young people but the physical facilities are not ideal or attractive for adolescents as the physical environment has been designed to accommodate younger children. Future capital development will address this issue.

Strategies for the future include:

- Developing closer working links with mental health services and other service partners to ensure a coordinated approach.
- Targeting vulnerable families that include young people to develop a comprehensive approach to addressing adolescent health issues

### **5.3.2. Mental Health Services**

Hunter New England Mental Health Services are managed and operated as a single service across the Area. So although there are close working relationships between Mental Health Services and Tamworth Health Services, they are managed and operated separately.

The ongoing development and expansion of mental health services is a priority for HNE Health. Key directions for mental health services development as outlined in the HNE Mental Health Services Plan 2006-2010 include:

- Enhanced evidence-based care to be provided within community mental health services;
- Partnering with other agencies to provide supported accommodation and accommodation support in rural areas;
- Increased resourcing of acute inpatient mental health services to support modern clinical service delivery;
- Efforts to increase attraction and retention strategies to address staffing shortages;
- Targeted service provision to specific needs groups (children and adolescents, older people and Aboriginal and Torres Strait Islander people);
- Expansion of consumer and carer services;
- Develop evidenced-based rehabilitation interventions through the Rehabilitation Coordinator and the HNE Psychiatric Rehabilitation Network.
- Enhanced relationships with intersectoral and other partners to improve services;
- Enhanced community mental health teams;
- Enhanced mental health services for older people;
- Increased focus on disease prevention, health promotion and early intervention;

- Improved linkages with Drug and Alcohol Services.

Mental Health Services in the Tamworth area are delivered in partnership with other service providers. Within this model of service delivery a proposed profile of mental health services in Tamworth follows:

- The provision of adult acute inpatient services to the communities of the northern part of HNE Health and community-based and consultative mental health services in the Tamworth area will continue.
- Adult mental health inpatient intensive care requirements will continue to be met by referral to Newcastle (James Fletcher Hospital) due to the specialised nature of this service.
- Acute child and adolescent community mental health services will be provided by staff located in Tamworth and across the northern part of HNE Health. The Child and Adolescent Mental Health Service (CAMHS) is a Mental Health Services service stream operating across the Hunter New England area. Paediatric and adolescent inpatient services are provided by the Nexus Unit at the John Hunter Hospital in Newcastle. Capacity will be available in the Paediatric Unit at Tamworth Hospital for treatment of children and adolescents where appropriate.
- Long Stay and Supported Accommodation in Tamworth will continue to be provided by non-government organisations and other service partners including the Richmond Fellowship and the Psychiatric Rehabilitation Association.
- Inpatient and community-based services for older people with acute mental illness and dementia with challenging behaviours will continue to be provided in Tamworth.
- HNE Mental Health Services will continue to provide services, partnering and support to agencies that provide services to people with mental illness living in the community including nursing homes and NGOs.
- Forensic Mental Health Services will continue to be provided as a Statewide service. Access is by referral. Additional support and consultation can be sought from HNE Community Forensic Service.

### 5.3.2.1. Adult Acute Mental Health Services

Adult acute mental health inpatient services for the northern part of HNE Health are provided from the 25 bed Banksia Unit located on the Tamworth Hospital site. The unit also includes a 3 bed observation area. Mental health intensive care services are provided at James Fletcher Hospital in Newcastle.

**Table 56: Banksia Adult Acute Mental Health Unit – Activity 2004/05 - 2005/06**

	2004/05	2005/06
Available beds	24	25
Patients Treated	696	753
Total Occupied Beddays	7,193	7,916
Daily Average Patients	20	22
Average Length of Stay (days)	11	11
Occupancy	82%	87%

Source: HIE 2008

As indicated above the bed occupancy rate of the Banksia Unit is around 85% with average length of stay longer than other acute facilities in the area. Strategies are in place aimed at reducing the length of stay including enhancements and expansion of community based services which in turn will increase the capacity of the Unit.

#### **5.3.2.2. Adult Non-Acute Mental Health Services**

Non-acute inpatient mental health services are not provided in Tamworth. Access to inpatient rehabilitation services is available through services currently based at Morisset Hospital, however, these are not long-stay accommodation services. In 2009 a new 20 bed non-acute inpatient facility will open at James Fletcher Hospital in Newcastle.

Increasing emphasis is being placed on the provision of mental health services within the community to enable people with mental illness to sustain the support of family and friends and assist them to continue living in the community. As well as the range of services provided by HNE Mental Health Services, agencies such as the Richmond Fellowship, Psychiatric Rehabilitation Association, New Horizons and the Schizophrenia Fellowship of NSW provide support, counselling and residential services in Tamworth and the surrounding areas to people with these needs. To further promote recovery and social inclusion it is proposed that:

- In addition to the appointment of a Rehabilitation Coordinator support should be provided for the further development of psychiatric rehabilitation services in the local area.
- Further development of innovative and integrated approaches to service delivery occurs between HNE Mental Health Service, Primary and Community Networks and local General Practitioner Services.

#### **5.3.2.3. Community Residential Services**

Community residential services are provided by the Richmond Fellowship through the Housing and Accommodation Support Initiative (HASI). There are 10 high support HASI places administered by the Richmond Fellowship in Tamworth. There are also 20 low support places managed by the Psychiatric Rehabilitation Association (PRA) - 16 in Tamworth and 4 outreach packages in Armidale. New Horizons also provides community residential services (15 places) through the HASI program at Tamworth. The Billabong Clubhouse, Tamworth, provides psychosocial rehabilitation services and has a membership of over 200 members with 40 active members and around 20 people attending each day.

Many of the agencies mentioned above provide services in peoples' homes including high support (24/7 care), medium support (up to 16 hours per day) and low support services (drop in on a needs basis). The level of care provided to a person can vary over time in response to their changing needs.

#### **5.3.2.4. Future Adult Mental Health Services**

1. The Acute Adult Mental Health Inpatient Unit at Tamworth Hospital will be maintained at 25 beds.

Facilities to accommodate mothers with post natal depression will be available in the Maternity Inpatient Unit (e.g. single room with ensuite) where it is considered more appropriate to keep the mother and child

2. The provision of Consultation Liaison Services to support people in hospital is considered a critical initiative. The Mental Health Clinical Care and Prevention model (MH.CCP) indicates that at any one time there are three (3) adults in an acute hospital bed in Tamworth Hospital who are in the need of mental health services. These may be people with a diagnosed mental illness who are admitted for an unrelated condition (e.g. surgery) or people who have a psychological reaction to their illness or hospital stay.
3. Non-acute and community residential mental health services will continue to be provided in the community by other service providers.
4. Very long stay accommodation is required by persons who are unable to manage in the community and require a supportive sheltered environment for long periods of time. At present this accommodation is only available at the James Fletcher Hospital Newcastle.

#### **5.3.2.5. Child and Adolescent Mental Health Services (CAMHS)**

CAMHS operates across the northern part of HNE Health and works closely with other agencies involved in services for children and young people. Children and young people requiring an inpatient stay are referred to the Nexus Unit at John Hunter Hospital.

There are currently 5.63 FTE staff for CAMHS employed in the THS area. In 2007/08, CAMHS provided 741 occasions of service to children and adolescents in Tamworth's immediate catchment area. This involved either face to face meetings or phone contact with clients. CAMHS staff also provide follow up support to carers and external service providers.

For the future it is proposed to:

- Increase the scope and range of services for children, young people and their families in partnership with other service providers;
- Develop and implement, in partnership with other agencies especially GPs and the Department of Education, health promotion strategies, disease prevention and early intervention strategies;
- Improve linkages with inpatient services to increase identification and treatment through Consultation Liaison Services;
- Ensure Emergency Department Mental Health staff are able to assess the needs of children and young people upon presentation;
- Partner with Maternity staff to ensure early identification of children at risk due to personal or family mental illness.

#### **5.3.2.6. Older Person's Mental Health Services**

The Specialist Mental Health Service for Older People (SMHSOP) provides services to people at home or in aged residential care accommodation (nursing homes and hostels) and via the T-Basis Unit. Services available include Hilltop Lodge (Transitional Behavioral Assessment and Intervention Service [T-Basis] Unit - 16 beds) a Clinical Psychologist and Clinical Nurse Consultant.

The following table summarises the activity for Hilltop Lodge in 2004/05 and 2005/06.

**Table 57: Hilltop Lodge (T-BASIS) – Older Person’s Mental Health Unit – Activity – 2004/05 - 2005/06**

	2004/05	2005/06
Available beds	16	16
Patients Treated	69	63
Total Occupied Beddays	4,106	4,003
Daily Average Patients	11	11
Average Length of Stay (days)	59.5	71.5
Occupancy	70%	69%

Source: HIE 2008

The Hilltop Lodge T-BASIS Unit (formerly a CADE unit) operates as a short-medium stay specialist assessment and treatment facility for older people with severely and persistently challenging behaviours associated with dementia and/or mental illness.

Outreach mental health services for older people are also provided to smaller centres catering for:

- People with dementia and challenging behaviour;
- Older people with mental illness;
- Older people with behavioural problems.

For the future it is proposed that:

- The 16 bed T-BASIS unit (Hilltop Lodge) be part of the redeveloped Tamworth Hospital. The T-BASIS unit provides transitional care focusing on the assessment and management of behavioural and psychological symptoms in people with age-related mental health problems.
- The primary focus for the SMHSOP Service is to maintain people in the community or in aged residential accommodation wherever possible.
- Beds required for very long stay (3 beds), non-acute places (3 beds) and psychogeriatric nursing home requirements (4 beds) will be provided by others in the community.
- A Team (T-BASIS) to conduct assessments and develop management plans (i.e. Dementia Service Management Plan) to support people in their own homes for as long as possible will be created. The Team would be located in Tamworth and have staff at Narrabri, Moree and Armidale to service the northern part of HNE Health.
- Support (including direct consultation and education/training) needs to be increased to nursing homes in the area so that they are capable of accepting and managing people with challenging behaviours due to dementia. It is proposed to engage a Psychogeriatric Outreach Nurse to promote this service.
- Linkages with ACAT services need to be strengthened.

### **5.3.2.7. Community Mental Health Services**

The Community Mental Health Services (CMHS) provided to people in the Tamworth catchment area include rehabilitation services and specialist programs such as early intervention, neuropsychiatry, dual diagnosis and evidence-based therapy programs. Tamworth CMHS covers the Peel Cluster and also manages the Rural Access Hotline

and centralised intake. In 2006/07 the service provided 7,444 non-admitted occasions of service to adults. This figure is expected to grow substantially in the future.

The service accepts referrals from Tamworth Hospital, Police, GPs and self-referrals, and provides:

- Consultation Liaison to hospital-based services and the Emergency Department where the staff establishment includes a Mental Health CNC who works directly with CMHS;
- Co-ordination of intake services;
- Partnering with Drug and Alcohol Services;
- Community training and education;
- Community prevention and early intervention programs.

For the future it is proposed to further strengthen services by:

- Improving capacity to provide evidence-based care within CMHS.
- Employing senior allied health clinicians to provide support and supervision to staff (HNE Mental Health Services Plan 2006-2011).
- Enhancing community mental health teams (HNE Mental Health Services Plan 2006-2011).
- Promoting social inclusion and destigmatisation in all aspects of service delivery by Mental Health Service and others through:
  - Co-locating Mental Health Services with general services;
  - Staff education and training;
  - Community information and education programs.
- Developing entry and exit criteria for Mental Health Services by:
  - Undertaking a stocktake of past activity;
  - Proposing clinical pathways to define future service directions.
- Further enhancing the Mental Health Services area in the Emergency Department to improve privacy, assessment and initial management, ensuring patients can be admitted in the least restrictive environment.
- Developing stronger partnerships between Mental Health and Drug and Alcohol Services to improve patient management practices.
- Promoting the collaboration of hospital-based and community-based mental health services to improve the client pathway and enhancing the recovery/rehabilitation components of care which will assist people with mental illness to sustain themselves in the community.
- Building relationships with the Tamworth Aboriginal Medical Service to respond appropriately to the needs of the local Aboriginal communities.

### **5.3.3. Drug and Alcohol Services**

HNE Health Healthcare Services Plan identifies Drug and Alcohol Services for development as an Area Clinical Network in partnership with Mental Health Services. Many of the clients seen by Drug and Alcohol Services have a mental health co-morbidity (estimated at 50% Australia-wide).

Drug and Alcohol Services are delivered primarily in the community with inpatient stays for detoxification or intense management if required. Patients are referred from GPs, the courts (Magistrates Early Referral into Treatment (MERIT) Program), Tamworth Aboriginal Medical Service, Police, other community health services and through self-referral.

In 2005/06 12,547 occasions of service were provided by community-based services.

Key strategic directions for the future include:

- Developing closer partnerships with Mental Health Services. Data demonstrates that more than 50% of clients have co-morbidities of mental illness and drug and/or alcohol dependence.
- Increasing services to meet need.
- Tailoring services to address the needs of specific groups including Aboriginal and Torres Strait Islander people and young people.
- Appointing a manager position in Tamworth to co-ordinate an Aboriginal Drug and Alcohol Team to ensure services are culturally appropriate, encourage the attraction and retention of staff and provide a structured approach to service delivery.
- Providing an outreach Drug and Alcohol Clinical Liaison Service to the mental health inpatient unit to facilitate identification, assessment, brief intervention and referral/linking to drug and alcohol services (HNE Health Drug and Alcohol Services Plan 2007-2011).
- Developing research to inform evidence-based practice.
- Enhancing consultation liaison services to hospital-based services.
- Providing community education programs especially for children and young people.
- Increasing links with education institutions to attract staff to this specialty.

The aIM 2005 activity projection tool identifies the need for one (1) acute inpatient bed in the future.

#### **5.3.4. Chronic Care Services**

Services for the management of people with chronic disease are a high priority for THS as a high proportion of people utilising hospital and community based services have complex and chronic diseases. HNE Health advises that 70% of all service activity is due to chronic illness.

THS operate under the principles of the *NSW Chronic Care Program*. There is a planned and co-ordinated approach to the management of people requiring chronic and complex care which commences at identification or admission. Specific Chronic and Complex Care Programs exist for:

- Respiratory
- Cardiac and pulmonary
- Cardiovascular disease
- Diabetes
- Renal
- Psycho-oncology

Future strategies for Chronic Care Services include:

- Strengthening the continuum from hospital to home-based services;
- Developing more strategies to enable people to stay at home longer;
- Increasing efforts to address the psycho-social aspects of illness to enhance the patients coping mechanisms and sustainability;
- Implementing the avoidable admission strategies under the Older Persons Journey.
- Further developing career education for example using the EduCare model to support patient and carer self management.
- Implementing comprehensive assessment and management plans across the health spectrum of care that includes all care providers from acute services, community based health services and General Practitioners.
- Implementing the recommendations from the Older Persons Journey including a Patient Services Centre (Referral and Information Centre) that will provide capacity for enrolment and follow up of persons with chronic diseases including scheduling of assessments, ongoing appointments and rehabilitation programs.
- Further implementing advanced care planning.
- Further implementing opportunistic and systematic identification of risk factors particularly for smoking, nutrition, alcohol, physical activity and falls prevention.
- Developing specific strategies to engage hard to reach populations, including those who are health and socially disadvantaged or who are isolated either by transport disadvantage or location.
- Working with Population Health to develop early detection and intervention strategies.

### **5.3.5. Aged Care Services**

#### **5.3.5.1. Aged Care Assessment Team**

The Tamworth Aged Care Assessment Team (ACAT) is based at Tamworth Community Health Service. It is a multidisciplinary team consisting of nursing staff, an occupational therapist and social worker. The service provides assessment of people for eligibility to enter a nursing home, hostel, respite or to access a community aged care package. The ACAT is a key coordinating service in the management of frail-aged people in the community and works closely with Tamworth Hospital, GPs, other government agencies and NGOs, including nursing homes and hostels.

#### **5.3.5.2. Transitional Aged Care Services**

This is a community based multidisciplinary programme providing slow stream rehabilitation in people's homes to avoid premature admission to nursing homes and acute hospital beds. The service is staffed by nurses, a physiotherapist, an occupational therapist, social worker, domestic assistant and administrative assistant. An ACAT assessment is required for clients to be deemed eligible for the Transitional Aged Care Programme.

#### **5.3.5.3. Aged Care Residential Services**

The Australian Government is responsible for the provision of residential aged care services. In Tamworth there are approximately 391 residential aged care places, 180 high care residential aged care places and 211 low care residential aged care places.

There are also around 80 Community Aged Care Packages (CACPs) and 13 Extended Aged Care in the Home (EACH) packages (an additional 18 EACH packages come on

line in February 2008) available to residents of the Tamworth Regional Council Area as well as Quirindi and Wallabadah. These packages are administered by private aged care providers in Tamworth and Kootingal.

Aged care accommodation is provided in Tamworth and nearby Kootingal by several facilities including:

- Peel Nursing Home (30 high care places)
- McKay House (60 high care places)
- Amity at Tamworth (41 high care places)
- Nazareth House (101 low care (hostel) places)
- Alblas Lodge (30 low care places)
- Cottage Homes (42 low care places)
- Jim Holm Hostel at Kootingal (15 low care and 38 high care places)
- Moonby House, Kootingal (34 high care places)

In addition, there are 2 facilities that provide self care for the elderly:

- Mountview Village (14 self-care and 40 assisted care places)
- Kurrajong Village (36 self-care places)

The following table presents current and future need for aged care places in Tamworth to 2011 and 2016 based on Commonwealth Aged Care Places Estimates, 2006.

