GRIFFITH HEALTH SERVICES PLAN REFRESH 2017

Murrumbidgee Local Health District

Version 1.5 Dec 2017

NSW GOVERNMENT Health
Murrumbidgee
Local Health District

Document History

Version	Version Description	Author	Reviewer	Approved for Release	Date Released
1.0	Initial Draft for Discussion	JY/NM/EHF	JY	15/09/2017	15/09/2017
1.1	MLHD changes and data/text update	JS/ND/NM	JS	28/9/2017	28/9/2017
1.2	Final Draft incorporates changes and additional information from Consultation held in Oct 2017	JS	JY	14/10/2017	14/10/2017
1.3	Final Draft revised following initial Executive Review - rebadged MLHD	JVDN	CE/ OT		
1.4	Updated Final draft – additional consultations with medical staff and Nurse Unit Managers	JVDN	CE/OT/GM	03/12/2017	
1.5	Review of Chemotherapy requirements	JVDN	AB	19/12/2017	19/12/2017

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EXECUTIVE SUMMARY

1. CONTEXT AND POLICY FRAMEWORK

1.1. Context Of The Service Plan

This Griffith Health Service Plan Refresh 2017 has been produced to update the health service planning for Griffith Hospital in preparation for a next stage of planning that will be to deliver an upgrade in infrastructure related to recently announced funding by the NSW Premier in June 2017. The focus of this document has been to update the *Griffith Health Services Plan 2015-2022* released in January 2015, in line with the most current NSW Health projection methodologies and tools, and review planning and service descriptions previously undertaken. This Refresh has been done in the context of time passed since the original planning was completed, updated population projections, and guided by the strategic direction of Murrumbidgee Local Health District (MLHD) to achieve the objective of modernising the hospital to deliver contemporary service models to meet the changing needs of Griffith and the catchment communities into the future.

This Plan has broadly identified the future priorities for Griffith Health Service (GrHS) and will assist in the master planning of a redeveloped Griffith Hospital. Master planning must be cognisant of the need for both Griffith Hospital and St Vincent's Private Community Hospital (SVPCH) Griffith to remain viable and provide services the catchment communities could reasonably expect to be delivered locally. This will require ongoing discussions with St Vincent's to avoid any duplication and to seek opportunities for shared support services and workforce, particularly as attracting staff to rural areas with the skills required is difficult.

Griffith Hospital has a peer group classification as a District Group 1, and provides most of its clinical services at a role delineation level of 4. The Griffith Health Service provides inpatient acute, sub-acute and community based services along with a hub role to surrounding health services. GrHS provides health services to the people in the Local Government Area (LGA) of Griffith, Leeton, Murrumbidgee, Carrathool, Hay, Narrandera and Bland as well as Lake Cargelligo (part of the Lachlan SLA).

While the activity projections have been updated and the planning horizon extended to another ten to fifteen years, there has been a greater focus on the requirements for ambulatory and non-inpatient care models in line with State directions and the vision of the Murrumbidgee Local Health District (MLHD) Board. The vision is to focus on wellness and hospital avoidance; promoting health and awareness to enable people to take more control of their own health, which is discussed further at 1.2.

This Refresh has been guided by:

- Information gathering consultations with local staff, and MLHD District and Program staff,
- Feedback sessions to test methodologies with staff and stakeholders (including Local Health Advisory Committee and Hospital Auxiliary members),
- In depth discussions with medical staff and maternity and paediatric Nurse Managers;
- Ongoing discussions with the Health Service planner and Griffith General Manager,
- Ongoing discussion with MLHD Executive and representatives from the NSW Ministry of Health,
- Griffith Regional Health Service - Health Services Planning and Site Master Plan 2014, and the
- Murrumbidgee Action Plan February 2015.

It should be noted that it is not the role of this Refresh to identify the physical asset solutions that may need to be provided to respond to current deficits. This is the role of the Business Case, which will be developed separately to access capital funding, identify priorities for investment, and informed by the Refresh and a new Functional Brief which will address design and layout requirements to deliver contemporary models of care in an upgraded health service facility.

1.2. Environmental Scan/Future Directions/Policy Framework

NSW State Health Plan and the NSW Rural Health Plan - toward 2021 are complementary documents which set out the Government's agenda for health, with the NSW Rural Health Plan acknowledging the needs of rural communities in accessing quality integrated and timely health care.

The NSW State Health Plan articulates three key Directions: Keeping People Healthy, providing World Class Clinical Care and delivering Truly Integrated Care. These are supported by four Strategies: supporting and developing the Workforce, supporting and harnessing Research and innovation, enabling e-health and designing and building future focussed Infrastructure.

The Rural Health plan mirrors the State plan with similar vision, directions and strategies. The directions are: healthy rural communities with access to high quality care for rural populations and integrated rural health services. The strategies to achieve these outcomes are to enhance the rural health workforce, to strengthen rural health infrastructure, research and innovation, and improve rural e- health.

There is a growing trend of some aspects of hospital bed based care being replaced by ambulatory or community-based care and this has clear health benefits to patients. This trend will continue as health technology advances, inpatient models of care change and the health system responds to the demand for best and least disruptive care closer to home.

There is evidence for better outcomes resulting from the right care being provided in the right place at the right time for a range of healthcare services, especially when robust models of care are developed to demonstrate the aspects of care that do not need to be delivered in an acute inpatient setting.

The MLHD perspective is to develop a broader range of bed substitution and disease management service strategies (aimed at reducing unplanned presentations, admissions or readmissions) and to redesign its approach to non-admitted patient care through review and recommendation of services and the way these services are delivered. Additionally, the Griffith Health service will be actively involved in service networks across the MLHD to increase access to cancer, mental health, chronic care, drug and alcohol and renal services. GrHS will also work with partner organisations to improve/streamline the patient journey, including Primary Health Networks, Aboriginal Medical Services, Non-Government Organisations and private providers.

Concurrent with this plan Refresh, the MLHD will design outpatient services in line with the NSW Health system approach to measuring healthcare value; with a key goal to improve health outcomes, the experience of care and the effectiveness of care.

Leading Better Value Care (LBVC) is the Program that has been developed for State-wide implementation. It comprises a number of initiatives that have been proven to be effective and will be incorporated into new or improved models of care. For MLHD, and for Griffith specifically, this planning will include directions in regards to service models to be introduced or redesigned with a priority for ambulatory and community based-care.

MLHD has identified an additional list of contemporary service models for consideration at GrHS. These services will include:

- Expansion of Rehabilitation Services
- Expansion of Geriatric Services
- Outpatient infusion service
- Subspecialty in medicine clinics including Endocrinology Clinic
- Expansion of Hospital in The Home (HiTH) – to include paediatrics
- High risk foot clinic
- Acute Surgical Unit Outpatient Clinic
- Osteoporosis re-fracture clinic
- Outreach Bariatric Clinic (new)

Hospital avoidance strategies have also been identified by MLHD as part of this planning. The planning for Griffith Health services will facilitate the introduction of fairer and more appropriate approaches to access of care for the broader community through the establishment/ progressing of:

- centralised intake service - a single point of entry that will assist in providing improved access to care, streamline processes, improved patient flow to the right service and transition/handover between providers
- support services including patient flow and transport, health information and records, biomedical engineering, information technology, education and library, volunteer and multi-faith support.
- Family accommodation to avoid additional overnight inpatient stay for rural/ remote families.

The NSW Health Integrated Care Strategy (2014-2017) involves the provision of seamless, effective and efficient care that reflects the whole of a person's health needs; from prevention through to end of life, across both physical and mental health, and in partnership with the individual, their carers and family. It requires greater focus on a person's needs, better communication and connectivity between health care providers in primary care, community and hospital settings, and better access to community-based services that are close to home.

1.2.1. Key service planning considerations for Griffith Health Services

Although there is no projected population growth across the catchment and a slight population growth within the Griffith LGA, there is a changing demand for health services, due to the aging population, increased rates of chronic disease and a large transient population of farm labourers. Also, the multicultural nature of the Griffith Region which includes a significant culturally and linguistically diverse (CALD) background and Aboriginal population requires tailored service delivery models that are culturally appropriate.

Therefore, key planning considerations include the capability of the GrHS to service 'spoke' facilities and sites, provide services for an aging population, and access to services for a population that:

- is culturally and linguistically diverse;
- has a higher proportion of Aboriginal people than the state average;
- has areas of relatively high socio economic disadvantage;
- has high rates of chronic illness and associated risk factors; and
- high rates of hospitalisation for injury.

The guiding principles in the planning and delivery of clinical services for Griffith Health Service are:

- Care should be provided in a community or ambulatory setting unless considered inappropriate in terms of safety, quality of care or efficiency;
- Models of care delivery and management processes should include integration and sharing of resources across all care settings;
- The key goal of the NSW Health system - Leading Better Value Care (LBVC) Program should be delivered;
- Telehealth and eHealth technology should be embedded in all service models and be an integrated component of service delivery;
- Services where possible, should be planned to be delivered close to home; if they cannot be delivered safely and effectively then clear pathways and support for access will be identified;
- Services should ensure equity of access (i.e. timely access to appropriate services that can be delivered safely);
- Services should be planned on a collaborative model which supports co-location and/or physical integration where there is service or patient synergy; and
- Services should be planned to meet the health needs of the catchment population, with capacity to respond to changes in service demand and new models of care.

1.2.2. Planning Assumptions

In undertaking the data refresh with the new projections, planning assumptions were considered to explore opportunities to reverse the flow of Griffith catchment residents from Wagga Wagga back to GrHS for sustainable clinical services that fit within the Hospital role delineation level for those services.

Particular service considerations have included:

- Orthopaedic, EN&T, services;
- maternity services; and
- other opportunities for flow reversal where there are sufficient service volumes to provide the service sustainably and safely.

1.3. Proposed Infrastructure Requirements

Beds/ Chairs or Equivalent Inpatient Beds (HealthAPP)	Current (available 2017)	Proposed to 2026/27
Surgical	18	
Medical	22	
Medical and Surgical Overnight	0	49
Medical and Surgical Day Only	12	9 – in ward area (not related to second stage recovery)
Obstetrics	14	12 – Birth rate increasing with new (secondary) migrant populations in recent years. Ongoing flows for high risk births from Leeton estimated at 50%. Flow reversal from Private services (70%) with new facility private rooms
Special Care Nursery	4	3
Nursery Cots (Bassinets)	14	10
Paediatrics	10	10 – At capacity with 10 on paediatric theatre days now
Paediatrics - day only	4	6 – plus use 2 inpatient beds as day only on theatre days (stage 2 recovery) (lists up to 15 per day)
Critical Care Unit (ICU/ HDU/ CCU)	6	7 – No provision for additional flows from St Vincent's
Hospital in The Home	10	10
Aged Care and Rehabilitation Unit (recovery, maintenance, palliative care and Stroke)	4 (part of medical)	20 - Includes management of acute delirium. Rounded from 18 to meet workforce ratio needs
Total - Inpatient Beds/Cots	**102**	**136**
Emergency and Ambulatory Services		
Emergency Resuscitation Bays	2	2
Emergency Observation/Treatment Bays	8 includes 1 paed + 1 plaster bay	10 - some may go to an Emergency Paediatric Assessment Unit on the paediatric ward – requirement for isolation rooms including neg pressure
Emergency Short Stay Unit (EMU)	0	8 (4 beds from medical allocated here to create new Unit but not included in total below)
Emergency low stimulus/ safe room	1	1 – mental health safe room
Emergency Procedure rooms (eye etc.)	1	2
Emergency/ Primary Health consult rooms	3	4
Sexual Assault dedicated room	0	1 – need raised by public and medical/nursing staff

Beds/ Chairs or Equivalent Inpatient Beds (HealthAPP)	Current (available 2017)	Proposed to 2026/27
Renal chairs (does not include PD training Chair)	6	10 - plus need for training chairs 2 (1 peritoneal, 1 haemo)
Chemotherapy chairs	4	10 - Preference for 8 chairs and 2 beds. Further review required in line with rapidly changing treatments and regimes
Dental chairs (treatment and therapy)	4	6
Outpatient/ Community Health/ MHDA	-	60 - based on similar requirements as Wagga – also includes outpatients
Ambulatory care therapy rooms/Gymnasium	0	3
Ambulatory care procedure room	0	2
Total – Chairs/ Beds/ trolleys	**30**	**117**
Other Service Delivery Units (not including imaging and support services)		
Operating Theatres	2	2
Procedure Room	0	1
Recovery (first stage)	5	7 – needs to be checked against facility guidelines
Birthing room	2	2
Assessment room (alternate use as additional birthing room)	1	2 – used for outpatients - collocated on maternity ward
Other		
Staff accommodation	13 units with 38 beds 3 x 2 bedroom unit 4 queen bedrooms Serviced Apartments	– off site leased units – on site for Junior Medical Officers on rotation – house on site for students on placement – used for visiting Specialists New model with expanded capacity needs to be considered
Relative accommodation	4 studios	– on site with queen bed and porta cot availability New model on site with expanded capacity to be considered
Education and training facilities		Yes – requirement for under-graduate and post-graduate training space

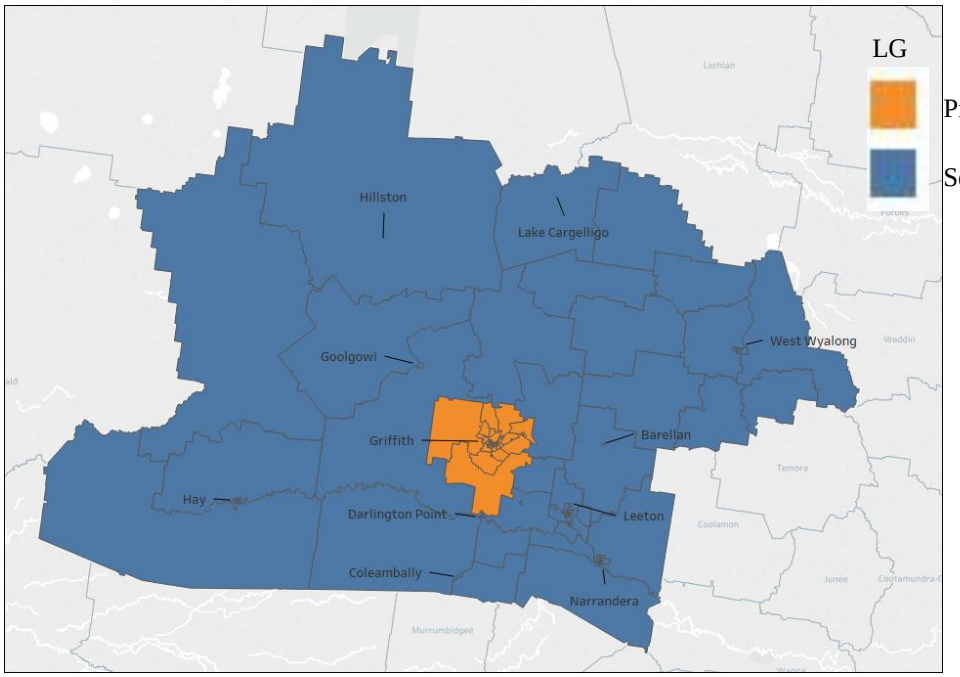
2. CATCHMENT PROFILE

The GrHS is situated within the Murrumbidgee LHD. The primary catchment for the GrHS is the LGA of Griffith itself whose population accounts for 65 per cent of inpatient separations. The secondary catchment accounts for 30 per cent of inpatient separations and is made up of the Local Government Areas (LGAs) of:

- Bland (major centre – West Wyalong)
- Carrathool (major centre – Hillston)
- Hay (major centre – Hay)
- Lake Cargelligo portion of the Lachlan LGA
- Leeton (major centre – Leeton)
- Murrumbidgee (centres of Coleambally and Darlington Point)
- Narrandera (major centre – Narrandera)

The term catchment throughout the document refers to the combined Griffith and surrounding LGA's.

Figure 1 Griffith Health Service – Primary (Griffith LGA) and Secondary (Bland, Carrathool, Hay, Lake Cargelligo of Lachlan, Leeton, Murrumbidgee, Narrandera LGAs) Catchments

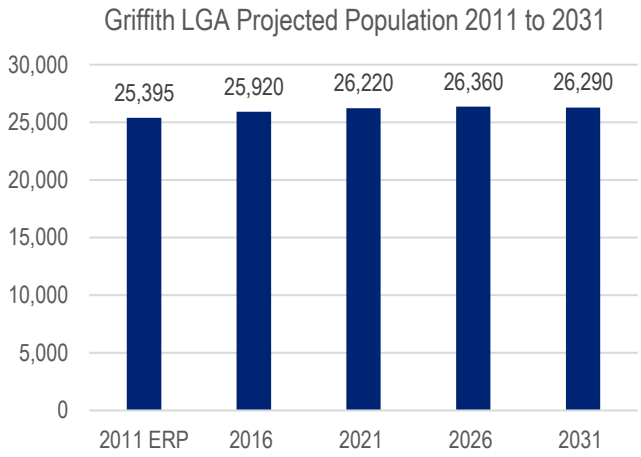


Griffith Hospital provides services as a regional 'hub' for the health services of Leeton, Narrandera, Hillston and Lake Cargelligo in addition to inpatient flows from Hay, West Wyalong, and a number of smaller centres.

2.1. Population

2.1.1. Primary Catchment

Griffith LGA estimated resident population for 2016 is 25,620 and has increased by 0.4 % (525 persons) since 2011. Growth is projected to continue at a slower rate, increasing by a further 371 people (0.01% pa) between 2016 and 2031. [1]



[1] 2016 Series Department of Planning and Environment Population Projections, non-amalgamated LGA version

Figure 2 Projected Griffith Population to 2031

2.1.2. Primary and Secondary Catchment

The Estimated Resident Population for GrHS catchment in 2011 was 58,877 persons, which is projected to decrease by 2,357 to reach 56,520 persons in 2031. 1 above

While the overall catchment population is projected to decrease, it should be noted that the aging profile of the population projects an increase in 65+ year olds and a change to the age structure of the catchment. The largest projected increase between 2016 and 2031 is for the 70-74 age group, a 51% (or 1,180 persons) rise. Overall, the number of residents aged 65 and over will increase by 3,840 between 2016 and 2031. Refer to Figure 3 and 4. [2]

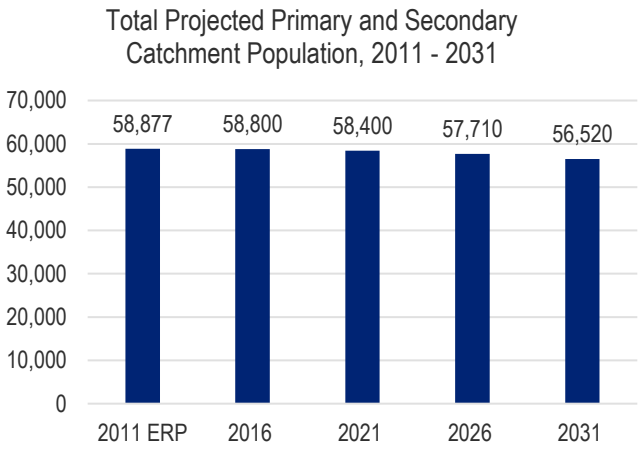
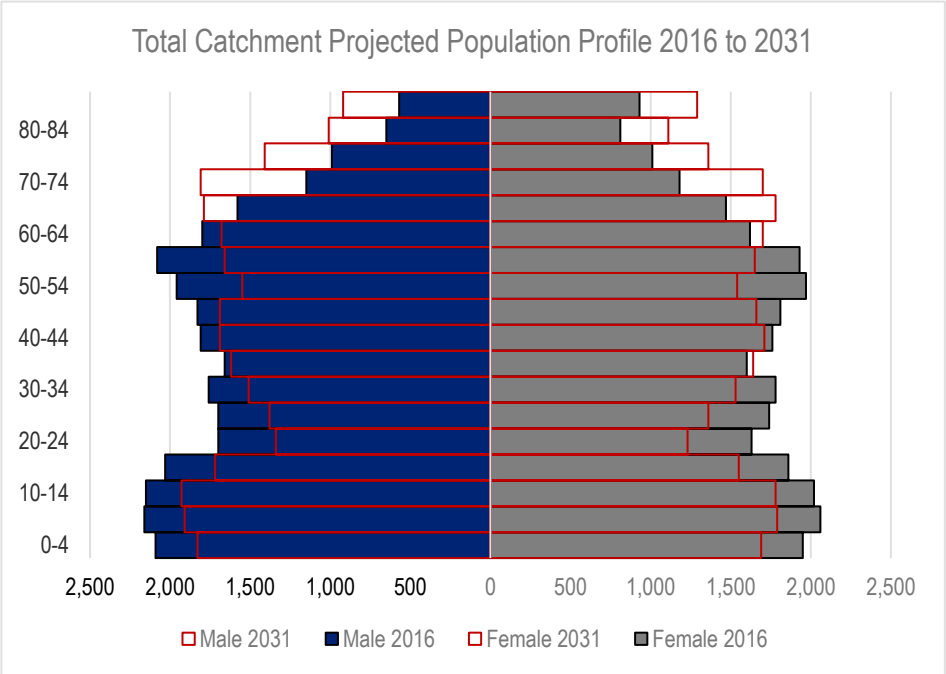


Figure 3 Total Projected Primary and Secondary Catchment Population 2011-2031

[2] 2016 Series Department of Planning and Environment Population Projections, non-amalgamated LGA version

Figure 4 Population Pyramid Griffith Catchment 2016 to 2031



Source: 2016 Department of Planning and Environment Population Projections (non-amalgamated LGAs)

2.1.3. Population Profile

In the 2016 Census of Population and Housing, Griffith LGA presented a higher proportion (4.5%) than Regional NSW (0.9%) of people who spoke another language. From 2011 to 2016 Griffith experienced a decrease in people who spoke English only, and an increase in people who spoke another language.

English was the only language spoken at home by 94.9% of Aboriginal and/or Torres Strait Islander people in Griffith in 2016 and Aboriginal people comprised 4.8% of the Griffith LGA population in 2016, considerably higher than the NSW state proportion of 2.9%. [3]

2.2. Health and Socio-Economic Status

2.2.1. Health Status

The MLHD as a whole has higher than state average rates of adults who are current smokers, risk alcohol drinkers, obese and overweight. However data shows that all of these rates have declined in the last year.

In 2013-2015, Griffith LGA reported above average rates of smoking attributable hospitalisations: 888 per 100,000 population compared to NSW rate of 541 per 100,000 population. For the same time period, Griffith showed a rate of preventable hospitalisations that was 53 per cent higher than the State average, with the bulk attributed to chronic (e.g. Smoking, alcohol abuse) and acute (UTIs, vaccine preventable) hospitalisations.

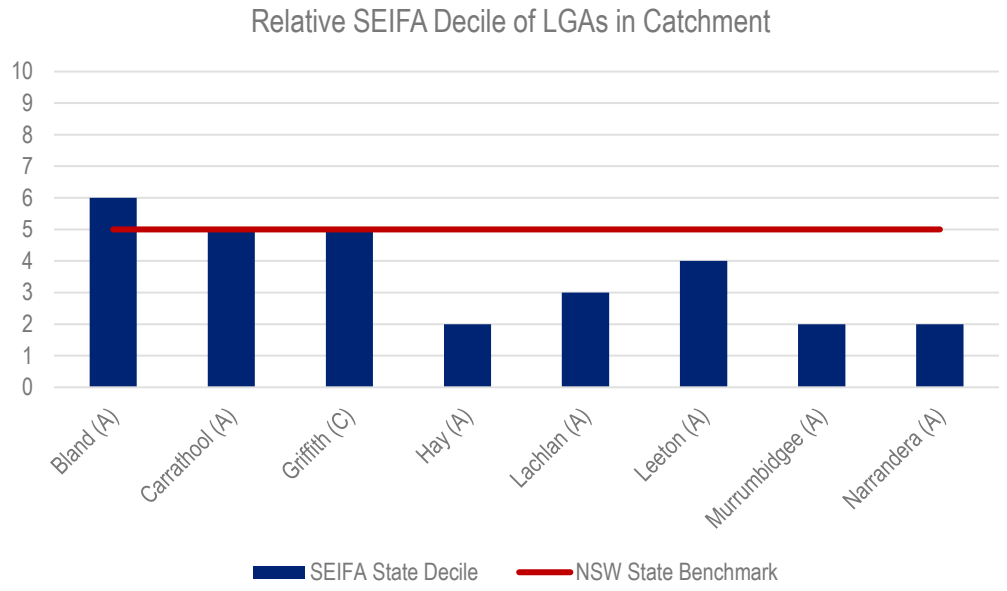
[3] Australian Bureau of Statistics, Census of Population and Housing, 2016

Dementia hospitalisations for the primary catchment have also been increasing since 2011, reaching 35 per cent above state average in 2013-2015 with 412 per 100,000 hospitalisations. While falls related injury hospitalisations have been decreasing for 10 years, the Griffith LGA rate of 853 per 100,000 is still higher than the state average (745 per 100,000 population)[4].

2.2.2. Socio-Economic Status

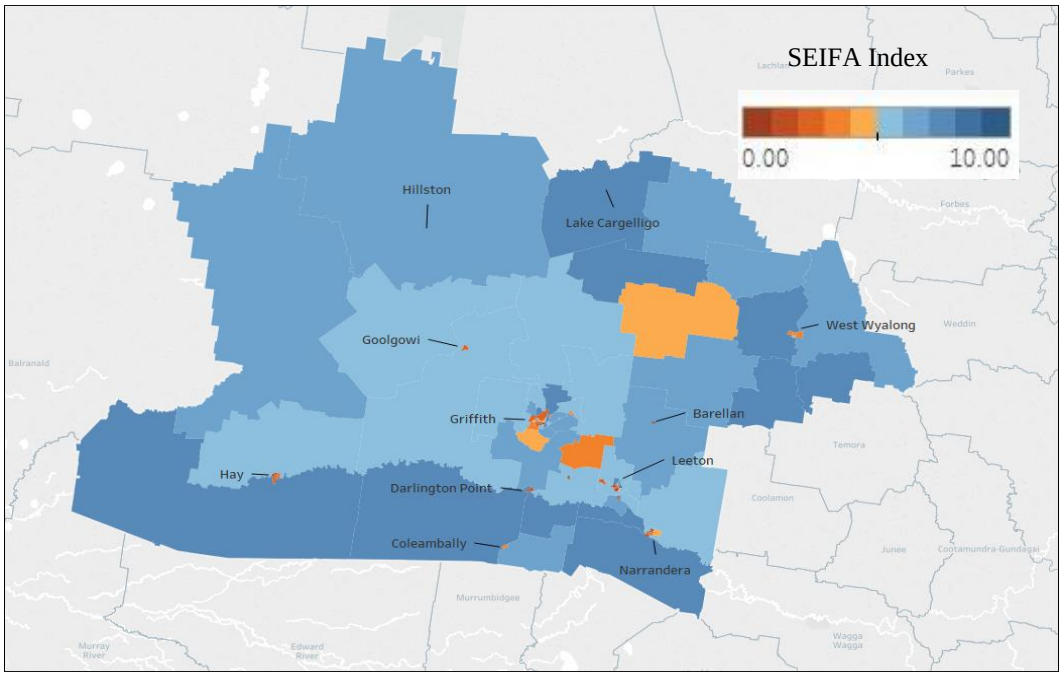
In 2011, Griffith LGA received a decile of 5 on the SEIFA Index of Disadvantage, indicating that all of the LGA's indicators are equal to the state average. A decile band of 1 indicates the top 10 per cent most disadvantaged areas, and conversely a decile band of 10 indicates the top 10 percent of advantaged areas in the State. Narrandera, Hay and Murrumbidgee are the LGAs with the greatest average disadvantage within the catchment and the MLHD.

Figure 5 Catchment LGAs SEIFA Relative Disadvantage Scores



[4] HealthStatsNSW, NSW Combined Admitted Patient Epidemiology Data and ABS population estimates (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

Figure 6 Relative SEIFA Index of Primary and Secondary Catchment Areas, where 1 is the most disadvantaged and 10 is the most advantaged.