**Table 58: Aged Care Places – Tamworth SLA, 2006 – 2016**

	Actual	Projected	
	2006	2011	2016
Population 70 years and over	5,830	6,558	7,527
High Care Places	180	289	332
Low Care Places	211	289	332
Community Aged Care Places	80	164	189

Source: Transport and Population Data Centre (TPDC), NSW SLA Population Projections, 2001 to 2031, 2005 Release, Detailed Data - Version 1.0, 2007 (Latest issue from NSW, October 2007 and Commonwealth Aged Care Places, 2007:

- Community Places 25 places/1,000 people aged 70 yrs and over
- Low aged care residential places 44 places/1,000 people aged 70 yrs and over
- High aged care residential places 44 places/1,000 people aged 70 yrs and over

By 2016 853 residential and community aged care places will be required in the Tamworth area. Based on current levels Tamworth will require significant increases in places and additional community packages over time to achieve this benchmark.

#### **5.3.5.4. Community Based Older People's Services**

Services for older people offered in the Tamworth area include:

- Aged Care Assessment Team
- Aged Care Services
- Alzheimer's Support Group
- Anglicare
- Area Palliative Care Services
- Association of Relatives and Friends of the Mentally Ill (ARAFMI)
- Asthma Education
- Audiometry (Hearing tests)
- Better Hearing Australia (Tamworth) Inc.
- Breast Cancer Support Group
- Can Assist
- Cancer Council of NSW and Volunteers

- Carer Support
- Centacare Catholic Family Services
- Community Health Centres –Tamworth (2)
- Community Mental Health Services
- Community Relations Commission (Panel Interpreter)
- Community Transport
- Counselling Service (Community Health Centre)
- Dementia Advisory and Support Service
- Department of Ageing Disability and Home Care
- Department of Community Services
- Diabetes Australia
- Diabetic Education
- EACH - Extended Aged Care in the Home
- Emergency Accommodation
- Epilepsy Support Group
- Grief Bereavement Counselling
- Guide Dogs Association of NSW
- Heart Foundation Support Group
- Home Care Service of NSW
- Home Flexi Care
- Meals on Wheels
- Mental Health Consumer Advisory Group
- MS Society
- Private Nursing Service
- Parkinson's Support Group
- Post-Polio Network (NSW) Inc
- Red Cross
- Royal Blind Society
- Salvation Army Red Shield Family Store
- St Vincent de Paul Society Centre

Most services work in collaboration with each other through formal and informal forums. Future strategies include developing closer linkages and service partnerships between services and developing a services directory to ensure elderly people and their families are aware of the range of available services.

### **5.3.6. Palliative Care Services**

#### **5.3.6.1. Definition**

Palliative Care is care provided for people of all ages who have a life limiting illness, with little or no prospect of cure, and for whom the primary goal is quality of life. While the majority of Palliative Care patients have a diagnosis of cancer, there is an increasing demand for services from people with other life limiting illnesses, such as heart failure, renal failure, COPD and neurological conditions. The bulk of Palliative Care Services are provided in the primary care setting by general practitioners supported by specialist palliative care nurses and generalist nurses. The latter is particularly the case in smaller rural towns.

#### **5.3.6.2. Service Demand**

The Cancer Institute NSW's "Central Cancer Registry" projects an increase in cancer deaths in NSW from 35,000 to 45,000 (30% increase) between 2006 and 2016. Increasing cancer deaths will increase the demand for Palliative Care Services.

Improving survival rates from other illnesses such as heart disease and the ageing of the population are also likely to increase demand for Palliative Care by 50-65% over the next 20 years.

In 2006/07 Tamworth Medical Oncology (Palliative)/Palliative Care Services provided 680 occasions of service (NAPOOS). At the very least, this is projected to increase to 782 (15% increase) by 2011 and 884 (30% increase) by 2016.

Currently in Tamworth generalist nursing staff provide community based palliative care services. HNE Health's Palliative Care Clinical Services Stream has identified the need for specialist palliative care nurses to provide palliative care services in the community. Given the projected increase in demand for home based palliative care services enhancements to develop such a service will be required in the future.

Tamworth Hospital also includes the Nioka Unit which currently has six (6) dedicated beds for palliative care inpatient stays. In 2005 there were 109 separations in the Nioka Unit accounting for 1,316 beddays at an occupancy rate of 85%. Modelling using the NSW Health Sub-acute Inpatient Activity Model (SiAM) projection tool indicates that by 2016 there will be 119 separations per annum – an increase of 9% from 2005. Inpatient palliative care services, therefore, will require four (4) beds (@ 75% occupancy) by 2011 and 2016.

**Table 59: Tamworth Hospital, Adults, Overnight, Sub-Acute Activity, Palliative Care**

Data	2005	2011	2016
Episodes	109	111	119
Beds @ 75%	5	4	4
Beddays	1,316	1,114	1,148

Source: SiAM v.1

The Nioka Unit has recently increased its bed capacity to six (6) beds. A six (6) bed palliative care unit is considered necessary to meet current and future needs based on the following:

- Ageing of the population and the projected increase in the number of people with cancer in the Tamworth area;
- Lack of family support for many people across the northern part of the area which necessitates an inpatient stay;
- People living in remote communities and travelling long distances for palliative care services increase demand;
- Desire of many families to admit terminally ill people to a hospice environment in their last days;
- Role of the palliative care unit in pain management.

For these reasons the HSP proposes the inclusion of six (6) beds for palliative care with a 'swing' capacity to meet fluctuating demand. The design of this facility will need to ensure that a homely environment is developed with space for family and interactions e.g. for Indigenous families. Palliative care bed requirements are included in the subacute bed assessment throughout this plan.

Strategies for the future include:

- Increasing community-based resources available for palliative care services particularly in Tamworth and Armidale.
- Continuing to improve links between palliative care and cancer care services.
- Recognising that the palliative care unit at Tamworth Hospital will be the referral centre for palliative care services in the northern part of HNE Health.

Detailed strategies for the future are currently being considered as part of the HNE Palliative Care Services Plan development.

### 5.3.7. Rehabilitation Services

Rehabilitation Services consisting of inpatient, day programs, community and home-based services are based at Tamworth with patients travelling from Armidale, Inverell, Quirindi, Gunnedah and Moree for treatment. Lack of physiotherapists and other staff currently limits rehabilitation services particularly community-based rehabilitation services.

One of the key directions for THS in the future will be the increased emphasis on rehabilitation and transition of people back into the community. Currently Tamworth Rehabilitation Service offers a comprehensive program of rehabilitation for people with physical disabilities which involves reorientation to daily living skills facilitated by a stay in the Transitional Living Unit. The service also provides intensive physiotherapy services and coordinated therapy from other services including occupational therapy, social work, speech pathology, diversional therapy and psychology. The service is highly regarded by the community and very positive results have been achieved.

Strategies for the future include:

- Development of strategies to ensure all aged care and rehabilitation patients have comprehensive and timely multidisciplinary assessments and that liaison with other services such as mental health occurs when required
- Improved access to geriatricians and social workers within Community Aged Care services for secondary assessment
- Expansion of the Transitional Living Unit so that families can be accommodated;
- Provision of outreach clinics to smaller centres.

### 5.3.8. Hydrotherapy Services

A hydrotherapy pool is located on the Tamworth Hospital site and is strongly supported by the community. The following table presents data on attendances at the pool 2005-07 demonstrating its high usage.

**Table 60: Tamworth Hospital, Hydrotherapy Pool Attendances**

	Attendances
2005 (Jan- Dec)	33,219
2006 (Jan – Dec)	31,570
2007 (Jan – Dec)	32,059
2008 (Jan – June)	15,983 (6 months)

Source: Tamworth Hospital Hydrotherapy Pool data collection, 2008

The hydrotherapy pool is fully utilised seven (7) days a week from 7am to 7pm on weekdays and from 7am to 5pm on weekends. The range of uses of the pool includes:

- General public use;
- Aqua-aerobics (graded for all age groups);
- Arthritis sufferers classes;
- Banksia Unit (acute mental health);
- Hospital patients physiotherapy classes;
- Schools use;
- HACC services (bring elderly people from outlying centres including Quirindi);

- Learn to swim classes for children.

An entry fee is charged for casual use and programs to supplement the upkeep of the pool.

### **5.3.9. Gymnasium**

The gymnasium in the Staff Fitness Centre is used at times of low demand by groups including the Cardiac Rehabilitation Program, HeartMoves and Pulmonary Rehabilitation Program.

### **5.3.10. Transitional Care Services**

In 2006/07 people over 70 years admitted to Tamworth Hospital accounted for 26.7% of separations and 39.8% of all beddays with 186 episodes in 2005/06 where people stayed in excess of 90 days (*aIM 2005*). These figures demonstrate the need to improve the movement of older people to more suitable settings and to increase efforts in the rehabilitation.

Many older people are admitted to hospital for an acute admission and fail to retain the required level of independence to return home or to other residential accommodation. The Transitional Care Program is aimed at assisting older people to maintain and strengthen their physical and mental abilities so that independent living can be maintained for as long as possible. The program is multidisciplinary in approach and dependent on identifying a clear patient pathway out of hospital to a sustainable environment in partnership with the patient and their family.

The Transitional Aged Care Program comprises 15 flexible community care places supported by a multidisciplinary team. The program provides home based rehabilitation and care that supports independent living and assists transition from acute care to home thereby avoiding premature admission to a residential aged care facility.

Strategies for the future include:

- Strengthening the resources available to Transitional Care;
- Identifying the need for Transitional Care on admission;
- Engaging all service providers in the patient journey to follow the agreed plan;
- Partnering with external providers (especially GPs) to maintain support services upon discharge;
- Working with aged care service providers to support the program and maintain rehabilitation efforts upon discharge.

### **5.3.11. Brain Injury Services**

The Brain Injury Service is a region-wide service that is affiliated with Brain Injury NSW, a state-wide service. There is an increasing demand for the service as people generally become lifetime clients requiring regular episodes of care throughout their life.

Services are provided for people aged 16 to 65 years. Most clients are males, average age 18-24 years who are injured in motor vehicle accidents. At any time there are approximately 45 active clients and 150 new referrals per annum.

Services include a Transitional Living Unit (TLU) which has three bedrooms, a kitchen, a bathroom and laundry to enable the development of daily living skills. The Transitional Living Unit offers a Monday to Friday service and works on outcome

measures determined for each patient. The TLU is staffed by 2 FTE living skills assistants from 7am to 10.30pm 5 days per week. Overnight staffing is provided by staff of the adjacent Nioka Unit.

The multidisciplinary care team includes rehabilitation medical specialists, occupational therapist, physiotherapist, social worker, speech pathologist and rehabilitation coordinators as well as living skills assistants. The Brain Injury team provides services to both the Transitional Living Unit and outpatient/outreach services to patients living in the community. There is a need for neuropsychology and clinical psychology services in the care team. This proposal is being considered by HNE Health even though the ability to recruit such specialist services to Tamworth is difficult.

Key service partners include:

- HACC funded services (such as Community activities Network and Community Options);
- Vocational rehabilitation service providers (such as Commonwealth Rehabilitation Service (CRS) Australia);
- Home Care
- General Practitioners.

In 2007/08, almost half (48%) of all referrals to the Brain Injury Rehabilitation Service were from hospitals, 18% from general practitioners, 15% from families, 10% from community agencies and 9% from metropolitan inpatient brain injury rehabilitation units. The majority (71%) of admissions to the TLU were from the community, often following discharge from an acute hospital. Agreed outcome measures are routinely collected and reported. Results show positive clinical outcomes for all patients and the service as a whole.

### 5.3.12. Sub-Acute Beds

SiAM (Subacute Inpatient Activity Model, NSW Health) is used to calculate sub-acute inpatient bed demand. SiAM projects the demand for the sub-acute categories of geriatric evaluation and management/psychogeriatric, rehabilitation, maintenance and palliative care inpatient services based on population demand levels.

In the THS service model mental health inpatient services for older people and psychogeriatric inpatient services are collocated components. Reference to psychogeriatric services is included under Mental Health Services – see section 5.3.2.6 - and is therefore not discussed here. The needs of palliative care services have also been considered elsewhere – see section 5.3.6.

**Table 61** presents the results of SiAM calculations for maintenance and rehabilitation services.

**Table 61: Subacute Separations, 2005 - 2016**

Subacute	Overnight+ Separations			Increase % (2005-2016)
	2005	2011	2016	
Rehabilitation	336	338	412	22.6%
Maintenance	22	23	30	36.4%
<b>Totals</b>	<b>358</b>	<b>361</b>	<b>442</b>	<b>23.5%</b>

Source: SiAM v.1

**Table 62: Tamworth Health Services – Sub-Acute Inpatient Beds – 2004 – 2016**

Sub-Acute Category	2006	2011	2016
Rehabilitation Services	22	22	26
Maintenance	3	3	3
<b>Total - Sub-Acute Beds @ 75% occupancy</b>	<b>25</b>	<b>25</b>	<b>29</b>

Source: SiAM v.1

Note 1: NSW Health advises that the preferred option for determining GEM/Psychogeriatric demand is the application of the Mental Health Clinical Care and Prevention Model rather than SiAM.

By 2016, 29 beds will be required for maintenance and rehabilitation services. It is proposed that these beds will comprise a Rehabilitation Unit at Tamworth Hospital. It is also proposed that the Rehabilitation Unit include a Transitional Living Unit (3 beds) for use by people with brain injury and others who would benefit from a training stay (alone or with family members) to develop living skills to enable them to return home.

### **5.3.13. Allied Health Services**

HNE Health recognises the essential role of Allied Health professionals as part of multi-disciplinary teams to enhance service provision. It also recognises the challenge of attracting and retaining allied health professionals across the area.

Allied Health staff at Tamworth provide a range of inpatient, outpatient and community based services through direct referral, in partnership with inpatient services and other service partners. While separate community-based Allied Health Services are detailed in Section 6.5, this section defines the scope of services available at to Tamworth Hospital by resident staff and to the surrounding districts through outreach programs.

- **Audiology** - Hearing testing and referral for further treatment if required (including the SWISH program).
- **Dietetics/Nutrition** - Dietary advice for individuals and groups, nutritional input to inpatient meals and dietary programs for people with special needs.
- **Occupational Therapy** - Direct therapy and programs for post injury, pre and post surgery, children and adults with learning/developmental disabilities, and aged and dementia-specific programs.
- **Optometry** - Acuity testing, ocular management for people with chronic disease (e.g. diabetes) and referral for further treatment as required.
- **Physiotherapy** - Direct therapy and programs for post injury, pre and post surgery, children and adults with developmental disabilities, brain injury-specific programs including brain-injury specific programs.
- **Speech Pathology** - Diagnosis and treatment of children and adults with speech impairment due to birth defect, trauma and post surgery.
- **Counselling Services** - including community based social work and psychology for child protection, child development, aged care, home sexual assault and child and family services.

In the consultations undertaken for this plan all acute services identified the importance of allied health participation in inpatient/outpatient treatment at Tamworth Hospital.

Outreach services are provided by allied health staff as follows:

- Physiotherapy clinics at Tenterfield and Moree.
- Dietetic clinics in Walcha, Quirindi, Werris Creek and Barraba.
- Occupational therapy outreach clinics for children and families, aged care and persons with chronic disease in Walcha, Manilla and Barraba.

It has been previously noted that patient acuity is increasing and together with the emphasis on early discharge pressure on allied health staff is increasing. There is also a lack of community-based allied health and domiciliary services which further increases their workload.

Service planning for community hospitals within the Peel Cluster has identified the need for increased access to community based physiotherapy and counselling services as high priorities. Major issues currently encountered by these services are difficulties with attraction and retention; lack of career pathways; and, expansion of clinical services without any increase in Allied Health staff numbers.

For the future it is proposed to:

- Improve transfer of care procedures to make contact and inform GPs in a more timely manner;
- Appoint and train allied health assistants to free up clinical staff
- Lobby for extra resources to engage locums for holiday and study relief.
- Develop transitional aged care packages to facilitate movement of older patients from hospital to home or residential accommodation in a timely manner.
- Develop a virtual 'Day Hospital' so that services can be provided in people's homes.
- Develop workforce strategies to attract and retain allied health professionals in Tamworth and the surrounding rural areas.

#### **5.3.13.1. Podiatry Services**

There is currently no public podiatry service in Tamworth. A mobile private podiatry service that regularly visits Tamworth is contracted to provide seven clinics each month (including three (3) clinics at the Diabetes Centre). The service also runs a TeleHealth clinic. It is proposed to establish a public podiatry service to enhance the provision of services especially for older people and people with diabetes.

#### **5.3.13.2. Audiology Services**

Audiology services are provided by nurse audiometrists at Tamworth Community Health Service..

### **5.4. Population Health Services**

HNE Health Population Health Services based in Tamworth are part of an Area-wide team responsible for the delivery of a range of population health services in and around Tamworth and across the northern part of the Area. Population health services include services that monitor health threats and trends, respond to environmental, emergency and communicable disease threats, and promote policies, services, environments and behaviours that are conducive to good health. Such services are delivered in an integrated fashion, incorporating the principles and strategies of epidemiology, surveillance, health protection, health promotion and research.

Cardiovascular disease, cancer and injury continue to form the major burden of disease in our communities. Health behaviours such as smoking, excessive alcohol consumption, inadequate physical activity and poor nutrition are major contributors to this disease burden. Communicable disease and environmental health risks remain a challenge. Health inequalities impact negatively on the health of the population.

Population Health Services have a key role in developing strategies to address the HNE Area Strategic Plan objective of *'Improved health and well-being for all'*. This is to be addressed through the delivery of integrated population health services focussing upon immunisation, regulation and monitoring, acute response, capacity building, health surveillance and sexual health service delivery teams. The specific risk reduction priorities of these services will include notifiable disease control, pandemic preparedness, HIV/AIDS and Chlamydia prevention, immunisation of children and the elderly, emergency management, water quality, tobacco control, prevention of obesity in both child and adult, and falls prevention.