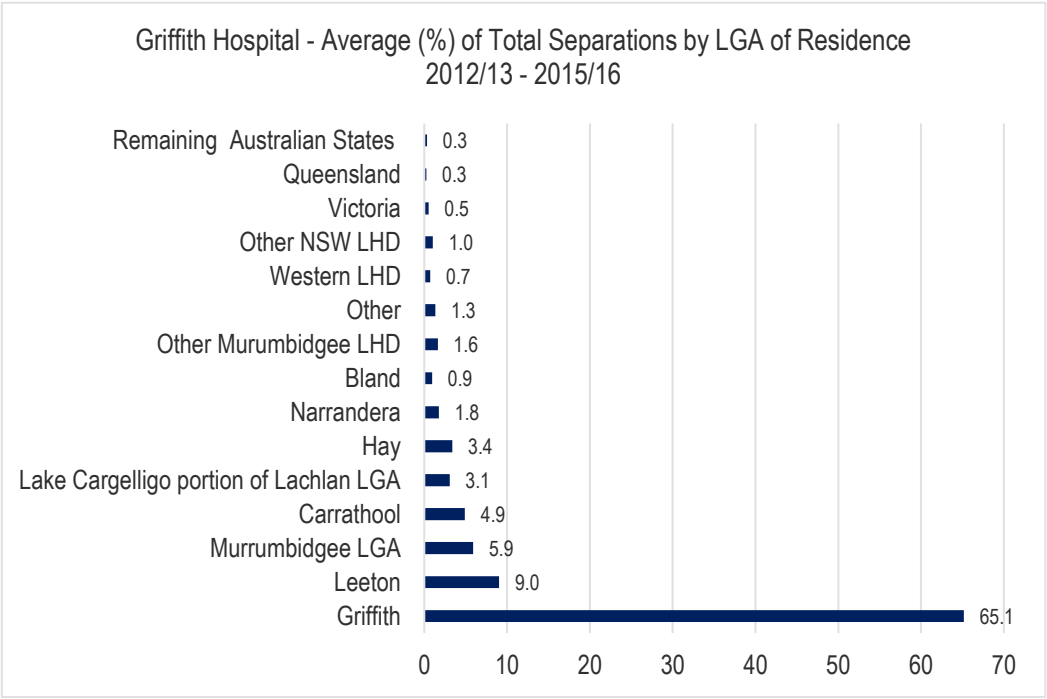


Source: 2011 SEIFA ABS

2.3. Inflows and Outflows

Figures 7 demonstrates the by LGA of residence those people who were admitted to the Griffith Hospital. The greater proportion of admissions come from the GrHS catchment.

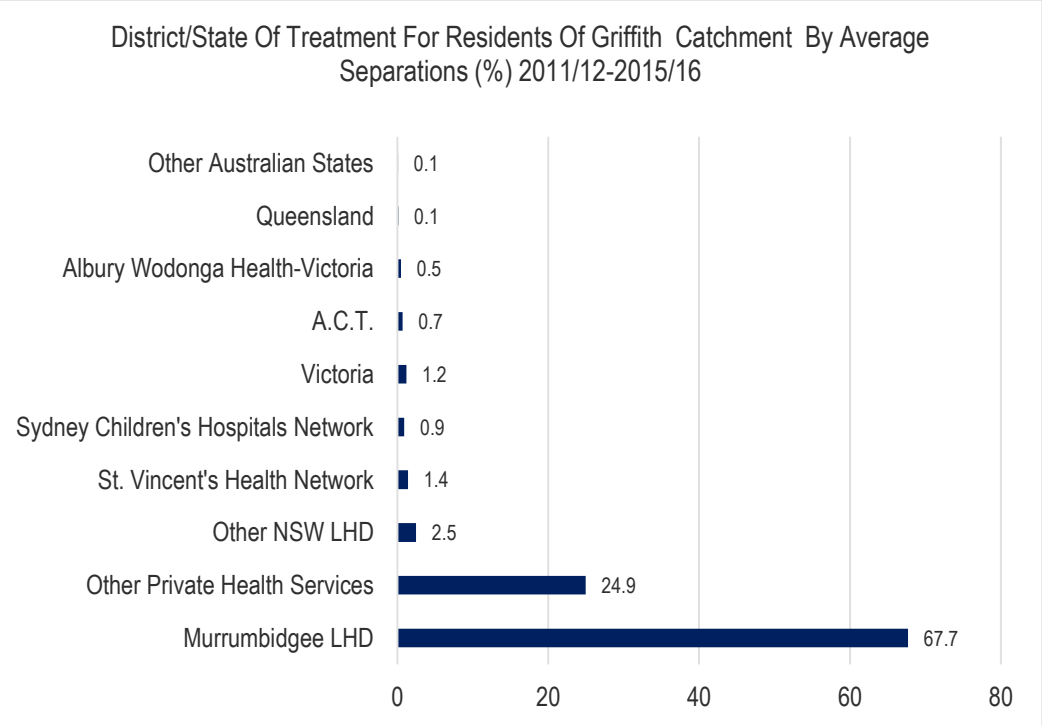
Figure 7 Griffith Hospital Separations by LGA of Residence



Source FlowInfo V.16

Figure 8 demonstrates all the places where Griffith residents received inpatient care in acute facilities. 24.9% of Griffith residents chose private facilities.

Figure 8 District/State of Treatment for Residents of Griffith Catchment



Source: FlowInfo V16

3. CURRENT SERVICES AND ACTIVITY

3.1. Current Profile and Activity

The current profile for the provision of acute services at Griffith Base Hospital is detailed in table 1 below.

Table 1 Current Acute Service Profile of Griffith Base Hospital

Department / Ward	Role Delineation	Beds / Spaces	Comments
Acute Inpatient Units			
> Surgery	Level 4	18	Plus 12 day only beds in ward areas
> Medicine	Level 4	22	Includes 4 rehab beds
Critical Care Unit	Level 4	6	1 ICU / 2 HDU / 3 CCU
Maternity, Neonatal and Paediatrics			
Obstetrics	Level 4		
> Inpatient Beds		14	
> Birthing Rooms		2	
> Assessment Room		1	Can be used as birthing room
Neonatal			
> Special Care Nursery	Level 3	4 cots	
> General Nursery		14 cots	
Paediatrics			Paediatric ambulatory and outpatient services delivered on ward
> Paediatrics	Level 3	10	
Operating Suite			
> Operating Theatres	Level 4	2	1 OT staffed / on call 24hrs / 7 days
> Recovery		5	2nd OT - sessions currently Mon and Fri only
> Admissions / Day Surgery Unit		6	
Emergency Medicine	Level 4	10 bays / 6 rooms	2 resuscitation / 8 treatment and observation

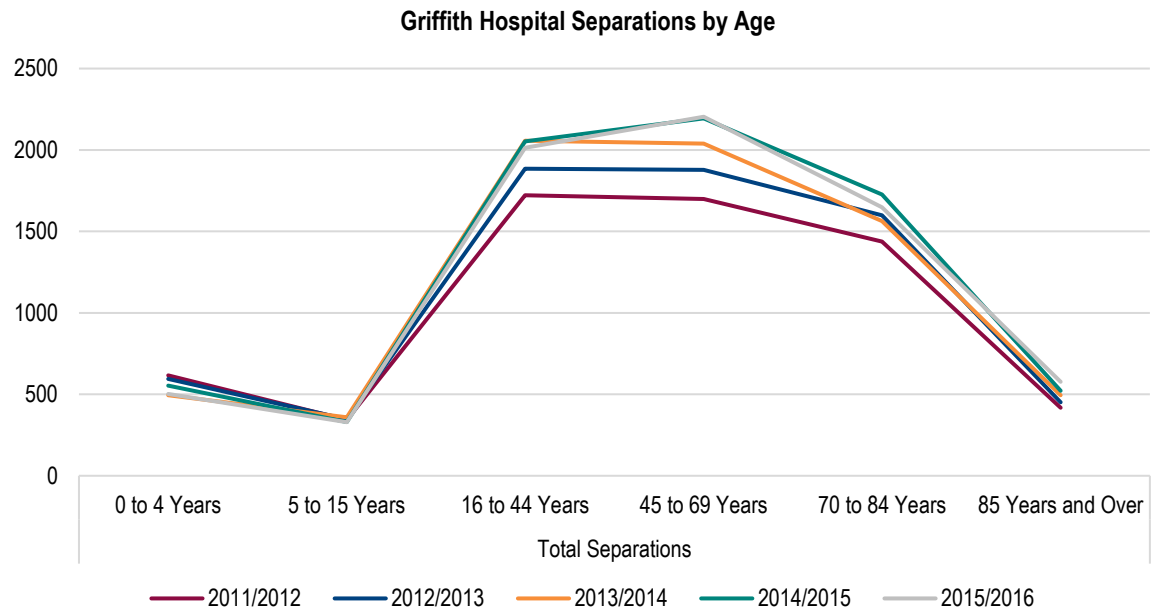
3.1.1. Role Delineation

Griffith Base Hospital delivers acute inpatient, ambulatory and outpatient clinical services, with core and some clinical services provided at role delineation Level 4.

The NSW role delineation levels of clinical services delivered locally are achieved by:

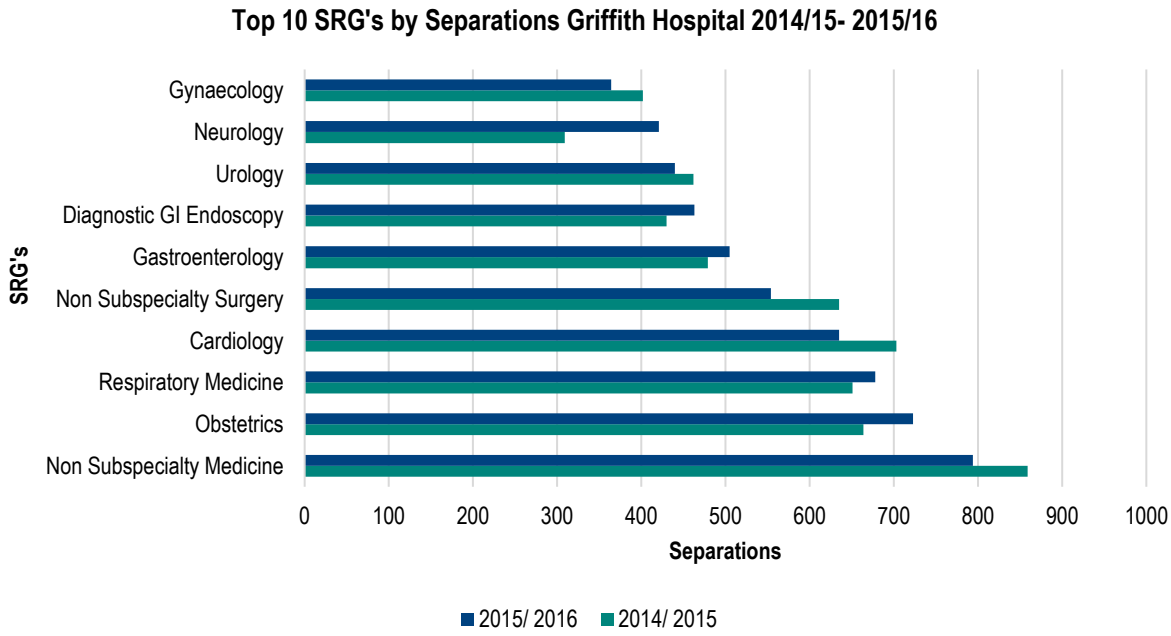
- Acute services being provided by a combination of resident medical officers, visiting surgeons and physicians, GP anaesthetists and GP obstetricians;
- A resident Director of Emergency Services;
- For medical services here are local specialists in paediatric medicine, obstetrics, general adult internal medicine and cardiology and visiting specialists in medical oncology, rehabilitation medicine, respiratory medicine, neurology, radiation oncology and rheumatology;
- For surgical services there are local specialists in general surgery and gynaecology and visiting specialists in paediatric surgery, ophthalmology and urology;
- Availability of Nursing Managers for all key services including the critical care unit, operating suite and all inpatient units;
- Local Allied Health professionals in physiotherapy, speech pathology, dietetics, social work and occupational therapy; and
- Core services of Pharmacy, Anaesthesia, Intensive Care, Operating Theatre, Pathology, Medical Information Management and Medical Imaging Services are provided to support a level 4 service.

Figure 9 Griffith Hospital Total Separations by Age Group 2011/12 – 2015/16



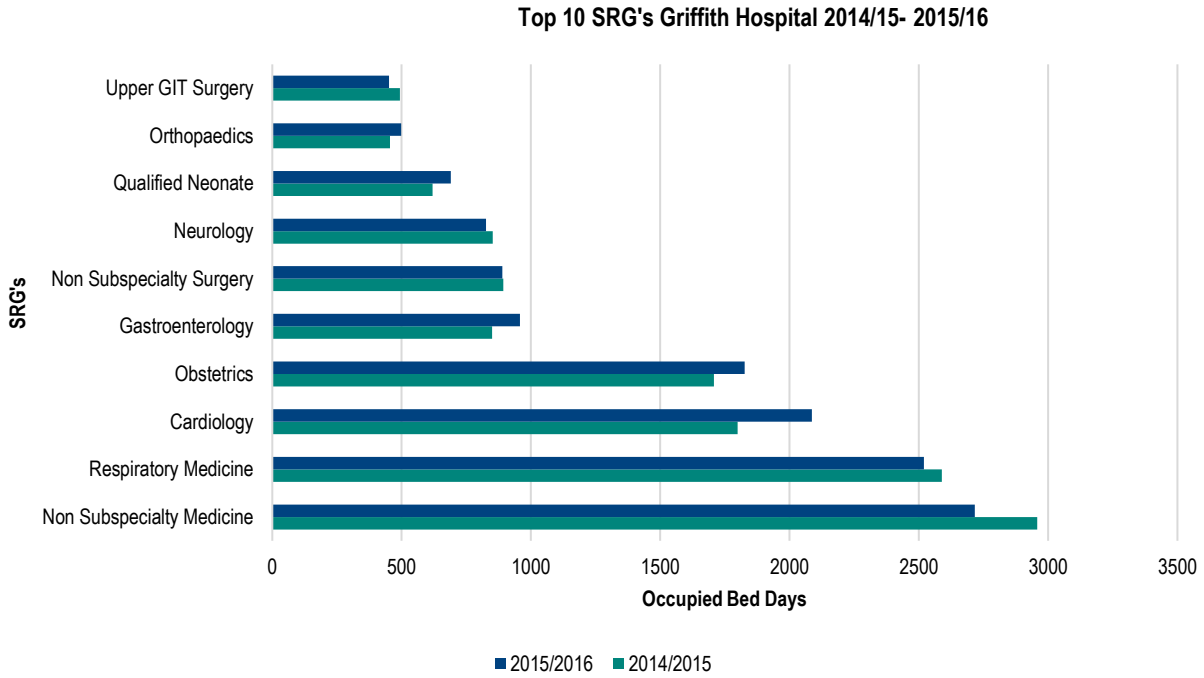
Source: FlowInfo V16. Refer to Appendix D for data table. Exclusions: HiTH Only, ED Only, SRGs: Chemotherapy, Renal Dialysis, Unqualified Neonates, Unallocated.

Figure 10 Top 10 SRGs by Separations Griffith Hospital 2014/15-2015/16



Source: FlowInfo V16. Exclusions: HiTH Only, ED Only, SRGs: Chemotherapy, Renal Dialysis, Unqualified Neonates, Unallocated.

Figure 11 Top 10 SRGs by Overnight Bed days Griffith Hospital 2014/15 – 2015/16



Source: FlowInfo V16. Exclusions: Day Only Bed days, HiTH Only, ED Only, SRGs: Chemotherapy, Renal Dialysis, Unqualified Neonates, Unallocated.

3.2. Surgical and Procedural Services

Griffith Base Hospital delivers general surgery and some sub specialty services at role delineation Level 4. Complex and high risk patients are referred to Wagga Wagga Hospital, and those requiring tertiary or quaternary services are transferred as per NSW Critical Care Tertiary Referral Network and Transfer Policy. Currently there are no ear, nose and throat or orthopaedic services provided at Griffith Hospital, resulting in a significant number of patients transferred to Wagga Wagga Hospital for minor and common procedures and after care. The table below indicates the Griffith catchment use of Wagga Wagga hospital surgical and procedural services for a five year period. Separations have been declining. Bed days have also declined, with a small increase in the final year of data.

Table 2 Surgical and Procedural Activity for Griffith catchment residents at Wagga Wagga Rural Referral Hospital, 2011/12 - 2015/16

Values	AR-DRG 80	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
Total Bed Days	Procedural	602	695	678	591	670
	Surgical	4438	4235	3934	3679	3650
Total Separations	Procedural	356	381	404	312	286
	Surgical	1348	1383	1329	1312	1271
Total Bed Days		5040	4930	4612	4270	4320
Total Separations		1704	1764	1733	1624	1557

Source: FlowInfo V16.1

The main flows to WWRRH for surgical services are for:

- Orthopaedics;
- Ear Nose and Throat/ Health and Neck;
- Urology;
- Ophthalmology; and
- Non Subspecialty Surgery.

The main flows to WWRRH for procedural services are for:

- Orthopaedics;
- Ear Nose and Throat/ Health and Neck;
- Urology;
- Ophthalmology; and
- Non Subspecialty Surgery.

See appendix D for further breakdown of activity.

3.2.1. Inpatient Services

A broad range of emergency and elective surgery is performed at Griffith Base Hospital with major specialties including, general surgery, gynaecology, urology, colorectal and upper gastro intestinal surgery. The data below shows surgical activity increasing at an annual growth rate of 4 per cent, and the average overnight length of stay is reported at 3.4 days in 2015/16. Procedural activity is classified by Diagnostic Related Group (DRG), which includes many investigative procedures and some ventilation support DRG's. The surgical ward reports an average occupancy level range of 79 per cent to 81 per cent over the last two financial years, with 18 Average Available Beds. Occupancy does not however reflect the type of patient being cared for. There is a large component of medical overflow into the surgical ward (10 to 15 patients at any given time).

Table 3 Acute Adult Inpatient Surgical and Procedural (Combined) Activity at Griffith Hospital, 2011/12 - 2015/16

	Separations					Bed days				
	2011/12	2012/13	2013/14	2014015	2015/16	2011/12	2012/13	2013/14	2014/15	2015/16
Day Only	1,128	1,241	1,305	1,411	1,340	1,128	1,241	1,305	1,411	1,340
Overnight	476	586	625	625	624	1,727	2,204	2,003	2,027	2,092
Grand Total	**1,604**	**1,827**	**1,930**	**2,036**	**1,963**	**2,855**	**3,445**	**3,308**	**3,438**	**3,432**

Source: FlowInfo V16. Surgical and Procedural Clinical Groups. Exclusions: 0-15 year old age groups, HiTH Only, ED Only, SRGs: Chemotherapy, Renal Dialysis, Unqualified Neonates, Unallocated.

3.2.2. Ambulatory Services

The 6-bed Day Surgery and Admissions Unit provides a centralised location for reception, admission, pre-operative preparation and transfer to the operating suite for patients undergoing procedures requiring day only or overnight stay. Day only patients return to the Day Surgery Unit for Stage 2 recovery and discharge.

3.2.3. Non-inpatient services

- Outpatient clinics provided to support surgical services include:
- Anaesthetics (pre admission);
- General Surgical;
- Gynaecology; and
- Dressing Clinic.

3.2.4. Operating Theatres

The operating theatre suite comprises two operating theatres and five recovery bays (although functional relationship to the theatres is poor). Currently there is funding for one operating theatre running sessions five days per week. There are additional sessions being run in the second theatre to accommodate the current waiting list and emergency surgery. There are no dedicated procedural suites, with all procedures being performed in the main operating theatre complex. An emergency surgery service is provided as required with 24 hour on-call coverage.

Surgical and procedural services are provided by staff specialists in addition to visiting medical officers contracted under a fly-in fly-out model. Anaesthetic and pain management services are provided by staff specialist and GP anaesthetists. Consultations with the general surgeons indicated there were issues with access to theatres at times due to emergency surgery and rescheduling (particularly for fly in fly out specialties).

Leeton Hospital also provides limited surgical services to the residents of the Griffith catchment. Leeton has one Operating theatre and one recovery bay and delivers services at a role delineation level of 3.

3.3. Medical Services

A range of Medical services are provided at Griffith Base Hospital predominately at role delineation level 4. There are minimal flows to Wagga Wagga for medical services from the Griffith catchment. If psychiatry is removed, demand by Griffith catchment at WWRRH equates to an average of 11 beds per annum, with small numbers of bed days for individual specialties. The small numbers are likely to be indicative of referrals for higher acuity patients.

There are no inpatient chemotherapy or public radiation oncology services provided in MLHD. Senior medical coverage is provided by 1 staff specialist physician and three to four fly-in consultants working a week on roster.

3.3.1. Inpatient Services

Main clinical specialties include respiratory, cardiology, endocrine/diabetes and geriatrics and the highest Service Related Groups (SRG) include Cardiology, Non Sub Speciality Medicine, Gastroenterology, Neurology and Respiratory Medicine. The Medical service is supported by highly functioning Hospital in the Home (HiTH) service providing in-reach and out-reach services. The inpatient unit frequently reaches capacity resulting in medical outliers being cared for in surgical and obstetric inpatient units. The medical ward has reported an average occupancy level of 93 per cent to 89.5 per cent over the last three financial years with 22 Average Available Beds.

Occupancy of the ward does not capture the full medical inpatient demand however as medical patients are cared for on the surgical ward as previously stated (10-15 patients at any given time). The layout of the ward with four bedded rooms (in the main) also impacts on male/female patient placement.

Table 4 Acute Adult Inpatient Medical Activity at Griffith Hospital, 2011/12 - 2015/16

	Separations					Bed Days				
	2011/12	2012/13	2013/14	2014/15	2015/16	2011/12	2012/13	2013/14	2014/15	2015/16
Day Only	502	590	542	590	685	502	590	542	590	685
Overnight	2,497	2,727	2,956	3,210	3,078	9,733	10,141	10,705	11,322	11,293
Grand Total	2,999	3,317	3,498	3,800	3,763	10,235	10,731	11,247	11,912	11,978

Source: FlowInfo V16. Inclusions: Clinical Groups: Medical, Mental Health, Unallocated. Exclusions: 0-15 year old age groups, HiTH Only, ED Only, SRGs: Chemotherapy, Renal Dialysis, Unqualified Neonates.

Sub-acute activity within the medical inpatient setting is shown in the table below. There has been an overall increase in bed days (40%) and separations (25%) from the baseline year. Maintenance care has shown a 165% increase in bed days compared to 38% increase for palliative care and a 6% increase for

rehabilitation bed days. This is reflective of longer stays for people who are likely to have greater comorbidities and are older (particularly the 85 and over age group).

Table 5 Griffith Hospital Subacute Activity 2011/12-2015/16

	Separations					Bed Days				
	2011/12	2012/13	2013/14	2014/15	2015/16	2011/12	2012/13	2013/14	2014/15	2015/16
Rehabilitation	118	122	147	115	97	1,334	1,480	1,475	1,225	1,411
Maintenance	62	54	67	94	91	384	502	510	842	1,018
Palliative Care	76	103	92	81	132	510	500	623	504	702
Grand Total	256	279	306	290	320	2,228	2,482	2,608	2,571	3,131

Source: FlowInfo V16. Subacute Clinical Groups only.

3.3.1.1. Rehabilitation Medicine

Allied Health led ambulatory rehabilitation services are provided at Griffith Base Hospital five days per week. Additionally four beds are assigned on the medical inpatient ward to cater for rehabilitation patients. These patients also access the day rehabilitation therapy area, which impacts on availability for outpatient rehabilitation services due to current layout and size of the space. Level 5 rehabilitation services for MLHD are provided at Wagga Wagga Hospital.

3.3.2. Ambulatory Services

3.3.2.1. Oncology Unit

Specialist medical oncology services are provided for patients at Griffith Base Hospital under a service agreement between MLHD and Riverina Cancer Care Centre. Haematology specialist services are provided at Griffith Base Hospital by St Vincent's Hospital, Sydney. The four-chair chemotherapy unit and infusion centre provides services Monday to Friday. The current space is insufficient and an additional treatment chair is frequently added to try to manage the workload. There is nominally a treatment bed available, however its current location in the staff office limits is use. Instead staff use an examination bed in one of the consultation rooms to administer treatments as required.

Treatment complexity, a rapidly expanding range of new treatments, as well as the increasing number of indications for use of monoclonal antibody therapies in cancer and non-cancer have placed and will continue to place increasing demand on the unit capacity and workforce. Changes in treatment availability mean that patients who once were not eligible for treatment or for whom there was no available treatment are now being treated. New treatments frequently take longer to administer and patients are now treated for years instead of for a short period of time. This means that there is frequently no longer the turnover of patients as treatment comes to an end. Instead, the number of patients being actively treated continues to increase.

The table below is only reflective of supply and not demand, which will be reflected in future service projections based on cancer incidence for the Griffith catchment. The supply is in line with existing infrastructure capacity.

Table 6 Chemotherapy Activity at Griffith Hospital, 2011/12 - 2015/16

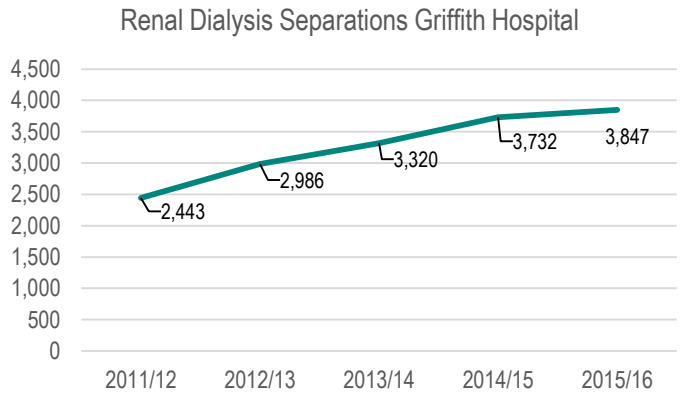
Year	2014/15	2015/16	2016/17
Non-Admitted	1,564	1,623	1,829
Admitted	48	42	N/A
Total	1,612	1,665	1,829

Source: FlowInfo V16 and Non-Admitted

3.3.2.2. Renal Dialysis Unit

Renal Services are provided as a single managed clinical stream across MLHD with Level 5 services provided at Wagga Wagga Rural Referral Hospital and Level 4 services provided at Griffith Base Hospital. Tertiary level services are provided at Royal Prince Alfred Hospital, Sydney. The Renal Dialysis Unit is a satellite unit of Royal Prince Alfred Hospital and comprises 6 chairs and 1 peritoneal dialysis training chair. The unit provides service on 2 shifts / 7 days per week and is currently exceeding its capacity. In-reach services, vascular access management, kidney biopsy and interventional radiology are currently provided at Royal Prince Alfred or Wagga Wagga Hospitals. Specialist medical services are provided by a fly-in fly-out nephrologist from Sydney. Renal dietetics and social work input is from Wagga Wagga.

Figure 12 Renal Dialysis Separations Griffith Hospital



Source: FlowInfo V16. SRG Renal Dialysis only. Exclusions: HiTH Only, ED Only.

3.3.2.3. Hospital in the Home (HiTH)

The HiTH service at Griffith Base Hospital provides multidisciplinary acute, subacute and post-acute in-reach and out-reach services for adults greater than 17 years living within a 20km radius. Care is provided in the home, Residential Aged Care Facility or ambulatory setting as an alternative to hospital admission. HiTH has 10 virtual beds and operates from a small space with capacity for one trolley and two chairs. Patient referral is via the emergency department, inpatient units or general practitioners. Senior medical coverage is provided by one staff specialist physician and general practitioners with admitting rights.

Table 7 HiTH Hours and Calculated Bed days, Griffith Hospital, 2011/12-2015/16

	2011/12	2012/13	2013/14	2014/15	2015/16
Hours - Acute	27,806	41,003	39,528	43,087	37,364
Hours - Sub and Non-Acute	50	336	140	154	51
Grand Total Hours	**27,857**	**41,338**	**39,668**	**43,241**	**37,415**
Calculated Bed days - Acute	1,159	1,708	1,647	1,795	1,557
Calculated Bed days - Sub and Non-Acute	2	14	6	6	2
Grand Total Calculated Bed days	**1,161**	**1,722**	**1,653**	**1,802**	**1,559**

Source: FlowInfo16. HiTH Flag. Exclusions: ED Only, Chemotherapy, Renal Dialysis, Unqualified Neonates

3.3.2.4. Cardiology Services

Griffith Base Hospital currently provides onsite stress testing, echocardiography, inpatient and outpatient Holter monitoring and a cardiac rehabilitation program.

3.3.3. Non Inpatient Services

Outpatient clinics are provided in multiple locations due to existing infrastructure restrictions. Outpatient clinic groups include:

- General Medicine;
- Sub specialty medicine including endocrinology, neurology, cardiology, respiratory and TB, rehabilitation, rheumatology and renal;
- Oncology, radiation oncology and haematology;
- Maternity; and
- Paediatric.

3.4. Critical Care Services

3.4.1. Critical Care Unit

Level 4 Adult Intensive Care and Coronary Care Services are currently provided from a six-bed critical care unit located in close proximity to the emergency department and operating theatre suite. There are formal network and telehealth link with the level 5 Intensive Care Unit at Wagga Wagga Rural Referral Hospital (WWRRH). Patients requiring tertiary or quaternary services are transferred in accordance with the NSW Critical Care Tertiary Referral Network and Transfer of Care (Adults) or (Paediatrics) Policy (2010).

The critical care unit comprises one Intensive Care bed, two High Dependency beds and three Coronary Care beds. The unit provides Elective Trans Oesophageal Echocardiogram (TOE) and cardioversion service. Additional services supporting inpatient units include insertion of central lines, point of care pathology, clinical emergency response (CERS), telemetry for up to four patients as outliers and support to cardiology/stress testing services. Senior medical cover is provided by staff specialists and VMOs. Most recently there has been a part time Director appointed to this Unit which operates with medical registrar coverage on a full time basis.

Consultations indicated there was a lack of telemetry on ward (currently four beds on medical ward).

Table 8 ICU and HDU Activity at Griffith Hospital, 2011/12-2015/16

	2011/12	2012/13	2013/14	2014/15	2015/16
Total Hours - ICU	4,028	3,165	8,179	7,128	7,819
Total Hours - HDU	14,482	15,768	18,982	22,110	24,357
Total ICU and HDU Hours	18,511	18,934	27,161	29,239	32,176
Calculated ICU and HDU Bed days	**771**	**789**	**1,132**	**1,218**	**1,341**

Source: FlowInfo V16. Exclusions: HiTH Only, ED Only, SRGs: Chemotherapy, Renal Dialysis, Unqualified Neonates.

3.4.2. Emergency Medicine

Griffith Base Hospital provides Level 4 emergency services and support services to small hospital sites via a telehealth link when there is no medical officer available at those sites.

The emergency department has:

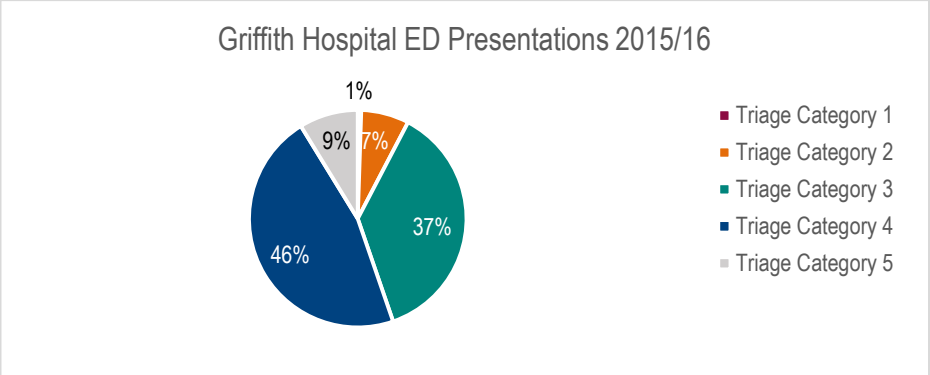
- 15 treatment spaces;
- 10 bays - two resuscitation and eight treatment / observation, including one paediatric bay; and
- 5 rooms – three consult, one procedure, and one mental health assessment room (not a safe assessment room).

There is no dedicated sexual assault assessment room.

Senior medical cover is provided by staff specialist and locum Emergency Medicine Physicians. Two Registrar or Career Medical Officers provide after-hours medical cover for the emergency department, critical care unit and inpatient units.

There has been a large increase in recent years of triage 2's and 3's, which puts pressure on space in ED as higher acuity patient take longer to work up, and there may also be delays in freeing space in inpatient units for admission.

Figure 13 Griffith Hospital ED Presentations by Triage Category 2015/16



Source: FlowInfo V16. Refer to Appendix D for corresponding data

Table 53 in Appendix D indicates that presentations for all triage categories are increasing. Local data indicates a 12-14% increase from 2015/16 activity to 2016/17 activity. The view at consultations was that the increase in the past few years is due to secondary refugee settlement, which has increased the population. There has also been significant industry increase with a return of McWilliams to the region, and ongoing growth in Steggles Chicken farms, which is providing employment opportunities, including for refugees settling in the area.

The majority of presentations to the Emergency Department are from the catchment communities.

Table 9 Griffith Hospital Emergency Department Presentations by LGA of Residence

	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016
Griffith (C)	14,549	14,110	14,128	13,932	14,770
Murrumbidgee (A)	955	1,048	1,051	991	1,049
Leeton (A)	816	746	763	670	771
Carrathool (A)	636	663	576	616	676
Lake Cargelligo part of Lachlan (A)	251	224	217	345	542
Narrandera (A)	304	218	234	226	272
Hay (A)	286	337	209	212	243
Bland (A)	123	86	112	96	107
Catchment Total	17,920	17,432	17,290	17,088	18,430
Murrumbidgee LHD Total	18,165	17,609	17,501	17,283	18,621
Other NSW	407	352	394	411	477

	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016
Other States	287	319	284	366	361
Overseas	250	340	346	378	405
Grand Total	19,109	18,620	18,525	18,438	19,864

Source: FlowInfo V16

Table 10 Griffith Hospital Emergency Department Presentations by Age and Total Hours

	2015/2016	
Age Group 3 Categories	Total Presentations	Total Time In ED hrs
0 to 15 Years	4999	9088
16 to 64 Years	11405	27904
65 Years and Over	3503	13019
Grand Total	19907	50012

Source: FlowInfo V16

3.5. Women's and Children's Services

Maternity and neonatal services at Griffith Base Hospital are provided as part of a tiered maternity and neonatal network within the MLHD. Critically ill neonates and women with high risk pregnancies that require inter-hospital transfer are transferred in accordance with the NSW Critical Care Tertiary Referral Network (Perinatal) policy.

3.5.1. Maternity Services

A Level four maternity service is provided at Griffith Base Hospital, including births from 34 weeks. There are a number of models of care available including care by medical officers, midwives, and community based home birthing services. In 2015/16 there were 639 overnight separations and 74 day only separations from the maternity unit.

3.5.1.1. Inpatient Services

Maternity inpatient services consist of:

- 14 obstetric beds (and 14 bassinets); and
- 2 birthing rooms and one assessment room – can be used as birthing room.

The ward report shows the maternity ward has an average annual occupancy level of around 35 per cent, which has increased over time from 29 per cent in 2012/13 There have been slight increases in the numbers of births. The caesarean rate over the last five years has ranged between 29.2 per cent up to 36.7 per cent. It should be noted however that Leeton hospital has been unable to attract a GP Obstetrician despite repeated attempts to recruit. Leeton hospital is commencing a midwifery led model to provide a birthing service for well women with low risk pregnancies. Women who are not able to be managed within this model at Leeton will flow to Griffith. It has been estimated that approximately 50 per cent of women will fall into this category based on the experience of clients currently attending at Griffith from Leeton. Currently there is at least one woman from Leeton on the maternity ward at any given time.

Table 11 Maternity Activity at Griffith Hospital, 2011/12-2015/16

	Separations					Bed Days				
	2011/12	2012/13	2013/14	2014/15	2015/16	2011/12	2012/13	2013/14	2014/15	2015/16
Day Only										
721 - Antenatal admission	40	52	76	67	76	40	52	76	67	76
722 - Vaginal delivery	7	10	7	7	7	7	10	7	7	7
723 - Caesarean delivery			1					1		
724 - Postnatal admission	1	2	5	3	1	1	2	5	3	1
Day Only Total	**48**	**64**	**89**	**77**	**84**	**48**	**64**	**89**	**77**	**84**
Overnight										
721 - Antenatal admission	131	131	130	103	123	194	183	194	162	167
722 - Vaginal delivery	327	313	344	325	314	948	873	977	944	913
723 - Caesarean delivery	146	146	147	134	182	586	589	565	555	708
724 - Postnatal admission	27	16	21	24	20	46	41	46	46	39
Overnight Total	**631**	**606**	**642**	**586**	**639**	**1,774**	**1,686**	**1,782**	**1,707**	**1,827**
Grand Total	**679**	**670**	**731**	**663**	**723**	**1,822**	**1,750**	**1,871**	**1,784**	**1,911**

Source: FlowInfo V16. Inclusions: Maternity Clinical Group only. Exclusions: 0-15 Age Groups, HiTH Only, ED Only, SRGs: Chemotherapy, Renal Dialysis, Unqualified Neonates, Qualified Neonates.

3.5.1.2. Neonatal Services

Level 3 neonatal services are provided at Griffith Base Hospital to support the Level 4 maternity service. There are four special care nursery cots. The ward report indicates that the occupancy level for this ward is around 41 per cent.

In 2014/15 there were 439 special care bed days.

Table 12 Special Care Nursery Activity at Griffith Hospital, 2011/12-2015/16

	2011/12	2012/13	2013/14	2014/15	2015/16
Total Hours - Special Care Nursery	11,725	8,651	6,966	9,975	10,539
Total Calculated Bed days - Special Care Nursery	489	360	290	416	439

Source: FlowInfo16. Inclusions: SCN Hours Only, Qualified Neonates Only. Exclusions: HiTH Only, ED Only.

3.5.1.3. Non Inpatient Services

Non inpatient services are provided through:

- GP and midwifery led ante-natal clinics;
- Obstetrician led ante-natal and post-natal clinics; and
- Group sessions.

3.5.2. Paediatric Services

Level 3 paediatric medicine and paediatric surgical services are provided at Griffith Base Hospital.

3.5.2.1. Inpatient Services

Paediatric inpatient services are provided from a 10 bed paediatric unit located physically remote from the main hospital clinical services. The inpatient ward also provides four beds/cots for second stage recovery

on paediatric surgery days. The Paediatric and Oral Health surgeons bring their own paediatric anaesthetists. Overflows into the inpatient beds occurs on these days.

The ward has a paediatric 'safe' room providing Child and Adolescent Mental Health Service (CAMHS) capability. The room is used flexibly for other children as required. The CAMHS clients are admitted under the Paediatricians.

The paediatric ward occupancy level is reported to be consistently around 32 per cent to 35 per cent. The average overnight length of stay was reported at 1.8 days in 2015/16, which is consistent with peer hospitals. Average occupancy may not be an appropriate indicator of need for paediatrics given the ward can be empty at times over Christmas, which will skew the data. The use of inpatient beds for second stage recovery cannot be averaged over 365 days and will not be indicative of need. Theatre list numbers may provide a better indicator of activity and bed use to meet this model of care. On paediatric theatre days, lists are between 12-15 patients.

Table 13 Paediatric Activity at Griffith Hospital 2011/12-2015/16

	Separations					Bed Days				
	2011/12	2012/13	2013/14	2014/15	2015/16	2011/12	2012/13	2013/14	2014/15	2015/16
Day Only	171	147	145	150	119	171	147	145	150	119
Overnight	569	599	578	600	552	1,106	1,081	1,059	1,028	979
Grand Total	**740**	**746**	**723**	**750**	**671**	**1,277**	**1,228**	**1,204**	**1,178**	**1,098**

Source: FlowInfo V16. Inclusions: 0-15 Age Groups only. Exclusions: Maternity Clinical Group, HiTH Only, ED Only, SRGs: Chemotherapy, Renal Dialysis, Unqualified Neonates

3.5.2.2. Non Inpatient Services

- Outpatient and ambulatory services are currently provided in an area adjacent to the paediatric inpatient unit;
- Senior paediatric medical cover is provided by staff specialists and VMOs; and
- There are four family cottages (10 beds in total) located on the campus.

3.6. Mental Health

The MLHD Mental Health Service provides a 24 hour consultation service for adults or paediatric patients presenting to the emergency department or who are inpatients at Griffith Base Hospital.

Mental health services accessible by the Griffith catchment communities include:

- In-reach and out-reach support provided by Griffith adult community team;
- Adolescent mental health inpatient beds at Orange, Hornsby and Shellharbour;
- Child and Adolescent Mental Health Service (CAMHS) in-reach and a 'safe' room on the paediatric ward,
- Mental Health emergency department liaison CNC community based – education and planning;
- Specialised Mental Health Services for Older Persons (Wagga based team) – in-reach to acute hospitals, Residential Aged Care Facilities, and communities;
- 2/52 psychiatrist visits + access to other services via GP and PHN; and
- Inpatient older person's mental health unit and dementia assessment unit in Wagga Wagga.

Consultations with medical staff indicated there are one to two mental health patients every night requiring an admission to an inpatient ward. There was consensus that Griffith Base Hospital needs better arrangements for managing high risk voluntary and involuntary patients while awaiting transfer to inpatient

mental health facilities. Activity for psychiatry at Griffith Base Hospital over the past five years is shown below.

Table 14 Psychiatric Activity at Griffith Hospital 2011/12-2015/16

Day Only Name	Values	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
Day only	Total Separations	37	47	30	60	47
	Total Bed Days	37	47	30	60	47
Overnight(s)	Total Separations	54	55	65	63	44
	Total Bed Days	140	115	138	105	110
Total Separations		**91**	**102**	**95**	**123**	**91**
Total Bed Days		**177**	**162**	**168**	**165**	**157**

Source: FlowInfo V16. Includes ED only

Bed days equate to an average of less than one bed required per day. The majority of adult mental health services are met (in order of separation volumes) by:

- WWRRH;
- Private Hospitals;
- Griffith Hospital;
- Narrandera Hospital; and
- Leeton Hospital.

The largest number of corresponding bed days were at:

- WWRRH;
- Private Hospitals;
- Orange;
- Narrandera Hospital; and
- Griffith Hospital.

See appendix D1.

3.7. Drug and Alcohol

An acute drug and alcohol program is provided from Griffith Base Hospital as an inpatient, outpatient and home based service with in-reach and out-reach support. The service works with other staff to access different at risk groups within the community.

Services accessible by the Griffith catchment communities include:

- Calvary Private Hospital, Wagga Wagga – inpatient drug and alcohol rehabilitation;
- Canberra inpatient unit;
- Griffith Specialist Community Mental Health Drug & Alcohol (MHDA) Team; and
- Services provided by non-Government Organisations (NGO's) and Aboriginal Organisations in Griffith and provided by outreach to catchment communities.

3.8. Current and Proposed Clinical Support Services

Clinical support services on site at Griffith are outlined below.

3.8.1. Allied Health

Allied Health services at Griffith Base Hospital are provided within the emergency department, inpatient units, outpatient and community settings to address the allied health needs of a wide range of patient groups. Current workforce constraints limit allied health services provided onsite. Current services include occupational therapy, physiotherapy and Dietetics with limited social work and speech pathology services. A Social Worker has recently been recruited. The allied health workforce will need to expand to meet additional proposed services.

3.8.2. Pharmacy Services

Pharmacy Services are provided at level 4 with compounding onsite for monoclonal antibody therapy. The service serves as a Hub for close sites of Leeton, Hillston and Lake Cargelligo. Chemotherapy is sourced from Slade Pharmaceuticals in Sydney. There is an arrangement with St Vincent's Private Hospital, Griffith for loan items and stock rotation.

An Infectious Disease service in partnership with Westmead Hospital has been established to support an antimicrobial stewardship role at Griffith.

Griffith pharmacy services will remain at a role delineation of 4.

3.8.3. Medical Imaging Services

Medical imaging services are provided at level 4 role delineation and include general x-ray, digital orthopantomogram (OPG) for dental, ultrasound, and Computerised Tomography (CT). Imaging Associates are contracted to provide this service and provide public, private and outpatient services. The full range of medical imaging services will need to be maintained with expanded services.

St Vincent's Private Community Hospital will have an increasing need for imaging services over time as service volumes increase. There is an opportunity to develop a single comprehensive imaging service at GrBH to service both facilities. A commercial partnership between the two services may be possible.

Good access and drop off facilities are required for patients in the public, private and outpatient cohorts. The location of the service to fulfil this requirement will need to be considered during master planning. Continuity of the service during the redevelopment is also paramount.

Additional service scope to be included in any redevelopment include space for MRI and mammography (including BreastScreen), and better fluoroscopy to facilitate a wider range of procedures. Future digital advances may impact on the model of care for delivery of these services.

The combination of public and private medical facilities, as well as a modern imaging facility will be significant attraction to recruiting and retaining specialists in future years, particularly radiologists. In addition, such a facility would be very attractive to training, and retaining technical staff, which improves ongoing viability of the service.

3.8.4. Nuclear Medicine

Nuclear Medicine is provided at level 4. This is a new service – currently one room operational with ventilation-perfusion (VQ) scan perfusion capability. This service will continue in any redevelopment.

3.8.5. Pathology Services

Pathology Services are provided at a level 5 role delineation through an agreement with NSW Health Pathology. Existing pathology services will continue to be provided to meet the requirements of a level 5 service.

3.8.6. Sterile Supply Services

Griffith hospital provides sterilising services for Griffith and facilities within its catchment. Griffith Base Hospital will require in house sterilising services to meet the increased surgical load projected due to reversal of flows.

3.8.7. Back of House Services

Back of House services, including kitchen are contracted by MLHD from NSW HealthShare. Food preparation facilities and a full suite of back of house services will be required to support the Base Hospital.

3.8.8. Engineering and Biomedical Support services

An asset management team is located on site and will continue to provide engineering and biomedical support services.

3.8.9. ICT services

MLHD has had major investment in ICT services over the past few years with wireless connectivity and the introduction of CHOC and EMR2. Any future development will be required to be digitally enabled to meet future investments planned by the NSW MoH. Early engagement with the ICT team in facility planning is required to ensure enhanced digital capability is achieved.

3.8.10. Other services

Medical records management, administrative and patient services and a range of hotel services on-site or networked are provided to support clinical activities.

3.9. Other Support Services

Griffith also provides a range of ambulatory and outpatient services including:

3.9.1. Specialist Outpatient Clinics

There are 14 consult / interview rooms operating in five physically separate locations, including the paediatric inpatient unit and adjacent to the maternity unit.

3.9.2. Regional Dental Service

The regional public dental service is supported by four chairs and a monthly dental surgery list at GrHS. Specialty dental and paediatric oral surgery services are based in Wagga Wagga.

3.9.3. Palliative Care

A generalist palliative care service is provided by community health, primary care, private and non-government organisations. The service consists of the following:

- Home based service – large catchment;
- Community based outreach service;
- No paediatric palliative care in the community; and
- Limited access to palliative care physicians and CNC at Wagga Wagga Hospital.

3.9.4. Aboriginal Health Services

The Griffith Aboriginal Health Unit provides a comprehensive, culturally appropriate service to Aboriginal communities within GrHS catchment. Staff provide services and support to Aboriginal patients and their family in inpatient, ambulatory and community settings, and also act as a link between hospital staff and patients.

Notably the current infrastructure does not always have culturally appropriate spaces for this community.

3.9.5. Chronic and Complex Care - Connecting Care Program

The MLHD Connecting Care Chronic Disease Management Program aims to enhance the coordination and integration of care for clients who have chronic disease, to enable them to maintain their independence at home, to have an appropriate quality of life and to avoid unnecessary hospitalisation. This is achieved by collaborative clinical practice between local community teams and general practice, with a framework to enhance local communication and shared knowledge and information between all providers of health and community services.

The Griffith Health Service Coordinator of Connecting Care supports the enrolment of eligible individuals and coordinates a multidisciplinary approach to care following enrolment. MLHD has worked in partnership with the Murrumbidgee Primary Health Network to support the implementation of the NSW Chronic Disease Management Program within general practice. The partnership has established a Griffith GP Liaison Nurse to support improved integrated care.

3.9.6. Integrated Care

The NSW Health Integrated Care Strategy (2014-2017) involves the provision of seamless, effective and efficient care that reflects the whole of a person's health needs; from prevention through to end of life, across both physical and mental health, and in partnership with the individual, their carers and family. It requires greater focus on a person's needs, better communication and connectivity between health care providers in primary care, community and hospital settings, and better access to community-based services close to home.

Programs enhancing integrated care for the Griffith catchment include Hospital in The Home, chronic disease management, a centralised intake service that standardises access and referrals to community based services, rapid assessment and other hospital avoidance and substitution initiatives that can be provided in the person's home or close to where they live.

There needs to be further investment and concentration on vulnerable communities such as Aboriginal, CALD, and seasonal workers.

3.10. Primary/ Community Health Service Clinics

The Griffith Health Service provides a comprehensive range of community and primary health services in leased premises. Access the community services is through a centralised intake service based at Wagga Wagga. The MLHD governance of community health services is through streamed programs. Stream managers are based across the LHD. Collocation is therefore important to maintain collegial support, connection with other streams and to prevent silos.

Integral to this service provision are a range of clinics and services described below.

Table 15 Griffith Health Service, Community Health Services – Clinics and Outreach Services

Clinics	Comments
Child and Family	Immunisation clinics, Home visiting, Daily clinic appointments, weekly mothers group
Sexual Health	Clinic appointments, 3 monthly VMO Sexual health clinic
Women's Health	Clinic appointments, outreach clinics (Hay, Hillston, Darlington Point, Coleambally)
Breast Care Nurse	Home visiting, clinic appointments
Diabetes Educator	Home visiting, clinic appointments, Outreach to Darlington Point, Coleambally, Hillston
Speech Therapy	Clinic appointments, outreach to Hay, and Hillston
Occupational Therapy	Home visits, Outreach to Hay, Hillston, Darlington Point and Coleambally
Palliative Care	Home visits, After hours on call
Community Nurses	Home visits
Sexual Assault	Clinic appointments, outreach service Hay, Hillston, Darlington Point, Coleambally
Respiratory/TB	Home visits, clinic appointments, Pulmonary Rehab Groups
Asthma	Clinic appointments
Generalist Counsellor	Clinic appointments, Home visiting, outreach as required
ACAT	Home assessments, outreach service, Hay, Hillston
Slow Stream Rehab	3 mornings/ week
Thai Chi	3 times per week
Day Care Respite	4 times/week
Transitional Rehabilitation Aged Care Service	Home based rehab service, and once weekly exercise program run out of aged care
Dental clinic	Clinic appointments, outreach service provided to Hillston fortnightly
Child Protection counselling services	Appointments at GCHC
Audiometry Paediatric	Once weekly clinic
STEPS	Pre-School vision screening outreach service

3.11. Other Community Based Services

Services currently provided by the Griffith Health Service in owned or leased accommodation off-site include:

- Mental Health and Drug & Alcohol Services;
- Most community health services including community nursing services, population health services, sexual health and HIV/AIDs services;
- Physical Abuse and Neglect of Children (PANOC) – child protection services;
- Aged Care Assessment Team (ACAT), Aged Care Services in Emergency Teams (ASET) and Integrated Care Connecting Care; and
- Ambulatory Day Aged Care Services (Transitional Rehabilitation Aged Care Service (TRACS) and Community Acute and Post-Acute Care (CAPAC) - see below).

Improved service coordination could be achieved if these services were collocated. The community health centre consists of eight consult/ interview, six clinics and a hearing booth, with a large group room and meeting room. The mental health facility provides a further five consult/ interview spaces – total 20 consult/clinic spaces, group room and meeting rooms plus staff office accommodation.

3.12. Aged Care Services

While not responsible for the provision of community and/or centre based residential aged care services, the MLHD and the GrHS have a serious interest in ensuring that sufficient capacity exists within their communities to ensure people are not inappropriately accommodated in hospitals when independent home-based living is no longer possible. The existence of a robust and adequate range of residential and home based aged care services means that acute hospital facilities are not being utilised inappropriately for aged residential services. When not requiring hospital care older persons can be accommodated in a home-like environment with a focus on enriching daily living activities.

There appears to be sufficient capacity currently in the Griffith catchment to ensure that ageing persons who require community and centre based services can access them.

GrHS currently provides services which are geared to older people who require a hospital stay, rehabilitation and home-based support. They do this this through Day Aged Care Services including Transition Care Program and Transitional Rehabilitation Aged Care Service (TRACS). The current infrastructure and associated resources limit the effectiveness of these two programs.

People 70 years and older are a large component of inpatient activity at Griffith hospital, as can be seen in the table below. The largest growth is in overnight stays for people 85 and older. Day only activity shows that the proportion of those 70 and older has remained relatively steady over the past five years. The proportion of separations for overnight inpatient stays have increased slightly for this age cohort, while bed days have increased from 39% in 2011/12 to 43% in 2015/16.

Table 16 Griffith Hospital separations and bed days by people 70 years and over

	Separations					Sum of Total Bed Days				
Row Labels	2011/12	2012/13	2013/14	2014/15	2015/16	2011/12	2012/13	2013/14	2014/15	2015/16
Day only	1861	2047	2084	2229	2229	1861	2047	2084	2229	2229
70 to 84 Years	537	607	567	574	577	537	607	567	574	577
85 Years and Over	77	80	70	81	89	77	80	70	81	89
Proportion total day only	33	34	31	29	30	33	34	31	29	30
Overnight(s)	4377	4706	4924	5149	5045	15289	15785	16037	16653	16851
70 to 84 Years	901	992	997	1152	1072	4306	4510	4393	4916	4576
85 Years and Over	341	371	424	440	487	1661	1888	2033	2050	2722
Proportion total overnight	28	29	29	31	31	39	41	40	42	43
Grand Total	6238	6753	7008	7378	7274	17150	17832	18121	18882	19080

Source: FlowInfo V16.0

3.13. Key service partners

The main key service partners include:

- Murrumbidgee Primary Healthcare Network;
- Aboriginal Medical Service and other Aboriginal Health partners;
- Residential Aged Care Facilities;
- General Practitioners;
- NSW Health Pathology;
- HealthShare NSW;
- St Vincent's Private Community Hospital Griffith;
- Enable NSW – provide equipment, aids and appliances; and
- Ambulance Service of NSW.

3.14. Networking Arrangements

GrHS is responsive to the MLHD Referral Networks. Griffith referrals are predominately to Wagga Wagga Rural Referral Hospital or St Vincent's Hospital Sydney, some referrals flow to Canberra, ACT. Griffith is a hub for Leeton, Hillston and Lake Cargelligo.

Other referral pathways and networks include:

- St Vincent's Private Community Hospital Griffith;
- NSW Critical and Tertiary Referral and Perinatal Patient Transfer Policies (2010);
- St Vincent's Hospital, Sydney – Clinical Referral Hospital;
- Prince of Wales Hospital – Spinal Cord Injury;
- St George Hospital – Trauma;
- Concord Hospital – Severe Burn Injury;
- Sydney Children's Hospital – Paediatrics; and
- Royal Prince Alfred Hospital – Perinatal.

3.15. Teaching Training Education and Research

Griffith Health Service has a range of education, training and research amenities across the campus, some in collaboration with universities and other training institutes as follows:

- University of NSW, University of Wollongong, Notre Dame University all have a presence/role in GrHS;
- There is a clinical school located on Griffith Hospital campus – although this if predominately associated with medicine; and
- Nursing and some Allied Health training amenities are based at Wagga Wagga and Albury.

Teaching and training facilities are an important aspect of recruitment and retention strategies. Facilities will need to meet the needs of all staff groups into the future to assist with recruitment. This includes medical, allied health and nursing.

4. PROJECTED SERVICE DEMAND AND TREATMENT SPACES

The NSW Ministry of Health HealthApp Analytics and other planning tools were utilised to project the future demand for health services at Griffith Hospital. HealthApp allows health service planners to project future activity by taking into account the main drivers of future demand such as trends in admissions, population growth and ageing. The HealthApp Analytics release has included updates to projection methodology and the projection base year, and provides activity projections for acute, subacute and emergency activity. However, it is important to note that HealthApp is a "base case" projection only, assuming existing flow patterns continue. Furthermore, the admitted activity projections are not currently utilised for projecting some activity such as chemotherapy and renal dialysis services (note detailed projections methodologies are outlined in Appendix B.

It is important to note that HealthApp **excludes** all activity undertaken in the home (including Hospital in The Home (HiTH), therefore caution must be applied when interpreting the differences between historical data (e.g. from FlowInfo, which did include HiTH) and the HealthApp projections.

HealthApp utilises the financial year 2014/15 as the base year for the activity projections. Generally there have been no significant increases in historical admitted activity at Griffith Hospital between 2014/15 and 2015/16 (as demonstrated by activity tables earlier in this plan) therefore the base year in HealthApp was considered appropriate. Note that some services discussed in this Refresh that do not use HealthApp as the basis for projections have different financial years as their base year (such as 2015/16) due to the availability of different datasets.

The projected demand is presented in two ways:

- the **'base case'** assumes that service provision remains largely similar to current service delivery (no changes to where patients access services, growth in line with trends and population growth)
- the preferred **'scenario'** which makes adjustments to base case parameters such as patient flow and the impact of new facilities. In this section, base case and, if applicable, scenario activity and treatment space projections are detailed in service groups.

The preferred scenario for Griffith Hospital involves the following changes to the base case parameters:

- A flow of a proportion of Griffith Hospital patients for specific specialties to the recently opened St Vincent's Private Community Hospital Griffith (SVPCHG) in the future. This was informed by the types of services provided at SVPCHG and the volume of patients that elect to be treated as private patients at Griffith Hospital.
- A flow reversal of Griffith Catchment residents currently accessing acute Orthopaedic and ENT/Head and Neck services at Wagga Wagga back to Griffith. Introducing comprehensive local services in these specialty areas was identified as a priority during consultation.
- Refer to Appendix B for detailed assumptions and methodologies

St Vincent's Private Community Hospital Griffith recently opened adjacent to Griffith Hospital and is expected to impact demand at Griffith hospital, but only for the specialty services provided at St Vincent's, and only for people who choose to use private health insurance. In 2014/15 and 2015/16, approximately 30 per cent of acute admissions to Griffith Hospital were chargeable to private health insurance. As part of the scenario and in line with the 2015 CSP, 15 per cent of patients that elect to use private health insurance at Griffith Hospital for specialties provided at St Vincent's are modelled to flow to St Vincent's (see Appendix B - B.1.1.).

Griffith Hospital proposes an increase in role delineation for Orthopaedic and ENT/Head and Neck specialties which will assist in a flow reversal of Griffith catchment residents currently accessing these services at Wagga Wagga Rural Referral and other public hospitals. 2014/15 data demonstrates that only 16 per cent of Griffith catchment residents are accessing these services at Griffith Hospital. The scenario incorporates approximately 70 per cent flow reversal by 2026/27 of Orthopaedics and ENT/Head and Neck activity that is currently flowing to Wagga Wagga. This will have some impact on demand for theatre time,

acute surgical ward activity and access to rehabilitation services, pathology and imaging support. These have been considered in the infrastructure requirements for the future.