One of the Area's key initiatives to achieve "Improved health and well being for all" is the implementation of risk prevention strategies across clinical services. The systematic delivery of preventive care by clinicians is a significant challenge and strategies need to be developed to increase the capacity of clinical services to deliver such care on a routine basis. These programs will seek to enhance and ensure a broader reach of existing preventive care delivery with regards to chronic disease prevention, immunisation and falls prevention.

The Population Health Unit is working closely with Aboriginal Health Services to reduce the gap in health status between Aboriginal and Non-Aboriginal populations as a key strategic priority. Formal collaboration between Aboriginal and Population Health Units seeks to maximise preventative efforts. Key priorities for service delivery to the Aboriginal communities are the prevention of otitis media, improvement in child and maternal health, prevention of chronic diseases, men's health issues, immunisation and housing for health.

Key Directions for the future:

- Develop a capacity building program in partnership with the Clinical Services Redesign Unit to enable clinicians to systematically and routinely deliver preventative care on areas such as smoking cessation and opportunistic immunisation.
- Deliver integrated population health services to reduce population health risks.
- Establish a formal collaborative mechanism between Population Health and Aboriginal Health services to progress joint planning and services focused on key Aboriginal Health issues.

## 5.5. Community Based Health Services

Community Based Health Services operate out of a separate and difficult to access building on the Tamworth Hospital site and from the Coledale Neighbourhood Centre in West Tamworth. Sexual Health Services and Family Care Services also operate off site in separate buildings. **Table 63** presents data on Non-Admitted Patient Occasions of Service (NAPOOS) delivered in 2006/07.

**Table 63: Community Based Health Services, 2006/07**

Centre	Tamworth Community Health
Community/Primary Health	35,647
Clinics	3,592
Mental Health	8,158
Allied Health	1,266
Clinical Support & Diagnostic	7
<b>Total Episodes of Care</b>	<b>48,670</b>

Source: Non-Admitted Patient Data Collection, 2006/07

Note: Oral Health and Drug and Alcohol NAPOOS are not included.

Complete details of NAPOOS delivered by community based services are included in **Attachment C**.

THS currently employs 70 staff in its Community Based Health Services. Services are not only provided to the Tamworth community but also to the Nundle community and as outreach to multiple other centres including Manilla, Werris Creek, Walcha, Barraba and Quirindi. Increasingly services are provided using an integrated multidisciplinary approach manner in partnership with a range of other service providers including GPs, other government agencies and NGOs. Specialised teams are also in place for services including mental health, drug and alcohol services, aged care (including transitional services), child, youth and family health, hearing services and sexual health services.

Strategies for the future include:

- Increased targeting of vulnerable families to access appropriate services in partnership with others;
- Increased focus on prevention strategies (through community education and awareness programs) and early intervention;
- Increased support to GPs and others to improve management strategies;
- Improved data collection and analysis to inform evidence-based practice.

A Framework Plan for HNE Health Primary and Community Services is currently being developed.

Details on the generalist and specialist services provided are included in the following sections.

### **5.5.1. Aboriginal Health Services**

Improving Aboriginal and Torres Strait Islander Health is a key strategic direction for HNE Health. A Hunter New England Aboriginal Health Plan 2007-2011 has been developed in partnership with Aboriginal Community Controlled Health Services (ACCHS) across the Hunter New England area. Launched in March 2008, the Plan addresses key issues such as the need to strengthen the Partnership between HNE Health and ACCHS, access to services, communication between services and communities, data quality, cultural respect, a focus on health promotion and primary health care, and the needs of more disadvantaged Aboriginal people living in rural and remote parts of the area.

HNE Health is committed to:

- Developing HNE Partnership Agreement;
- Enhancing community engagement and partnerships with Aboriginal communities and organisations;
- Driving organisational cultural change so that Aboriginal Health is 'Core Business' for all health services;
- Introducing Mandatory Cultural Respect Training for all frontline staff;
- Developing workforce, particularly training to increase skills and recruitment of staff from communities that are difficult to access;
- Increasing the focus on Aboriginal health promotion and disease prevention programs;
- Continuing the focus on the treatment of otitis media in children;
- Developing and implementing culturally appropriate programs to address maternal and child health, chronic disease and men's health.

### **5.5.1.1. Aboriginal Health Education**

An Aboriginal Health Education Officer (AHEO) provides community focused education and participates in the development and running of community programs including senior first aid and Child Health Check Days at the Coledale Neighbourhood Centre. These programs are specifically designed to engage Aboriginal and Torres Strait Islander individuals and families. The role of the AHEO involves contacting people providing ongoing support, developing and running prevention, promotion and early identification programs as well as providing information formerly and on an ad hoc basis.

The advice of AHEOs is continually being sought by Aboriginal and Torres Strait Islander people to confirm the need for health services and to clarify details of treatment regimes. They also work closely with GPs and other service providers to improve the effectiveness of the services provided.

A key service partner in the provision of services to Aboriginal and Torres Strait Islander people is the Tamworth Aboriginal Medical Service (TAMS). A profile of TAMS is provided in **Section 5.8: Other Service Providers**

### **5.5.1.2. Aboriginal Mothers and Babies Service**

This service has been established as part of the Aboriginal maternal and Infant Health Strategy (AMIHS). A midwife and an AHEO provide antenatal and postnatal services for Aboriginal and Torres Strait Islander mothers, babies and families. The service is predominantly a home visiting service. An antenatal clinic in conjunction with an obstetrician is held weekly at Coledale Neighbourhood Centre. A clinic is also held weekly at the Tamworth Aboriginal Medical Service. The Aboriginal Mother and Babies Service staff also visit and follow-up their clients in the maternity inpatient unit at Tamworth Hospital.

The results of an audit of AMIHS by NSW Health in November 2007, showed that this culturally appropriate maternity service has successfully increased the number of Aboriginal women accessing antenatal clinics prior to 20 weeks gestation.

### **5.5.1.3. Aboriginal Health Services – Future Strategies**

Strategies for Aboriginal Health Services in the future include:

- Developing specific strategies to address chronic diseases and mental health issues
- Enhancing environmental health strategies for Aboriginal communities to address overcrowding, asbestos, water quality, sewerage, pest control, dust control and dogs management
- Increased partnering with Aboriginal health organisations to improve access for Aboriginal and Torres Strait Islander people to services

## **5.5.2. Community Nursing Services**

THS employs 14 community nurses who provide services to the community in partnership with a wide range of other service providers. Community nurses have a major role not only in the provision of services but also in the coordination of a comprehensive range of multidisciplinary services to ensure people are appropriately supported in the community. There are also strong linkages between hospital and community health services. Screening and early intervention programs are conducted

for the general population and identified risk groups in response to local needs and priorities.

Services provided include domiciliary nursing, clinical procedures, stomal therapy, palliative care, genetic services, men and women's health, asthma education, immunisation and maternal and child health. The majority of services are provided in the patient's home.

Community nursing services also include a daily drop-in clinic at the Coledale Neighbourhood Centre, which is located in an area of high community need. The clinic addresses a range of medical and social issues. The community nurse who staffs this clinic also provides home visiting to families in the area.

A wound clinic is also held daily by community nurses in a room adjacent to the Emergency Department. This is not an optimal location for access by the community and would preferably be included as part of a primary health or ambulatory care service in the future. Clients using the wound clinic have expressed satisfaction with the service as appointments are available when it suits them rather than having to wait at home for the community nurse to arrive.

### **5.5.3. Audiometry Services**

Audiometry Services including full hearing assessment and diagnosis for people of all ages including industry are provided by nurse audiometrists. Education on a range of hearing health issues is also provided.

In 2006/07 there were 831 occasions of services to children and adults.

### **5.5.4. Statewide Infant Screening – Hearing (SWISH) Program**

The SWISH Program has statewide coverage and is aimed at identifying all babies born in NSW with significant permanent bilateral hearing loss by three (3) months of age. The program also provides access to any children identified with this level of hearing loss to appropriate intervention by the age of six (6) months. SWISH Coordinators employ innovative methods to ensure that every baby is tested such as service agreements with private hospitals and dedicated screeners to meet special needs (e.g., for Aboriginal people and people from CALD communities<sup>16</sup>).

This hearing testing service provided more than 900 tests to newborns in Tamworth in 2006/07.

### **5.5.5. Continence Advisor**

The Continence Clinical Nurse Consultant provides expert continence advice to clients and education to nursing and other staff in the area. The service accepts referrals from other service providers, Tamworth Hospital and self-referrals. Demand for this service is increasing.

### **5.5.6. Diabetes Services**

Diabetes Services provide management advice, support and education for people with diabetes, their families and carers. The service is staffed by a Clinical Nurse Consultant, two (2) Clinical Nurse Specialists, Dietician and administrative assistant.

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<sup>16</sup> NSW Health, Statewide Infant Screening – Hearing (SWISH) Program, June 2007

The Diabetes Centre is part Tamworth Community Health Services and provides services to Tamworth Hospital. Diabetes Services accept referrals from Tamworth Hospital, the community, other service providers and through self-referral.

At present 10% of the Tamworth Hospital population at any given time are people with diabetes. National<sup>17</sup> and state<sup>18</sup> projections identify that the prevalence of diabetes is set to double over the next three (3) years so it can reasonably be expected that the rate of admissions of people with diabetes will also increase. This will result in the need for additional staff dedicated to the provision of diabetes services including a Diabetes Educator to increase the focus on prevention, early intervention and self-management.

A HNE Health Diabetes Services Plan 2008-2012 to inform future service development and to highlight the implications of the rapidly increasing incidence of diabetes on service provision is currently being developed.

### **5.5.7. Dietetics/Nutrition Services**

The community dietician provides a dietetic/nutrition service to adults and paediatric clients in the community. This involves community education, participation with school staff in the healthy canteen project, links with population health projects, and individual counselling regarding dietary needs as well as management and advice on enteral feeding for other staff, clients and families.

### **5.5.8. Occupational Therapy Services**

The community occupational therapy service provides both paediatric and adult services. The adult occupational therapist provides community based services to clients including outreach services to Manilla and Barraba. The paediatric occupational therapy service participates in the Child Development Service, in-reaches to babies and children in the hospital, as well as seeing clients with learning difficulties, sensory deficits and who are developmental delayed.

### **5.5.9. Speech Pathology Services**

A paediatric speech pathology service is provided in the community and to patients in Tamworth Hospital including maternity and paediatric inpatient units. The speech pathologists also provide communication and feeding services offering both diagnosis and treatment options.

### **5.5.10. Paediatric Physiotherapy Services**

A physiotherapist attached to Community Health services provides paediatric services to the community and in-reach to hospital patients.

### **5.5.11. Paediatric Psychology Services**

A psychologist provides services specifically for paediatric clients and their families. There is an increasing demand for this service.

### **5.5.12. Social Work Services**

A social worker is an integral member of the Community Health Services team providing counselling services upon referral for children and adults. The inability to

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<sup>17</sup> Diabetes Australia, Diabetes Facts at [www.diabetesaustralia.com.au](http://www.diabetesaustralia.com.au)

<sup>18</sup> NSW Health, Report of the Chief Health Officer, 2006

identify and attract social workers is hampering service delivery and is the subject of a concerted recruitment effort.

### **5.5.13. Respiratory Services**

This service provides asthma education, pulmonary rehabilitation, tuberculosis (TB) services (including staff TB screening) for the northern part of HNE Health. Chest clinics are conducted on a regular basis for people with TB and people requiring home oxygen therapy from Tamworth Hospital and in the community in partnership with other service providers.

### **5.5.14. Hepatitis C Services**

Hepatitis C Services provide services to approximately 20 patients per week. Clients are referred from GPs, drug and alcohol services, inpatient services and antenatal services. In 2005/06 Hepatitis C Services provided 963 occasions of service.

### **5.5.15. Genetic Counselling Services**

A Genetic Counsellor provides services for the northern part of HNE Health. Referrals to the service are made by general practitioners, other health professionals or by the client themselves. Appointments are initially arranged for clients initially the Genetic Counsellor. For those clients who need to see the visiting Clinical Geneticist either face-to-face appointments or Telehealth consultations are arranged. In 2005/06 147 NAPOOS were provided by Genetic Counselling Services.

### **5.5.16. Sexual Health Services**

Sexual Health Services cover the areas of HIV AIDS, needle/syringe use and general sexual health education services. Services are currently provided from the Bligh Street Clinic and incorporate visiting specialists from Newcastle. The service provides screening and treatment for sexually transmitted diseases and health promotion activities to raise awareness. In 2005/06 approximately 1,049 occasions of service were provided. A recent review of services identified the following issues:

- There is currently a lack of outreach capacity to provide Sexual Health Services to other centres in the northern part of HNE area.
- 11% of the persons seeking services are Aboriginal and Torres Strait Islander people.
- 15% of the people seeking services are from outside the Tamworth area.
- 65% of clients are in the 16-24 years age range.
- There is little support for other practitioners especially GPs.
- A decision whether Sexual Health Services are provided through multiple centres or maintained in Tamworth and provided to other centres through peer support, education and training of local service providers and outreach clinics is needed.
- Sexual Health Services in Tamworth need to be relocated as a Child Care Centre is being constructed next to the current facility.
- The inability to recruit medical and nursing staff in the northern part of HNE area has meant the service is running at only 50% capacity and not able to provide services to some vulnerable groups e.g., young women

Strategies for developing this service include:

- Development of an Area-wide Sexual Health Service to enable resources to be distributed equitably across HNE Health in response to identified need.
- Multi-skilling of staff in smaller centres (including inpatient staff) to provide a Sexual Health Service across the northern part of the Area with support from the Tamworth based service.
- Inclusion of vending machines for syringes in smaller centres to promote safe practice.
- Submission for additional funding (especially for the Hepatitis C Program) so that services can meet demand.
- Development of a service component specifically aimed at young people (the highest at risk group) to encourage access.

### **5.5.17. Women's Health Services**

The Women's Health Clinical Nurse Consultant provides a consultancy and clinical service to the Peel Cluster. The service provides education, advice and Well Women's Screening including Pap tests.

Regular clinics are conducted at Tamworth Community Health Centre, Coledale Community Centre, Barraba, Walcha and Nundle. The service accepts referrals from GPs, other service providers and women can self-refer.

The service also works closely with other services such as Continence, Child and Family, and Drug and Alcohol services.

### **5.5.18. Oral Health Services**

Public Dental Services are provided from the Tamworth Hospital site. Tamworth Dental Clinic is currently a four chair clinic with staffing of approximately 9.0 FTEs including:

Senior Dental Officers	2.0 FTEs
Dental Therapists	2.0 FTEs
Dental Assistants	4.9 FTEs

Occasions of Service (OOS) for 2005/06 totalled 6,399 adults and 7,789 children OOS. Nearly 70% of all activity relates to the provision of clinical care.

Tamworth Dental Clinic provides outreach services – presently to Walcha, Barraba and Gunnedah:

- Child Oral Health Service Program to Barraba (two days each month)
- Child Oral Health Program to Walcha (one day each month)
- Adult Dental services at the Gunnedah Dental Clinic one day per week and Barraba Community one day per month.

General dentistry under general anaesthetic for children and special needs patients is conducted at both Tamworth Hospital (alternate Fridays) and at Gunnedah Hospital (bimonthly).

A Paediatric Dental Specialist attends the Tamworth Dental Clinic bimonthly and performs specialist dental services under general anaesthetic on a bimonthly basis as well.

Key Focus Areas for Oral Health Services within Hunter New England are to:

1. Increase fluoridation and promotion of fluoride
2. Include of oral health in primary health care initiatives
3. Increase awareness of the importance of oral health and preventative strategies
4. Strengthen coordination, training & information services for Oral Health promotion
5. Increase partnerships with appropriate stakeholders
6. Improve access to oral health services.

Tamworth Hospital has been identified as a site for a Rural Oral Health Centre to provide teaching and learning opportunities for dentistry students. The Centre will include teaching facilities and an additional four dental chairs for both teaching purposes and to meet projected increased community demand for clinical dental care. Dental chairs at Tamworth Hospital will therefore increase from four to eight chairs with these changes.

#### **5.5.19. Physical Abuse and Neglect of Children (PANOC) Services**

The service provides counselling for children and families referred by the Department of Community Services (DOCS) with issues related to physical abuse and neglect. This service provides a highly confidential service in a highly emotive and often dangerous environment in partnership with other government agencies including police and DOCS.

#### **5.5.20. Sexual Assault Services**

The service provides initial support as well as counselling for adults, children and their families who have experienced sexual assault. Crisis services are also provided for victims of sexual assault and support for clients negotiating the legal system. Services are provided whenever required for persons presenting to the Emergency Department of Tamworth Hospital.

### **5.6. Executive Management**

Tamworth and Armidale Hospitals are part of the Area's Acute Hospitals' Network and are managed by a single general manager to encourage service linkages across both sites. Community Health Services are managed by the General Manager of the Peel Cluster to promote networking of services and increased access to services across the Cluster. Hospital and Community Health Services work in partnership to ensure the holistic provision of health services across the care continuum.

### **5.7. Clinical Governance**

HNE Health Clinical Governance is an Area-wide executive portfolio that works closely with clinical staff and management in relation to clinical practice standards, clinical quality and patient safety endeavours. To support this close relationship, the staff of Clinical Governance are geographically located at sites including hospitals and clusters across the Hunter New England. The Clinical Governance Unit, based at Tamworth Hospital is the second largest in HNE Health, providing a focus for Tamworth and Armidale Hospitals, and the northern part of the Area.