4.1. Acute Services

4.1.1. Adult Inpatient Surgical / Procedural Services

Base Case

The Base Case overnight surgical and procedural activity is projected to increase by 34 separations and 249 bed days between 2014/15 to 2030/31 resulting in the requirement of 7 beds by 2030/31. Beds are adjusted for the volume of services provided in critical care to avoid double counting. The Base Case is projected activity based on actual historical data over the previous 15 years.

Table 17 Griffith Hospital Base Case Adult Overnight Surgical and Procedural Actual and Projected Activity and Treatment Spaces

	2014/15	2020/21	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
Surgical / Procedural Separations	624	628	627	658	34	0.3%
Surgical / Procedural Bed days	1,963	2,197	2,116	2,212	249	0.7%
Surgical / Procedural Beds	6	7	7	7	1	
Surgical / Procedural Beds (adjusted for critical care)	5	6	6	6	1	

Source: NSW Ministry of Health HealthApp Analytics Tool
Exclusions: Chemotherapy, Renal Dialysis, Unqualified Neonates, Age Groups: 0-15 yrs

The Base Case day only surgical and procedural activity is projected to increase by 176 separations between 2014/15 to 2030/31 resulting in the requirement of 6 recovery spaces by 2030/31. This relates to Stage 2 recovery and is inclusive of 2 day surgical spaces and 4 procedural spaces (to account for high throughput). This will require further consideration during facility planning.

Table 18 Griffith Hospital Base Case Adult Day Only Surgical and Procedural Actual and Projected Activity and Treatment Spaces

	2014/15	2020/21	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
Surgical / Procedural Separations	1,411	1,456	1,517	1,587	176	0.7%
Surgical / Procedural Day Only Beds (Stage 2 recovery)	6	6	6	6	0	

Source: NSW Ministry of Health HealthApp Analytics Tool
Exclusions: Chemotherapy, Renal Dialysis, Unqualified Neonates, Age Groups: 0-15 yrs

Scenario

Flows for surgical services by the Griffith catchment community were investigated for potential reversal of activity to Griffith. Those thought to contribute to a potentially viable service at Griffith are included below. Further discussion is included at section 5.

The preferred Scenario for Griffith Hospital models (see Appendix B for details)

- A flow of a proportion of activity to St Vincent's Private Hospital Griffith for selected specialties based on the proportion of private patients in Griffith Hospital for the specialties provided at St Vincent's.
- Residents of the Griffith catchment that access Orthopaedic and ENT/ Head and Neck services are "reverse flowed" from Wagga Wagga Hospital back to Griffith Hospital (priorities identified during consultation).

The Scenario results in a higher projected volume of surgical / procedural activity at Griffith Hospital comparative to the Base Case. The Scenario overnight surgical and procedural activity is projected to increase at an annual growth rate of 2.1 per cent in separations and 3.0 per cent in bed days between 2014/15 to 2030/31 resulting in the requirement of 9 overnight beds, applying an 85 per cent planning occupancy, by 2030/31. Beds are adjusted for the volume of services provided in critical care to avoid double counting.

Table 19 Griffith Hospital Scenario Adult Overnight Surgical and Procedural Actual and Projected Activity and Treatment Spaces

	2014/15	2020/21	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
Surgical / Procedural Separations	624	717	844	871	247	2.1%
Surgical / Procedural Bed days	1,963	2,719	3,156	3,148	1,186	3.0%
Surgical / Procedural Beds	7	9	11	11	4	
Surgical / Procedural Beds (adjusted for critical care)	6	9	9	9	3	

Source: NSW Ministry of Health HealthApp Analytics Tool
Exclusions: Chemotherapy, Renal Dialysis, Unqualified Neonates, Age Groups: 0-15 yrs

The Scenario day only surgical and procedural activity is projected to increase by 46 separations or an annual growth rate of 0.2 per cent between 2014/15 to 2030/31, resulting in the requirement of 6 day only beds by 2030/31. This will require further consideration during facility planning.

Table 20 Griffith Hospital Scenario Adult Day Only Surgical and Procedural Actual and Projected Activity and Treatment Spaces

	2014/15	2020/21	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
Surgical / Procedural Separations	1,411	1,307	1,396	1,457	46	0.2%
Surgical / Procedural Day Only Beds (Stage 2 recovery)	6	6	6	6	0	

Source: NSW Ministry of Health HealthApp Analytics Tool
Exclusions: Chemotherapy, Renal Dialysis, Unqualified Neonates, Age Groups: 0-15 yrs

A caveat needs to be placed on projecting surgical activity based on historical data at Griffith, as access to the second existing theatre has been limited.

4.1.2. Adult Inpatient Medical Services

Base Case

The Base Case overnight medical activity is projected to increase by 506 separations and 4,168 bed days between 2014/15 to 2030/31 resulting in the requirement of 42 beds at an 85 per cent by 2030/31. Beds are adjusted for the volume of services provided in critical care to avoid double counting.

Table 21 Griffith Hospital Base Case Adult Overnight Medical Actual and Projected Activity and Treatment Spaces

	2014/15	2020/21	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
Medical Separations	3,210	3,194	3,395	3,716	506	0.9%
Medical Bed days	11,322	12,982	13,410	14,240	4,168	2.2%
Medical Beds	33	42	44	46	13	
Medical Beds (adjusted for critical care)	29	38	39	42	13	

Source: NSW Ministry of Health HealthApp Analytics Tool
Includes Medical, Mental Health (non-designated), Unallocated.
Exclusions: Chemotherapy, Renal Dialysis, Unqualified Neonates, Age Groups: 0-15 yrs

The Base Case day only medical activity is projected to increase by 275 separations between 2014/15 to 2030/31 resulting in the requirement of 3 treatment spaces by 2030/31.

Table 22 Griffith Hospital Base Case Adult Day Only Medical Actual and Projected Activity and Treatment Spaces

	2014/15	2020/21	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
Medical Separations	590	762	827	865	275	2.4%
Medical Day Only Beds	2	2	2	3	1	

Source: NSW Ministry of Health HealthApp Analytics Tool
Includes Medical, Mental Health (non-designated), Unallocated.
Exclusions: Chemotherapy, Renal Dialysis, Unqualified Neonates, Age Groups: 0-15 yrs

Scenario

Flows for the Griffith catchment communities to WWRRH for medical services were interrogated to determine if a reversal of flows could support a viable service for additional specialties. Neurology, cardiology and respiratory medicine were considered, however numbers are low and equate to under one bed each for full reversal, which is an unlikely scenario. Further discussion of a Stroke service is included at section 7.3.6. Flow data for medical services to WWRRH is contained in Appendix D1.

The preferred Scenario for Griffith Hospital models (see Appendix B.1.for details)

A flow of a proportion of activity to St Vincent's Private Hospital Griffith for selected specialties based on the proportion of private patients in Griffith Hospital and the specialties provided at St Vincent's.

- Residents of the Griffith catchment that access Orthopaedic and ENT/ Head and Neck services are "reverse flowed" from Wagga Wagga Hospital back to Griffith Hospital (priorities identified during consultation). It is noted that a low proportion of these services are medical.

The Scenario overnight medical activity is projected to increase by 428 separations and 3,887 bed days, or an annual growth rate of 0.8 per cent (separations) and 2.1 per cent (bed days) between 2014/15 to 2030/31, resulting in the requirement of 40 beds by 2030/31. While not a significant increase in separations

the increase in the bed days can be attributed to the needs of an ageing population. Beds are adjusted for the volume of services provided in critical care to avoid double counting.

Table 23 Griffith Hospital Scenario Adult Overnight Medical Actual and Projected Activity and Treatment Spaces

	2014/15	2020/21	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
Medical Separations	3,210	3,119	3,329	3,638	428	0.8%
Medical Bed days	10,072	12,704	13,166	13,958	3,887	2.1%
Medical Beds	33	41	43	45	12	
Medical Beds (adjusted for critical care)	29	37	38	40	11	

Source: NSW Ministry of Health HealthApp Analytics Tool
Includes Medical, Mental Health (non-designated), Unallocated.
Exclusions: Chemotherapy, Renal Dialysis, Unqualified Neonates, Age Groups: 0-15 yrs

The Scenario day only medical activity is projected to increase by 281 separations between 2014/15 to 2030/31 resulting in the requirement of 3 treatment beds/spaces by 2030/31. It should be considered that these beds/spaces are located in an ambulatory care unit or could even be used to build up HiTH capacity.

Table 24 Griffith Hospital Scenario Adult Day Only Medical Actual and Projected Activity and Treatment Spaces

	2014/15	2020/21	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
Medical Separations	590	756	840	871	281	2.5%
Medical Day Only Beds	2	2	2	3	1	

Source: NSW Ministry of Health HealthApp Analytics Tool
Includes Medical, Mental Health (non-designated), Unallocated.
Exclusions: Chemotherapy, Renal Dialysis, Unqualified Neonates, Age Groups: 0-15 yrs

4.1.3. Maternity Inpatient Services

Base Case and Scenario

There has been no scenario modelled for Griffith maternity services (Appendix B.2). The base case for Griffith maternity services will need to accommodate additional flows from Leeton due to a change in models of care. The estimated proportion of women who sit outside the low risk category at Leeton is estimated to be 50 per cent. Table 25 shows total projected maternity activity for Leeton, which equates to just under one overnight bed on average per day. 50 per cent would equate to 0.5 beds. Day only activity in total for Leeton in 2026/27 is projected to be 35 bed days. Obstetric staff (medical and nursing) report that there is currently one woman from Leeton in a maternity bed in Griffith at any given time. The midwifery model at Leeton commenced last month.

Overnight maternity services at Griffith Hospital are projected to decrease from 585 separations and 1,704 bed days in 2014/15 to 514 separations and 1,219 bed days in 2030/31, resulting in a requirement of 5 overnight beds calculated using a planning occupancy level of 75 per cent. Less than 1 same day maternity bed is required.

Obstetric medical and midwifery staff had issues with the projected data for births based on local data for 2014 (calendar year – 491 births), and 2015/16 and 2016/17 financial years. The base financial year births equated to 466 births. The two latter years of local data indicated there were 509 (FlowInfo 503) and 551 births respectively, with 70 of those in 2016/17 being from Leeton. There is a firm belief that births have

been increasing in recent years and will continue to do so due to the influx of secondary refugees relocating from primary settlement towns due to the multicultural nature of Griffith. The last three years of data bear this out.

Further considerations for future maternity services should consider recent increases in the refugee population and also a flow reversal from private services that can be anticipated with a new facility as was seen at WWRRH. Griffith Hospital has only two private rooms in the maternity ward, which impacts on attracting private patients. Projected flows to private hospitals for maternity are shown below. Fifty per cent of Leeton flows and 70% of private flows at 75% occupancy equates to 1.9 additional beds in 2025/26.

Flows to WWRRH for the catchment were also investigated. When complex cases were excluded (delivery and qualified neonates), there was little change in the flows for the last four years, during which time the new hospital came on line. Delivery separations were between 40 and 43[5], however some of these may still have been transfers for high risk pregnancies with good outcomes. A flow reversal has therefore not been undertaken.

The maternity bed requirement is for 10 beds with 75% occupancy based on the 2014/15 low base year. This includes capacity for Leeton flows, and a 70% reversal of flows to private services. Further analysis of the projection data using a higher base year will impact further. Appropriate staffing ratio requirements will require a rounding of beds to 12.

Table 25 Griffith Hospital Maternity Actual and Projected Activity and Infrastructure

Stay Type		2014/15	2020/21	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
Overnight	Separations	585	547	532	514	-71	-0.8%
	Bed days	1,704	1,497	1,368	1,219	-485	-2.1%
	Beds (Rounded)	7	6	5	5		
Day Only	Separations	77	67	70	62	-15	-1.3%
	Beds (Rounded)	1	1	1	1		
Grand Total	Beds (Rounded)	8	7	6	6		

Source: NSW Ministry of Health HealthApp Analytics Tool
Inclusions: Maternity Clinical Group Only
Exclusions: SRGs: Chemotherapy, Renal Dialysis, Unqualified Neonates, Flags: HiTH Only

[5] FlowInfo V16.1, NSW MoH

Table 26 Leeton Hospital Maternity Actual and Projected Activity

Row Labels	ClinicalGroupName	2015	2021	2026	2031
Day Only					
Sum of Episodes	721 - Antenatal admission	31	29	27	23
	722 - Vaginal delivery	4	4	4	3
	724 - Postnatal admission	0	0	1	0
Sum of Bed Days	721 - Antenatal admission	31	29	27	23
	722 - Vaginal delivery	4	4	4	3
	724 - Postnatal admission	0	0	1	0
Day Only Sum of Episodes		**35**	**33**	**32**	**26**
Day Only Sum of Bed Days		**35**	**33**	**32**	**26**
Overnight					
Sum of Episodes	721 - Antenatal admission	29	23	23	20
	722 - Vaginal delivery	70	70	68	61
	724 - Postnatal admission	21	10	9	9
	723 - Caesarean delivery	28	25	28	25
Sum of Bed Days	721 - Antenatal admission	39	43	43	35
	722 - Vaginal delivery	204	177	158	127
	724 - Postnatal admission	49	26	24	21
	723 - Caesarean delivery	110	102	106	89
Overnight Sum of Episodes		**148**	**128**	**128**	**115**
Overnight Sum of Bed Days		**402**	**348**	**331**	**272**
Total Sum of Episodes		**183**	**161**	**160**	**141**
Total Sum of Bed Days		**437**	**381**	**363**	**298**

Source: NSW Ministry of Health HealthApp Analytics Tool
Inclusions: Maternity Clinical Group Only
Exclusions: SRGs: Chemotherapy, Renal Dialysis, Unqualified Neonates, Flags: HiTH Only

Table 27 Private Hospital Maternity Actual and Projected Activity for Griffith Catchment Residents

Row Labels	ClinicalGroupName	2015	2021	2026	2031
Day only					
Sum of Episodes	721 - Antenatal admission	36	27	27	27
Sum of Bed Days	721 - Antenatal admission	36	27	27	27
Day only Sum of Episodes		**36**	**27**	**27**	**27**
Day only Sum of Bed Days		**36**	**27**	**27**	**27**
Overnight					
Overnight Sum of Episodes	721 - Antenatal admission	23	21	21	16
	722 - Vaginal delivery	45	46	41	38
	723 - Caesarean delivery	74	64	62	57
	724 - Postnatal admission	5	1	1	0
Overnight Sum of Bed Days	721 - Antenatal admission	56	51	52	39
	722 - Vaginal delivery	185	194	171	158
	723 - Caesarean delivery	371	323	303	270
	724 - Postnatal admission	19	3	2	0
Overnight Sum of Episodes		**147**	**132**	**125**	**111**
Overnight Sum of Bed Days		**631**	**571**	**528**	**467**
Total Sum of Episodes		**183**	**159**	**152**	**138**
Total Sum of Bed Days		**667**	**598**	**555**	**494**

Source: NSW Ministry of Health HealthApp Analytics Tool
Inclusions: Maternity Clinical Group Only

Delivery suites are calculated utilising the projected number of separations for vaginal and caesarean deliveries (100 per cent of total vaginal delivery separations and 50 per cent of total caesarean delivery separations). The total separations for deliveries utilising birth suite are projected to decrease from 399 in 2014/15 to 357 in 2030/31. Additionally flows for deliveries utilising birth suite from Leeton and Private Facilities equates to a further 99 births, and brings the total of deliveries using birth suites to 472 by 2025/26 (100% of vaginal births and 50% caesarean section births). Two birth suites and two assessment rooms are required. The assessment rooms provide flexibility to be used as additional birthing suites when required. Currently the single assessment room is used for birthing approximately five times per year.

Table 28 Griffith Hospital Birthing Suites Actual and Projected Activity and Infrastructure

		2014/15	2020/21	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
Vaginal Deliveries (Separations)	Overnight	325	313	308	293	-32	-0.6%
	Day Only	7	7	7	6	-1	-1.0%
Caesarean Deliveries (Separations) utilising Birth Suite	Overnight	67	59	58	58	-9	-0.9%
Total Deliveries Utilising Birth Suite (Separations)		399	379	373	357	-42	-0.7%
Birthing Suites (Rounded)		2	2	2	2		

Source: NSW Ministry of Health HealthApp Analytics Tool
Inclusions: ESRGs Vaginal Delivery and Caesarean Delivery only

4.1.3.2. Hospital In the Home

According to consultation, the Hospital in the Home service (HiTH) is a progressive and a well-developed service, in comparison with other hospitals in NSW. Griffith Hospital has one of the highest percentages of bed days in the state. Hospital in the Home services will therefore be assumed to remain at the current level (approximately 6 per cent of total admitted bed days, as informed by HiTH Hours in FlowInfo v16.0) and an average available bed level of 10 beds.

4.1.4. Paediatric Inpatient Services

Base Case

Overnight paediatric inpatient demand at Griffith Hospital is projected to grow from 1,028 bed days in 2014/15 to 1,410 bed days in 2030/31 resulting in a requirement of 6 beds. During the same period of 2014/15 to 2030/31, day only activity is projected to grow from 150 separations to 195 separations at an annual growth rate of 1.8 per cent and overall increase of 30 per cent. No changes in day only beds are projected (1 medical and 1 surgical day only space are projected, dependent on the preferred model for these services).

Table 29 Griffith Hospital Base Case Paediatric Actual and Projected Activity and Treatment Spaces

Stay Type		2014/15	2020/21	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
Overnight	Separations	600	648	663	695	95	0.9%
	Bed days	1,028	1,317	1,362	1,410	382	2.0%
	ALOS	1.7	2.0	2.1	2.0	0.3	
	Total Overnight Paediatric Beds (Rounded)	4	5	5	6	2	
Day Only	Separations	150	181	204	195	45.0	1.7%
	Total Day Only Paediatric Beds (Rounded)	2	2	2	2	0	

Source: NSW Ministry of Health HealthApp Analytics Tool
Exclusions: Age Groups 16+ yrs, SRGs: Chemotherapy, Renal Dialysis, Unqualified Neonates

Scenario

The Scenario for Griffith Hospital paediatric services involves the reversal of some flows for ENT and Head and Neck services from Wagga Wagga Hospital. (See Appendix B.5.for details). At consultations the paediatric team were supportive of developing orthopaedic and ENT services, but highlighted the need for dialogue with ENT specialists in relation to post surgery follow up arrangements.

Overnight demand at Griffith Hospital in the Scenario is projected to grow from 1,028 bed days in 2014/15 to 1,483 bed days in 2030/31 resulting in a requirement of 6 multi stay beds. During the same period of 2014/15 to 2030/31, day only activity is projected to grow from 150 separations to 256 separations. No changes in day only beds are projected.

Table 30 Griffith Hospital Scenario Paediatric Actual and Projected Activity and Treatment Spaces

Stay Type		2014/15	2020/21	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
Overnight	Separations	600	670	704	735	135	1.3%
	Bed days	1,028	1,357	1,440	1,483	455	2.3%
	ALOS	1.7	2.0	2.0	2.0	0.3	
	Total Overnight Paediatric Beds (Rounded)	4	5	5	6	2	
Day Only	Separations	150	214	267	256	106	3.4%
	Total Day Only Paediatric Beds (Rounded)	2	2	2	2	0	

Source: NSW Ministry of Health HealthApp Analytics Tool
Exclusions: Age Groups 16+ yrs, SRGs: Chemotherapy, Renal Dialysis, Unqualified Neonates, Qualified Neonates

Consultations with the paediatric team indicated that the existing ward is at capacity regularly during theatre days. Four existing paediatric stage 2 recovery beds are incorporated on the ward area. Inpatient beds are currently used flexibly for stage 2 recovery on theatre days. Lists vary from 12-15 per theatre day. This model provides additional flexing capacity during winter, with the stage 2 recovery area able to be used as a close observation area. A reconfiguration of stage 2 and inpatient beds is recommended to include 10 inpatient beds and six day only second stage recovery beds/cots. The increase in secondary refugee families to the area in recent years is also impacting on paediatric demand.

4.1.5. Special Care Nursery Services

Special Care Nursery services were projected by analysing the SCN Flag and SCN Hours fields in FlowInfo v16.0 and applying the growth rate in Qualified Neonates bed days to the base year. In 2015/16 there were 219 Qualified Neonate separations and 620 bed days, of which 440 were in the Special Care Nursery.

The projection result of three cots by 2025/26 will need to be considered in light of operational and clinical realities during facility planning.

Table 31 Griffith Hospital SCN Actual and Projected Activity and Treatment Spaces

	2015/2016 actual	2020/21	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
SCN Bed Days (derived from SCN Hours)	440	584	574	534	95	1.2%
SCN Cots	2	3	3	2		

Source: FlowInfo v16.0 and NSW Ministry of Health HealthApp Analytics Tool
Includes SCN Hours only

There was no scenario modelled for the Special Care Nursery. (See Appendix B.6)

4.1.6. Critical Care Services

The base case and scenario modelling do not take into account potential additional flows from St Vincent's Community Hospital adjacent to the Griffith Base Hospital. St Vincent's do not have an ICU or HDU. Joint replacement surgery has commenced in recent months and there is a likelihood that some flows will ensue to Griffith Base critical care services. Further consideration will need to be given to these flows in the next phase of planning.

Base Case Projected Activity

ICU/HDU bed days were identified utilising the ICU Hours and HDU Hours fields in FlowInfo v16.0 and growth applied in line with acute medical and surgical/procedural growth in bed days for the hospital. General adult medical and surgical/procedural overnight beds have been adjusted to avoid double counting.

Base Case demand at Griffith Hospital is projected to grow from 1,342 bed days and 5 multi-stay beds in 2015/16 to 1,614 bed days and 6 multi-stay beds in 2030/31 at an annual growth rate of 1.2 per cent.

Table 32 Griffith Hospital Base Case Actual and Projected Intensive Care Activity and Beds

	2015/16	2020/21	2025/26	2030/31	Change 15/16 to 30/31	Annual Growth Rate
ICU/HDU Bed days	1,342	1,427	1,518	1,614	272	1.2%
ICU/HDU Beds	5	6	6	6	1	

Source: FlowInfo v16.0, NSW Ministry of Health HealthApp Analytics Tool
Exclusions: SRGs: Chemotherapy, Renal Dialysis, Unqualified Neonates, Flags: ED Only, HiTH Only

Scenario

While there were no specific scenario adjustments applied to intensive care service activity, the increased adult overnight activity proposed in the scenario projected an annual growth rate in bed days of 1.5 per cent, which is 0.3 per cent higher than the base case. The demand for intensive care, after accounting for the increased adult overnight activity, is projected to increase by 340 bed days and 2 multi-stay beds by 2030/31, which requires one additional Intensive Care Service bed when compared with the Base Case projections and the current bed level. The planning for beds has applied a 75 per cent occupancy level in the calculations. (See Appendix B.4)

Table 33 Griffith Scenario Actual and Projected Intensive Care Activity and Treatment Spaces

	2015/16	2020/21	2025/26	2030/31	Change 15/16 to 30/31	Annual Growth Rate
ICU/HDU Bed days	1,342	1,447	1,560	1,682	340	1.5%
ICU/HDU Beds	5	6	6	7	2	

Source: FlowInfo v16.0, NSW Ministry of Health HealthApp Analytics Tool
Exclusions: SRGs: Chemotherapy, Renal Dialysis, Unqualified Neonates, Flags: ED Only, HiTH Only

4.1.7. Emergency Services

Base Case Projected Activity

Projected Emergency Department (ED) presentations were sourced from NSW Ministry of Health HealthApp Analytics Tool and treatment spaces calculated in line with the *NSW Ministry of Health Emergency Department Activity Planning Guideline, April 2014.*

Projected future demand indicates presentations at Griffith Hospital Emergency Department will increase by 13.2 per cent overall or 2,812 presentations from 2014/15 to 2030/31. This is equivalent to a compounding annual growth rate of 0.9 per cent, resulting in a requirement of 12 treatment spaces by 2031/32. A mental health safe room and dedicated sexual assault assessment room are required in addition to these treatment spaces (see Appendix B.10).

Table 34 Griffith Hospital Emergency Department Actual and Projected Activity and Treatment Spaces

	2014/15	2021/22	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
Total Presentations	18,486	21,195	20,817	21,298	2,812	0.9%
Treatment Spaces (incl. isolation)	8	10	9	10	2	
Resuscitation Bays	2	2	2	2	0	
Total Treatment Spaces	10	12	11	12	2	

Source: NSW Ministry of Health HealthApp Analytics Tool, EDAAv16.0

4.1.7.2. Short Stay Unit

The reported 2015/16 and 2016/17 ED activity indicates a significant increase in presentations from previous years, almost to the level of the projections in the outer years and it is unknown whether this will continue as a trend. However consultation locally has indicated that there is a requirement for a short stay unit in the ED. It is proposed that an eight bed short stay unit be established to complement the ED treatment spaces. This will assist with providing a better environment for the more complex presentations which require multiple investigations, and is reflective of growth in the older population. The proposal to use four medical beds towards the eight bed unit was supported by the physicians and hospital management. The model of care will be determined during change management processes. Both the Emergency Medical Unit (EMU) and Medical Assessment Unit (MAU) models will be explored further to determine the best fit.

4.1.7.3. GP Clinic

The concept of a GP clinic adjacent to the ED was discussed at consultations and supported. Griffith has struggled to establish GP after hour clinics in private practices, which impacts on after hour presentations at the ED. Providing infrastructure to enable walk in walk out on call work was supported to establish a viable GP after hour model for the community.

4.1.8. Chemotherapy Services

Previously Cancer Incidence rates sourced from the Cancer Institute NSW for the LGAs in the catchment for Griffith Hospital were used with assumptions based on existing treatment regimes. This assumed 40% of people with a cancer diagnosis would receive chemotherapy consisting of 10 treatments per patient. A certain proportion (25%) of these people will require further retreatment. There is a rapidly increasing use of immunotherapies, and the previous assumptions are no longer able to be applied in isolation. It is estimated that there is an additional 30% of adjuvant treatments that need to be considered. The NSW Directors of Cancer Services have raised this as an issue for future capacity and resources with the Cancer Institute. Further work will need to be undertaken to determine future demand with these rapidly changing treatment options, and more importantly, ongoing nature of treatment regimes. The following assumptions are used:

- 250 operational days per year
- 2 patients per chair per day
- 75% occupancy
- A chemotherapy treatment rate of 40% per new cancer case
- A retreatment rate of 25%
- 10 chemotherapy visits per patient
- An adjuvant treatment rate of 30%

The Unit currently operates with 4 chairs, does not meet current demand, and is unable to meet the broader scope of cancer related infusion/transfusion therapies normally collocated (improved efficiencies). A redeveloped unit will likely attract back patients who currently opt to have their treatment privately or outside of the LHD due to limitations of existing unit.

Based on the assumptions above and in line with similar developments at Bega and Dubbo, it is recommended that the unit has capacity for 10 chairs and two beds by 2026/27.

Table 35 Griffith Hospital Chemotherapy Projections

	2016/17	2021/22	2026/27	2030/31	Change 14/15 to 30/31
Projected Incidence	403	441	485	534	131
Patients requiring Chemotherapy	201	221	243	267	66
Patients requiring retreatment	50	55	61	67	17
Total chemotherapy patient numbers	251	276	303	334	83
Total chemotherapy treatments required	2510	2756	3031	3338	828
Adjuvant therapies	753	827	909	1001	248
Total treatments	3263	3583	3941	4339	1076
Chairs/beds @ 100% occupancy	6.5	7.2	7.9	8.7	2
Chairs/beds @ 75% occupancy (rounded)	8	9	10	11	3

Source: Cancer Incidence Projections, Cancer Institute NSW

4.1.9. Renal Dialysis Services

Renal dialysis services were projected by calculating a dialysis rate for the Griffith Catchment by age group and applying population projections to this local calculated prevalence rate. The assumption that there is no increase in the percentage of home haemodialysis or peritoneal dialysis was used to inform these projections (30%). Chair-based dialysis patients are assumed to require 3 sessions per week, 52 weeks per year.

The Base Case projects 4,914 chair-based dialysis sessions and a requirement for 10 renal dialysis chairs at Griffith Hospital by 2030/31. This would be supported by the continued provision of a separate training chair for peritoneal dialysis providing a total of 11 chairs. Future consideration will be given as to whether a training chair can be established for Home Haemodialysis, this will be reliant on any future decision around the network and referral partner of the service for GrHS and the availability of other resources to deliver the training.

Table 36 Griffith Hospital Base Case Projected Renal Dialysis Activity and Treatment Spaces

	2016/17	2020/21	2025/26	2030/31	Change 16/17 to 30/31	Annual Growth Rate
Chair-Based Patients	28	29	30	32	4	0.8%
Home PD/HD Patients	4	4	4	5	1	0.8%
Chair-Based Services	4,368	4,505	4,641	4,914	546	0.8%
Chairs Rounded Up at 170% Occupancy, 6 days per week operation	9	9	9	10	1	0.7%

Source: Local renal dialysis data provided by MLHD

It is noted that work is currently underway to expand the capacity and relocate renal dialysis services at GrHS. This is through the planned relocation of a demountable unit that is currently in Tamworth. The facility will be transported to Griffith in December 2017 and should be operational in early 2018. The capacity of this new Unit is 11 chair spaces. While all space will not be commissioned immediately there is the capability of the service to expand sooner than required if the need is determined.