The Unit at Tamworth Hospital is ideally located, in that it is within the main patient care building of Tamworth Base Hospital, and in close proximity to staff undertaking routine

patient care. The Unit accommodates two Associate Directors, two Patient Safety Officers and an administrative officer. The Area Quality Manager is also based at Tamworth (but in a separate building), and ideally should be located with the other Clinical Governance staff. Currently, there is no available space for other Clinical Governance staff who attend to duties in the northern part of the Area from time to time. It should also be noted that Executive Support Service staff are located at the Area's Regional Office in Tamworth.

## **5.8. Hotel Services**

The provision of Hotel Services into the future will be dependent on NSW Health's *Health Support Services Strategy* which is being developed and implemented across NSW. The following sections describe current service provision and strategies for the future.

### **5.8.1. Stores Management**

Stores Management for HNE Health is based in Newcastle. Orders are placed via a centralised system (Oracle) based on imprest demand levels. Filled orders are dispatched via a statewide contractor to more than 28 centres in the northern part of HNE area. Some orders for outlying areas are delivered to Tamworth, repackaged according to requirements and dispatched.

Locally, four week's supply of goods is held along with adequate stocks of high turnover items along with non-stock items that are specific to THS.

For the future it is proposed that bar coded ordering will be introduced to improve accuracy and efficiency.

### **5.8.2. Catering Service**

Pre-prepared food is received from Newcastle and plated onsite. Perishable portions such as salads and bread are prepared locally. Meals are provided for all services including patient residential accommodation, the staff cafeteria and the kiosk in the hospital foyer. The current cook-chill model of food service is expected to continue in the future.

Current issues with food services include:

- An outdated kitchen that has been modified several times to accommodate changing service models;
- More stringent food safety and handling requirements;
- Challenges in delivering meals to all areas due to the dispersed nature of the site.

Strategies for the future include:

- Advocating for a new kitchen with equipment and a design to streamline services and improve staff utilisation;
- Improving workflows, ergonomics and functionality not only in the kitchen but for the site overall;
- Continuing to use SEABORD for menu preparation and ordering.

### **5.8.3. Laundry Service**

The New England Linen Supply Service is a separate business unit based on the Tamworth Hospital site. The laundry service collects and delivers to 66 separate units

on and off the site. Deliveries are made daily as holding areas are inadequate to store dirty or clean laundry. The Service is now managed by Health Support.

#### **5.8.4. Cleaning Services**

Cleaning Services are provided in-house. The current configuration and state of buildings and services cause difficulties for cleaning staff as many floor and other finishes are not conducive to the types of cleaning required by contemporary infection control standards.

Future directions for cleaning services include:

- Negotiation of increased flexibility of staff categories to enable multi-skilling.
- Application of benchmarks to cleaning areas to standardise practice.
- Provision of contemporary cleaning equipment to improve efficiency and effectiveness.

#### **5.8.5. Security Services**

The provision of a safe and secure environment for patients, visitors and staff is a high priority for HNE Health especially in Emergency Departments where incidents of violence against staff have increased over time.

Currently security management at the Tamworth Hospital site is hampered by:

- an extensive campus of multiple separate buildings with many entry and exit points which require securing and monitoring;
- old building stock with poor sight lines;
- inability to light all areas at night.

Future directions:

- Continuing staff training to manage aggressive persons;
- Provision of new infrastructure with limited entry and exit points as well as improved lighting and sight lines.

#### **5.8.6. Portage and Wardsperson Service**

Porters and Wardspersons are an essential component of a modern hospital where patients and goods need to be transported safely across multiple locations. Current staff face daily challenges due to the dispersed nature of the site and the multiple entry and exit points that require monitoring and securing.

Future strategies include reviewing current work-practices to improve the effectiveness of the service.

#### **5.8.7. Waste Management Service**

Waste Management is conducted in accordance with NSW Health policy<sup>19</sup> and HNE Health management strategies.

Currently the following practices are in place:

- Self-disposal of general waste to landfill;

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<sup>19</sup> NSW Health Generic Hospital Waste Management Plan, March 1999

- Contaminated waste (biological, sharps and contaminated waste) collected and disposed of by external contractor;
- Secure documents collected and disposed of by an external contractor;

Very little recycling at point of collection or after collection currently takes place. This situation is considered likely to change and infrastructure for sorting of recyclable items should be included in future facility planning.

The feasibility of introducing a waste decontaminator to reduce the cost of disposing of biological and contaminated waste also needs to be explored.

### **5.8.8. Staff and Family Accommodation Services**

THS currently provide a range of accommodation for staff, patients and families in properties that are owned or leased on site or within Tamworth. Many of these facilities are getting to the end of their useful life-cycle and require a significant capital investment to bring them up to required standards. Current facilities owned or leased by THS include:

- Eighteen (18) X 2-3 bedroom units (leased)
- Four bedroom unit (owned and offsite)
- Three units adjacent to the hospital for locums;
- Separate nursing accommodation (off-site);
- Rotary House (on the Tamworth Hospital site) provides four (4) units comprising six (6) bedrooms for patients and their families;
- Ronald McDonald House has recently opened on the hospital campus and provides accommodation for parents and siblings.

THS is currently in consultation with the Cancer Council and McDonalds Australia about providing additional residential accommodation in the future.

Given the future scope of services proposed for THS, the rural referral role of Tamworth Hospital, the proposed increase in ambulatory models of care and the number of clinical students likely in the future the importance of adequate staff accommodation onsite or close by is recognised.

It is recommended that a business case, in accordance with HNE Health and NSW Health requirements, be undertaken prior to commencing capital planning for THS to assess accommodation needs and identify the most feasible and cost effective option for providing that accommodation into the future.

### **5.8.9. Public Amenities**

The community has come to expect a certain level of amenity when visiting a hospital or other health service facility. The range and quality of amenities can also make it easier for patients and families who have to spend long hours waiting for treatment or other services. An individual's perception of the quality of care received is often influenced by the level of amenity.

At THS the range and quality of public amenities is inadequate due to the disjointed nature of the buildings, the age of the buildings, the need to use all available areas for clinical service provision and a lack of recognition of the importance of public amenities.

For the future the following range of amenities are proposed:

- Adequate car parking that enables easy access to service locations;
- Food and beverage outlets;
- Newspapers, gifts and flowers available for purchase;
- Centrally located Pharmacy;
- Pager system for Outpatient Clinics so that long waits do not mean being restricted to a waiting room;
- Multifunctional quiet room/chapel in a convenient location;
- Interview rooms and lounges at convenient locations throughout the facility to talk with health professionals and for families to hold vigil if required;
- Family Resource Centre that includes areas for relaxation between appointments, health information, a library, audio-visual aides and volunteer services;
- Easy access to residential accommodation when required;
- Internet access for families and patients who are away from home for extended period of time and who need to pay bills, transfer money, make contact with family members etc;
- Electronic path finding aides;
- Parent accommodation on the Paediatric Unit at the bedside or adjacent to the inpatient bedrooms;
- Interpreter Services.

#### **5.8.10. Staff Fitness Centre**

As mentioned previously there is a Staff Fitness Centre located adjacent to the main hospital campus. Amenities include:

- Gymnasium/fitness centre;
- Access to the hydrotherapy pool.

There is currently limited use of these facilities. Access is limited to certain hours due to lack of appropriate supervision. It is proposed that this facility be maintained and that opportunities to enhance the service and hours of operation be explored.

### **5.9. Other Service Providers**

#### **5.9.1. Ambulance Services**

The NSW Ambulance Service based at Tamworth is part of the Western Division that extends to the Queensland Border, the South Australian Border, Lithgow to the east and Oberon to the south, and serves a population of 450,000 people. It is responsible for local service provision as well as co-ordinating access to the Air Ambulance and managing emergency transfers by air or road into and out of Tamworth. The Tamworth-based service has 24 staff, eight (8) ambulance vehicles, a rescue truck, a rapid response vehicle (RRV), a public relations vehicle and a mobile information (MI) trailer. It is intended to expand the service to 30 officers and 12 vehicles in the near future to meet area-wide demands.

The Tamworth-based service provides 9,000 episodes of care and transport each year, and operates on a 24/7 basis. The Division office, including five (5) staff, is located in Tamworth. The Division training unit is also located in Tamworth, has two (2) staff and provides all rescue, accreditation and other training for officers in the sector. The Tamworth service also participates in Statewide Disaster Planning and responding to all emergency and disaster situations within the area. The Ambulance Station is located remote from Tamworth Hospital with a repair/maintenance shop located on the hospital site.

Current government policy is moving to integrate Ambulance Services more closely with other health services through the development of joint policy and co-operative work-practices. Any redevelopment of the Tamworth Hospital site will require consideration of the future role and location of the Ambulance Service including ease of access to the site, ability to access emergency department and primary health locations for drop-off and pick-up. Access to a helipad on site is also considered necessary for the Ambulance Service and Tamworth Hospital to address their responsibilities across the northern part of HNE Health.

### **5.9.2. General Practice**

General practitioner services are located at multiple locations across the northern part of HNE Health. The North West Slopes Division of General Practice is active in the area and covers Tamworth, Quirindi, Walcha, Werris Creek, Kootingal and Nundle. In partnership with the University of Newcastle and the Tamworth Regional Council the Division has established the Regional GP Access Project in Tamworth with the main aim of providing general practitioners to under-resourced rural and remote areas.

Private pharmacies and dental services are also available across the area although the latter is not adequate to meet the demand for oral health services.

Tamara Private Hospital operates private X-Ray and ultrasound services.

### **5.9.3. Private Hospital Services**

There are two private hospitals in the northern part of HNE Health– Tamara Private Hospital (77 beds) in Tamworth and Armidale Private Hospital (32 beds) in Armidale. Both are operated by Ramsay Health Care. Armidale Private concentrates on surgical services and has a respiratory failure and sleep disorders unit. Tamara Private also provides surgical services and has recently recommenced Maternity services.

### **5.9.4. Aboriginal Medical Services**

The Tamworth Aboriginal Medical Service (TAMS) (a community-controlled health service) is auspiced by the North West Slopes Division of General Practice, and provides primary health services to Aboriginal and Torres Strait Islander people in the community. Services provided include:

- GP consultations (approximately 25 per day) Monday to Friday;
- Aboriginal Health Worker consultations seeing about 30 people per day;
- Cochlear Implant Clinic for Aboriginal and Non-Aboriginal people;
- Drug and Alcohol Services;
- Mother and Babies Clinic (provided by THS every Thursday);
- Working closely with the Aboriginal Liaison Officers from THS;
- Specific programs for men and women;
- Aboriginal Fathers, Uncles and Pops Program;
- Giab (Police) Program to build self-esteem in young people;
- Deadly Hot Program for school kids;
- Senior Aboriginal people's First Aid Classes;
- Outreach services to Coledale Neighbourhood Centre, Walhallow and Gunnedah.

The service currently employs three (3) Aboriginal Health Workers which will increase to five (5) in the near future to provide mental health (social and emotional well-being services) services.

While not part of the NSW Health system of services, TAMS is a key provider of health services to Aboriginal and Torres Strait Islander people in the area. Public health services often encounter resistance from Aboriginal and Torres Strait Islander people to visiting traditional health facilities such as hospitals for services. It is now acceptable to provide services to Aboriginal and Torres Strait Islander people in an environment in which they are at ease. In this respect TAMS is a valuable service partner and is keen to enhance services to the community by partnering with THS.

TAMS is a relatively new service auspiced from the North West Slopes Division of General Practice, and a signatory to HNE Health Aboriginal Health Partnership Agreement. Strategies for the future include:

- Ways to enhance access to GP-type services after hours;
- Plan to link Aboriginal Mental Health Workers with other mental health services to ensure a care continuum;
- Introduction of children's health checks especially for boys;
- Access to Allied Health services especially Physiotherapy, Speech Pathology, Audiology and Podiatry.

### **5.9.5. Disability Services**

Apart from those provided by THS, disability services available across the Tamworth catchment include:

- Aged Day Care Services;
- Association for the Relatives and Friends of the Mentally Ill (ARAFMI);
- Asthma Foundation of NSW;
- Brain Injury Association of NSW;
- CAN Assist (NGO providing support, services and equipment for people with cancer);
- Commonwealth Carelink Centre;
- Commonwealth Department of Community Services;
- Community Options Programs;
- Community Transport;
- Deaf Society of NSW;
- Department Ageing, Disability and Home Care;
- Diabetes Australia – Tamworth Branch;
- Home and Community Care;
- Multicultural Disability Services
- National Disability Abuse and Neglect Hotline;
- Royal Blind Society;
- Supported Accommodation and Living Skills Programs.

## 6. Staffing Issues

The *NSW Rural Health Plan 2002* identified the need to attract and retain staff as one of three key issues hampering the delivery of health services in rural and remote areas.

Attracting and retaining appropriate staff with the required skills and expertise is one of HNE Health's strategic objectives and is a significant challenge for the whole of the NSW Health system, but especially for rural areas. The next ten to twenty years will see the ageing and retirement of many health professionals across NSW and Australia. The shortage of skilled staff is further pronounced in rural areas where attracting and retaining the staff needed presents significant challenges and where it is difficult to achieve a critical mass of health service providers to share the workload, reduce the burden of 'on call' demands and allow sufficient leave replacement. Proactive and innovative approaches to attracting and retaining staff are required to ensure adequate numbers of skilled, experienced staff are available into the future.

To this end, HNE Health has established a Workforce Planning and Development Unit, as part of Workforce Development, to ensure the workforce is both dynamically and directly linked to the future shape of health services. Workforce planning is completed as part of the clinical services planning process, resulting in clinical services having a Workforce Development Framework which defines the current state of the services' workforce and identifies issues and strategic directions to address those issues. All clinical services plans referred to in this Plan have a completed Workforce Development Framework which identifies a range of strategies and initiatives aimed at addressing their particular workforce issues.

For HNE Health key workforce directions for the future include:

- Ensuring the size and skill mix of the workforce meets community need
- Becoming an employer of choice
- Developing flexible and innovative employment policies and practices
- Developing flexible and innovative models of service delivery
- Developing organisational capacity and learning.
- Developing work practices to promote cross-skilling to improve sustainability.
- Succession planning to ensure adequate numbers of skilled experienced staff in smaller more remote areas.

### 6.1 Workforce Profile

The following staffing summary includes staff providing hospital and community-based services in Tamworth as well as some positions servicing cluster and the northern part of HNE Health.

**Table 64:** *Current health service staff located at Tamworth, 2008*

Service	FTEs
Tamworth Hospital Staff (total)	619.84
Mental Health Services	114.3
Patient Support Services	104.26
Hospital Maintenance	38.0
Tamworth Pathology Laboratory	38.0
Community/Primary Health	69.96
<b>Total</b>	<b>984.36</b>

Source: *Tamworth Health Services, August 2008*

A comprehensive list of current staff numbers by service and cost centre is included as **Attachment G**.

## **6.2. Future Workforce Demand**

Increased staff numbers are likely to be required in the future as new services are established or existing services are expanded, for example, the introduction of Interventional Cardiology in 2008 has increased activity levels in support areas such as the operating suite and other critical care services.

This HSP proposes the introduction of radiation oncology in Tamworth as part of an Integrated Cancer Care Service. This will also require additional staff which will be determined during planning for the new service.

Another important issue that must be considered in any workforce planning exercise is the need to enhance the 24/7 service capacity of Tamworth and the redesign of staffing profiles accordingly.

Finally consideration needs to be given to how best we can meet the needs of the next generation of health professionals – the generation Y - to ensure that we can continue to attract and retain the workforce we need to deliver the services outlined in this Plan.

It is therefore recommended that a Workforce Development Plan be developed in conjunction with any future capital works planning process. Besides detailing the workforce capacity and capability necessary to ensure appropriate services are delivered effectively and efficiently, the Plan will include innovative recruitment strategies and programs, some of which have been identified in this Health Services Plan such as the development of models of advanced nursing practice, and the educational and research opportunities associated with the University Department of Rural Health (UDRH), and the Joint Medical Program.

The focus of a Workforce Development Plan for Tamworth Health Services will be on the issues, gaps and needs of the three main staff groupings of medical nursing and allied health. The following sections provide an overview of their main issues.

### **6.2.1. Medical Workforce**

THS are committed to achieving the appropriate mix of Visiting Medical Officers and Staff Specialists to meet demand and sustain services into the future. Staff specialists and Visiting Medical Officers provide services not only to the Tamworth area but also to other parts of the northern HNE Health through outreach clinics or referrals. Major medical workforce issues include: the recruitment and retention of medical staff, especially in key specialist areas; planning for the future loss of medicos, their knowledge and experience; and, succession planning for the next generation of clinicians.

#### **6.2.1.1. General Surgery**

THS have an approved staff establishment of five (5) general surgeons. There are currently four (4) general surgeons working in Tamworth. Increased numbers are likely to be required to meet future demand and the flow-on effects of service enhancements such as cardiac interventional procedures. Recruitment is underway for a gastroenterologist – this position when filled will provide some relief for the surgeons by performing procedures that are currently doing.

An important factor in the future sustainability of health services is succession planning for surgeons working in smaller centres. Failure to achieve this will mean that more work will flow from centres such as Gunnedah, Narrabri and Moree to Tamworth. Strategies are being developed to address this issue. There are currently GP Proceduralists in Surgery working in Gunnedah, Narrabri and Moree. Tamworth

Hospital supports these GPs through refresher training and referrals for more complex work.