4.1.10. Operating Theatres / Procedure Rooms

Base Case

Projected surgical separations from HealthApp were utilised to calculate theatre infrastructure requirements at 1,900 day only separations and 1,500 overnight separations per theatre per annum.

Future surgical demand at Griffith Hospital is projected to require one surgical theatre, in line with the current operation. However, consultation with the MLHD has raised this as an operational issue and risk due to the lack of flexibility and conflicts between emergency surgeries and elective surgical lists. This service plan proposes an increase to two surgical theatres in both Base Case and Scenario to allow capacity for emergency surgery without conflicting with scheduled elective surgeries, and to accommodate for future flexibility and increased surgical activity at Griffith Hospital.

Note that Stage 2 recovery spaces for day patients are covered in the adult inpatient surgical section. The place for recovery of day paediatric surgical patients will need to be considered.

Table 37 Griffith Hospital Base Case Surgical Theatre Actual and Projected Activity and Theatres / Recovery

	2014/15	2020/21	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
Overnight Surgical Separations	473	459	467	482	9	0.1%
Caesarean Separations	134	117	116	114	-20	-1.0%
Total Overnight Separations	607	576	583	596	-11	-0.1%
Day Only Surgical Separations	549	544	569	597	48	0.5%
Theatres Required	0.7	0.7	0.7	0.7	0	
Total Theatres Required	2	2	2	2	0	
Total Stage 1 Recovery Spaces (Rounded)	5	5	5	5	0	

Source: NSW Ministry of Health HealthApp Analytics Tool
Inclusions: All Age Groups, Surgical ESRGs and Caesarean Delivery ESRG only

There is currently no procedure room at Griffith Hospital.

Projected procedural separations from HealthApp were utilised to calculate procedure room requirements at 2,550 separations per theatre per annum.

Total procedural separations are projected to increase from 1,209 to 1,394 between 2014/15 and 2030/31, maintaining the current demand for one procedural suite and two Stage 1 Recovery Spaces.

Table 38 Griffith Hospital Base Case Procedural Actual and Projected Activity and Procedural Suites

	2014/15	2020/21	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
Total Procedural Separations	1,209	1,296	1,329	1,394	185	0.9%
Procedural Suites	1	1	1	1	0	
Stage 1 Recovery Spaces	2	2	2	2	0	
Stage 2 Recovery Spaces*	4	4	4	4	0	

Source: NSW Ministry of Health HealthApp Analytics Tool
Inclusions: All Age Groups, Procedural MSPb only

**Note: included in Adult Surgical / Procedural Day Spaces chapter*

Scenario

Projected surgical separations from HealthApp were utilised to calculate theatre infrastructure requirements at 1,900 day only separations and 1,500 overnight separations per theatre per annum.

As per the discussion in the Base Case, a requirement for two theatres has been projected. The projected surgical activity does not support additional theatres at this point in time, however the need for a critical mass to support a surgical workforce including Registrars is imperative to support a viable surgical service into the future. Further work is required to develop models to support this which may include:

- District surgical model utilising MLHD surgeons to support surgery at Griffith hospital;
- shared workforce model with St Vincent's Community Hospital, Griffith, which also needs a viable surgical service;
- sharing infrastructure resources with St Vincent's Community Hospital to increase access to theatre space, support a sustainable workforce model and attract additional surgical specialties.

Note that Stage 2 recovery spaces for day patients are also discussed in the adult inpatient surgical section. The place for recovery of day paediatric surgical patients will need to be considered. (See Appendix B.7)

Table 39 Griffith Hospital Scenario Surgical Theatre/ Recovery - Actual and Projected Activity

	2014/15	2020/21	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
Overnight Surgical Separations	473	577	717	731	258	2.8%
Caesarean Separations	134	117	116	114	-20	-1.0%
Total Overnight Separations	607	694	833	845	238	2.1%
Day Only Surgical Separations	1,214	1,388	1,666	1,690	476	2.1%
Theatres Required (calculated)	0.7	0.8	0.9	0.9	0	
Total Theatres Required	2	2	2	2	0	
Total Stage 1 Recovery Spaces (Rounded)	5	5	5	5	0	
Total Stage 2 Recovery Spaces*	2	2	2	2	0	

Source: NSW Ministry of Health HealthApp Analytics Tool
Inclusions: All Age Groups, Surgical MSPb and Caesarean Delivery SRG

**Note: included in Adult Surgical / Procedural Day Spaces chapter*

There is currently no procedure room at Griffith Hospital. Projected procedural separations from HealthApp were utilised to calculate procedure room requirements at 2,550 separations per theatre per annum.

Total procedural separations are projected to decrease from 1,209 to 1,117 between 2014/15 and 2030/31, maintaining the current demand for one procedural suite and two Stage 1 Recovery Spaces.

Table 40 Griffith Hospital Procedural Actual and Projected Activity and Procedural Suites

	2014/15	2020/21	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
Total Procedural Activity (incl. additional for non-admitted)	1,209	1,296	1,329	1,394	185	0.1%
Procedural Suites Required (calculated)	0.5	0.5	0.5	0.5	0	
Procedural Suites (Rounded Up)	1	1	1	1	0	
Stage 1 Recovery Spaces	2	2	2	2	0	
Stage 2 Recovery Spaces*	4	4	4	4	0	

Source: NSW Ministry of Health HealthApp Analytics Tool
Inclusions: All Age Groups, Procedural MSP

**Note: included in Adult Surgical / Procedural Day Spaces chapter*

4.2. Subacute Care

Consultation at the GrHS along with a review of current policies, community expectations and evolving models of care demonstrate the need for dedicated sub-acute and aged care inpatient capacity into the future.

HealthApp projects an increase in subacute average length of stay in line with peer group hospitals from 9.0 days in 2014/15 to 13.4 days in 2020/21. Subacute projected activity has not been scenario modelled as this increase in HealthApp will accommodate for a more comprehensive subacute service at Griffith Hospital. The increase will facilitate earlier transfer of patients having received surgery at Wagga Wagga Rural Referral Hospital, increased capacity for rehabilitation services for the planned on-site orthopaedic service, and allow greater support for existing services on-site at Griffith Hospital.

The projections provide a very good indication of the level of demand for sub-acute services, and previous planning also indicated a need for 18 beds. However, there is some difficulty in estimating the projected aged care needs from this data set and suggesting Maintenance separations as a proxy for aged care may not be reflective for the cohort. Given the projected population catchment of GrHS will comprise of some 51 per cent of its residents over the age of 71 years it would be expected that there will be an increase in service requirements for aged care.

Subacute services are projected to increase from 298 separations (2,647 bed days) in 2014/15 to 468 separations (5,874 bed days) by 2030/31. There is a projected requirement for 18 subacute beds by 2030/31. (See Appendix B.3)

Table 41 Griffith Hospital Actual and Projected Subacute Activity and Beds

	2014/15	2020/21	2025/26	2030/31	Change 14/15 to 30/31	Annual Growth Rate
Rehabilitation Separations	120	180	208	224	104	4.0%
Maintenance Separations	97	104	110	120	23	1.3%
Palliative Care Separations	81	109	112	124	43	2.7%
Total Separations	**298**	**393**	**430**	**468**	**170**	**2.9%**
Rehabilitation Bed days	1,285	3,204	3,636	3,805	2,520	7.0%
Maintenance Bed days	856	1,111	1,043	1,027	171	1.1%
Palliative Care Bed days	533	932	971	1,042	509	4.3%
Total Bed days	**2,674**	**5,247**	**5,650**	**5,874**	**3,200**	**5.0%**
ALOS	9.0	13.4	13.1	12.6		
Beds Required	**9**	**16**	**18 (20)***	**18 (20)**	**9**	

Source: NSW Ministry of Health HealthApp Analytics Tool - Inclusions: Subacute - Exclusions: 0-15 yrs Age Groups

*Rounded to 20 for staffing ratios

4.3. Non Admitted Care

Non-admitted services were projected utilising MBS and Non-MBS data provided by MLHD and growth rates from HealthAPP according to the clinic specialty. Specialised services and those not provided from consult / interview rooms were excluded from this analysis such as dental, medical imaging, home-based services and case conferences (noting they will still need to be considered). The quality of the data was however found to be unreliable to use for projections. In the final year of data there was no Mental Health data due to a change in software. Staff vacancies have a major impact on activity, and activity does therefore not reflect the true demand for services.

Griffith Outpatient, Community Health and Mental Health/ Drug and Alcohol clinics are unable to cope with current demand. The plan to expand alternative models to inpatient care will see a large growth in these service areas. Anecdotally District positions have indicated that Griffith outpatient/ community health services are as busy as Wagga Wagga. Griffith has a greater volume of private clinics due to the fly in fly out medical arrangements. Wagga Wagga Stage 3 development has much better data and has projected the need for 60 clinic/consult spaces across Outpatient specialist, Community Health and Mental Health/ Drug and Alcohol services (excluding gym spaces, medical imaging rooms and dental clinics).

Non admitted data is shown in Appendix D (tables 50 and 51). While activity for private clinics has fluctuated, the total public non admitted activity has increased by 25% over the last five years.
The potential for enhanced or new clinics must also be considered particularly those related to the Leading Better Value Care initiative. The current infrastructure has no capacity to increase service provision and as such there is a level of demand that is unmet. It is recommended that the final requirements for the number of consult rooms and interview spaces be reviewed. Planning for spaces should include the accommodation of new services such as:

- Bariatric and Metabolic outreach clinical services to support a new Bariatric Surgical Service at WWRRH;
- Increased number of outpatient services for older persons;
- Increase capacity for community based mental health services to support multidisciplinary teams and the increasing number of peer workers to deliver assertive community based care;
- Dedicated ante natal and post-natal clinics to support new midwifery shared care and group practice approach; and
- Paediatric outpatient clinic (activity currently provided on the ward and not captured in data).

5. CONSULTATION OUTCOMES

5.1. Consultation Process and Outcomes

Two two-day site visits were conducted at the beginning and the final week of writing the Refresh. Consultation occurred with senior clinical leaders across the Griffith Health Service, General Practitioners and leaders from the MLHD wide services. Members from the Local Health Advisory Committee and Hospital Auxiliary also contributed to discussions. The key areas explored during the consultation rounds included an explanation of the current service level, current projects and service developments, thoughts on new service developments, barriers to service delivery and confirmation of the outcomes of the first round of consultations. The participants were actively engaged in the process and provided comprehensive information from their perspective and experience in local service provision.

Further consultations were held to review historical data and projected service need with medical staff and the paediatric and maternity teams to test validity. Valuable insights for future models of care were incorporated into the final draft document.

It was acknowledged at all consultations that Griffith Health Service plays an important role in the delivery of health services in the region. A commonly held view is that the current hub and spoke model could be enhanced to enable Griffith Health Service to increase its self-sufficiency and play a greater role. There is also a need for Griffith Base Hospital to expand its partnership networks to ensure seamless delivery of services between acute and community and home based services.

Consultation with the senior members of the Griffith Health Service also indicated that the aging infrastructure is currently inhibiting the ability to contemporise some models of care. One of them is the current outpatient model; it is disjointed with services being provided across multiple sites and affecting the effectiveness of these services. For instance, Rehabilitation Services currently do not have a designated inpatient area and for Mental Health patients who require admission, they are currently being admitted to the medical ward.

Several key themes emerged that apply to Griffith Hospital and to the Health Service in General.

1. Aging Infrastructure that inhibits the ability to change or enhance models of care to make them more contemporary, or to improve efficiency in service delivery; and the health service in meeting contemporary health standards and guidelines, including Infection Control.
2. Challenge of recruitment. Griffith has a number of services that require a specific recruitment strategy to ensure the ongoing viability of the service, the ability for Griffith to meet service requirements at its designated role delineation Level 4, and to provide appropriate clinical services for the community.
    a. Service sustainability is an issue for some specialities as is the case for many rural and regional health services. 'Fly in Fly out' services are currently provided by sole medical practitioners, which increases the risk of service viability into the future, especially for some outpatient services.
3. Lack of some core health services such as orthopaedics and associated fracture clinic.
4. Lack of space for growing ambulatory and subacute services such as renal dialysis, outpatients, Hospital in The Home, oncology and rehabilitation (especially rehabilitation outreach services).
5. Limited Allied Health coverage, particularly in social work, physiotherapy, occupational therapy, pharmacy and speech pathology. This has impact on current service delivery at Griffith Hospital and local sites and limiting future service development.
6. Improved Integration with the Primary Health Network. This led to greater awareness of what is provided in the area, preventing costly duplication and ensuring appropriate linkages for an improved care continuum.

Each Service expressed unique challenges including: the need for workforce strategies to enhance recruitment and retention of staff, infrastructure constraints, work processes and IT/communication challenges.

6. PLANNING OUTCOMES AND FUTURE SERVICE OPPORTUNITIES

6.1. Future Models of Care

Contemporary models of care and contemporary facilities are designed to reduce inconsistencies in service and treatment experiences and outcomes for both the consumer and the provider. They use technology to enable efficiency and where it is clinically appropriate, to provide services close to home and in the least intrusive setting. For Griffith Health Service, this will require a significant change in the current thinking and practice as well as substantial improvements in both physical and ICT infrastructure. The development of patient centric models of care that allow the implementation of individualised treatment pathways will enable Griffith Health Service to provide the most appropriate care to its population.

The current care environment is also influenced by a number of external factors and these require Griffith Health Service to implement more contemporary models of care for some services. These factors are:

- The changing nature of health care, including the increase in community ambulatory and outpatient services rather than longer inpatient stays
- The NSW and the Murrumbidgee Local Area Health Service strategies that outline the requirement to deliver services closer to home in rural and regional areas
- Focusing on organising care to meet the needs of targeted patients and their carers, rather than organising services around provider structures, and
- The expectation of the Griffith community to be provided with the best health care services possible within their local area.

There is also the need for more integrated care across the care continuum which will involve

- designing better connected models of healthcare to leverage available service providers to meet the needs of smaller rural communities;
- improving the flow of information between hospitals, specialists, community and primary care healthcare providers;
- developing new ways of working across State government agencies and with Commonwealth funded programs to deliver better outcomes for identified communities; and
- providing greater access to out-of-hospital community-based care, ensuring that patients receive care in the right place right time

Ideally, future models require defined and flexible inpatient and outpatient spaces to enable the development of improved models of care. Support services need to be collocated to enhance patient flow and there needs to be improved working environments to enhance staff efficiency.

There are however a number of new models that could be developed regardless of infrastructure and these models would assist Griffith Health Service to improve service delivery. For example, many services described themselves as reactive rather than proactive. To align with the Murrumbidgee Strategic Plan, future models need to focus on prevention and wellness rather than solely on the current reactive mode. Integration of services across the continuum was a common theme of many services, particularly with the aging population and the increasing number of patients with multiple medical conditions.

6.2. Surgical and Procedural Services

NSW Health supports the High Volume Short Stay model for surgical services. There is considerable evidence in the literature suggesting that such a model has a number of benefits including improved access to planned surgical services and improved service efficiency in terms of operating theatre, bed utilisation and better patient experience.[6] This relies on the separation of procedural and short stay surgery from the more complex surgical cases. Currently there is funding for the provision of one operating theatre 5 days per week. There are additional sessions being run to accommodate the current waiting list and emergency surgeries.

The planning accounts for contemporary models and will enable Griffith to accommodate reverse flows and the small growth in volume that will occur to 2031. With the new models of care the increased volume can be offset by short stay environments and increased outpatient services.

Currently, there are no dedicated procedure suites, with all procedures being undertaken within the main theatre complex. Gastroenterology is a growing speciality across Australia with the ageing population and the introduction of the National Bowel Screening Program.

Flows for the Griffith catchment to WWRRH and other services were considered, particularly flows to private services. The largest flows to private hospitals for surgical services (separations) were for Orthopaedics, Urology, ENT and Health and Neck, Non sub-specialty surgery, and Gynaecology. The highest volume of bed days associated with these was for orthopaedics, which equates to an average need for five beds. The volume of Procedural activity at private hospitals was very small. See Appendix D1.

Flows from the catchment to Private Day Procedure Units for surgery (separations) were highest for Ophthalmology, Orthopaedics and Gynaecology. Associated bed days were highest for Ophthalmology, Orthopaedics and Gynaecology. Ophthalmology bed days equate to an average requirement of two beds, while orthopaedics is less than one bed. Procedural activity was highest for Diagnostic GI Endoscopy, Gastroenterology, Dentistry, and Urology.

Any reversal of flows from private services are likely to go to St Vincent's Community Private Hospital. A private Ophthalmology service has recently commenced based at St Vincent's Community Private Hospital and is doing well. Gastroenterology procedures are also likely to flow to St Vincent's.

Orthopaedic flows to WWRRH by separations are highest for the 16-64 age group, while the 65 years and over make up the largest number of bed days. There were just over 100 paediatric orthopaedic separations that flowed to WWRRH from the Griffith catchment in 2015/16. Paediatric surgeons currently bring their own anaesthetists. See Appendix D1.

The flows to WWRRH for ENT are the highest for the paediatric cohort (108 in 2015/16) and made up 61% of the total flows for this specialty. See Appendix D1.

Succession planning for the existing two general surgeons was expressed as a priority by these surgeons.

Development of a sustainable general surgeon cohort with appropriate Registrar and junior staff, and reasonable on call commitments (1 in 4) will require adequate theatre time availability and sufficient activity to occupy the surgeons.

Discussions at consultations noted that even with projected reversal of flows, there will not be sufficient activity in the public sector at Griffith to sustain the desired workforce model, even with proposed reversal of flows for orthopaedics and ENT. A shared workforce model across the public and private sector will be explored further in the workforce plan. This model is desirable to attract additional general surgeons and specialists. A reversal of private flows from other NSW private hospitals and day procedure units to Griffith and reversal of flows from WWRRH would provide sufficient activity for the proposed workforce, however this will need to be across private and public services. St Vincent's Community Hospital Griffith also has

[6] HVSS Agency for Clinical Innovation fact sheet

two theatres and one procedure room. Combined with the proposed two theatres and one procedure room at Griffith Base Hospital, there should be adequate access to theatre time to support the proposed model.

6.2.1. Future Opportunities Surgical

a. Commissioning the second operating theatre and attracting new surgeons to the area is a priority for Griffith to enhance the self-sufficiency of its surgical service and decrease the number of planned surgical cancelations. The areas of ear, nose and throat and orthopaedic specialties would be the two main areas of focus in the short term. Opportunities to build an orthopaedic service in conjunction with St Vincent's to attract workforce exist as the flows for both public and private orthopaedic surgery would support a service locally.

b. The development of a separate Day Procedure Suite that incorporates Gastroenterology Services and minor procedures such as peripherally inserted central catheter (PICC) line insertions would free up space in the main operating theatre, thus enhance patient flow and service delivery.

c. The increase in bowel screening and the ageing population have contributed to the increasing demand of gastroenterology services. The development of a day procedure unit will enhance the ability to develop a sustainable gastroenterology service.

d. A second operating theatre would allow the reverse flow of some historical standing referral patterns which means that some patients who are previously referred to Wagga Wagga Rural Referral Hospital, could have surgery at Griffith Hospital but more importantly provides the capacity to flex up and down as required to accommodate sometimes less flexible scheduling which occurs with Fly in Fly out specialists.

e. Upgrading of the facilities and equipment would assist the recruitment of new surgeons and staff to the area, enhancing the ability to engage more procedural clinicians and staff specialists to develop strong and sustainable surgical services.

f. Building the critical mass of surgeons will enable a Registrar program to be commenced. There are opportunities to look at a number of models to progress this. Additional specialties may then also be attracted to provide a service in Griffith.

g. Enhancement of preadmission processes which can ensure care continuum.

h. There is currently pressure on clinic space, which will need to be addressed as additional surgeons are recruited.

i. Promotion of surgical services to GP's is required to reduce outflows.

j. The capacity of the sterilizing services to meet increase surgical throughput will need to be considered. Griffith Base Hospital should include a sterilizing service in capital plans to ensure capability exists into the future.

6.3. Medical Services

Inpatient Medical Services is one of the major activities at Griffith. This will continue to increase with the ageing population. Currently, medical patients are often outliers in the surgical ward due to limited bed availability. The current infrastructure is not well designed for the current patient cohort and models of care. There are no appropriate clinical spaces available for patients with behavioural disturbances including those with delirium, confused elderly, and those with mental health conditions.

GrHS currently lacks an acute stroke service and issues around access to a Neurology physician has been highlighted. The role level of the services and enhancement of medical and allied health staff could support the establishment of an acute stroke service, and would be most appropriate for this community. Allied health support within the service will require enhancement to support proposed services especially orthopaedics, rehabilitation and aged care. A need for further development of staff training programs was emphasised at consultations and will need to be considered in workforce planning.

Consultations highlighted issues with cardiology transfers for pacemaker insertion with a five to six day wait and travel costs associated with transfer to Sydney. While staff did not believe it was a viable service locally (40-50 per year), it was suggested that this service may be viable closer to home in Wagga Wagga.

More medical inpatient beds will need to be made available to 2031. The sum total of inpatient beds needed overall only increases slightly however the allocation of inpatient places between medicine and surgery does need to be addressed in the long term planning.

6.3.1 Aged care

Currently, specific services designed to support aged care clients and services within the Murrumbidgee LHD include Geriatric Evaluation Management (GEM), Aged & Extended Care (including Transition Care and ambulatory care programs), and dementia-specific units. With an ageing population profile identified in the GrHS catchment an upgrade of the facility will provide an opportunity to develop more aged focus services at Griffith.

The preferred model at the hospital is for flexible medical aged care beds with access to shared rehabilitation clinical therapy spaces. This will mean that a small number of projected inpatient beds from rehabilitation and medical will need to be identified and co-located to develop this ward. Acute delirium should be able to be managed within the general ward situation by staff who have the appropriate training and skills to manage this presentation. The longer term broader aged care service will be a regional aged care model that covers the Murrumbidgee Sector (reflecting the Primary Health Network sectors), and will incorporate a Geriatrician covering the hospital, community, MPS sites and residential aged care in-reach. In the shorter term the regional service will be overseen by a Senior Nursing position for consultation and liaison with a weekly visiting Geriatrician service.

6.3.2. Hospital in the Home (HiTH)

HiTH currently provides services for adults within a 20km radius including services into the local nursing homes. HiTH also provides onsite services for patients requiring infusions and wound dressings. The service is currently being administered and co-ordinated out of one small office which is insufficient for its role and need. Infusion/transfusions are not core services for HiTH and would be better collocated with ambulatory care services. This does occur in other locations.

6.3.3. Oncology

Demand for Oncology and Haematology services is projected to increase. The current day procedure area for oncology is inadequate for the current demand and is not culturally appropriate for the population. The current infrastructure does not permit any further expansion, and the aging ICT systems limit the ability to share data with St Vincent's, the tertiary provider of oncology services for Griffith Health Service. This in turn limits the ability to provide other types of services such as telehealth due to both limited space and inadequate technology.

Both the oncologist and haematologist are available through fly in fly out models. This is through a contractual arrangement with another LHD.

6.3.4. Palliative Care

There are currently no dedicated inpatient palliative care beds. Community services provide good in home support and end of life care, however early referral and increased intervention is required. Palliative care will be administered and governed as part of a move by the LHD to introduce clinical streams across the District. Three palliative care beds will be required to 2031. Where these beds are situated and how they are configured will need to be considered as part of the functional briefing process. The need for a quiet room for families and interfaith room will also be considered at this time.

6.3.5. Renal Dialysis

The number of patients requiring renal dialysis continues to grow. The Griffith based service has a target of 30 per cent of all patients being on home dialysis although this is felt not to be a realist target for Griffith with the current patient cohort, unsuitability of some rural environments and the Hub and Spoke model of care

with patient training for dialysis occurring either in Wagga Wagga or Sydney. The current dialysis space is not culturally appropriate for the population and has inadequate capacity to meet future demand. To develop a more sustainable service a proactive approach for succession planning for a Nephrologist should be implemented in partnership with Royal Prince Alfred and/or Specialty networks with a medical workforce planner to address longer term needs.

6.3.6. Neurology – Stroke

FlowInfo data indicates that the majority of separations for stroke for the catchment are managed at Griffith. Total stroke separations for the Griffith catchment in 2015/16 treated anywhere was 128, with 447 associated bed days, which equates to an average of 1.2 beds. Griffith managed 45% and WWRRH managed 20% of separations. See Appendix D1 for further details.

Stroke projections for the Griffith catchment are expected to increase, which aligns with the ageing population. The impact at Griffith, Leeton, Narrandera and WWRRH was investigated. The projected bed days to 2031 equate to one bed (which are incorporated in the projected medical bed numbers). See Appendix D1 for further details.

6.3.6.1. Future Opportunities Medical

Contemporary planning and design ensures areas are built with features to assist in the care of the patient. The current environment has no specific design features or enhancements to staffing models to aid in the care of multiple different patient types e.g. the acute delirium patient, rehabilitation patient or mental health patients.

a. The redesign of the inpatient ward areas to incorporate key design features for the care of the acutely unwell, confused and elderly patient. Additionally, patient safety design elements should also be included.

b. Consider establishment of an acute stroke service supported by a Neurologist, and appropriate clinical and other therapeutic spaces.

c. The development of an Integrated Model of Care for the complex patient.

d. Expansion of the Renal Dialysis Unit in line with projected demand
   - Capacity for respite dialysis and a service for home haemodialysis service who temporarily have a setback with independence and capacity for peritoneal dialysis training
   - Culturally appropriate environment for Aboriginal people.

e. Expansion of the Day Oncology and Infusion Service Unit in line with projected demand and role delineation
   - Griffith Connected Cancer Care Model and oncology model of care to include Cancer Council Information Service and Transport to Treatment initiatives provided by the Cancer Council NSW.
   - Enhanced partnerships with community based services and support groups
   - Culturally appropriate environment for Aboriginal people and the Culturally and Linguistically Diverse (CALD) population groups in Griffith.

f. Expansion of the HITH unit and the provision of suitable space to administer the service.

g. The development of a palliative care inpatient service.

h. Improved ambulatory multidisciplinary care co-located where possible to make it more patient centred.

i. Recruitment of health workforce for expanded services.

j. Improved communication with the PHN and understanding of roles and services available to the community to enhance the care continuum.

k. Day only spaces for medical treatments.

6.4. Critical Care Services

6.4.1. Intensive Care Unit

There is currently a formal network and telehealth link with St Vincent's Sydney (Level 6) and daily links with Wagga Wagga Level 5 service. The location of the ICU near both the emergency department and the operating theatre is effective for patient flow and staffing, the infrastructure and equipment is aging with limited space for storage, administration and meeting areas. The planning accounts for an increase in Intensive Care Service beds to 2031.

Consultations indicated the need for additional remote telemetry in other spaces including wards and proposed short stay unit in the ED. Remote monitoring from the ICU is required. Bed block in ICU has occurred to the lack of remote monitoring capabilities at the present time.

6.4.2. Emergency Department

There has been significant work done within the department to enhance service delivery and patient flow including creating more appropriate spaces for paediatrics and mental health patients. The ageing infrastructure restricts the ability to implement more contemporary models of care. The impact of limited transport options to transfer patients to Sydney or Wagga Wagga means some patients remain in the department for extended periods of time.

There is limited access to allied health services for ED patients, particularly physiotherapy and pharmacy, which have been shown to decrease admissions and emergency department length of stay.

Appropriate spaces are required for providing safe clinical care for mental health patients who are being assessed in ED or those who are waiting to be transferred to an acute inpatient mental health unit.

The planning projections accounts for an increase in treatment spaces by 2. However some consideration should be given to the operational and capital solutions to providing an appropriate space for those patients waiting longer term prior to transfer out of the department/hospital to a higher level of care. This should be addressed at the functional briefing stage.

This planning has also included the introduction of an ED short stay unit. Emergency short-stay units (commonly called Emergency Medicine Units or EMUs) have been present in ED's for several decades. Their purpose is to treat and observe patients who are likely to stay for a relatively short period and require non-intensive intervention. Optimally configured, they have been shown to:

- reduce length of stay for certain diagnoses such as chest pain, asthma, and falls in aged care patients;
- improve ED efficiency;
- be cost-effective;
- reduce the number of inpatient admissions to hospital;
- to be associated with a high level of patient satisfaction, comparable to or greater than conventional treatment systems;
- to improve bed utilization; and
- reduce ED overcrowding and inappropriate discharges from the ED.

It is important that there are clear admission criteria around this type of Unit and that the governance is clear. In general the principles guiding admission to the EDSSU are:

- Clinically stable patients who require a period of observation which is less than 24 hours;
- Clinically stable patients who require treatment by the ED for less than 24 hours prior to discharge home;
- Patients requiring satisfactory social and clinical support arrangements prior to discharge home to manage their clinical condition, where these arrangements will take less than 24 hours to complete, may be accepted; and
- The patient is admitted under the care of the Emergency Physician.