#### **6.2.1.2. Maternity/Gynaecology**

THS has an approved establishment of five (5) obstetricians and gynaecologists. There are currently four (4) Obstetricians providing services at the hospital; two are Staff Specialists and two are Visiting Medical Officers (VMOs). Recruitment activities are nearing completion for an additional obstetrician. If the birth rate continues to climb as it has in the recent past an additional obstetrician maybe required in the future. There are no GP Obstetricians working in Tamworth. However there are GP Obstetricians based in Manilla, Gunnedah, Narrabri and Moree who are supported by the specialists in Tamworth.

For gynaecological services, Tamworth Hospital's catchment area is the northern part of HNE Health.

#### **6.2.1.3. Orthopaedic Surgery**

Likewise the increasing demand for orthopaedic surgery, largely from an ageing population, may require an increase in orthopaedic surgeons from the current establishment of three (3). There is one Staff Specialist Orthopaedic Surgeon and two VMOs (one works part time) shared between Armidale and Tamworth Hospitals.

#### **6.2.1.4. Anaesthetists**

THS has recognised the need for additional anaesthetists to support current and future service provision. Recruitment processes are currently underway.

#### **6.2.1.5. General Medicine**

There are eight (8) General Physicians currently providing a range of services at Tamworth Hospital. To ensure the future sustainability of services and to cope with the numbers of medical students proposed for the future, these physicians believe that an additional four (4) General Physician positions are required. There are currently long waiting lists for appointments to see the General Physicians and Australian Medical Workforce Advisory Committee (AMWAC) figures indicate a total of 12 General Physicians are required to meet demand for services across the Tamworth catchment. In recognition of the importance of the role of the general physician, Tamworth Hospital has participated in physician training programs for many years.

#### **6.2.1.6. Medical Specialities**

The lack of medical officers in some medical specialties (including cardiology, haematology, medical oncology, respiratory medicine and gastroenterology) is considered to be hampering the range and quality of services available at Tamworth Hospital.

Endocrinology services are currently provided by a part time endocrinologist 2 days per week.

While there is a dermatologist in Tamworth services to Tamworth Hospital are very limited and efforts need to be made to recruit a specialist dermatologist or continue to refer people to Newcastle for services.

THS is actively pursuing recruitment to several vacant positions to remedy some of these staffing problems.

#### **6.2.1.7. Geriatrician**

There is the need for a geriatrician to be appointed to THS for both inpatient and outpatient services, including providing care to elderly people in the community to prevent hospital admissions. The increasing ageing of the population and the need to provide expert advice to aged care services warrants such a position. Currently, there is a Rehabilitation Physician who sees some geriatric patients. If appointed, a geriatrician could work with the rehabilitation physician and together provide support and cover for each other.

#### **6.2.1.8. Joint Medical Program**

The Joint Medical Program (JMP) is an innovative partnership between HNE Health, the University of Newcastle and the University of New England (UNE). This new program will commence with the first intake of students in 2008. An Australian first, the concept behind the JMP is based on evidence that medical students completing their training in a rural setting are more likely to practise in rural areas.

To address the shortage of medical practitioners in rural areas, 80 new Commonwealth supported places for medical students have been created in addition to those already existing through the University of Newcastle's Bachelor of Medicine program. Beginning in the first semester 2008, sixty (60) new students will enrol each year for the five-year course in Armidale. The curriculum for the JMP is the current University of Newcastle curriculum.

Student clinical placements will occur at facilities across HNE Health including at Armidale, Tamworth, Taree, Maitland and Newcastle. JMP students will spend a higher proportion of time in rural health settings.

Currently, the majority of the additional medical teaching load has been managed by local practitioners working harder. This is unsustainable and additional staffing will be required as the additional clinical load increases with the growth of the Joint Medical Program. A reasonable estimate, as planning with the Universities continues, would be for an additional 10 FTE.

#### **6.2.1.9. Oral Health Program**

Tamworth Hospital has been identified as a site for a Rural Oral Health Centre to provide teaching and learning opportunities for dentistry students. The program will provide an additional four dental chairs for both teaching purposes and to meet projected demand for clinical dental care. Dental chairs at Tamworth Hospital will therefore increase from four to a total of eight chairs with these changes.

### **6.2.2. Nursing Workforce**

As with the medical and allied health workforces, there is currently a critical nursing shortage across Australia. For the HNE Health nursing workforce major issues include: the retention of experienced nurses; attracting skilled and experienced nurses; and, succession planning for the next generation of nurses.

Other key issues facing the nursing workforce include:

- An ageing workforce looking after an ageing population;
- Increased patient acuity means there is no 'down time';
- The need to improve workforce capacity and achieve consistent capability
- Lack of appropriate skills and expertise in smaller centres;
- Pressure on staff to mentor nursing graduates;
- Lack of capacity to introduce new technologies and innovative models of care due to the age of buildings and poor infrastructure;
- The need for career structures and progression.

Strategies for the future include:

- Job redesign;
- Effective recruitment and retention strategies;
- Developing models of advanced nursing practice for rural areas
- New facilities, equipment and systems to improve effectiveness and efficiency;
- Building capacity and capability in the nursing workforce

### **6.2.3. Allied Health Workforce**

As discussed previously HNE Health recognises the significant and essential role allied health professionals play in the provision of acute, sub-acute, community and aged care services across the Area. Working collaboratively with doctors and nursing staff, allied health professionals diagnose and treat a range of conditions, making a unique contribution to optimising patient outcomes. But as with other sectors of the health workforce, there are significant workforce issues that need to be addressed if we are to have adequate numbers of skilled and experienced allied health professionals into the future to support the models of care outlined in this Plan.

The major allied health workforce stressors are: staff shortages; difficulties in recruitment and retention; and workload.

Strategies for the future to address workforce issues include:

- Developing a sustainable allied health service delivery model/model of care;
- Developing roles to support the work of allied health professionals e.g., allied health assistants;
- Developing programs to support the retention of allied health professionals;
- Developing incentive programs to attract allied health professionals to rural areas;
- Ensuring career structures and progressions for allied health professionals;
- Providing clinical supervision and development programs for new graduates.

### **6.2.4. Aboriginal and Torres Strait Islander Workforce**

A key strategic initiative for HNE Health is to increase the number of people of Aboriginal and Torres Strait Islander heritage who are employed by the Health Service. The aim for THS is to have 3% of all staff of Aboriginal and Torres Strait Islander descent.

To achieve this objective several training initiatives have been implemented including:

- Trainee Nursing Program that moves through a TAFE Course to Enrolled Nurse and ideally to Registered Nurse Education.
- Training Aboriginal Liaison Officers for involvement in key service areas especially Renal Services, Mental Health, Cancer Services, Diabetes, Dental and Paediatric Services to improve the cultural appropriateness of those services for Aboriginal and Torres Strait Islander people.

### **6.3. Training and Education Services**

THS are committed to teaching, education, research and evidence-based clinical practice. It is recognised that the presence of the universities in Tamworth, their partnerships with THS and the undergraduate programs offered are essential to the long-term sustainability of a skilled health workforce. The affiliations with the universities are also recognised as an advantage when attracting and retaining staff because of the additional career opportunities made possible by their presence.

Tamworth Hospital has a Director of Prevocational Training and basic Physician trainees who are part of the Hunter Physician Training Network. Postgraduate medical training is strongly supported at Tamworth by both Staff Specialists and Visiting Medical Officers who participate in much of this training in their own time.

There is also currently a General Practitioner (GP) Proceduralists Training Program operating at Tamworth. Since the commencement of this Program, Tamworth has trained seven GPs/GP registrars – two in Emergency, three in Obstetrics and two in Mental Health. A GP Mental Health and GP Anaesthetist are currently in training.

#### **6.3.1. University Department of Rural Health (UDRH), University of Newcastle**

The current focus is on undergraduate training of multidisciplinary students. The school commenced in 2002 with four sixth year medical students and in 2006 took in 20 students. The University of Newcastle also has a formal rural clinical school located in Tamworth teaching medical students. The UDRH is located on the Tamworth Hospital Campus and will be considered in any redevelopment of the site.

#### **6.3.2. University of New England**

The University of New England has established a Joint Medical Program (JMP) commencing in 2008 with over 60 students enrolled in the first intake. The University and THS will work as partners to provide the required scope of teaching and practical experiences required by medical students. The impact of the JMP and requirements for placing and accommodating students at Tamworth is an important consideration in any future planning exercise.

#### **6.3.3. Nurse Training**

Education and training is a key focus of the nursing establishment at THS. Staff are encouraged to undertake formal and informal education and training courses to ensure a culture of continual improvement. At present education requirements suffer from lack of resourcing due to budget restraints.

Hunter New England Area Rural Training Unit (HNEARTU) promotes rural health careers to school students, undergraduates and postgraduates in north-west New

South Wales. It also provides training opportunities for GPs in the region. Centres are located at Tamworth, Moree and Armidale.

#### **6.3.4. Future Education Demand**

Annually, the following numbers of students are expected to use Tamworth Hospital for components of their education and training:

- 60 undergraduate medical students;
- 30-40 Allied Health students;
- 50-60 nursing students.

#### **6.3.5. Future Directions**

The following strategies will foster a 'learning culture' for THS:

- Changing cultural attitudes so that education is not seen as simply a luxury.
- Wider use of videoconferencing in multiple locations for training and education.
- IT support to ensure systems are functional at all times and that staff are conversant with how to operate equipment.
- Web-based training and education packages.
- Administrative support to ensure clinical people can do core business and not be distracted by multiple administrative tasks. This is not considered a cost effective use of clinical staff.
- Employment of Education Co-ordinators who can ensure ongoing education and training initiatives for all staff.
- Increased partnering between hospital-based services, UDRH and HNEARTU.
- Ongoing education programs for current staff in house or through conferences etc.
- Sourcing of more nursing scholarships.

### **6.4. Research and Development**

HNE Health actively supports services to initiate and participate in relevant research. Research initiatives currently involving THS include:

- Evidenced based research by nursing staff.
- Participation in Area-wide and statewide renal research projects.
- Clinical Trials involving multiple departments and external service providers including the University of Newcastle.
- Two collaborative research projects involving Community Health Services: one with the Department of Health, University of Sydney and South Eastern Sydney Illawarra Health implementing risk factor assessment and brief intervention as part of routine service delivery; and the second with the University of New England addressing implementation of a clinical supervision framework within community-based nursing services.

Future strategies will include:

- Assisting staff to identify funding and scholarships to undertake research;
- Developing a culture of accepting applied research as part of the service delivery processes;
- Engaging educational institutions to partner in research initiatives to bring rigour and credibility to the process;
- Participating in Area-wide research initiatives.

## 7. Challenges for the Future

Challenges and concerns for the future have been identified and discussed throughout this HSP. In summary, the key challenges in implementing the future directions identified include:

- **Movement to Ambulatory Care Services**

Services provided as inpatient episodes of care have established and complex management structures and operational practices that have developed historically. Assisting staff to realise that similar levels of care can be provided with improved outcomes in an ambulatory or community-based setting will require education and gradual change to embed the new approach.

- **Past Referral Patterns**

Prior to the establishment of HNE Health, Tamworth had established historical referral patterns to public hospitals in Sydney and Brisbane. These are partly influenced by existing transport links to those capital cities and the range of accommodation available at major treatment facilities. Changes to encourage Tamworth people to use services at Newcastle will require not only education of the referring doctors but also access to convenient transport and accommodation comparable with Brisbane and Sydney centres.

- **Partnering with other service providers**

Health Services in Tamworth have developed largely in isolation from each other with operational practices and models of service delivery developed specifically for the service concerned. It is now recognised that services need to develop common goals and operational practices and identified service outcome that support a multidisciplinary multi-service approach to care delivery. Change management strategies need to be developed and implemented in partnership with service providers for all required service changes or transitions. Adequate resources are also required to support such processes and confirm their importance.

- **Current Facilities**

Many strategies proposed in this HSP require the integration or partnering of services to facilitate a multidisciplinary approach across the care continuum (patient journey). These models of care will be difficult to implement within the current inpatient and community health environments at Tamworth. While physical collocation is not essential to services working together the current disjointed relationships of services requires much effort on the part of staff to achieve cooperation across services. New, contemporary facilities will greatly enhance the ability to achieve coordinated and integrated models of care.

## 8. Benefits of the Health Services Plan

Implementation of the recommendations in this plan is expected to realise a number of significant benefits which are listed below. It is important that processes of review, prioritisation, resource assessment, risk management and evaluation are developed as part of the capital planning process to ensure these benefits are realised.

- **A realignment of health services** will increase the focus on and enable more investment into disease prevention and health promotion programs.
- Attention to service provision **across the lifespan**.
- **Improved services for families** and increased service provision for **young people**.
- **Improved coordination of key service modalities**, in partnership with other service providers e.g. to target diabetes management, mental health services and Aboriginal Health Services.
- **Increased community access** to services through improved service coordination, timely delivery, enhanced transport availability, increased cultural sensitivity and the use of technologies (including Telehealth).
- **A supported health workforce** who have the resources and skills required to provide quality health services
- **Improved health facility environments** to meet public and staff expectations
- **Increased cultural sensitivity of service providers** to encourage utilisation by Aboriginal and Torres Strait Islander peoples and people from CALD communities.
- **Increased support for existing staff** with regards to flexible work practices, ongoing education and training opportunities, and, participation in health services planning and management protocols.

## 9. Current Facilities

Tamworth Hospital and community health services are located in Dean Street, Tamworth approximately five (5) kilometres from the Central Business District. Other health services, including Regional Office (Church Street), Sexual Health Services (Bligh Street) and Population Health Services (Peel Street), are located at other sites throughout the city. The Regional office is located in a residential dwelling that is inadequate to current needs while population health services are located on the second floor of cramped rented accommodation in the main street of Tamworth. Sexual Health Services are also located in a residential area in facilities that no longer meet the needs of the service.

The current building stock of Tamworth Hospital has grown in a piecemeal fashion over time. The facilities present a range of problems that prevent the delivery of optimum contemporary health services. While efforts have been made to maximise the efficiency of buildings and site conditions the campus was originally planned and designed for models of service delivery which are no longer relevant. Issues with the site and buildings include:

- **Site** - The site is hilly which causes access problems for the public especially people with disabilities that have to walk long distances uphill to access services. There are also more than five separate entries to the site and confusing and poorly designed roadways.
- **Car Parking** - Parking is provided at more than 16 separate on-ground locations and the number and spacing of car parking is inadequate. Community members interviewed during the consultation phase report that the lack of parking, especially for people with physical disabilities close to services, is a major obstacle to accessing services.
- **Building Stock** - The original hospital building dating back to 1883 is still in use. Recent additions have included a new Emergency Department, Banksia Acute Mental Health facility, Department of Rural Health (University of Newcastle) and a new Outpatients Clinic.
- **Distribution.** - Health services are spread over more than 20 buildings, many linked with circuitous walkways. Separate buildings are used for:
  - Acute Services (in several locations);
  - CADE Services;
  - Community health services in Johnston House;
  - Diabetes services;
  - Hydrotherapy pool;
  - Laundry, maintenance and mortuary services;
  - Pathology;
  - Physiotherapy;
  - Renal Services;
  - Staff Accommodation;
  - Stores;
- **Service Clusters** - The arrangement of buildings prevents the achievement of effective functional relationships between services and the efficient sharing of resources amongst complementary service modalities. Even under these conditions there are multiple examples of services attempting to integrate common service components to improve the 'patient journey' and operational efficiency. An example is the integration of the management of the Emergency Department and Intensive Care Services on different floors in different sections of the building.

- **Pathfinding** - Patient pathfinding and service access is also problematic with people having to walk long distances between services e.g. between outpatient clinics and Medical Imaging. There is a lack of obvious decision points to assist visitors and very little logic to the location of services with every possible space utilised to make the best of the available building stock. While efforts to address this situation including signage and marked trails have been tried, the dispersed nature of services continues to be a major problem.
- **Security** - Multiple entry points into the buildings also require complicated security measures to ensure the level of safety/security required of a contemporary health facility.
- **Functional Space** – The ratio of services to the amount of spatial area across the site is excessive when compared to the requirements of the *Australasian Health Facility Guidelines, 2006*. While functional space is at a minimum the linkages and poor functionality have produced very high circulation spaces and wasted areas which are non-productive.

The issues identified above in relation to the physical facilities threaten the sustainability, efficiency and effective use of available resources. The service models proposed in this HSP are dependent on the provision of improved facilities and equipment to support the delivery of appropriate services from a contemporary rural referral hospital. The buildings and supporting infrastructure have been modified repeatedly to adapt to changing needs over time and now present cost and structure impediments to future service delivery e.g.

- Inability to 'swing' beds for changing needs over time reducing the efficiency of bed use;
- Inability to transition some services to ambulatory care due to the lack of amenities and space;
- Inability to use staff and other resources across several areas due to physical separations;
- Significant periods of time spent transporting patients between areas such as treatment and diagnostic areas wasting clinical interface time;
- Difficulties in securing all areas of the campus against unauthorised access especially after hours;
- The need for patients to access services from multiple locations wastes time and causes dissatisfaction;
- Difficulty coordinating services across modalities (e.g. hospital and community health);
- Financial costs of maintaining multiple buildings that are well beyond their effective life cycle;
- The need to rent/lease buildings to meet accommodation needs;
- Staff dissatisfaction with the physical environment and working conditions making it hard to attract and retain personnel;
- Lack of amenities to ensure adequate infection control including no acceptable isolation room capacity in key areas and poor water quality control due to the age of plumbing systems;
- Overcrowding in the chemotherapy and renal dialysis units which is compromising patient and staff safety, comfort and privacy;
- Poor public perceptions of the health service and its perceived lack of engagement with the community due to physical barriers.

## 10. Functional Requirements

The implementation of the models of care and service delivery models proposed in this HSP is dependent on providing improved functional relationships in a new facility that removes the current physical obstacles to service delivery including:

- Improved infection control practices including isolation rooms in ED, ICU/HDU/CCU, paediatric inpatient unit and the adult inpatient unit. These should be a mix of N Class (highest level) and S Class (Personal Protection Equipment [PPE] Bay fronting the room). It is suggested that all isolation rooms be designed with sliding front panels so they can be used as treatment bays when not being used for isolation and thus increase their usefulness/flexibility.
- Development of ambulatory care services with:
  - A focus on ambulatory primary care services;
  - A convenient and accessible location for the services likely to have the most attendances and activity;
  - Implementation of the integrated Primary and Community Health Policy particularly in regard to Primary and Community Care Networks with the North West Slopes Division of General Practice, general practitioners and other community-based health services.
- Service modalities that should participate in ambulatory care services through collocation and joint service models include:
  - Outpatient Clinics;
  - Allied Health Services;
  - Rehabilitation Services;
  - Relocation and recovery components of Day Surgical Procedures Services. Day Procedures Rooms should be located in the Operating Theatre Suite;
  - Renal Dialysis Services;
  - Chemotherapy Services.;
  - Other Day Medical Procedures Services;
  - Medical Imaging;
  - Pathology Collection Services;
  - Pharmacy;
  - Patient Services;
  - Public amenities;
  - Family Resource Room for families who have travelled from smaller centres to include bathroom facilities; areas to care for dependent children/relatives; access to the internet for business purposes; health information; volunteer assistance; relaxation areas.
- Provision of a range of staff and student amenities accessible at the unit level for education, training, meetings and web-based learning activities.
- Multifunctional use of inpatient beds to increase occupancy and improve staff utilisation. This is of particular relevance to services that have widely fluctuating occupancies such as paediatric services. The placement of 'swing' beds that have dual uses should be considered when reconfiguring existing or designing new space.
- Consideration of including the Cardiac Catheter Suite within or adjacent to the operating suite due to the increased complexity of the procedures that will be undertaken by this unit in the future. Collocation with MRI is also a critical factor for the future that requires consideration.

- Collocation of all cancer care modalities to create a comprehensive centre. This will provide opportunities to enhance models of care, reduce public inconvenience and enable the sharing of staff.
- Consideration needs to be given to making day care chairs multifunctional to facilitate the introduction of new treatments in the future. This would result in the collocation of renal dialysis, chemotherapy, transfusion and any other medical day services in one location with flexibility for functions to change over time if required.

All of the above principles need to be considered in the light of the required service outcomes and in consultation with staff and the community.

New facilities need to be developed in accordance with the spatial requirements of the *Australasian Facility Guidelines, 2006* to ensure that they meet contemporary standards.

## **11. Conclusion**

The completion of this Health Services Plan (HSP) is the first stage in the planning and development of new infrastructure to accommodate future health services at Tamworth. This HSP considers NSW Health directions and policy requirements, HNE Health strategic directions and community needs, and describes the health services and service models required to deliver healthcare to the residents of the immediate and wider catchment areas to best meet their needs.

As stated, the purpose of the HSP is to ensure the delivery of integrated, accessible and quality health services for all people living in the Tamworth area and the wider catchment. This has been achieved in the Plan by providing a comprehensive description of current services and trends in service provision, as well as a thorough assessment of issues affecting demand for health services and what is required to meet that demand. Models of service delivery are proposed that complement initiatives already in place and align with initiatives that have been identified in Area clinical service planning. There is also clear acknowledgement of the importance of establishing partnerships with key groups/agencies (such as General Practitioners, the private sector and community organisations) to ensure future service provision.

## **Attachment A: Tamworth HSP Steering Committee**

## Tamworth Health Services Plan Steering Committee

- Kim Browne HNE Director Population Health, Planning & Performance (Chairperson)
- Chris Coombs Director of Nursing, Tamworth Hospital
- Deanne Harris Dietician in Charge, HNE North Sector
- Fergus Fitzsimmons General Manager Tamworth & Armidale Hospitals
- Frank Sardelic Surgeon VMO
- Jenny Sheehan Manager, Rural Health Services & Capital Planning Unit, NSW Health
- Keith Hollebhone Obstetrician VMO
- Lauren Cruz Communications Unit
- Clare Siddins Formerly with the Communications Unit
- Lynne Gardner Manager, Drug & Alcohol, Northern
- Martin Nean Co-ordinator Aboriginal Health, Peel and Mehi Cluster
- Paul Gorrick General Manager, Peel Cluster
- Peter Finlayson Director Clinical/Medical Services, Tamworth Health Service
- Peter Massey Manager, Population Health, Northern
- Samit Roy Clinical Director, Mental Health, Northern
- Stewart Leeman HNE Area Director, Capital Works & Physical Resources
- Sue Carter HNE Area Director, Strategic & Clinical Services Planning
- Susan Heyman A/Manager, Tamworth Community Health Services
- In attendance:  
Matthew Dougherty Planning Officer, Clinical & Strategic Planning Unit, HNEH
- Colleen Wilson CWHS, Consultant

## **Attachment B: Inpatient Activity (2003/04 – 2006/07)**

## Tamworth Rural Referral Hospital Inpatient Activity, 2003/04 to 2006/07

	2003/04	2004/05	2005/06	2006/07
<b>Total separations</b>	14,126	14,850	14,995	14,955
Overnight	10,237	10,547	10,761	10,703
Day only	3,889	4,303	4,234	4,252
ALOS (overnight)	4.8 days	4.8 days	4.7 days	4.5 days
Total Bed days	71,277	74,715	73,728	69,890
Available beds	258	258.9	259.6	264.3
Available chairs				
<b>Medical</b>				
% Medical	60.2%	60.3%	60.9%	60.7%
% Planned	15.9%	14.0%	12.6%	11.4%
% Unplanned	63.7%	63.0%	62.7%	62.6%
% Other	8.6%	11.3%	12.5%	14.8%
% Day only	14.5%	15.5%	15.2%	15.5%
<b>Medical total</b>	8,509	8,955	9,136	9,074
<b>Surgical/Procedural</b>				
% Surgical/Procedural	39.8%	39.7%	39.1%	39.3%
% Planned	74.8%	73.8%	72.5%	72.0%
% Unplanned	22.1%	22.4%	23.1%	21.8%
% Other	2.5%	3.6%	4.3%	5.9%
% Day only	47.3%	49.4%	48.5%	48.6%
<b>Surgical/Procedural Total</b>	5,617	5,895	5,859	5,881
<b>Births</b>				
Births	665	709	799	953
Annual % increase from previous year		6.6%	12.7%	19.3%
<b>Paediatrics (0-15 yrs)</b>				
Paediatrics	1,985	2,072	2,028	2,023
Paediatrics ALOS (overnight)	3.2	3.2	3.3	3.1
Bed days	5,335	5,429	5,737	5,383
Day Only	486	551	462	432

Source: FlowInfo version 9.2, excludes Chemotherapy, Renal Dialysis and Unqualified Neonates

## Tamworth Hospital - Service Related Groups (2003/04 and 2006/07)

### Medical

SRG v2(aIM 2005)	Day Only		Overnight	
	2003/04	2006/07	2003/04	2006/07
Acute Definitive Geriatric Medicine		2	70	73
Breast Surgery	7	1	3	3
Cardiology	83	97	1035	1039
Colorectal Surgery	12	11	75	99
Definitive Paediatric Medicine	14	18	250	271
Dermatology	11	11	25	22
Drug and Alcohol	5	27	100	104
Ear, Nose and Throat	39	46	122	115
Endocrinology	44	31	119	141
Extensive Burns		1	2	4
Gastroenterology	82	137	269	299
Gynaecology	37	36	59	47
Haematology	74	50	99	61
Immunology and Infections	25	30	235	274
Medical Oncology	60	40	155	142
Neurology	77	77	323	381
Non Subspecialty Medicine	212	153	287	300
Non Subspecialty Surgery	43	91	393	440
Obstetrics	60	117	812	898
Ophthalmology	7	25	20	24
Orthopaedics	48	81	351	373
Pain Management	20	29	23	25
Plastic and Reconstructive Surgery	11	12	48	42
Psychiatry - Acute	8	9	44	43
Qualified Neonate	5	6	320	391
Renal Medicine	55	49	148	199
Respiratory Medicine	43	67	635	633
Rheumatology	10	5	16	4
Upper GIT Surgery	4	12	76	106
Urology	66	78	128	122
Vascular Surgery	38	6	55	28
<b>Grand Total</b>	<b>1200</b>	<b>1357</b>	<b>6298</b>	<b>6706</b>

Source: FlowInfo Version 9.2. Excludes chemotherapy, renal dialysis, unqualified neonates and unallocated separations

## Surgical

SRG v2(aIM 2005)	Day only		Overnight	
	2003/04	2006/07	2003/04	2006/07
Breast Surgery	53	47	65	49
Colorectal Surgery	20	34	132	148
Ear, Nose and Throat	128	129	248	237
Extensive Burns			6	7
Gynaecology	316	324	273	186
Haematology	3		3	4
Head and Neck Surgery	2		48	42
Interventional Cardiology		1	1	5
Non Subspecialty Surgery	66	62	296	344
Obstetrics			192	294
Ophthalmology	593	662	32	36
Orthopaedics	259	227	781	743
Plastic and Reconstructive Surgery	140	178	90	95
Qualified Neonate		1		1
Renal Medicine	2	6	10	5
Respiratory Medicine	1	4	13	23
Tracheostomy			46	43
Upper GIT Surgery	2		171	165
Urology	56	85	241	321
Vascular Surgery	5	4	120	43
<b>Total</b>	<b>1653</b>	<b>1766</b>	<b>2788</b>	<b>2806</b>

Source: FlowInfo Version 9.2. Excludes chemotherapy, renal dialysis, unqualified neonates and unallocated separations

## Procedural

SRG v2(aIM 2005)	Day only		Overnight	
	2003/04	2006/07	2003/04	2006/07
Cardiology	0	0	3	9
Dentistry	104	102	10	4
Diagnostic GI Endoscopy	673	655	74	47
Gastroenterology	59	58	54	39
Interventional Cardiology	19	111	7	90
Non Subspecialty Medicine	0	0	1	1
Palliative Care			1	
Psychiatry - Acute	34	24	0	0
Renal Medicine	1	14	0	1
Respiratory Medicine	1	0	16	18
Urology	110	116	3	4
<b>Grand Total</b>	<b>1002</b>	<b>1081</b>	<b>169</b>	<b>213</b>

Source: FlowInfo Version 9.2. Excludes chemotherapy, renal dialysis, unqualified neonates and unallocated separations

## **Attachment C: Non-Admitted Patients Occasions of Service**

## Non-Admitted Patients Occasions of Service (NAPOOS) 2006/07

	Community Health		Tamworth Hospital			Total NAPOOS
	NAPOOS	Total Community	NAPOOS	Privately Referred	Total Tamworth	
<b>Community/Primary Health</b>						
Aboriginal Health	604.3	604.3	64		64	668.3
Acute/Post Acute	927	927			0	927
Aged Care	2,110	2110	700.1	115	815.1	2925.1
Alcohol and other Drug		0			0	0
Anticoagulant	55	55			0	55
Asthma	8	7.8			0	7.8
Asthma Education	57.3	57.3			0	57.3
Audiology	831.4	831.4			0	831.4
Child & Family	9,231	9230.9	2		2	9232.9
Child Protection	165	165			0	165
Counselling - general	317.9	317.9	2,313		2313.3	2631.2
Developmental disabilities	10	10			0	10
Diabetes education	2,523	2523.3	208.3		208.3	2731.6
Disability - other	10	10			0	10
Families First Follow-up Visit	170	170			0	170
Families First Initial Visit	212	212			0	212
General Practice / Primary health	1,069	1069.3			0	1069.3
Genetic	26	26			0	26
Home and Community Care service	5,003	5003.3	16		16	5019.3
Immunisation	2,033	2032.8	976		976	3008.8
Intake	90	90				
Maintenance care	1364.5	1364.5			0	1364.5
Men's Health - General	3	3				
Men's Health - maintenance care	117	117			0	117
Palliative care - Other	543	543			0	543
Respite care		0	388		388	388
Rehabilitation - Other	61	61	10,270	304	10573.6	10634.6
Sexual assault	283.5	283.5			0	283.5
Sexual health	928	928			0	928
Stomal therapy		0	102		102	102
SWISH - Newborn hearing screening	133	133			0	133
Women's health - general	962.8	962.8			0	962.8
Women's health - maintenance care	189	189			0	189
Wound management	5,609	5609			0	5609
<b>Subtotal</b>	<b>35,647</b>	<b>35647.1</b>	<b>15,039</b>	<b>419</b>	<b>15458.3</b>	<b>51105.4</b>
<b>Clinics</b>						
Cardiology		0	730.5	438	1168.5	1168.5
Burns	417	417	96		96	513
Diabetes	1456.9	1456.9	201.6		201.6	1658.5
Falls	1	1			0	1
Fracture		0	5,482		5482	5482
General surgery		0	59	307	366	366
Gynaecology		0	414.6	3,278	3692.6	3692.6

	Community Health		Tamworth Hospital			Total NAPOOS
	NAPOOS	Total Community	NAPOOS	Privately Referred	Total Tamworth	
Haematology		0	22	227	249	249
Infectious diseases	914	914	611	155	766	1680
Nephrology		0	3,033	132	3164.9	3164.9
Neurology		0	38	91	129	129
Obstetrics	403	403	7,735	20	7754.6	8157.6
Optometry		0			0	0
Orthopaedics		0	40	709	749	749
Orthotics		0	1,705	70	1775	1775
Paediatric medicine		0	1,086	4,663	5749	5749
Plastic surgery		0		166	166	166
Pre-admission		0	1,241		1241	1241
Radiation oncology - curative		0	207	862	1069	1069
Radiation oncology - palliative		0	105	833	938	938
Gynaecology oncology - curative		0			0	0
Medical oncology - curative	7	7	1514	227	1741	1748
Medical oncology - palliative	38	38		99	99	137
Respiratory	334.7	334.7	1115	425	1540	1874.7
Spinal		0			0	0
<b>Subtotal</b>	<b>3,572</b>	<b>3571.6</b>	<b>25,435</b>	<b>12,702</b>	<b>38137.2</b>	<b>41708.8</b>
<b>Procedural</b>						
Cardiac Catheterisation.		0			0	0
Chemotherapy - curative		0	643	854	1497	1497
Chemotherapy - palliative		0	474	959	1433	1433
Gynaecology Oncology - chemotherapy - curative		0	3		3	3
Gynaecology Oncology - chemotherapy - palliative		0	20	17	37	37
Dental - adult		0			0	0
Dental - child		0			0	0
Renal Dialysis		0			0	0
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>1,140</b>	<b>1,830</b>	<b>2970</b>	<b>2970</b>
<b>Clinical Support &amp; Diagnostic</b>						
Breast screening		0			0	0
Clinical Measurement	7	7			0	7
Imaging		0	1,396	10,544	11940	11940
Imaging - other		0	1,220		1220	1220
Imaging in the ED		0	11,688		11688	11688
Dispensing pharmacy		0	9,823		9823	9823
Pathology		0	1,313		1313	1313
Pathology in the ED		0	25,900		25900	25900
<b>Subtotal</b>	<b>7</b>	<b>7</b>	<b>51,340</b>	<b>10,544</b>	<b>61884</b>	<b>61891</b>
<b>Mental Health</b>						
Mental Health - adult & general	7,444	7444.4			0	7444.4
Mental Health - child & adolescent	741	741			0	741
<b>Subtotal</b>	<b>8,158</b>	<b>8,158</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,158</b>
<b>Allied Health</b>						

	Community Health		Tamworth Hospital			Total NAPOOS
	NAPOOS	Total Community	NAPOOS	Privately Referred	Total Tamworth	
Nutrition/dietetics - general	50.4	50.4	1145.5		1145.5	1195.9
Occupational therapy - general	184.9	184.9	571.3		571.3	756.2
Physiotherapy - general	291	291	4,303		4302.9	4593.9
Podiatry - general	147	147			0	147
Research		0			0	0
Speech pathology - general	593	593	516.4		516.4	1109.4
<b>Subtotal</b>	<b>1,266</b>	<b>1266.3</b>	<b>6,536</b>	<b>0</b>	<b>6536.1</b>	<b>7802.4</b>
<b>Grand Total</b>	<b>48,643</b>	<b>48,463</b>	<b>99,491</b>	<b>25,495</b>	<b>124986</b>	<b>173,629</b>

Source: Non-Admitted Patient Data Collection, 2006/07

Notes:

- Oral Health and Drug and Alcohol NAPOOS are not reported in this table.
- Data in the above table has been grouped under a series of headings to highlight mode of service delivery.