As this model was not presented and discussed in the previous planning document the EMU has been included as part of this Refresh. It is proposed an 8 bed EMU be established, with 4 beds being new

spaces to address the increase in ED activity and 4 beds redirected from the projected medical bed numbers. This will reduce the requirement to increase the ED treatment spaces and manage the projected growth in medical admissions within projected bed numbers. The model will be based on the very successful delivery model that currently operates at Wagga Wagga Rural Referral Hospital.

The introduction of an afterhours GP clinic is also proposed to provide Griffith with a viable model for afterhours GP services. Efficient use of the space by other service requirements will be explored during the facility planning phase.

6.4.2.1. Future Opportunities- Critical Care

a. Expansion of the emergency department to meet current and future demand.

b. Consider implementation of a Rapid Assessment Clinic or ED diversion initiative if ED presentations continue to increase significantly.

c. Establishment of an Emergency Medical Unit (EMU).

d. Any redevelopment of the emergency department, intensive care unit and operating theatres should ensure that where possible colocation of services such as medical imaging and cardiac stress testing occurs to enhance efficiency.

e. Ensure that any increase in service includes the allied health support positions necessary in any associated workforce planning.

6.5. Women's and Children's Services

6.5.1. Maternity Services

Currently Griffith provides a level 4 Maternity Service which is well integrated with community services and the General Practitioners in the area. The demand for overnight and day maternity beds decreases slightly to 2031. The total number of delivery suites required remains unchanged. A second assessment room is required.

A level 3 Special Care Nursery (SCN) service is available and the projected demand for SCN cots is reflective of the decrease in projected births. Midwives currently provide care for these cots.

There is a large Aboriginal population which accounts for approximately 15 per cent of all births. The Aboriginal Maternal and Infant Health Strategy team are collocated on the maternity ward. This model has improved integration of services.

The service needs to meet the demand of the growing CALD population and the increasing number of transient farm workers moving into the area. This can be addressed through operational approaches in addition to capital solutions.

The maternity service requires close proximity to theatres and paediatric/ SCN services. Collocation with paediatric services will provide efficiencies for staff amenities and office accommodation, as both staffing cohorts are unable to leave the ward for meal breaks due to minimum staffing requirements.

6.5.2. Paediatric Services

Paediatrics is projected to increase by 0.9 per cent to 2031. This results in a requirement of 6 overnight beds. The inpatient paediatric service is physically dislocated from the main inpatient areas which pose some logistical challenges when moving patients, staff and resources throughout the hospital. The ward supports Child and Youth Mental health patients, supported by the Child and Adolescent Mental Health Service (CAMHS) community based team.

The ward also supports outpatient activities such as dressing changes, catheter access, the activity for which is currently not captured in the acute projections or the non-admitted data. The best place for these paediatric outpatient activities and workforce requirements should be considered during the functional briefing process. The respite function provided by the paediatric ward also needs to be considered in future service delivery.

6.5.2.1. Future Opportunities Women's and Children's

a. Ensuring every aspect of the service addresses consumer choice in how the mother and baby are treated prior to, during and after the birth experience.

b. The enhancement of services to include lactation and bereavement support.

c. Enhancement of collaborative and midwifery lead models of care such as shared care programs and Midwifery Group Practice.

d. The development of culturally appropriate services for the increasing CALD population.

e. Development of maternity services to accommodate direct entry Midwives (unable to cover other ward areas).

f. A paediatric Hospital in the Home service.

g. Any future redevelopment of the maternity and children's services needs to be cognisant of staffing constraints. Staff are unable to leave the ward for meal breaks. Close functional relationships between the two services, which have similar issues, will assist with efficiencies of providing staff facilities (kitchen, lockers and office requirements).

h. The preferred model to build a critical mass for paediatric services is for collocation of a paediatric assessment unit (PASSU), neonatal cots and surgical day only stage 2 recovery spaces. The existing ward already has stage 2 recovery as part of their model, with four bed/cots. Inclusion of Special Care cots will release midwives to focus on maternity care.

i. The existing safe paediatric room for Child and Adolescent Mental Health Services will need to be replicated in future builds.

j. The need for management of infectious diseases needs to be considered in future builds (positive and negative pressure rooms) as this impacts on the ability to receive reverse transfers.

k. Develop the paediatric unit with a capacity to offer short term respite for children with a disability.

l. Any future redevelopment of the emergency department and critical care services need to ensure appropriate facilities are incorporated for children.

m. The service requires family and multi-disciplinary conference space to plan for complex patients. Griffith receives reverse transfers for children with complex and long stay requirements from metropolitan facilities.

n. Transport issues for families on discharge (outlying communities) increases length of stay as families are not able to be sent home from dusk due to the risk of kangaroo's and distance. On site family accommodation is therefore an important consideration. Several units exist, but require upgrades.

o. Consultations indicated the need for an emergency entrance (including ambulance) direct into maternity to expedite transfer into a delivery environment.

p. An external entrance into paediatric services is also desired for access to outpatient paediatric services, without having to navigate through ward areas.

6.6. Subacute Services

6.6.1. Rehabilitation and Maintenance Services

Rehabilitation activities[7] need to take place in a range of settings from inpatient acute to inpatient sub-acute to ambulatory care and outreach (home-based). The increasing burden of an ageing population and the need to integrate the philosophy of rehabilitation into all health service environments to reduce dependence on hospital-based services, maximise opportunities for patients to achieve and maintain living independence, is becoming more important. The projections indicate a need for 15 inpatient beds by 2031 (not inclusive of the three required for palliative care in the sub-acute bed base).

Griffith Base Hospital runs a Monday to Friday rehabilitation service based around allied health input. There are no dedicated inpatient beds although inpatients do attend the day rehabilitation area. The rehabilitation specialist is part time and flies in and out. This limits the extent to which rehabilitation services can be provided at Griffith. There is growing level of demand for this service and a multidisciplinary approach is required to improve functional outcomes and reduce inpatient length of stay.

While a Geriatric Evaluation and Maintenance (GEM) model could be implemented, having a GEM and aged care service as separate models can be inefficient particularly due to the restrictive in admission criteria for a GEM. As such it is proposed a more flexible model be developed. While there is no Geriatrician at GrHS, one has recently been appointed across the District and as such models of care that could work effectively in an inpatient unit are under development. Previous planning also had not investigated options for a combined aged care and rehabilitation service therefore it is recommended that this approach be investigated further to develop a ward space to combine acute and sub-acute aged care with rehabilitation.

The Prosthetic and Orthotic Service is a sub-branch of Enable NSW (HealthShare NSW) which provides technical/fabrication and clinical services to the MLHD. MLHD currently have two fabrication facilities based at WWRRH and Albury. Expansion of this service to Griffith is planned to provide services closer to home for the catchment communities. This will require specific workshops for prosthetic and orthotic fabrication, modification and repair. The workshop needs to be collocated with a consultation room with an examination couch and IT access. There are specific requirements for this space to meet the needs of the service, and these will need to be incorporated during facility design.

The Leading Better Value Care Musculoskeletal Project is expanding in Griffith. New clinics will be required as part of this service, including a fracture clinic.

6.6.1.1. Future Opportunities Rehabilitation

a. The development of a designated aged care and rehabilitation service including designated inpatient beds. The expansion of the outpatient and day rehabilitation services with expanded scope.

b. Improvements to the care continuum from hospital to home through the use of proactive rehabilitation programs, collaboration with other service partners (especially General Practice and the use of other programs such as Transitional Care Programs.

c. Proactive patient pathways which anticipate problems and have individualised solutions to achieve the required outcomes.

d. Enhanced alternatives to hospital based care especially in the sub-acute setting with proactive rehabilitation support.

[7] NSW Ministry of Health Rehabilitation Redesign Project

e. Work with general practice residential aged care providers and other service partners to ensure the right services are being provided holistically in a timely manner to promote maintenance and to negate the need for a hospital stay.

f. The further development of outpatient rehabilitation programs to enhance the continuum of care for the most common of chronic diseases such as pulmonary rehabilitation and heart failure rehabilitation.

g. Enhancement of the Allied Health workforce and rehabilitation physician requirements (currently 0.32 Full Time Equivalent Staff Specialist) will need to be considered in workforce planning.

6.7. Mental Health

Mental Health has a 24/7 consultation service that enables the assessment of patients in the emergency department and inpatients. This service works well however, due to lack of transport options out of hours, there is often difficulty in transferring patients to the adult inpatient service at Wagga Wagga, which means patients remain in the ED or are admitted to a medical ward bed until transfer can be arranged. There is limited support for both ends of the Mental Health age spectrum with limited access to Adolescent and Older Persons mental health beds. Transfers to another centre is also considered in many cases to be disruptive to the sustainability of the client's local support networks which are suspended and weakened while they are out of town in another centre.

There have been enhancements to the current emergency department space for those patients presenting with a mental health issue however any future expansion of the emergency department needs to take into consideration the needs of this group.

Mental Health services for the young and the very elderly are currently of limited capacity within the region. Partnership with NGO's to develop services such as Residential Rehabilitation for youth and Older Persons residential facilities could be explored.

Mental Health consumers are unequivocal in their assertions that they do not want acute hospital admissions to be the only treatment option. *Living Well* **A Strategic Plan for Mental Health in NSW 2014 - 2024** urges that future growth funding in NSW should be directed to the delivery of community based mental health services. There are opportunities to implement new models to enhance care in the community, making it more responsive to the needs of consumers. This strategy can reduce the need for a person with a mental illness to present to an emergency department, to prevent avoidable hospital admissions and unplanned contact with the hospital system.

Integrated service delivery is a key objective of the District which should deliver care that focuses more on the person and their family and carers. Keeping people out of hospital through the development of better community-based mental health care and support services is a critical element in the NSW mental health reforms. There are a number of models emerging with potential to better support consumers within their own communities that require exploration and funding and will be a priority focus of MLHD to respond to the needs of Griffith residents.

Mental Health community services are ideally collocated with community health services and outpatient services. The service is currently in a leased purpose built facility, which limits the capacity to provide extended hours services.

Community-based services are being commissioned by the MPHN to better support people in the Griffith community.

While the objective in providing care close to home and within the community for the consumer there are times where a person is so unwell they will require admission to a mental health inpatient unit. It is appropriate they receive that care as soon as possible and provided by a full complement of specialised psychiatrists, medical, nursing and allied health clinicians to ensure recovery can commence a immediately. This level of service is not available at Griffith, with the closest service being at Wagga Wagga.

6.7.1.1. Future Opportunities Mental Health

a. Appropriate and safe space for assessment for all age groups of mental health patients.

b. The development of bespoke model of care to meet the needs of the mental health consumers at Griffith.

c. Establishment of a dedicated after hours transport service, with specifically trained staff to reliably and safely transfer consumers requiring admission to Wagga Wagga.

d. Extended hours Assertive Community Team development.

e. Investigate the feasibility of appointing MH CNCs or Nurse Practitioner within the Griffith ED to provide extended hours coverage.

f. Development of Older Persons Mental Health Community based services with NGO partners, with potential in-reach programs.

6.8. Drug and Alcohol Services

An acute Drug and Alcohol withdrawal program is run from Griffith as inpatient, outpatient and homebased service with in-reach / out-reach support. There are Drug and Alcohol inpatient beds in Wagga Wagga. Recruitment and retention of staff is a challenge for this service.

6.8.1.1. Future Opportunities Drug and Alcohol

a. Development of Adolescent Services such as Residential Rehabilitation, Acute Outreach services in conjunction with NGO partners.

6.9. Aboriginal Health Services

There is a need for greater integration of culturally appropriate services for the Aboriginal population, as Aboriginal Health workers are seen as the most appropriate and only option and are currently stretched to capacity. The service currently is only able to react rather than proactively managing the health issues of the Aboriginal population.

Key factors of significance to the delivery of services noted in the Griffith Health Service Plan (2015) include;

- Increased incidence of chronic disease amongst local people;
- Increases in the number of people experience mental illness;
- Global focus on aged care and chronic care but a high percentage of the Aboriginal population is made up of children under 15 years of age;
- Increase in psychological and psychosis issues (related to drug use) being experienced by adolescents; and
- People refusing to use some GrHS services as the facilities they are provided in are considered culturally inappropriate (such as some areas of the renal unit and chemotherapy unit and the mortuary which joins other buildings).

6.9.1.1. Future Opportunities Aboriginal Health Services

a. Enhance the integration of services across the care continuum.

b. Ensure in the redevelopment that culturally appropriate areas are provided for this cohort.

6.10. Support Services

6.10.1. Pharmacy

The pharmacy like many other services at Griffith Base hospital is housed in ageing infrastructure and limited space. The number of pharmacists is currently below the Society of Hospital Pharmacist Australia recommended workforce benchmark. This impacts on the quantity and volume of services it can provide. MLHD Pharmacy staff take accountability for leading the microbial stewardship program. An Infectious Diseases physician to support this program is provided through a networked service with Westmead.

6.10.2. Medical Imaging

Imaging Associates are the contracted provider for medical imaging. The existing dislocation of medical imaging services creates inefficiencies that will need to be rectified in a redevelopment.

Good access and drop off facilities are required for patients in the public, private and outpatient cohorts. The location of the service to fulfil this requirement will need to be considered during master planning. Continuity of the service during the redevelopment is also paramount.

The combination of public and private medical facilities, as well as a modern imaging facility will be significant attraction to recruiting and retaining specialists in future years, particularly radiologists. In addition, such a facility would be very attractive to training, and retaining technical staff, which improves ongoing viability of the service.

Future Opportunities Support Services

a. Redevelopment of Medical Imaging to collocate all services and expand services to include MRI and mammography (including BreastScreen), and better fluoroscopy.
b. There is an opportunity to develop a single comprehensive imaging service at GrBH to service both facilities. A commercial partnership between the two services may be possible.
c. Improved recruitment and retention of medical imaging specialists and technical staff, particularly radiologists. Opportunities to provide training.
d. Enhancement of service and review of models of care for Pharmacy.

6.11. Ambulatory Services - Wellness Centre

The increased focus on Ambulatory and Integrated models of care that assist in decreasing length of stay, preventing admissions, and reducing the disruption to people's lives means the development of an Ambulatory Care Hub or Wellness Centre to enable the collocation of all current ambulatory services and to future proof GrHS needs to be a priority. The current services have significant space and operational challenges that inhibit the ability to develop new models or enhance services and is a limiting factor in the development of Griffith Health Services.

Contemporary models would suggest that the colocation of procedures of similar complexity improves efficiency particularly in relation to multiple use of infrastructure and assets, skills and supplies. This provides the ability to use infrastructure in a flexible way as service demands change over time. All invasive type procedures should be collocated such as renal dialysis, oncology, infusion/transfusion services and day procedures, while less invasive interactions such as outpatient clinics, specialist clinics, community health, pharmacy and Aged Day Care should be collocated. All services should be telehealth enabled to meet the needs of the catchment and improve access to support services.

6.11.1.1. Future Opportunities Ambulatory Care

a. Development of an ambulatory care hub or Wellness Centre ensuring the efficient colocation of services within the hub.

b. The Wellness Centre to be accessible without impacting the main hospital and to use self-help technology to maximise responsibility and ownership of self and supportive care.

c. Implementation of an electronic referral and waitlist system.

d. Investigate opportunities for not for profit or NGOs to provide Aged Day Care as it is not a core service for the LHD.

6.11.2. Outpatient Services

The current outpatient services are spread across a number of locations. This impacts the ability to centrally manage the service and the ability to recruit and retain the workforce. The current demand for clinics exceeds the current space available resulting in extended waiting times for some specialty clinics. There is limited access to allied health support in outpatient clinics, particularly social work and physiotherapy compounded by the physical spread of the service locations. There is no fracture clinic and there are a number of new clinics planned for introduction in the future.

6.11.2.1. Future Opportunities for Outpatients

a. Expanded outpatient and multidisciplinary team clinics and rooms be included in the ambulatory care hub/ Wellness Centre.

b. Ensure the spaces are suitable for a range of activities and age groups and offer the flexibility for clinics to scale up and scale down. Consider specific needs for group therapy/meeting rooms.

c. The spaces to include clinical measurement services that are not collocated with acute inpatient areas.

d. Provide space for other clinical services requiring allied health support.

6.11.3. Day Rehabilitation Services

The day rehabilitation unit runs, physical, pulmonary and cardiac rehabilitation services and provides rehabilitation activities for inpatients.

6.11.3.1. Future Opportunities Day Rehabilitation

> Development of dedicated outpatient space.

> Enhance orthopaedic services with a fracture clinic.

6.12. Primary and Community Services

The MLHD vision for wellness incorporates strong primary and community services that are front of house. There are opportunities to improve efficiencies and shared spaces with outpatient specialist clinics and provide good collegial support for multi-disciplinary teams.

6.12.1. Child and Family Health

The Child and Family Health Program provides an extensive range of services throughout the Griffith Health Service catchment. The service is seeing an increase in complexity of clients and family support requirements. The Community Nursing Service does not provide services to children. There is no respite service for this group.

6.12.2. Community Health

The community health service is currently undergoing a change with the new MLHD clinical stream model implemented in July 2017. Changes in funding models, changes in Models of Care, and the implications of the NDIS implementation in 2017/18 will all have implications on how the service is run. There is currently limited social work support and limited access to appropriate services for Aboriginal and CALD populations.

6.12.3. Dental Health

Currently the service is reactive rather than proactive. There is limited ability to service the less acute patient such as those in nursing homes. The recruitment of experienced dental officers in rural areas requires targeted workforce strategies. Expanding the scope of practice of Dental Technicians is being examined to address needs of this service.

There are specialty dental services based in Wagga Wagga including paediatric oral surgery.

6.12.4. Integrated Care

There needs to be further investment and concentration on vulnerable communities such as Indigenous, CALD and transient backpackers.

6.12.4.1. Future Development Opportunities

- Expand the scope of Dental technicians;
- Further develop integrated Models of Care for vulnerable communities; and
- Improved functional integration between Murrumbidgee Primary Health Network and MLHD.

6.12.5. Transition Care Program

Transition Care is a Federally-funded program which provides short-term care that seeks to optimise the functioning and independence of older people after a hospital stay through a care continuum to home rather than into a residential aged care facility prematurely. Transition Care is goal-oriented, time-limited and therapy-focussed. It provides older people with a package of services that includes low intensity therapy such as physiotherapy and occupational therapy, social work, nursing support and personal care.

Griffith Health Service offers this program to its residents through a range of avenues including an acute inpatient unit and outpatient Rehabilitation Unit. These two units are physically separate and lacking the range of amenities ideally required, including spaces for activities of daily living (ADL) training. The lack of a dedicated rehabilitation inpatient unit and associated therapy areas makes it difficult to fully implement transitional rehabilitation activities including evaluation, transitional living practice and patient-directed rehabilitation.

6.13. Partnerships

Several attempts have been made to procure food services from St Vincent's Private Hospital, however a financially viable solution has not been reached. The aging infrastructure of the current food service area will require significant capital investment.

The NSW Ministry's roll out of the electronic medical record should be embraced by Griffith Health Service to enable the sharing of information across the vast distances patients travel. The key areas of focus should be on those that enhance and support the business. With each new infrastructure and model of care being developed, a clear ICT strategy should be implemented to leverage the change.

6.13.1.1. Future Development Opportunities

- Continue to explore shared support service options with other providers; and
- Telehealth enablement of all clinical spaces.

6.14. Workforce

The future workforce requirements for Griffith Health Service is still being finalised, although the Griffith Health Service Workforce Overview forms a key component of the Griffith Health Service Plan and is provided as an appendix (Appendix E) as an excellent basis to inform planning. Future staffing and further workforce information should be available for facility design.

The majority of the services provided other than support services are for staff to utilise a space for a very small amount of their work (community and integrated) or would not require staff office accommodation other than support services (inpatient services). It is recommended that in addition a full audit of all staff that require office accommodation, working in new ways be implemented in the office space, and an audit of workstations be performed hourly for two to three days to determine the percentage of time each staff member spends at their workstations. A similar audit at Blacktown Hospital showed a very low utilisation rate and therefore only 60% of office space was required compared to a traditional workstation setting.

Specialist Medical Consultants may choose to be included in the working in new ways as has occurred in other locations such as Westmead. As there is a recruitment and retention issue with Specialists in rural areas these staff may be considered for traditional office accommodation. Support areas such as training facilities, and lounge may also need to be considered.

Paediatric and maternity units will need special consideration of office accommodation and staff amenities on the ward as low staffing numbers require staff not to leave the ward for meal breaks. Managers and educators will need to be considered for office accommodation.

6.15. Staff and Relative Accommodation

Griffith Hospital currently has multiple off-site leased units and some on site units to meet staff accommodation requirements. There are on site relatives studio's for families from outlying communities (travel risk after dusk due to distance and kangaroos). Existing accommodation stock is listed below.

Type	Style	Location
Staff accommodation	13 units with 38 beds	– off site leased units
	3 x 2 bedroom unit	– on site for Junior Medical Officers on rotation
	4 queen bedrooms	– house on site for students on placement
	Serviced Apartments	– used for visiting Specialists
Relative accommodation	4 studios	– on site with queen bed and porta cot availability

Consideration of alternative models to provide increased accommodation demand is required. The proposed increase in specialties will attract further medical, allied health and nursing students, new graduates on placement, Junior Medical Officers on rotation, and visiting Specialists. Access to an increased range of services will also increase relative overnight accommodation requirements. On site alternatives will need to be included and alternative delivery models investigated as part of the redevelopment to reduce this growing recurrent cost burden.

7. CONSIDERATIONS FOR FACILITY PLANNING

Although this was not the focus of consultation for this Health Service Plan, there were nonetheless comments raised during consultation that had implications for facility planning that will be undertaken at a later date. These included:

> The need to consider and develop synergies between Griffith Hospital and St Vincent's Community Hospital Griffith in some specialties and support services to create a critical mass. This will require master planning considerations for physical positioning on site of any new build and staging processes;

- The potential to physically integrate outpatient, community health and Mental Health and Drug and Alcohol services (currently off-site) to enable extended safe after hours service delivery and increase efficient use of shared space;
- Separation of paediatric patients from adult patients, especially in areas such as ED, ICU and outpatients;
- The potential collocation of chemotherapy and day medical services for efficiency in an integrated unit and future flexibility in configuration of space to meet changing service demands;
- Collocated pre and post-surgical recovery spaces for flexibility during peak periods;
- The need to consider the management of the older patient in facility design (particularly important considering the ageing population), particularly in the emergency department and wards;
- Appropriate spaces in ED for mental health patients;
- Capacity for the future introduction of haemodialysis training in the renal dialysis unit;
- Appropriate clinical and other therapeutic spaces for subacute patients including palliative care, rehabilitation and maintenance care; and
- Appropriate housing for HITH administrative function needs to be considered in the functional design brief process.

7.1. Patient Flow Observations and Considerations

A patient flow research project, recently completed by the MLHD Patient Flow Unit in September 2017, provides some further insight into some areas that should be considered as part of further planning. The project undertook to investigate current patient flow and referral processes within MLHD and aligns with many of the planning priorities already discussed in the Refresh. The following is an extract from the final report.

Griffith Base Hospital Key Learnings:

- *Lack of availability of key surgical and speciality services for example Urology in addition to limitations in level 4 and 5 critical care management results in outflow from Griffith Base Hospital in particular to WWRRH;*
- *Flow back to facilities from Griffith Base Hospital although increased over the data period is not proportional to the increased inflow;*
- *Delays in flows occur when there is disruption to internal management of resources and planning for discharge;*
- *Without knowledge of MLHD existing services within Griffith Base Hospital GP's in the community will refer patients to interstate sites; and*
- *Aboriginal people require specific cultural supports to prevent early discharge and experience an appropriate discharge.*

Griffith Base Hospital Future Considerations:

- *Availability of theatre space at Griffith Base Hospital for ENT and Orthopaedic procedures;*
- *Availability of a short stay ward;*
- *Advanced medical training to build medical workforce capacity;*
- *Development of sub-acute ward at either Griffith or Leeton with geriatrician input;*
- *Increase in outflow from Griffith Base Hospital to outlier hospitals such as Narrandera and Hay;*
- *Community education on role of acute ward and use of outliers within the District;*
- *Increased direct transfers to smaller outliers from tertiary hospitals;*
- *Support for Aboriginal families to support family members to stay within the hospital system such as social work support, family accommodation and availability of kitchen facilities; and*
- *Support for Aboriginal people to receive end of life care on their country.*

8. IMPLEMENTATION APPROACH

The implementation of this Griffith Clinic Services Plan Refresh will be undertaken over a number of phases. Although some planning priorities are reliant on capital investment and as such there implementation will be dictated by that timeline. There are however a number of planning priorities that will be able to be implemented or developed for implementation in the short term. It is proposed that these priorities be addressed through the development of an action plan that allocates responsibility and identifies a timeframe for completion.

Appendix A identifies a comprehensive list of planning priorities. As an outcome of recent consultation and discussion there are some priorities that have been identified as those that should be addressed immediately and do not have a direct reliance on new capital infrastructure. The table below provides these as high level project descriptions.

Table 42 Implementation Priority Projects

Priority Planning	Service
The development of bespoke model of care to meet the needs of the mental health consumers at Griffith	Mental Health
Establishment of a dedicated after hours transport service, with specifically trained staff to reliably and safely transfer consumers requiring admission to Wagga Wagga.	Mental Health
Expansion of Hospital in the Home to meet needs of the paediatric patient.	Paediatrics
Review and enhancement of care continuum preadmission processes	Surgical
The development of an Integrated Model of Care for the complex patient.	Medical
The development of a feasible model of care to support the implementation of an acute stroke service.	Medical
Improved ambulatory multidisciplinary care co-located where possible to make it more patient centred	Medical
Improvements to the care continuum from hospital to home through the use of proactive rehabilitation programs, collaboration with other service partners (especially General Practice and the use of other programs such as Transitional Care Programs	Rehabilitation
Enhancement of collaborative and midwifery lead models of care such as shared care programs and Midwifery Group Practice	Maternity
The enhancement of services to include lactation and bereavement support	Maternity
Enhanced alternatives to hospital based care especially in the sub-acute setting with proactive rehabilitation support	Rehabilitation
Work with general practice residential aged care providers and other service partners to ensure the right services are being provided holistically in a timely manner to promote maintenance and to negate the need for a hospital stay	Rehabilitation and Aged Care
The further development of outpatient rehabilitation programs to enhance the continuum of care for the most common of chronic diseases such as pulmonary rehabilitation and heart failure rehabilitation.	Rehabilitation and Aged Care
Investigate the feasibility of appointing a MH CNC or Nurse Practitioner within the Griffith ED to provide extended hours coverage.	Mental Health
Development of Adolescent Drug and Alcohol Services such as Residential Rehabilitation, Acute Outreach services in conjunction with NGO partners	Drug and Alcohol
Development of Older Persons Mental Health Community based Drug and Alcohol services with NGO partners, with potential in-reach programs	Drug and Alcohol
Development of new models of service for Pharmacy.	Pharmacy
Improved functional integration between Murrumbidgee Primary Health Network and MLHD	GrHS
Develop a future Workforce Plan once all models of care have been established	Workforce Planning, GrHS

APPENDIX A PRIORITY PLANNING ACTIONS FOR SELECTED SPECIALTY SERVICES

Specialty Group	Priority Planning Action and Impact on Future Infrastructure Requirements	Priority
Surgery	a. Commissioning the second operating theatre and attracting new surgeons to the area is a priority for Griffith to enhance the self-sufficiency of the surgical service and decrease the number of planned surgical cancelations. The areas of ear nose and throat and Orthopaedic specialties would be the two main areas of focus in the short term. b. Consider and develop synergies between Griffith Hospital and St Vincent's Community Hospital Griffith in some specialties to create a critical mass for workforce and service development. c. The development of a separate Day Procedure Suite which could incorporate Gastroenterology Services, minor procedures such as peripherally inserted central catheter (PICC) line insertions would free up space in the main operating theatre, enhance patient flow and service delivery for patients. d. The increase in bowel screening and the ageing population has increased the demand on gastroenterology services. The development of a day procedure unit will enhance the ability to develop a sustainable gastroenterology service. e. The second operating theatre would allow the reverse flow of some historical standing referral patterns which means that some patients who are referred to Wagga Wagga, could have surgery at Griffith. f. Upgrading of the facilities and equipment would assist in the recruitment of new surgeons and staff to the area enhancing the ability to engage more procedural clinicians and staff specialists to develop strong and sustainable surgical services. g. Enhancement of care continuum preadmission processes.	
Medical	a. The redesign of the inpatient ward areas to incorporate key design features for the care of the dementia patient and the elderly. Additionally, patient safety design elements should also be included. b. The development of an Integrated Model of Care for the complex patient. c. The development of a feasible model of care to support the implementation of an acute stroke service.	