## **Attachment D: Role Delineation and Submission Report**

Service	Level		Comment
	Current	Proposed	
<b>Clinical Support Services</b>			
Pathology	5	5	
Pharmacy	5	5	
Diagnostic imaging	5	6	As Level 5 plus special rooms for cardiac investigation and digital angiography, neuro-radiology. CAT scan and full ultrasound service, appropriately staffed, available 24 hours. Has MRI, digital angiography available. May have cardiac catheterisation laboratory. Has Radiology Registrar <sup>(1)</sup> . Performs invasive procedures. Level 4 Pharmacy and Level 5 Pathology, Intensive Care, Coronary Care and Level 6 Operating Suite Services are required on site. It is intended to introduce interventional cardiology in the near future.
Nuclear medicine	4	5	<b>Moving to Level 5</b> to support ENT, Endocrinology/Renal Medicine and Clinical Haematology/Oncology which are operating at Level 5. Needs to gain and maintain accreditation with the ANZAPNM; provide an on-call service for out-of-hours scans; adequate patient isolation; dedicated research programs and facilities for invitro tracer studies.
Anaesthetics	5	5	Meets all criteria for level 5
Intensive care	5	5	Meets all criteria for level 5
Coronary Care	4	5	<b>Needs to be Level 5 to support</b> Emergency at Level 5, Diagnostic Imaging at Level 6 and Cardiology at Level 5. Requires a Director, Cardiology/General Physicians on call 24 hours, Medical Officer on site 24 hours, Medical Registrar on call 24 hours, invasive monitoring available, isolation facilities, formal audit and review procedures, RNs @ 1:2 and access to CNC desirable.
Operating Suites	6	6	<b>Meets all the requirements of a Level 6 Service</b> which is an essential prerequisite for the provision of Diagnostic Imaging at Level 6 and the range of surgical specialities being undertaken at Level 5.
<b>Core Services</b>			
Emergency Medicine	5	5	Meets all criteria for level 5
<b>Medical Services</b>			
General Medicine	5	5	Meets all criteria for level 5
Cardiology	5	5	Meets all criteria for level 5
Dermatology	4	5	<b>Working towards Level 5</b> (HNE Health Healthcare Service Plan) which requires an appointed Specialist Dermatologist, Medical Registrar on call 24 hours and linkages with Radiation Oncology.
Endocrinology	5	5	Subject to appointment of endocrinologist
Gastroenterology	4	5	<b>Working towards a Level 5 status</b> (HNE Health Healthcare Service Plan) which requires a Specialist Gastroenterologist, Medical Registrar on call 24 hours and ideally access to a CNC.
Haematology – Clinical	5	5	Medical Registrar available

Service	Level		Comment
	Current	Proposed	
HIV/AIDS	3	4	<b>Working towards Level 4</b> which requires enhancements in hospital/community support service linkages (home and respite care as well as formal linkages with Divisions of GPs, other government agencies and NGOs), partnerships with Palliative Care Services and enhanced health promotion and education programs.
Immunology	4	4	
Infectious diseases	4	4	
Medical Oncology	5	5	Meets description for level 5, but no level 5 Nuclear Medicine Service at present.
Neurology	5	5	Neurosurgery support provided through networking with John Hunter Hospital
Radiation Oncology	4	5	<b>Proposed to include an enhanced service to Level 5</b> for the future by the introduction of a Integrated Cancer Care Centre including a Radiation Oncology Treatment Centre. The proposed services at Tamworth Hospital are also planned to take pressure off the current Radiation Oncology services at Newcastle by reversing flows and improving the quality of Cancer Care Services provided to the Northern Sector.
Renal Medicine	5	5	Meets description for Level 5, but no level 5 Nuclear Medicine Service at present.
Respiratory Medicine	5	5	
Rheumatology	5	5	
<b>Surgery</b>			
General Surgery	5	5	
Burns	5	5	Tamworth Hospital provides services for the management of severe burns in adults in accordance with the Burn Transfer Guidelines - <i>NSW Service and Burn Injury Service, 2<sup>nd</sup> Edition 2008</i> . There is an established Burns Unit, Part Time Director and RNs with experience in the management of burns.
Cardiothoracic surgery	4	5 (access to)	Cardiothoracic Surgery support will be provided through networking with John Hunter Hospital.
Day Surgery	4	4	
Ear, Nose and Throat	5	5	Currently operates at this level but requires Level 5 Nuclear Medicine to comply with Role Delineation Guidelines.
Gynaecology	5	5	
Neurosurgery	4	4	
Ophthalmology	4	4	
Orthopaedics	5	5	
Plastic Surgery	4	4	
Urology	5	5	

Service	Level		Comment
	Current	Proposed	
Vascular Surgery	5	5	
<b>Mother and Child Health</b>			
Maternity	4	5	<b>Moving to Level 5</b> to function as an Obstetric Referral Centre for the Northern Sector. .
Neonatal	3	4	<b>Needs to be Level 4 service for Obstetrics to function at Level 5.</b> As Level 3 plus may provide short term and complex care in consultation with Level 5/6 Neonatal Centre. Capable of delivering care to convalescing medical and surgical patients. Accredited specialist physician (neonatal paediatrician). Ultimately planning towards on site specialist paediatrician with direct involvement in neonatal ward. Paediatric Registrar on site 24 hours. A minimum of one RN(1) (preferably with relevant post graduate qualifications) per shift. Established links with CNC(1) and/or CNE(1) in neonatal nursing at tertiary facility. Link with Level 5 Unit may include rotation of senior clinical staff.
Paediatric Medicine	4	4	
Paediatric Surgery	4	4	
Family and Child Health	5	5	Access to child and adolescent psychiatry via Telehealth
<b>Integrated Community and Hospital Services</b>			
Adolescent Health	4	4	
Adult Mental Health: Inpatient - Acute and Extended Care	5	5	
Adult Mental Health: Community Care - Acute and Non acute	5	5	
Child/Adolescent Mental Health: Inpatient Care	4	4	Access to child and adolescent psychiatry via Telehealth
Child/Adolescent Mental Health: Community Care – Acute and Non acute	4	4	
Older Adult Mental Health (Inpatient Care)	3	3	
Older Adult Mental Health (Community Care)	4	4	
Child Protection Service (PANOC Services)	4	4	
Drug and Alcohol Services	5	5	

Service	Level		Comment
	Current	Proposed	
Geriatrics	5	5	
Health Promotion	4	5	Needs to be Level 5 to support Community Health at Level 5. Needs an extensive and diverse range of health promotion and patient education activities, consultation and collaboration with public health resources in the Area/Region, collaboration with clinical staff, GPs, community health services and the hospital in the development of health promotion interventions, representation of senior executive on Area committee or other structure, collaboration with tertiary education institutions and intersectoral collaboration on health promotion interventions.
Palliative Care	5	5	
Rehabilitation	5	5	
Sexual Assault Service	4	4	
<b>Community-Based Services</b>			
Aboriginal Health	5	5	
Community Health, General	5	5	
Community Nursing	5	5	
Genetics	4	4	
Multicultural Health	1	3	<b>Due to the increase in people from CALD Communities this service will be increased to Level 3.</b> As Level 1, plus access to generalist ethnic health worker(s) providing a range of services in association with locally based teams on a regular basis. Access to a wider range of health care interpreter services. May have regular on site arrangements for interpreter services for major language groups. Access to cultural awareness programs. Formal quality assurance program(1). Established Ethnic Access Committees.
Oral Health	5	5	
Sexual Health Service	3	3	
Women's Services	4	4	

## SUBMISSION REPORT

<b>Hospital ID Number</b>	J216	<b>Area</b>	Hunter / New England Area Health Servi
<b>Hospital Name</b>	Tamworth Base Hospital	<b>Peer Group</b>	Major Non-Metropolitan

### Clinical Support Services

Pathology	5
Pharmacy	5
Diagnostic Imag.	6
Nuclear Med.	5
Anaesthetics	5
ICU	5
Coronary Care	5
Operating Suite	6

### Emergency Services

<b>Emergency</b>	5
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**Date** 18/07/2007

**User** C WILSON

### Core Services

<b>General Medicine</b>	5	<b>Rheumatology</b>	5	<b>Neonatal</b>	4	<b>Health Prom.</b>	5
<b>Cardiology</b>	5	<b>General Surgery</b>	5	<b>Paediatric Med.</b>	4	<b>Palliative Care</b>	5
<b>Dermatology</b>	5	<b>Burns</b>	5	<b>Paediatric Surg.</b>	4	<b>Rehabilitation</b>	5
<b>Endocrinology</b>	5	<b>Cardiothoracic Srg.</b>	5	<b>Family, Child Hlth</b>	5	<b>Sexual Assault</b>	4
<b>Gastroenterology</b>	5	<b>Day Surgery</b>	4	<b>Adolescent Hlth</b>	4	<b>Aboriginal Health</b>	5
<b>Haematology, Clin.</b>	5	<b>Ear, Nose, Throat</b>	5	<b>Adult MH, Inpat.</b>	5	<b>Com. Hlth, Gen.</b>	5
<b>HIV/AIDS</b>	4	<b>Gynaecology</b>	5	<b>Adult MH, Com.</b>	5	<b>Com. Nursing</b>	5
<b>Immunology</b>	4	<b>Neurosurgery</b>	4	<b>Chd/Ad MH Inpat.</b>	4	<b>Genetics</b>	4
<b>Infectious Diseases</b>	4	<b>Ophthalmology</b>	4	<b>Chd/Ad MH Com.</b>	4	<b>Multicultural Hlth</b>	3
<b>Oncology, Med.</b>	5	<b>Orthopaedics</b>	5	<b>O. Adult MH - Inpat.</b>	3	<b>Oral Health</b>	5
<b>Neurology</b>	5	<b>Plastic Surgery</b>	4	<b>O. Adult MH - Com.</b>	4	<b>Sexual Health</b>	3
<b>Oncology, Rad.</b>	5	<b>Urology</b>	5	<b>Child Protection</b>	4	<b>Women's Health</b>	4
<b>Renal Medicine</b>	5	<b>Vascular Surgery</b>	5	<b>Drug, Alcohol</b>	5		
<b>Respiratory</b>	5	<b>Maternity</b>	5	<b>Geriatrics</b>	5		



## **Attachment E: Inpatient Activity Projections (aIM)**

Service Related Group	Day Only			Overnight+		
	2011/12	2016/17	2021/22	2011/12	2016/17	2021/22
11 Cardiology	101	126	153	1,031	1,087	1,171
12 Interventional Cardiology	158	204	260	44	53	64
13 Dermatology	24	25	27	21	19	18
14 Endocrinology	50	54	61	133	143	157
15 Gastroenterology	125	142	161	329	373	427
16 Diagnostic GI Endoscopy	846	929	1,019	68	64	60
17 Haematology	141	161	188	145	152	165
18 Immunology & Infections	33	38	44	283	304	331
19 Medical Oncology	83	101	123	140	137	136
21 Neurology	89	101	115	334	349	373
22 Renal Medicine	66	78	93	122	129	142
24 Respiratory Medicine	64	68	73	719	757	812
25 Rheumatology	18	20	21	29	28	27
26 Pain Management	11	11	10	24	21	19
27 Non Subspecialty Medicine	202	212	223	674	694	736
41 Breast Surgery	42	42	41	67	68	71
43 Colorectal Surgery	37	48	62	139	144	152
44 Upper GIT Surgery	6	8	10	220	218	216
45 Head & Neck Surgery	22	26	30	48	47	45
47 Dentistry	116	124	133	7	6	4
48 Ear, Nose & Throat	146	143	140	286	246	211
49 Orthopaedics	367	410	456	1,097	1,119	1,156
50 Ophthalmology	864	1,077	1,349	46	41	38
51 Plastic & Reconstructive Surgery	200	233	270	117	112	108
52 Urology	249	282	324	356	342	334
53 Vascular Surgery	52	62	74	158	157	156
54 Non Subspecialty Surgery	141	159	182	733	734	743
62 Extensive Burns	0	0	0	7	6	5
63 Tracheostomy	0	0	0	57	64	73
71 Gynaecology	322	305	286	294	264	235
72 Obstetrics	77	86	95	833	765	705
73 Qualified Neonate	10	10	10	371	381	394
81 Drug & Alcohol	2	2	2	98	99	100
82 Psychiatry - Acute	12	14	16	48	52	56
84 Rehabilitation	1	1	1	16	16	14
87 Maintenance	1	1	1	6	7	8
99 Unallocated	14	13	11	30	29	27
<b>Grand Total</b>	<b>4,562</b>	<b>5,150</b>	<b>5,854</b>	<b>9,099</b>	<b>9,190</b>	<b>9,446</b>

Source: aIM 2005

Note: excludes Chemotherapy, Renal Dialysis and Unqualified Neonates

## Tamworth Hospital - Projections to Bed Numbers

### Summary

Specialties	Separations								Beds			
	2003/04		2006/07		2011/12		2016/17		2011/12		2016/17	
	ON	DO	ON	DO	ON	DO	ON	DO	ON	DO	ON	DO
Medical	3,596	745	3,802	684	4,106	1,713	4,371	2,064	77	6	80	7
Surgical	2,296	2,260	3,031	2,850	2,863	3,340	2,839	3,784	54	15	54	17
Paediatrics			1,599	427	1,728	465	1,645	462	17	(included in Med/Surg)	16	(included in Med/Surg)
Drug and Alcohol	101	5	2	8	98	2	99	2	0	1	0	1
Obstetrics	986	60	1181	113					15		15	
Subacute	0	0	467		472	34	561	67	32		32	
<b>Total Separations</b>	<b>6,979</b>	<b>3,070</b>	<b>10,082</b>	<b>4,087</b>	<b>9,267</b>	<b>5,554</b>	<b>9,515</b>	<b>6,379</b>	<b>194</b>	<b>22</b>	<b>197</b>	<b>25</b>

### Medical - Separations

Medical Specialty	Overnight+ Separations				Increase % (2003/04-16/17)	Day Only Separations				Increase % (2003/04-16/17)								
	2003/04	2006/07	2011/12	2016/17		2003/04	2006/07	2011/12	2016/17		2011/2012		2016/17					
										Overnight	Day Only	Overnight	Day Only					
										OBDs	Beds @ 80%	OBDs	Beds Mon-Fri					
Acute Definitive Geriatric Medicine	79	99	105	140	77.2%	<5	14	16	20									
Cardiology	969	1039	1,031	1,087	12.2%	62	11	101	126									
Dermatology	25	22	21	19	-24.0%	21	11	24	25									
Endocrinology	120	141	133	143	19.2%	24	30	30	50									
Gastroenterology	220	299	278	323	55.9%	48	37	73	90									
Haematology	139	161	143	149	7.2%	119	50	138	158									
Immunology & Infection	361	274	283	304	16.5%	24	30	33	38									
Interventional Cardiology <sup>#</sup>	8	80	100	120	1400.0%	19	81	800	1000									
Medical Oncology	148	142	140	137	-6.1%	61	40	83	101									
Neurology	319	381	334	349	9.4%	71	77	89	101									
Non Subspecialty Medicine	376	300	674	694	84.6%	198	153	202	212									
Pain Management	28	25	24	21	-25.0%	11	29	11	11									
Renal Medicine	118	199	122	129	9.3%	48	49	66	78									
Respiratory Medicine	655	633	689	728	11.1%	20	67	69	34									
Rheumatology	31	7	29	28	-9.7%	14	5	18	20									
<b>Totals</b>	<b>3,596</b>	<b>3,802</b>	<b>4,106</b>	<b>4,371</b>	<b>19.9%</b>	<b>745</b>	<b>684</b>	<b>1,753</b>	<b>2,064</b>	<b>1,832.0%</b>	<b>21,147</b>	<b>77</b>	<b>1,206*</b>	<b>6</b>	<b>22,126</b>	<b>80</b>	<b>1,432*</b>	<b>7</b>

Sources: aIM, 2005 and FlowInfo Version 9.2

Notes: #. Interventional Cardiology figures for 2011/12 and 2016/17 have been increased beyond those demonstrated by aIM to reflect the introduction of the Cardiac Catheter Unit.

\* excludes additional projected interventional cardiology beyond aIM projections

1. aIM projections are for adults only (paediatrics are calculated separately) and exclude chemotherapy, renal dialysis, unqualified neonates and service activity calculated separately, i.e. for maternity, non- acute separations, drug and alcohol, psychiatry in a designated unit.

2. aIM projections include ICU/HDU beds in the calculation of medical beds

3. : In this Plan, in calculating bed requirements to 2016 a bed occupancy rate of 80% has been used unless otherwise stated.

## Surgical and Procedural- Separations

Surgical Specialty	Overnight+ Separations				Increase %	Day Only Separations				Increase %										
	2003/04	2006/07	2011/12	2016/17	(2003/04-16/17)	2003/04	2006/07	2011/12	2016/17	(2003/04-16/17)	2011/12				2016/17					
											Overnight	Beds @ 80%	DO OBDs	Beds Mon-Fri	Overnight	Beds @ 80%	DO OBDs	Beds Mon-Fri		
Breast Surgery	64	49	67	68	5.9%	42	47	42	42	0%										
Colorectal Surgery	133	149	139	144	8.3%	20	24	37	48	140.0%										
Dentistry	10	4	7	6	-40.0%	103	102	116	124	20.4%										
Diagnostic GI Endoscopy	75	47	68	64	-14.7%	707	655	846	929	31.4%										
ENT Surgery	244	231	189	159	-34.8%	115	123	105	102	-11.3%										
Extensive Burns	8	7	7	6	-25.0%	0	0	0	0	NA										
Gastroenterology	54	39	51	50	-7.4%	49	58	52	52	6.1%										
Gynaecology	277	285	243	221	-20.2%	314	324	281	262	-16.6%										
Head & Neck Surgery	52	47	48	47	-10.0%	16	6	22	26	62.5%										
Non-Specialty Surgery	318	362	296	288	-9.4%	70	57	82	92	31.4%										
Ophthalmology	32	36	30	27	-15.7%	594	662	857	1069	80.0%										
Orthopaedics	789	748	795	816	3.4%	261	232	315	350	34.1%										
Plastic & Reconstructive Surgery	81	80	78	76	-6.2%	143	173	187	217	51.7%										
Tracheostomy	47	48	57	64	39.1%	0	0	0	0	NA										
Upper GI Surgery	150	157	139	133	-11.3%	0	0	0	0	NA										
Urology	275	326	267	260	-16.2%	162	201	223	257	58.6%										
Vascular Surgery	97	40	90	87	-10.3%	5	3	6	7	40.0%										
Other Surgical	295	376	292	353		59	183	170	207		OBDs	Beds @ 80%	DO OBDs	Beds Mon-Fri	OBDs	Beds @ 80%	DO OBDs	Beds Mon-Fri		
<b>Totals</b>	<b>2,926</b>	<b>3,031</b>	<b>2,863</b>	<b>2,839</b>	<b>-3.0%</b>	<b>2,660</b>	<b>2,850</b>	<b>3,340</b>	<b>3,784</b>	<b>42.3%</b>	<b>14,688</b>	<b>54</b>	<b>3,341</b>	<b>15</b>	<b>14,765</b>	<b>54</b>	<b>3,784</b>	<b>17</b>		

Sources: aIM, 2005 and FlowInfo Version 9.2

Notes: 1. aIM projections are for adults only (paediatrics are calculated separately) and exclude chemotherapy, renal dialysis, unqualified neonates and service activity calculated separately, i.e. for maternity, non- acute separations, drug and alcohol, psychiatry in a designated unit.