Specialty Group	Priority Planning Action and Impact on Future Infrastructure Requirements	Priority
	d. Expansion of the Renal Dialysis Unit in line with projected demand including – Capacity for respite dialysis and a service for home haemodialysis service who temporarily have a setback with independence and capacity for peritoneal dialysis training. – Culturally appropriate environment for the aboriginal cohort.	
	e. Expansion of the Day Oncology Unit in line with projected demand and role delineation – Griffith Connected Cancer Care Model and oncology model of care to include Cancer Council Information Service and Transport to Treatment initiatives provided by the Cancer Council NSW. – Culturally appropriate environment for the Aboriginal cohort.	
	f. Expansion of the HITH unit and the provision of suitable space to administer the service.	
	g. The development of inpatient Palliative Care service.	
	h. Improved ambulatory multidisciplinary care co-located where possible to make it more patient centred.	
	i. Recruitment of health workforce for expanded services.	
	j. Consider and develop synergies between Griffith Hospital and St Vincent's Community Hospital Griffith in some specialties to create a critical mass for workforce and service development.	
	k. Improved communication with the PHN and understanding of roles and services available to the community to enhance the care continuum.	
	l. Day only spaces for medical treatments.	
Critical Care	a. Expansion of the emergency department to meet current and future demand.	
	b. Any redevelopment of the emergency department, intensive care unit and operating theatres should ensure that where possible colocation of services such as medical imaging and cardiac stress testing occurs to enhance efficiency.	
	c. Ensure that any increase in service includes the allied health support positions necessary in any associated workforce planning.	
Women's and Children's	a. Ensuring every aspect of the service addresses consumer choice in how the mother and baby are treated prior to, during and after the birth experience.	
	b. The enhancement of services to include lactation and bereavement support.	

Specialty Group	Priority Planning Action and Impact on Future Infrastructure Requirements		Priority
	c.	Enhancement of collaborative and midwifery lead models of care such as shared care programs and Midwifery Group Practice.	
	d.	The development of culturally appropriate services for the increasing CALD population.	
	e.	Expansion of Hospital in the Home to meet needs of the paediatric patient.	
	f.	Enhancement of a paediatric unit through inclusion of stage 2 recovery (as exists now), Special Care Cots, paediatric outpatients, CHAMS room, and a Paediatric Assessment Unit.	
	g.	Collocation with maternity unit to provide efficiencies and shared spaces (utility rooms, staff amenities and potentially office accommodation).	
	h.	Develop the paediatric unit with a capacity to offer short term respite for children with a disability.	
	i.	Any future redevelopment of the emergency department needs to ensure appropriate facilities are incorporated for children.	
Rehabilitation and Aged Care	a.	Creation of a Rehabilitation and Aged Care Inpatient Unit which is operated in collaboration with Allied Health Services and reflects the requirements of the MLHD Rehabilitation Clinical Service Plan (2014).	
	b.	The development of a designated rehabilitation service including designated inpatient beds. The expansion of the outpatient and day rehabilitation services with expanded scope.	
	c.	Improvements to the care continuum from hospital to home through the use of proactive rehabilitation programs, collaboration with other service partners (especially General Practice and the use of other programs such as Transitional Care Programs.	
	d.	Proactive patient pathways which anticipate problems and have individualised solutions to achieve the required outcomes.	
	e.	Enhanced alternatives to hospital based care especially in the sub-acute setting with proactive rehabilitation support.	
	f.	Work with general practice residential aged care providers and other service partners to ensure the right services are being provided holistically in a timely manner to promote maintenance and to negate the need for a hospital stay.	
	g.	The further development of outpatient rehabilitation programs to enhance the continuum of care for the most common of chronic diseases such as pulmonary rehabilitation and heart failure rehabilitation.	
Mental Health	a.	Appropriate and safe space for assessment for all age groups of mental health patients.	
	b.	The development of bespoke model of care to meet the needs of the mental health consumers at Griffith.	

Specialty Group	Priority Planning Action and Impact on Future Infrastructure Requirements	Priority
	c. Establishment of a dedicated after hours transport service, with specifically trained staff to reliably and safely transfer consumers requiring admission to Wagga Wagga.	
	d. Investigate the feasibility of appointing a MH CNC or Nurse Practitioner within the Griffith ED to provide extended hours coverage.	
Drug and Alcohol	a. Development of Adolescent Services such as Residential Rehabilitation, Acute Outreach services in conjunction with NGO partners. b. Development of Older Persons Mental Health Community based services with NGO partners, with potential in-reach programs.	
Aboriginal Health	a. Enhance the integration of services across the care continuum. b. Ensure in the redevelopment that culturally appropriate areas are provided for this cohort.	
Support Services	a. Redevelopment of Medical Imaging to collocate all services. b. Development of new models of service for Pharmacy to meet a level 4 role delineation level (current level).	
Ambulatory Care	a. Development of an ambulatory care hub/ Wellness Centre ensuring the efficient colocation of services within the hub. b. The Wellness Centre to be accessible without impacting the main hospital and to use self-help technology to maximise responsibility and ownership of self and supportive care. c. Implementation of an electronic referral and waitlist system	
Ambulatory Care - Outpatients	a. Expanded multidisciplinary outpatient spaces be included in the Wellness Centre. b. Ensure the spaces are suitable for a range of activities and age groups and offer the flexibility for clinics to scale up and scale down. c. The spaces to include clinical measurement services that are not collocated with acute inpatient areas. d. Provide space for other clinical services requiring allied health support.	
Ambulatory Care – Day Rehabilitation	a. Development of dedicated outpatient space. b. Enhance orthopaedic services with a fracture clinic.	
Primary and Community Services – Integrated Care	a. Expand the scope of Dental technicians. b. Further develop integrate Models of Care for the vulnerable communities. c. Improved functional integration between Murrumbidgee Primary Health Network and MLHD.	

APPENDIX B TECHNICAL PLANNING METHODOLOGY AND ASSUMPTIONS

The projection methodologies for services at Griffith Hospital are outlined in this Appendix for the Base Case and the Scenario. Where relevant, assumptions underpinning the proposed Scenario are described.

B.1 Adult Acute Inpatient Services

Adult Overnight Beds

The methodology used to calculate overnight acute beds is as follows:

- Determine activity by bed days using the HealthAPP tool, separated medical / surgical
- Apply annual bed days benchmark of 365 day per annum (or termed operational days per annum) to activity projections
- Apply occupancy rate of 85 per cent.

Adult Day Only Beds and Bed Alternatives

The methodology used to calculate day only acute beds / bed alternatives is as follows:

- Determine activity using the HealthAPP tool, separated medical / surgical
- Apply annual benchmark of 250 day per annum (or termed operational days per annum) to activity projections
- Apply occupancy rate of 170 per cent.

Hospital in the Home

According to consultation, the Hospital in the Home service is a progressive and well developed service. Comparison with other hospitals in NSW suggests that Griffith Hospital has one of the highest percentages of bed days in the state. Hospital in the Home services will therefore be assumed to remain at the current levels from an admitted inpatient perspective (approximately 6 per cent of total admitted bed days, as informed by the HiTH Hours field in FlowInfo v16.0).

B.1.1. Scenario Modelling Adult Acute Inpatient

Accounting for St Vincent's Private Hospital

St Vincent's Private Community Hospital, Griffith (SVPCHG) recently opened in Griffith, located adjacent to Griffith Hospital. SVPCHG is expected to have some impact on the demand for services at Griffith Hospital.

To determine the impact, an analysis of those specialties expected to be provided at SVPCHS was undertaken alongside an analysis of those patients electing to be treated privately at Griffith Hospital.

Analysis of 2014/15 and 2015/16 FlowInfo v16.0 data indicates that approximately 30 per cent of acute admitted activity in Griffith Hospital was chargeable - i.e. patients who elected to use their private health insurance (and smaller volumes of MVA / DVA patients).

2015 CSP modelled a 15 per cent flow to private from Griffith Hospital in endoscopy, ophthalmology, urology, gynaecology, dentistry, non-subspecialty surgery, plastics, general surgery, and minor orthopaedics. This was based on a quoted average private patient load of 10 per cent in public hospitals in Australia, plus an additional 5 per cent for flows due to increased choice and access.

This is maintained in the new CSP.

Reverse Flow of Activity from Wagga Wagga

The Griffith catchment is defined as the following LGAs:

- Bland (major centre – West Wyalong)
- Carrathool (major centre – Hillston)
- Hay (major centre – Hay)
- Lake Cargelligo portion of the Lachlan LGA
- Leeton (major centre – Leeton)
- Murrumbidgee (centres of Coleambally and Darlington Point)
- Narrandera (major centre – Narrandera)

Consultation indicated that reversing Griffith catchment flows of Orthopaedics and ENT / Head and Neck services is a priority for the District (with increasing role delineation levels in these specialties). This has been supported by analysis of flows indicating only 16 per cent of Orthopaedics admissions and 12 per cent of ENT and Head and Neck admissions at Griffith Hospital were from Griffith Catchment residents.

Griffith Catchment Residents Flows - Top 5 SRGs Flowing to Wagga Wagga (Separations), 2014/15

SR Gv50 Code And Name	Griffith	Wagga Wagga	Other Public Hospitals	Grand Total	% at Griffith
49 - Orthopaedics	184	701	286	1,171	16%
52 - Urology	411	261	149	821	50%
24 - Respiratory Medicine	621	183	586	1,390	45%
48 - ENT & Head and Neck	35	174	81	290	12%
15 - Gastroenterology	460	166	406	1,032	45%

Source: FlowInfo v16.0. Excl. private facilities. Excl. ED Only and HiTH Only.

For some of the more complex procedures, patients will still need to go to Wagga Wagga or elsewhere to access the higher level services. Therefore, not all of the activity will be able to flow back to Griffith Hospital in the future.

On the basis of the above, and consultation with MLHD planners the following has been modelled:

- A reverse flow of 70 per cent of Orthopaedics activity that is currently flowing to Wagga Wagga for Griffith catchment residents.
- A reverse flow of 70 per cent of ENT & Head and Neck activity that is currently flowing to Wagga Wagga for Griffith catchment residents.
- This will be staged - target of 40 per cent reverse flowed by 2020/21 and 70 per cent by 2025/26.
- For overnight services, the average length of stay will be applied to the reverse flowed activity for Griffith Catchment residents at Wagga Wagga, by ESRG.

It is noted that this methodology has some impact on reverse flowing a small volume of paediatric ENT services, but the largest impact is on adult services.

B.2 Maternity Services

Overnight Beds

The methodology used to calculate paediatric overnight acute beds is as follows:

- Determine activity by bed days using HealthAPP
- Apply annual bed days benchmark of 365 day per annum to activity projections
- Apply occupancy rate of 75 per cent.

Same Day Beds

The methodology used to calculate day only acute beds / bed alternatives is as follows:

- Determine activity using HealthAPP
- Apply annual benchmark of 250 day per annum to activity projections
- Apply occupancy rate of 170 per cent.

Delivery Suites

The methodology used to calculate Delivery Suite requirements is as follows:

- Determine activity by separations using the Acute Inpatient Modelling Tool for all ages for the following SRGs:

Activity	Stay Type	Percentage of Activity
Vaginal Delivery	Overnight and Day Only	100% of total activity
Caesarean Delivery	Overnight and Day Only	50% of total activity

- Apply benchmark of
  - 250 separations per delivery suite

B.2.1. Scenario Modelling Maternity Services

No scenario modelling proposed for maternity services.

B.3 Subacute Inpatient

Overnight Beds

The methodology used to calculate overnight subacute beds (rehabilitation, palliative care and maintenance) is as follows:

- Determine activity by bed days using HealthAPP
- Apply annual bed days benchmark of 365 day per annum (or termed operational days per annum) to activity projections
- Apply occupancy rate of 90 per cent.

B.3.1. Scenario Modelling Subacute Inpatient

There is no scenario modelling for subacute services. The fairly significant increase in average length of stay in HealthApp for subacute services was considered, however due to the need to increase service capability at Griffith Hospital, facilitate earlier transfers back from Wagga Wagga etc. this increase was considered appropriate.

B.4 Critical Care Unit

The methodology used to calculate Critical Care Unit beds is as follows:

- Calculate 2015/16 Intensive Care Unit / High Dependency Unit activity by utilising the "Total hours - ICU" and "Total hours - HDU" fields in FlowInfo v16.0
- Apply the projected annual growth rate in bed days for acute inpatient services to the baseline number of hours.
- Apply occupancy rate of 75 per cent to calculate beds
- The total projected Critical Care Unit beds have been deducted from the total overnight acute beds to avoid double counting.

B.4.1. Scenario Modelling Critical Care Unit

The Scenario for the Critical Care Unit is affected by the growth in adult acute inpatient services projected in the Scenario.

B.5 Paediatric Inpatient

Overnight Beds

The methodology used to calculate paediatric overnight acute beds is as follows:

- Determine activity by bed days using HealthAPP
- Apply annual bed days benchmark of 365 day per annum to activity projections
- Apply occupancy rate of 75 per cent.

Same Day Beds

The methodology used to calculate day only acute beds / bed alternatives is as follows:

- Determine activity using HealthAPP
- Apply annual benchmark of 250 day per annum to activity projections
- Apply occupancy rate of 170 per cent.

B.5.1. Scenario Modelling Paediatric Inpatient

- See adult acute inpatient scenario modelling - the reverse flow from Wagga Wagga has some impact on paediatrics (ENT services in particular).

B.6 Special Care Nursery

The methodology used to calculate Special Care Nursery Unit cots is as follows:

- Determine the number of neonates that spent time in Special Care Nursery utilising the SCN Flag and SCN Hours field in FlowInfo v16.0
- Calculate the proportion of separations and bed days by Qualified Neonates in Special Care Nursery
- Apply the same proportion to the projected activity for Qualified Neonates in HealthAPP
- Apply annual bed days benchmark of 365 day per annum to activity projections
- Apply occupancy rate of 75 per cent.

B.6.1. Scenario Modelling Special Care Nursery

No scenario modelling for Special Care Nursery.

B.7 Operating Theatres / Procedure Rooms

The methodology used to calculate Operating Theatre / Procedure Room requirements is as follows:

- Determine surgical / procedural activity by separations using HealthAPP data set for all ages (adjusting the number of separations in the Scenario)
- Apply the Victorian Health benchmark of:
  - Day Only - 1,900 surgical separations per theatre per annum (assumes 250 operational days per annum)
  - Overnight - 1,500 surgical separations per theatre per annum (assumes 365 operational days per annum)
- 2.5 Stage 1 recovery spaces per operating theatre (2 per theatre if more than two theatres are projected).

- For procedural activity in the procedure room, apply a benchmark of 2,550 procedures per procedure room (based on a Queensland Health benchmark).
- Add 10% to the same day admitted procedural activity to account for non-admitted activity utilising the procedure room.

B.7.1. Scenario Modelling Operating Theatres / Procedural Rooms

Requirements are affected by changes to flows for surgical services in the Scenario. Consideration is given to rurality and the need to consider emergency vs. elective procedures when calculating final operating room / procedure room requirements.

B.8 Renal Dialysis

Local patient data is utilised for Griffith Hospital chair-based and home peritoneal dialysis for the catchment population by age to calculate a local prevalence rate from which the projections are calculated by applying population growth to this baseline (to take into account the impact of ageing).

Assumptions to be applied to the projections to calculate activity:

- Current in-home rate applied
- 3 chair-based sessions per in-centre patient per week.
- Assumptions applied to calculate renal dialysis chairs:
- 2 available sessions per chair per day (170% occupancy applied)
- 6 days of service per week
- 52 weeks of service per year.

B.9 Chemotherapy

A cancer incidence methodology will be used to calculate projected chemotherapy activity and chair requirements in line with rapidly changing treatment regimes.

The following assumptions to be applied:

- Projected incidence sourced from Cancer Institute NSW for the LGAs in the catchment for Griffith Hospital
- 250 operational days a year
- 2 patients per chair per day.

B.9.1. Scenario Modelling Chemotherapy Services

No scenario modelling has been undertaken for chemotherapy activity or treatment spaces although additional capacity was provided to accommodate other medical infusion and transfusion services.

B.10 Emergency Department

- Projected Emergency Department presentations are sourced from HealthAPP.
- Projected Emergency Department treatment spaces are calculated utilising the *NSW Ministry of Health Emergency Department Activity Planning Guideline (Draft), April 2014.*

B.10.1. Scenario Modelling Emergency Department

No scenario modelling has been undertaken for Emergency Department activity or treatment spaces.

APPENDIX C ABORIGINAL HEALTH IMPACT STATEMENT

Murrumbidgee LHD has a higher proportion of Aboriginal people than the state with 4.1% compared to 2.5% Aboriginal population and therefore service impacts are even more pertinent. Within the District, LGAs with the highest proportions of Aboriginal people are Lake Cargelligo area 14%, Murrumbidgee Shire (10%) and Narrandera (10%) and the highest disadvantaged Aboriginal communities in MLHD were around Young, Deniliquin, Gundagai and Griffith. It is noted that Aboriginal people represent 5% of the hospitalisations for MLHD residents and 6% of preventable hospitalisations. Particular categories where Aboriginal people are "over-represented" proportionally are dialysis and mental disorders and the acute preventable hospitalisations.

The Griffith Service Plan Refresh will build upon the existing initiatives and propose infrastructure redevelopment to provide an updated facility to support the existing Aboriginal health programs in the District. It is acknowledged that barriers to service access potentiate health problems for the Aboriginal population, so at Murrumbidgee LHD, Aboriginal Health staff are located to the north, east, west and south of Wagga Wagga with outreach sites stretching to the borders of the LHD. The staff provide support by personally visiting patients in hospital and community settings, and facilitate and implement health programs throughout the district to act as the connection between the hospital and patients. These 30+ staff are both Aboriginal and non-Aboriginal, and increase the availability and access of services at all levels, not just in the hospital setting, respecting and incorporating traditional preferences. It has also been noted that 4% of the Aboriginal population are aged 65 years and over which will continue to be addressed as the non-Aboriginal ageing population increases and services shift to focus on aged care.

Consultation occurred with the Aboriginal Health unit as part of the consultation process in the development of this plan. The Aboriginal Health unit are part of the requirements of the Stage 3 and the infrastructure requirements are detailed within this document. The Aboriginal Health unit models of care and requirements are detailed in the Murrumbidgee Health Plan (2014) and a continued focus on this area and the requirements of this unit will continue through facility planning.

APPENDIX D DETAILED ACTIVITY DATA – CURRENT AND PROJECTED

D.1 Current Activity

Table 43 Griffith Hospital Top 10 SRG's by Overnight Separations

	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
27 - Non Subspecialty Medicine	622	639	678	859	794
72 - Obstetrics	680	670	733	664	723
24 - Respiratory Medicine	589	608	633	651	678
11 - Cardiology	515	583	629	703	635
54 - Non Subspecialty Surgery	469	580	614	635	554
15 - Gastroenterology	453	466	509	479	505
16 - Diagnostic GI Endoscopy	295	297	345	430	463
52 - Urology	404	490	492	462	440
21 - Neurology	234	293	305	309	421
71 - Gynaecology	239	280	396	402	364
Remaining SRG Separations Combined	1,738	1,847	1,674	1,784	1,697
Grand Total	**6,238**	**6,753**	**7,008**	**7,378**	**7,274**

Source: FlowInfo V16. Exclusions: HiTH Only, ED Only, SRGs: Chemotherapy, Renal Dialysis, Unqualified Neonates, Unallocated.

Table 44 Top 10 SRG's by Overnight Bed days

	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
27 - Non Subspecialty Medicine	2,088	2,188	2,274	2,958	2,716
24 - Respiratory Medicine	2,296	2,322	2,539	2,589	2,520
11 - Cardiology	1,582	1,685	1,723	1,799	2,086
72 - Obstetrics	1,778	1,686	1,784	1,708	1,827
15 - Gastroenterology	915	935	991	850	958
54 - Non Subspecialty Surgery	947	1,137	915	893	890
21 - Neurology	586	786	894	852	826
73 - Qualified Neonate	954	675	509	620	690
49 - Orthopaedics	638	730	527	455	498
Remaining SRGs Combined	3,505	3,641	3,881	3,929	3,840
Grand Total	**15,289**	**15,785**	**16,037**	**16,653**	**16,851**

Source: FlowInfo V16. Exclusions: Day Only Bed days, HiTH Only, ED Only, SRGs: Chemotherapy, Renal Dialysis, Unqualified Neonates, Unallocated.

Table 45 Griffith Hospital Activity by Age

	Separations					Sum of Total Bed Days				
Row Labels	2011/12	2012/13	2013/14	2014/15	2015/16	2011/12	2012/13	2013/14	2014/15	2015/16
Day only	1861	2047	2084	2229	2229	1861	2047	2084	2229	2229
0 to 4 Years	94	78	62	86	55	94	78	62	86	55
5 to 15 Years	90	75	86	66	69	90	75	86	66	69
16 to 44 Years	362	483	499	534	550	362	483	499	534	550
45 to 69 Years	701	724	800	888	889	701	724	800	888	889
70 to 84 Years	537	607	567	574	577	537	607	567	574	577
85 Years and Over	77	80	70	81	89	77	80	70	81	89
Overnight(s)	4377	4706	4924	5149	5045	15289	15785	16037	16653	16851
0 to 4 Years	523	516	432	468	448	1566	1242	1058	1202	1173
5 to 15 Years	253	272	273	264	260	498	514	512	447	496
16 to 44 Years	1360	1402	1558	1519	1463	3525	3583	4006	3828	3658
45 to 69 Years	999	1153	1240	1306	1315	3733	4048	4035	4210	4226
70 to 84 Years	901	992	997	1152	1072	4306	4510	4393	4916	4576
85 Years and Over	341	371	424	440	487	1661	1888	2033	2050	2722
Grand Total	6238	6753	7008	7378	7274	17150	17832	18121	18882	19080

Source: FlowInfo V16. Exclusions: HiTH Only, ED Only, SRGs: Chemotherapy, Renal Dialysis, Unqualified Neonates, Unallocated.

Table 46 Surgical Separations for Griffith catchment residents at Wagga Wagga Rural Referral Hospital, 2011/12 - 2015/16 by SRG and ESRG

SR Gv50 Name	ESR Gv50 Name	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016
Orthopaedics	Hip replacement/revision	64	63	55	62	53
	Knee procedures	42	20	53	50	48
	Knee replacement/revision	54	71	69	57	60
	Other orthopaedics - surgical	258	284	300	283	267
	Wrist & hand procedures incl carpal tunnel	104	96	119	125	114
ENT & Head and Neck	Head & neck surgery	1	3			
	Myringotomy w tube insertion	13	18	13	10	16
	Other procedural ENT	52	75	63	52	62
	Tonsillectomy & adenoidectomy	67	83	74	83	76
Urology	Other urological procedures	163	118	104	106	95
	TURP	23	16	13	10	7
Ophthalmology	Glaucoma & lens procedures	57	72	77	64	78
	Other eye procedures	24	24	17	28	22
Non Subspecialty Surgery	Appendicectomy	23	15	11	14	16
	Inguinal & femoral hernia procedures Age>0	19	17	16	8	13
	Other general surgery	63	68	37	54	53
	Thyroid procedures	1	10	3	5	8
Gynaecology	Abortion w D&C, aspiration curettage or hysterotomy	3	4	4	2	2
	Conisation, vagina, cervix & vulva proc	17	12	14	7	7
	Diagnostic curettage/hysteroscopy	11	9	11	16	4
	Endoscopic proc for female reproductive system	4	4	6	8	9
	Gynaecological oncology	2	1	1		2
	Hysterectomy	10	13	5	13	11
	Other gynaecological surgery	31	26	29	37	22
Upper GIT Surgery	Cholecystectomy	36	45	30	28	29
	Other upper GIT surgery	7	18	12	5	14
Plastic and Reconstructive Surgery	Maxillo-facial surgery		1	1		

	Microvascular tissue transfer/skin grafts	19	9	8	9	11
	Other plastic & reconstructive surgery	3	2	3	3	1
	Skin, subcutaneous tissue & breast procedures	36	41	54	33	28
Vascular Surgery	Other vascular surgery	33	29	36	26	29
	Vein ligation & stripping	10	9	5	3	6
Obstetrics	Caesarean delivery	29	27	30	37	30
	Vaginal delivery	3	3		1	3
Colorectal Surgery	Anal, stomal & pilonidal procedures & pilonidal procedures	4	11	6	12	15
	Colorectal surgery	23	28	16	26	15
Breast Surgery	Breast surgery	18	14	17	19	23
Renal Medicine	Other renal medicine	4	2	2		5
Neurosurgery	Other neurosurgery	7	3	5	3	5
Interventional Cardiology	Percutaneous coronary angioplasty	7	7	1	3	5
Tracheostomy	Tracheostomy or ventilation >95 hours	1	8	7	3	4
Haematology	Lymphoma and leukaemia	1	2		3	1
Respiratory Medicine	Other respiratory medicine	1		1	2	1
Rehabilitation	Rehabilitation Stroke - Overnight					1
Psychiatry - Acute	Other psychiatry				2	
Cardiothoracic Surgery	Other cardiothoracic surgery		2	1		
Grand Total		1348	1383	1329	1312	1271

Source: FlowInfo V16.1

Table 47 Procedural Separations for Griffith catchment residents at Wagga Wagga Rural Referral Hospital, 2011/12 - 2015/16 by SRG and ESRG

SR Gv50 Name	ESR Gv50 Name	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016
Diagnostic GI Endoscopy	Diagnostic colonoscopy	64	91	87	67	59
	Diagnostic gastroscopy	53	50	57	37	40
Gastroenterology	ERCP	13	22	13	26	16
	Gastroscopy	66	66	67	70	54
	Other gastroenterology	3	9	8	4	7
Respiratory Medicine	Bronchoscopy	23	31	38	22	26
	Other respiratory medicine	4	7	3	10	7
Urology	Cystourethroscopy	58	38	47	30	28
	Other urological procedures	9	5	8	3	2
Non Subspecialty Surgery	Other general surgery	29	39	33	26	19
Dentistry	Dental extractions & restorations	8	6	18	10	13
Interventional Cardiology	Invasive cardiac inves proc	19	13	14	2	7
Rheumatology	Rheumatology	7		8	2	3
Cardiology	Other cardiology		1	2		3
Psychiatry - Acute	Other psychiatry					1
Neurology	Other neurology		1			1
Immunology and Infections	Infectious diseases		2	1	1	
Non Subspecialty Medicine	Injuries - non-surgical				1	
Palliative Care	Palliative Care - Cancer Related				1	
Grand Total		356	381	404	312	286

Source: FlowInfo V16.1

Table 48 Griffith Catchment Population Orthopaedic Activity at WWRRH Hospital

	2011/ 2012		2012/ 2013		2013/ 2014		2014/ 2015		2015/ 2016	
ESRG	Separations	Bed days	Separations	Bed days	Separations	Bed days	Separations	Bed days	Separations	Bed days
Other orthopaedics - surgical	258	898	284	840	300	1091	283	892	267	850
Other orthopaedics - non-surgical	146	201	118	148	138	199	142	166	134	183
Wrist & hand procedures incl carpal tunnel	104	133	96	123	119	149	125	149	114	128
Knee replacement/ revision	54	282	71	379	69	342	57	280	60	287
Hip replacement/ revision	64	485	63	408	55	438	62	377	53	368
Injuries to limbs - medical	78	168	56	79	51	122	46	138	49	85
Knee procedures	42	45	20	20	53	91	50	66	48	51
Hip fracture	2	5	4	13	3	16	5	16	4	6
Total	748	2,217	712	2,010	788	2,448	770	2,084	729	1,958

Source: FlowInfo V16

Table 49 Griffith Catchment Population Orthopaedic Activity at WWRRH Hospital by Age

Age Group 3 Categories	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016
Separations					
16 to 64 Years	365	341	382	407	372
65 Years and Over	228	235	247	223	218
0 to 15 Years	126	107	120	104	109
Bed days					
16 to 64 Years	807	666	780	800	785
0 to 15 Years	153	131	198	154	136
65 Years and Over	1161	1133	1359	976	959
Total Separations	**719**	**683**	**749**	**734**	**699**
Total Bed Days	**2121**	**1930**	**2337**	**1930**	**1880**

Source: FlowInfo V16

Table 50 Griffith Catchment ENT Flows to WWRRH by Age (Surgical, Procedural and Medical)

Age Group 3 Categories	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016
0 to 15 Years	93	114	111	107	108
16 to 64 Years	47	59	48	54	51
65 Years and Over	14	21	9	8	19
16 to 64 Years	64	68	52	68	62
0 to 15 Years	95	118	112	109	108
65 Years and Over	43	38	23	14	36
Total Separations	**154**	**194**	**168**	**169**	**178**
Total Bed Days	**202**	**224**	**187**	**191**	**206**

Table 51 Griffith Catchment Surgical/Procedural Flows to Private Hospitals (NSW)

AR-DRG 80 Medical Surgical Procedural	Values	SR Gv50 Name	2015/2016
Procedural	**Total Bed Days**	Interventional Cardiology	142
		Respiratory Medicine	56
		Urology	55
		Diagnostic GI Endoscopy	54
		Gastroenterology	40
		Rheumatology	16
		Dentistry	16
		Non Subspecialty Surgery	12
	Total Separations	Interventional Cardiology	62
		Non Subspecialty Surgery	12
		Diagnostic GI Endoscopy	43
		Respiratory Medicine	21
		Dentistry	16
		Rheumatology	16
		Gastroenterology	25
		Urology	52
Procedural Total Bed Days			**391**
Procedural Total Separations			**247**

AR-DRG 80 Medical Surgical Procedural	Values	SR Gv50 Name	2015/2016
Surgical	**Total Bed Days**	Orthopaedics	1872
		Non Subspecialty Surgery	572
		Urology	571
		Neurosurgery	544
		Cardiothoracic Surgery	461
		Vascular Surgery	461
		Interventional Cardiology	358
		ENT & Head and Neck	299
		Obstetrics	296
		Gynaecology	255
		Upper GIT Surgery	232
		Breast Surgery	122
		Colorectal Surgery	109
		Plastic and Reconstructive Surgery	81
		Ophthalmology	27
		Respiratory Medicine	13
		Pain Management	4
		Haematology	3
	Total Separations	Non Subspecialty Surgery	140
		Obstetrics	55
		Cardiothoracic Surgery	35
		Ophthalmology	26
		ENT & Head and Neck	228
		Orthopaedics	577
		Haematology	3
		Pain Management	2
		Neurosurgery	83
		Plastic and Reconstructive Surgery	36
		Colorectal Surgery	28
		Respiratory Medicine	1
		Interventional Cardiology	77
		Upper GIT Surgery	94
		Gynaecology	124
		Urology	263

AR-DRG 80 Medical Surgical Procedural	Values	SR Gv50 Name	2015/2016
		Breast Surgery	66
		Vascular Surgery	42
Surgical Total Bed Days			**6280**
Surgical Total Separations			**1880**
Grand Total Bed Days			**6671**
Grand Total Separations			**2127**

Source: FlowInfo V16.1

Table 52 Griffith Catchment Surgical/Procedural Flows to Private Day Procedure Units (NSW)

AR-DRG 80 Medical Surgical Procedural	Values	SR Gv50 Name	2015/2016
Procedural	**Total Bed Days**	Diagnostic GI Endoscopy	519
		Gastroenterology	362
		Dentistry	172
		Urology	150
		Non Subspecialty Surgery	147
		Interventional Cardiology	84
		Rheumatology	6
	Total Separations	Interventional Cardiology	84
		Dentistry	172
		Non Subspecialty Surgery	147
		Gastroenterology	362
		Rheumatology	6
		Diagnostic GI Endoscopy	519
		Urology	150
Procedural Total Bed Days			**1440**
Procedural Total Separations			**1440**
Surgical	**Total Bed Days**	Ophthalmology	625
		Orthopaedics	218
		Gynaecology	138
		Plastic and Reconstructive Surgery	81
		ENT & Head and Neck	55
		Urology	45
		Non Subspecialty Surgery	45
		Vascular Surgery	31

AR-DRG 80 Medical Surgical Procedural	Values	SR Gv50 Name	2015/2016
		Interventional Cardiology	30
		Colorectal Surgery	15
		Breast Surgery	13
		Upper GIT Surgery	3
		Haematology	1
		Qualified Neonate	1
	Total Separations	Non Subspecialty Surgery	45
		Ophthalmology	625
		Colorectal Surgery	15
		Orthopaedics	218
		Gynaecology	138
		Plastic and Reconstructive Surgery	81
		Interventional Cardiology	30
		Qualified Neonate	1
		ENT & Head and Neck	55
		Upper GIT Surgery	3
		Breast Surgery	13
		Urology	45
		Haematology	1
		Vascular Surgery	31
Surgical Total Bed Days			**1301**
Surgical Total Separations			**1301**
Grand Total Bed Days			**2741**
Grand Total Separations			**2741**

Source: FlowInfo V16.1

Table 53 Griffith Hospital ED by Triage Category

Triage Category	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
1	113	87	95	78	103
2	1244	1285	1369	1302	1422
3	7220	7673	7130	6948	7378
4	9303	8655	8791	8673	9259
5	1307	988	1181	1479	1745
N\A	-	2	-	9	-
Grand Total	19187	18690	18566	18489	19907

Source: FlowInfo V16

Table 54 Chemotherapy Separations at Griffith Hospital

	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
Separations	2	13	37	48	42

Source: FlowInfo V16. SRG Chemotherapy only. Exclusions: HiTH Only, ED Only.