2. aIM projections include ICU/HDU beds in the calculation of medical beds

3. : In this Plan, in calculating bed requirements to 2016 a bed occupancy rate of 80% has been used unless otherwise stated.

Mother and Child Health	Overnight+ Separations				Increase %	2011/12		2016/17	
	2003/04	2006/07	2011/12	2016/17	(2003/04-16/17)	OBDs	Beds @ 75%	OBDs	Beds @ 75%
Vaginal Deliveries	487	691	661	649	33.3%	2314	13	2272	2
Caesarean Deliveries	178	262	245	240	34.8%	1299		1272	
Ante-natal admissions	361	311	345	273	-24.4%	414	2	353	2
Post Natal Admissions	40	46	22	25	-37.5%	492		419	
<b>Totals</b>	<b>1,066</b>	<b>1,310</b>	<b>1,273</b>	<b>1,187</b>	<b>11.4%</b>	<b>4,519</b>	<b>15</b>	<b>4,316</b>	<b>15</b>

Source: FlowInfo Version 9.2 with adjustments for the increase to a Level 5 Obstetrics Service, fertility rates and past and projected birthing rates

Subacute	2011				2016					
	Overnight+ Separations			Increase %	Overnight+			Overnight+		
	2005	2011	2016	(2005-2016)	OBDs	Beds @ 75%	alos	OBDs	Beds @ 75%	alos
Rehabilitation	336	338	412	21.9%	6108	22	18	7188	26	17.4
Palliative Care <sup>2</sup>	109	111	119	9.2%	1114	6	10	1148	6	9.6
Maintenance	22	23	30	36.4%	628	2	27	757	3	25.2
<b>Totals</b>	<b>467</b>	<b>472</b>	<b>561</b>	<b>20.1%</b>	<b>7850</b>	<b>27</b>		<b>9093</b>	<b>32</b>	

Source: SiAM v.1

Note. Palliative Care beds have been adjusted to six (6) to reflect likely increased demand – see section 5.3.6.2

Other	Overnight+ Separations				Increase %	Day Only Separations				Increase %
	2003/04	2006/07	2011/12	2016/17	(2003/04-16/17)	2003/04	2006/07	2011/12	2016/17	(2003/04-16/17)
Drug and Alcohol	100	104	98	99	-1.0%	5	27	2	2	-60.0%
Psychiatry - Acute	44	43	48	52	18.2%	10	31	12	14	40.0%
Psychiatry in a designated unit	627	658	734	796	27.0%	61		122	153	150.8%
<b>Totals</b>	<b>771</b>	<b>805</b>	<b>880</b>	<b>947</b>	<b>44.1%</b>	<b>76</b>	<b>58</b>	<b>136</b>	<b>169</b>	<b>130.8%</b>

Sources: aIM 2005 and FlowInfo Version 9.2

## **Attachment F: Service Delivery Units**

## Tamworth Rural Referral Hospital

Current Name	Type	2008	2016	Future Name/Definition	Source
W1	Orthopaedic	28	110	Multi-functional Medical/Surgical	aIM
W3	Medical	30			
W4	Surgical	32			
W8	Medical/Surgical	19			
W9	Maternity	20	15	Maternity	Projected activity
W10	Paediatrics	15	18	Paediatrics	aIM
ICU/CCU/HDU	ICU	7	16	ICU/HDU	Projected activity
	HDU	4	0		
	CCU	6	8	CCU for interventional cardiology	Projected activity
	Burns	2	0	Burns to utilise ICU/HDU beds as required	Projected activity
Short Stay Unit		0	6	Proposed new service	
Banksia	Adult Mental Health	25	25	Adult Acute Mental Health	MH.CCP
<b>Total Acute Beds</b>		<b>188</b>	<b>198</b>		
Delivery Suite	Labour Birthing Rooms	3	4	Delivery Suite	Projected activity
	L3 Special Care Nursery	7	12	L4 Special Care Nursery	Projected activity
	Nursery	20	15	Bassinettes	Projected activity
<b>Total Cots</b>		<b>30</b>	<b>31</b>		
W11	Rehabilitation	22	26	Rehabilitation	SiAM
Transitional Living	Maintenance	3	3	Brain Injury Unit	SiAM
Nioka	Palliative care	6	6	Palliative Care	SiAM
Hilltop Lodge	Older Person's Mental Health/T-Basis	16	16	Older Persons Mental Health/Dementia	MH.CCP
<b>Total Non Acute Beds</b>		<b>47</b>	<b>51</b>		
Renal Unit	Chairs	10	17		NSWH Guidelines
Chemotherapy	Chairs	8	14		NSWH Guidelines
DS	Day Surgery Chairs/Beds/Trolleys	22	24	Recovery spaces in Ambulatory Care Centre	Projected activity
Dental	Chairs	4	8		Projected activity
<b>Total Day Only Beds/Chairs</b>		<b>44</b>	<b>63</b>		
Emergency Treatment Bays	Trolleys	20	26	Emergency Department	NSWH Guidelines
Emergency Resuscitation Treatment Bays	Trolleys	2	3	Emergency Department	NSWH Guidelines
Operating Suite/Procedure Rooms	Places	4	6	Operating Suite	Operating Theatre Planning Tool
Operating Theatre Recovery Places	Places	8	12	Recovery	Operating Theatre Planning Tool
Cardiac Catheter laboratory	Trolleys	7	7	Cardiac Catheter Laboratory	NSWH Guidelines
<b>Total Other</b>		<b>41</b>	<b>54</b>		
<b>Total Beds/Chairs/Places</b>		<b>350</b>	<b>397</b>		

Source: aIM projections for separations and beddays were used to inform the allocation of beds across specialities. Where special consideration has been given to some categories this has been justified in the body of the report

## **Attachment G: Current Staffing Figures**

<b>Tamworth Hospital Staffing</b>	<b>Base FTE</b>	<b>Relief FTE</b>	<b>Total FTE</b>
Occupational Therapy ENH	6.21	0	6.21
Anaesthetics Medical Staff	6	0	6
Paediatrics Medical Staff	5.7	0	5.7
Medical Staff Critical Care	7.82	0.32	8.14
Medical Staff O&G	8	0	8
Staff Accommodation Unit	1	0	1
Orthopaedics ~ Nursing	22.13	3.12	25.25
Day Surgical Ward ~ Nursing	4.47	0.52	4.99
OH & S Support Unit	1	0	1
Pain Management	1	0.12	1.12
General Paediatrics ~ Nursing	11.51	1.63	13.14
Obstetrics Ward ~ Nursing	26.6	3.8	30.4
Accident and Emergency ~ Nursing and Admin	35.05	5.04	40.09
Medical/Surgical LGF ~ Nursing	24.73	3.51	28.24
Day Care Centre	1	0	1
Outpatients General ~ Nursing	3.42	0.41	3.83
Renal Procedures ~ Nursing and Admin	10.15	1.34	11.49
Operating Theatre General ~ Nursing	34.04	4.85	38.89
Rehabilitation Medical Staff	2	0	2
General Surgery Medical Staff	8	0.64	8.64
Orthopaedics Medical Staff	5	0.16	5.16
Hydrotherapy Pool	2	0.12	2.12
Medical Records	10.94	0.6	11.54
Physiotherapy	12.17	0	12.17
Speech Pathology	2	0	2
Social Work	5.53	0	5.53
Dietetics	5.1	0.04	5.14
Patient Discharge Planning	3.53	0.21	3.74
Nursing Administration	5.96	0.83	6.79
Radiology ~ Radiographers, Nursing and Admin	21.17	0	21.17
Nuclear Medicine ~ Radiographers, Nursing and Admin	4.19	0	4.19
Clerical Administration	11.89	0.97	12.86
Mail Desk/Courier	3	0.12	3.12
Administration	7.63	0	7.63
Brain Injury Program ~ Nursing, Social Work, Physio, Speech Pathology, Occupational Therapy, Admin	8.52	0	8.52
Infection Control Unit	0	0	0
Nursing Casuals	0	0	0
Quality Assurance	1	0	1
Medical Administration	7.58	0	7.58
Director Clinical Training	0	0	0
Rural Stroke Service	1.05	0.12	1.17
Palliative Care program ~ Nursing	9.57	1.31	10.88
Aged Care Services Emergency Teams (ASET's)	1.4	0.16	1.56
Rural Critical Care ~ Nursing and Admin	1.53	0	1.53
Retrievals	1.05	0	1.05

<b>Tamworth Hospital Staffing</b>	<b>Base FTE</b>	<b>Relief FTE</b>	<b>Total FTE</b>
Renal Outreach ~ Nursing and Social Work	2.9	0	2.9
Renal Enhancement Funding ~ Social Work, Occupational Therapy and Nursing	1.15	0	1.15
Stomal Therapy	1	0.12	1.12
Cardiorespiratory ~ Nursing	2.21	0.25	2.46
Oncology-Data Manager	0.53	0	0.53
Rural Oncology Service Enhance ~ Nursing	2	0	2
Plaster Clinic ~ Nursing and Admin	1.02	0.01	1.03
Tamworth Clinic ~ Admin and EN	5.1	0.3	5.4
Medical/ Surgical Ward 8 ~ Nursing	17.43	2.47	19.9
Surgery Ward ~ Nursing	24.88	3.55	28.43
Rehabilitation Ward ~ Nursing	14.1	2.01	16.11
Respite Unit ~ Nursing	9.36	1.25	10.61
Medicine - Internal ~ Medical	13.85	0	13.85
General-Tamwell Clinic ~ Admin	3.05	0.14	3.19
Critical Care - Emergency ~ Medical	28.64	0	28.64
Patient Services ~ Admin	15.57	0	15.57
Ultra Sound ~ Radiography, Nursing and Admin	1.95	0	1.95
Cat Scan ~ Radiography, Nursing and Admin	3.33	0	3.33
Cardiac Catheterisation Lab ~ Nursing and Radiography	4.64	0	4.64
Renal Research ~ Nursing	0.2	0	0.2
NICS Fellowship Grant ~ Medical	0	0	0
Community Geriatric & Rehab ~ Admin	1	0.04	1.04
Intensive Care Ward ~ Nursing	45.94	6.52	52.46
Pre Admission Clinic ~ Nursing and Admin	2.73	0.31	3.04
CSSD Shared Service	10	1.32	11.32
Cancer Institute Clinical Trials	0	0	0
Renal Area ~ Nursing, Admin and AHEO	3.21	0	3.21
Rural Trauma CNC Pilot Project	1.42	0	1.42
Cancer Services ~ CNC	1.53	0.12	1.65
Hepatitis Prevention & Education ~ CNC	1	0	1
<b>Grand Total – Tamworth Hospital</b>	<b>571.49</b>	<b>48.35</b>	<b>619.84</b>

Source: Tamworth Hospital, 2008

<b>Tamworth Hospital Patient Support Services Staffing</b>	<b>Base FTE</b>	<b>Relief FTE</b>	<b>Total FTE</b>
Catering	30.10	2.16	32.26
Domestic Services	52.55	0.72	53.27
Wardsperson	13.18	1.04	14.22
Waste Disposal	2.86	0.15	3.01
Hospital Kiosk	1.34	0.16	1.50
<b>Grand Total</b>	<b>100.03</b>	<b>4.23</b>	<b>104.26</b>

Source: Tamworth Hospital, 2008

<b>Tamworth Hospital Maintenance Staffing</b>	<b>Total FTE</b>
Area Manager	1
Area Trade Manager	1
Area Trade Staff	8
Construction Manager	1
Planner	1
Site Supervisor	1
Trade Staff	23
Administration	2
<b>Grand Total</b>	<b>38</b>

Source: Tamworth Hospital, 2008

<b>Tamworth Hospital Visiting Medical Officers (VMOs)</b>	<b>Number of VMOs(Resident in Tamworth or with active involvement)</b>	<b>VMOs providing intermittent or consulting service</b>
Anaesthetics	9 (includes 2 GP Anaesthetists)	0
Breast Screening	0	7
Cardiology	3	2
Cardiothoracic Surgery	0	2
Child & Adolescent Psychiatry	0	1
Diagnostic Radiology Tier 1 (incl Ultrasound)	2	~40
Emergency Medicine		1
ENT Surgery	1	
Gastroenterology		1
General Medicine	6 ( includes local VMO's with subspecialties)	
General Surgery	4	0
GP Adult Medicine – includes Anaesthetic, Geriatric Medicine, Minor Gynaecology, Minor Surgery, Obstetrics, Paediatric Medicine, Palliative Care, Psychiatry and Sexual Assault Services	17	
Medical Oncology	2	
Nuclear Medicine (incl. ultrasound, also VMO Physician)	1	
Obstetrics & Gynaecology	2	
Ophthalmology	2	2
Orthopaedic Surgery	2	
Psychiatry General	4	
Psychiatry Older persons	1	
Radiation Oncology	2	
Urology	2	
<b>Total</b>	<b>80</b>	<b>56</b>

Source: Tamworth Hospital, 2008

Note: Each VMO is represented in one area only. It is acknowledged that VMOs may have multiple roles.

<b>Tamworth/Nundle Community Health Staffing</b>	<b>Staff Categories</b>	<b>Total FTE</b>
Transitional Aged Care Program	Nursing, Occupational Therapy, Physiotherapy, Social Work, Residential Services Assistant, Admin	8.68
Audiometry	CNC	1.42
PANOC	Social Work	1.0
Geriatric Assessment	Occupational Therapy, Social Work, Admin, Nursing	3.52
Regional Health Service	Nursing, Health Education	1.63
Diabetes Clinic	Nursing, Dietician, Admin	3.63
Families First	Nursing, Social Work	1.24
Maternity Aboriginal Outreach	Nursing, Aboriginal HEO	1.68
Community Occupational Therapy	Occupational Therapy	1.0
Podiatry	Podiatrist	0.53
Community Health Admin	Management, Admin	4.32
Dietetics	Dietician	1.0
Women's Health Nursing	CNC	1.0
Child and Family Service	Nursing, Occupational Therapy, Physiotherapy, Social Work, Speech Pathologist, Aboriginal HEO, Psychology, Management, Genetic Counselling	18.37
Sexual Assault	Social Work, Psychology	1.84
Palliative Care	CNC	1.0
Nundle Community Health	Nurse Practitioner	1.0
Veterans Affairs	Community Nursing	1.37
HACC	Nursing	2.05
Psychogeriatric Services	CNC	1.0
Delirium/Dementia	CNS	0.5
Home Nursing	Nursing	10.18
Incontinence Service	CNC	1.0
Respiratory	CNC	1.0
<b>Total</b>		<b>69.96</b>

Source: Tamworth Community Health, 2008

Note: A number of Tamworth Community Health staff provide services to the Peel and other clusters

<b>Tamworth Pathology Laboratory Staffing</b>	<b>FTE</b>
Receptionist / Courier	2.0
Enrolled nurse	0.5
Business Manager	1.0
Senior Scientist	4.0
Scientist	3.6
Staff Specialist	2.0
Technical Officer	8.4
Technical Assistant	7.0
Typist	2.0
Registrar	2.0
Blood Collectors	5.5
<b>Total</b>	<b>38.0</b>

Source: Tamworth Pathology, 2008

<b>Tamworth Mental Health Services Staffing</b>	<b>Staff Categories</b>	<b>Total FTE</b>
Promotion and Prevention	Health Education Officer	3.0
Transcultural Mental Health	Health Service Manager	0.6
Consumer and Carer Network	Health Education Officer	0.6
Early Psychosis	Health Service Manager	1.0
Outcomes and Assessments	Health Service Manager	2.0
Drought Worker	Health Service Manager	1.0
Farmlink Project	Health Service Manager	1.0
School Link Coordinator	Health Service Manager	1.0
Regional Management	Staff Specialist, HSM, Nurse Manager, Admin	7.0
Regional Inpatient Unit (Banksia)	Nursing, Psychology, Occupational Therapy, Nurse Educator, Medical, Admin	39.1
TBASIS (Hilltop Lodge)	Nursing, Security, , Social Work, Staff Specialist, technical Assistant, Admin	24.2
Community Administration	HSM, CNC, Staff Specialist, Admin	4.0
Community Team	HSM, Nurse Practitioner, Nursing, Social Work, Occupational Therapy, Psychology, HEO, Aboriginal HEO, Admin	16.0
Child and Adolescent Mental Health	Social Work, Clinical Psychology, Nursing, HEO	5.5
Mental Health Service for Older People	CNC, Clinical Psychology	2.0
Rural Critical Care	Nursing, Security	1.3
Rehabilitation Coordinator	HSM	1.0
<b>Total</b>		<b>114.3</b>

Source: Tamworth Mental Health, 2008