Table 55 Renal Dialysis Separations at Griffith Hospital

	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
Separations	2443	2986	3320	3732	3847

Source: FlowInfo V16. SRG Renal Dialysis only. Exclusions: HiTH Only, ED Only.

Table 56 Griffith Catchment Medical flows to WWRRH

Values	SR Gv50 Name	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016
Separations	Non Subspecialty Medicine	150	145	151	157	216
	Psychiatry - Acute	127	141	117	190	196
	Orthopaedics	219	175	184	182	178
	Cardiology	128	140	105	113	102
	Neurology	101	123	96	104	101
	Non Subspecialty Surgery	90	81	79	69	96
	Respiratory Medicine	115	103	110	147	95
	Gastroenterology	112	94	75	77	95
	Urology	76	82	90	90	86
	Obstetrics	71	88	91	63	76
	Psychiatry - Non Acute	6	7	9	36	39
	Rehabilitation	51	48	41	35	36
	ENT & Head and Neck	26	23	23	27	31
	Ophthalmology	23	15	24	23	29
	Qualified Neonate	26	30	28	34	24
	Drug and Alcohol	11	17	15	19	21
	Upper GIT Surgery	25	18	18	16	19
	Renal Medicine	16	14	13	16	18
	Haematology	26	33	33	29	16
	Vascular Surgery	16	22	7	12	16
	Neurosurgery	14	10	14	15	13
	Rheumatology	8	6	6	5	13

Values	SR Gv50 Name	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016
	Plastic and Reconstructive Surgery	17	9	11	8	11
	Gynaecology	15	5	16	12	9
	Endocrinology	13	10	12	8	8
	Palliative Care	1	1	1	5	5
	Dermatology	1	6	5	7	4
	Immunology and Infections	17	11	3	4	4
	Pain Management	4	6	4	5	2
	Diagnostic GI Endoscopy	5	7	7	3	2
	Breast Surgery	6	2	2	1	1
	Extensive Burns	3		1		
	Maintenance		2			
	Unallocated			1		
Bed Days	Non Subspecialty Surgery	174	160	183	138	210
	Obstetrics	139	164	203	151	181
	Cardiology	292	375	331	264	282
	Ophthalmology	59	22	42	58	42
	Diagnostic GI Endoscopy	5	7	7	3	2
	Orthopaedics	341	237	304	308	264
	Endocrinology	26	31	39	42	29
	Pain Management	54	10	6	16	2
	Extensive Burns	6		1		
	Palliative Care	1	1	34	9	15
	Gynaecology	19	5	18	14	12
	Plastic and Reconstructive Surgery	28	10	15	11	20
	Immunology and Infections	17	41	19	4	4
	Psychiatry - Acute	1441	1137	1689	3004	2562
	Neurology	400	385	320	404	357
	Psychiatry - Non Acute	752	311	534	1813	2415
	Non Subspecialty Medicine	434	370	446	389	541
	Qualified Neonate	147	176	119	213	193
	Dermatology	1	11	13	16	4
	Rehabilitation	839	1100	672	760	683
	ENT & Head and Neck	66	37	37	32	57

Values	SR Gv50 Name	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016
	Renal Medicine	86	59	94	52	47
	Haematology	71	140	74	81	38
	Respiratory Medicine	360	331	282	359	318
	Neurosurgery	65	31	39	28	26
	Rheumatology	20	46	23	13	57
	Drug and Alcohol	14	26	25	30	31
	Unallocated			1		
	Maintenance		26			
	Upper GIT Surgery	91	59	56	55	62
	Gastroenterology	262	215	174	200	366
	Urology	169	230	203	172	215
	Breast Surgery	14	10	4	1	1
	Vascular Surgery	54	116	28	47	66
Total Separations		**1519**	**1474**	**1392**	**1512**	**1562**
Total Bed Days		**6447**	**5879**	**6035**	**8687**	**9102**

Source: FlowInfo V16

Table 57 Griffith Catchment Cardiology flows by Hospital of Treatment 2015/16

Values	LHD Of Hospital Name	Hospital	2015/2016
Bed Days	Murrumbidgee Total		**3507**
		Griffith	1971
		Leeton	394
		Narrandera	359
		Wagga Wagga (excl. Coll. Care)	306
		Wyalong	250
		Hillston	60
		Hay	48
		Lake Cargelligo	38
		Wagga Wagga (Coll. Care)	31
		Temora	25
		Cootamundra	9
		Deniliquin	7
		Lockhart	5
		Jerilderie	2
		Barham/Koondrook	1
		Junee	1
	Other Private Total		**385**
	St. Vincent's Health Network Total		**150**
	Other Total		**118**
Separations	Murrumbidgee Total		**1301**
		Junee	1
		Lake Cargelligo	25
		Cootamundra	3
		Leeton	183
		Griffith	651
		Lockhart	1
		Hillston	28
		Narrandera	129
		Barham/Koondrook	1
		Temora	17
		Hay	32
		Wagga Wagga	8

Values	LHD Of Hospital Name	Hospital	2015/2016
		(Coll. Care)	
	Other Private Total		**142**
	St. Vincent's Health Network Total		**17**
	Other Total		**51**
Total Bed Days			**4160**
Total Separations			**1511**

Source: FlowInfo V16.1

Table 58 Griffith Catchment Respiratory Medicine flows by Hospital of Treatment 2015/16

Values	LHD Of Hospital Name		2015/2016
Bed Days	Murrumbidgee Total		**5633**
		Griffith	2454
		Leeton	780
		Narrandera	688
		Wyalong	685
		Wagga Wagga (excl. Coll. Care)	475
		Hay	231
		Lake Cargelligo	100
		Hillston	94
		Wagga Wagga (Coll. Care)	73
		Temora	29
		Deniliquin	22
		Junee	2
	Other Private Total		**427**
	St. Vincent's Health Network Total		**110**
	Other Total		**237**
Separations	Murrumbidgee Total		**1450**
		Lake Cargelligo	33
		Leeton	199
		Griffith	660
		Narrandera	158
		Hillston	34
		Temora	11

		Deniliquin	4
		Wagga Wagga (Coll. Care)	12
		Junee	2
		Wagga Wagga (excl. Coll. Care)	129
		Hay	69
		Wyalong	139
		Lake Cargelligo	33
	Other Private Total		**188**
	St. Vincent's Health Network Total		**18**
	Other Total		**75**
Total Bed Days			**6407**
Total Separations			**1731**

Source: FlowInfo V16.1

Table 59 Stroke Activity for Griffith Catchment by Hospital of Treatment 2015/16

LHD Of Hospital Name	Hospital Name	Total Separations	Total Bed Days
Murrumbidgee	Griffith	57	181
	Wagga Wagga(excl. Coll. Care)	25	117
	Leeton	15	29
	Narrandera	11	51
	Other MLHD	16	57
Murrumbidgee Total		**124**	**435**
Other		4	12
Grand Total		**128**	**447**

Source: FlowInfo V16.1

Table 60 Psychiatric Separations for Griffith Catchment by Hospital of Treatment

Hospital Name	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
Wagga Wagga(excl. Coll. Care)	133	148	126	228	236
Private(excl DPCs) Hospitals	69	64	45	86	135
Griffith	91	102	95	123	91
Narrandera	62	55	57	54	62
Leeton	51	54	46	68	62
Other MLHD	50	25	40	53	44
Other States and Territories	2	7	6	9	9
Other NSW	79	104	68	25	43
Grand Total	**537**	**559**	**483**	**646**	**682**

Source: FlowInfo V16.1

Table 61 Psychiatric bed days for Griffith Catchment by Hospital of Treatment

Hospital Name	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
Wagga Wagga(excl. Coll. Care)	2193	1448	2223	4845	5045
Private(excl DPCs) Hospitals	1133	900	881	944	733
Orange	604	889	159	631	394
Narrandera	171	113	158	105	196
Griffith	177	162	168	165	157
Other MLHD	240	182	213	265	133
Other States and Territories	2	167	65	96	96
Other NSW	681	1301	1387	203	496
Grand Total	5201	5162	5254	7254	7250

Source: FlowInfo V16.1

Table 62 Griffith Hospital and Griffith Community Health Activity excluding privately referred activity

Excludes Case Conference and Case Management & Planning

Facility Code & Name	Program	Service Unit	2012/13	2013/14	2014/15	2015/16	2016/17
M221 - Griffith Community Health	Population Health Services	M221-HealthPromotion-AsthmaEducation-N-1	22				
		M221-HealthPromotionDiabetesEducation-N-3			8		
		M221-HealthPromotionGeneral-1	152				
		M221-HealthPromotionOT-OT-1			42		
		M221-HealthPromotion-PulmonaryRehabilitationEducation-Psy-1			10		
		M221-HealthPromotion-Schools-N-1			28		
		M221-HealthPromotion-SpeechPathology-SP-1			4		
		M221HealthPromotion-TaiChi-N-1	1				
		M221-Immunisation-NonIdentified-SBVP-1	1539	1215	1058	1514	1074
	Population Health Services Total		1714	1215	1150	1514	1074
	Primary and Community Based Services	M221-Audiology-Schools-N-2	13				
		M221-C&FEarlyChildhood-2	2792	3081	3699	3735	3351
		M221-C&F-MothersGroup-N-2			152	255	391
		M221-Child Protection Counselling Services P (CPCS)	67				
		M221-Child Protection Counselling Services SW (CPCS)	731	273		264	381
		M221-Child&Family School Health	65	63	186	37	
		M221-Counselling	230	220	278	225	255
		M221-DomicilliaryNursing General-N-2	327	641	822		
		M221-FamilyPlanning-N-2	11	7	4		
		M221-GeneralOutpatientsCH-N-2	293	357	51		
		M221-Griffith Sexual Health-Dr-2				1	
		M221-Griffith Sexual Health-N-2		183	184	225	210
		M221-Immunisation-Identified-2	1014	1250	1323	1322	1419
		M221-PathologyCollection-N-2	82	4			
		M221-SchoolHearing-N-2	8				
		M221-SexualAssaultCounselling-SW-2	417	516	786	686	716
		M221-SexualHealth-2	161	162			
		M221-SpeechPathologyGeneral Community-SP-2	1052	970	1030	1061	1007
		M221-StaffHealth-N-3	249	47	275	455	
		M221-STEPSProgram-N-2	166	225	261	276	141
		M221-TB Immunisations-N-1	34		13		
		M221-TRACSTransport-N-2	58				

Facility Code & Name	Program	Service Unit	2012/13	2013/14	2014/15	2015/16	2016/17
		M221-Transport-AgedCareDayCare-AH-2	14			48	
		M221-Womens Health-N-2	200	372	305		
	Primary and Community Based Services Total		7984	8371	9369	8590	7871
	Aboriginal Health Services	M221-AboriginalHealth-48HourFollowUp-2A	66	244	170	338	268
		M221-AboriginalHealth-AuntyJeansProgram-2A	29	160		34	
		M221-AboriginalHealth-CoreofLife-2A	188				
		M221-AboriginalHealth-Cultural Awareness-AHW-2A	9				
		M221-AboriginalHealth-DirectClinic-2A	102	252	370	919	1595
		M221-AboriginalHealth-Education&Training-2A	55	99	26	100	64
		M221-AboriginalHealth-HealthPromotionGeneral-1	131	215	72	13	838
		M221-AboriginalHealth-HealthPromotionOtitisMedia/Hearing-1	21				
		M221-AboriginalHealth-Midwifery-2A		77	840	239	248
		M221-AboriginalHealth-Mothers&BabiesGroup	18	194	2	85	
		M221-AboriginalHealth-OtitisMedia-2A		325	724	372	466
		M221-AboriginalHealth-SmokingCessation-2A	63	28	93	591	500
		M221-AboriginalHealth-Social&EmotionalSupport-AHW-2A	851	1542	3007	3221	3874
		M221-AboriginalHealth-Transport-2	4	32	3	9	27
	Aboriginal Health Services Total		1537	3168	5307	5921	7880
	Drug and Alcohol	M221-D&A Services General-AH-2F			1156	802	308
		M221-D&AServices General	764	627			
	Drug and Alcohol Total		764	627	1156	802	308
	Dental - Adult	M221-Dental Vouchers Contracted Emergency-2G	62	145	157	212	905
		M221-DentalAdultClinics	2506	2664	2904	2302	1344
		M221-DentalChildServices	5338	5532	4651	4259	4062
		M221-DentalEducation-Adult-2G	0	0	16		
		M221-DentalEducation-Child-DT-2H	0		198	163	293
		M221-DentalSpecialistAdult	59	67	60	37	0
		M221-DentalVouchersContractedDentures-2G	169	206	176	95	325
	Dental - Adult Total		8134	8614	8162	7068	6929
	Dental - Child	M221-DentalEducationChild-DT-2H	0	0			
	Dental - Child Total		0	0			
	Outpatient Care Services	M221-AsthmaEducation-N-3	164	168	225	297	162
		M221-C&FEnuresis-N-3	12	14	15	19	16
		M221-DiabetesEducation-N-3	327				
		M221-DiabetesMedicalClinic-N-3	219	58			

Facility Code & Name	Program	Service Unit	2012/13	2013/14	2014/15	2015/16	2016/17
		M221-DiabetesMellitus-N-3		482	484	575	511
		M221-GeneralOutpatientsCH-N-3	13				
		M221-GestationalDiabetes-N-3	202	382	458	433	285
		M221-Griffith HIV Inf Dis Nurse-N-3		56	41	35	60
		M221-Griffith HIV Inf Dis-Dr-3		14	25	13	24
		M221-Leprosy(Hansen'sDisease)TreatmentInactive&ContactTracking-N-3	6	10	24		
		M221-McGrathFoundationBreastCare	17				
		M221-McGrathFoundationBreastCareCurative-N-3	240	328	351		
		M221-McGrathFoundationBreastCare-N				542	609
		M221-McGrathFoundationBreastCarePalliative-N-9	1	19	4		
		M221-Nursing-PostAcuteCare-3				1743	1618
		M221-OccupationTherapyGeneral-OT-3			48		
		M221-OncologyExcludingChemotherapy-Curative-N-3	41	15	1		
		M221-Pathology Community Health-MDT-3	430	396	371	532	562
		M221-Respiratory-N-3	6	28	113	294	152
		M221-SexualHealthHIV/AIDS-N-3	24	44			
		M221-TB Treatment Active Clinic				114	272
		M221-TB TreatmentInactive&ContactSceening-N-3	370	605	1332	56	25
		M221-TB TreatmentInactive&ContactTracking-N-3			212	669	139
	Outpatient Care Services Total		2072	2619	3704	5322	4435
	Mental Health - Child and Adolescent Care	M221-Mental Health Community Adult/General-SW-8C	36	11	536		
		M221-MentalHealthCommunityAdult/General-8C	646	743	863	1291	
		M221-MentalHealthCommunityAdult/General-8C-NGO(PRA)	1	0	464		
		M221-MentalHealthCommunityAdult/General-Psy-8C		115	108		
		M221-MentalHealthCommunityAdult/General-S-8C			12		
		M221-MentalHealthCommunityChild/Adolescent-8B	806	1467	1414	1342	
		M221-MentalHealthCommunityOlderPeople-8D	468	643	438	430	
	Mental Health - Child and Adolescent Care Total		1957	2979	3835	3063	
	Rehabilitation and Extended Care Services	M221-AdmittedPatientServiceContacts-TRACS-9				2	13
		M221-AgedCare Day Care-AH-9	3176	3959			
		M221-AgedCare-ACAT-N-9	1518	1750	1601	1362	379
		M221-AgedCare-Geriatritian-S-9	58	68	81	128	138

Facility Code & Name	Program	Service Unit	2012/13	2013/14	2014/15	2015/16	2016/17
		M221-ConnectingCareRehabilitation-N-9	77	83		238	203
		M221-DomicilliaryNursing DVACommunityHomeNursingContract-N-9	22				
		M221-DomicilliaryNursing HACC-N-9	911	1550	1346		
		M221-HACC-OccupationTherapy-OT-9	389	657	866	855	970
		M221-NationalRespiteServicesforCarers-N-9	108	913	10		
		M221-Nursing-CHSP-N-9				1283	1622
		M221-PalliativeCare-N-9	1660	588	34		
		M221-PalliativeCareOnCallAfterHours-N-9	239	167	132	166	153
		M221-PalliativeCareOutreach-9				172	492
		M221-PalliativeCareSpecialist-9		744	1097	1796	1061
		M221-RehabRespiratory-N-9	33	59	70	308	39
		M221-SlowstreamRehabActivities-N-9	801	1907	2824	1622	1885
		M221-SpeechPathology Rehab-SP-9			7		
		M221-SteppingOn-9				72	66
		M221-TRACSLuncheonGroup-N-1			48	443	316
		M221-TRACS-N-9	1086	1027	298	2644	1811
		M221-TRACSPhysiotherapyGroup-9			140	1090	1105
		M221-TRACS-TaiChiClass-AHA-2	15			353	436
	Rehabilitation and Extended Care Services Total		10093	13472	8554	12534	10689
M221 - Griffith Community Health Total			34255	41065	41237	44814	39186
R205 - Griffith Base Hospital	Population Health Services	R205-HealthPromotionAntenatal-M-1	288	290	276		
		R205-HealthPromotionASET-N-1	92	105	13		
	Population Health Services Total		380	395	289		
	Primary and Community Based Services	R205-AntenatalEducationClasses				768	844
		R205-DieteticsGeneralHospital-DTN-2	618	663	558	719	621
		R205-JIRT-OAHS-2	49				
		R205-SWISH-T-2	64	353	87	281	455
	Primary and Community Based Services Total		731	1016	645	1768	1920
	Aboriginal Health Services	R205-AboriginalHealth Direct Clinic-AHW-2A	142				
		R205-AboriginalHealth Transport-AHW-2A	3				
		R205-AboriginalHealthAdmittedPtContact-M&B	6				
		R205-AboriginalHealthCulturalAwareness-2A	19				
		R205-AboriginalHealthEducation&Training-2A	89				

Facility Code & Name	Program	Service Unit	2012/13	2013/14	2014/15	2015/16	2016/17
		R205-AboriginalHealthMidwifery-2A	35				
		R205-AboriginalHealth-OtherGroupPrograms	71				
		R205-AboriginalHealthSocial &Emotional Well Being-2A	164				
	Aboriginal Health Services Total		529				
	Outpatient Care Services	R205-AntenatalCareClinic-3	2443	2433			
		R205-CardiacOutpatients-N-3			1700	1432	1798
		R205-ClinicalMeasurement-N-3	774	924			
		R205-ECG-N-3	164	176			
		R205-EndocrineConsultations-MSS-3	0	0			
		R205-ENT-S-3	0				
		R205-FractureClinic-3	0	0	0		
		R205-General surgery-3	105	132	5	0	162
		R205-GynaecologyAssist-N-3	118	206			
		R205-Gynaecology-Specialist-3	0	256	0	0	162
		R205-Haematology Clinic-S-3	0	0			
		R205-HomeEnteralNutrition-3				1947	3599
		R205-Hospital in the Home Intermittent - Non admitted-3	862	872	873	463	655
		R205-MaternityOutpatients-M-3	625	294	793	1066	825
		R205-MedicalOncologyConsults-N-3			1034	777	486
		R205-MedicalOncologyTreatments-N-3			1564	1623	1829
		R205-Nephrology-3	799	225			
		R205-Neurology-S-3	0	0	0	0	0
		R205-OccupationalTherapy Hospital Outpatients-OT-3	120	151	49	72	150
		R205-OncologyChemotherapyCurative	322	361			
		R205-OncologyExcludingChemo Curative	1091	1205			
		R205-Ophthalmology-S-3	0				
		R205-Orthopaedics-S-3	0	0			
		R205-OutpatientClinicNurse-N-3			1801	1559	2072
		R205-OutpatientClinicNurseWoundManagement-N-3	1267	1410			
		R205-PacemakerClinic-N-3	0	0			
		R205-PaediatricMedicine-S-3				0	55
		R205-PaediatricSurgery-S-3	0	0	0	0	
		R205-PathologyEmergencyDepartment-MDT-4	14318	14788	16283	16348	21164
		R205-PathologyGeneral-MDT-3	471	46	141	103	75
		R205-PharmacyOutpatients-P-3				1268	1481
		R205-Physicians Clinic-S-3	0	0	0	0	12
		R205-PhysiotherapyConnectingCare-P-3	563	36			

Facility Code & Name	Program	Service Unit	2012/13	2013/14	2014/15	2015/16	2016/17
		R205-PhysiotherapyHospitalOutpatient-Phy-3	2292	1738	2373	2760	1986
		R205-PhysiotherapyOutreach-P-3	300	428			
		R205-Podiatry-Pod-3	101	81			
		R205-Pre-anaesthetic clinic-3	0	0	314	321	220
		R205-PregnancyCareDoctorLed-MSS-3			338	281	247
		R205-PregnancyCareMidwifeLed-M-3			1651	1727	1921
		R205-PrenatalCareWard-M-3	964	1001			
		R205-Radiology Ultrasound-MDT-3	2				
		R205-RadiologyEmergencyDepartment-MDT-4	3043	2974	3074	3196	4488
		R205-RadiologyGeneral-MDT-3	0	2	16	189	92
		R205-RadiologyUltrasound-MDT-3	283	357	431	365	525
		R205-RenalDialysis Peritoneal Dialysis HomeDelivered-3				130	
		R205-RenalOutpatients-N-3				705	771
		R205-RenalOutreach-N-3			1181	1035	287
		R205-Respiratory-3	782	768			
		R205-Rheumatology-S-3	0	0	0	0	26
		R205-Radiology Computerised Tomography-3					195
	Outpatient Care Services Total		31809	30864	33621	37367	45283
	Rehabilitation and Extended Care Services	R205-ASET-N-9	569	407	385	514	561
		R205-Balance&FallsClass-P-9				9	27
		R205-CardiacRehabilitation-N-9	398	326	431	488	546
		R205-OncologyChemotherapyPalliative	510	405			
		R205-OncologyExcludingChemoPalliative	669	801			
		R205-Rehabilitation Clinic-9	132	156	172	273	171
	Rehabilitation and Extended Care Services Total		2278	2095	988	1284	1305
R205 - Griffith Base Hospital Total			35727	34370	35543	40419	48508
Grand Total			69982	75435	76780	85233	87694

Source: Non-Admitted NAPOOS data provided by MLHD

Table 63 Griffith Hospital and Griffith Community Health Privately Referred Activity

Facility Code & Name	Program	Service Unit	2012/13	2013/14	2014/15	2015/16	2016/17
M221 - Griffith Community Health							
	Dental - Adult	M221-Dental Vouchers Contracted Emergency-2G				176	283
		M221-DentalAdultClinics					

Facility Code & Name	Program	Service Unit	2012/ 13	2013/ 14	2014/ 15	2015/ 16	2016 / 17
		M221-DentalChildServices					
		M221-DentalEducation-Adult-2G					
		M221-DentalEducation-Child-DT-2H					
		M221-DentalSpecialistAdult					96
		M221-DentalVouchersContractedDentures-2G				133	147
	Dental - Adult Total					309	526
		M221-Pathology Community Health-MDT-3		6			1
	Outpatient Care Services Total			6			1
		M221-TRACSPhysiotherapyGroup-9					
		M221-TRACS-TaiChiClass-AHA-2					
M221 - Griffith Community Health Total				6		309	527
R205 - Griffith Base Hospital							
	Outpatient Care Services						
		R205-EndocrineConsultations-MSS-3	244	370			
		R205-ENT-S-3	120				
		R205-FractureClinic-3	109	213	47		
		R205-General surgery-3	1753	1917	1452	1768	1495
		R205-GynaecologyAssist-N-3					
		R205-Gynaecology-Specialist-3	2377	2721	1459	1472	1130
		R205-Haematology Clinic-S-3	441	425			
		R205-HomeEnteralNutrition-3					122
		R205-Nephrology-3	364	443			
		R205-Neurology-S-3	137	163	188	208	221
		R205-OncologyChemotherapyCurative	90	107			
		R205-OncologyExcludingChemo Curative	555	621			
		R205-Ophthalmology-S-3	164				
		R205-Orthopaedics-S-3	275	147			
		R205-PacemakerClinic-N-3	265	210			
		R205-PaediatricMedicine-S-3				561	885
		R205-PaediatricSurgery-S-3	170	187	139	152	
		R205-PathologyGeneral-MDT-3					2771
		R205-Physicians Clinic-S-3	34	320	198	300	309
		R205-Pre-anaesthetic clinic-3	382	509	231	319	465
		R205-RadiologyEmergencyDepartment-MDT-4				10	52
		R205-RadiologyGeneral-MDT-3	8035	9346	10058	9104	7335
		R205-RadiologyUltrasound-MDT-3	1112	1935	2712	1422	1355

Facility Code & Name	Program	Service Unit	2012/ 13	2013/ 14	2014/ 15	2015/ 16	2016 / 17
		R205-Respiratory-3	868	846			
		R205-Rheumatology-S-3	191	154	230	243	188
		R205-Radiology Computerised Tomography-3					141
	Outpatient Care Services Total		17686	20634	16714	15559	16469
	Rehabilitation and Extended Care Services						
		R205-OncologyChemotherapyPalliative	269	88			
		R205-OncologyExcludingChemoPalliative	211	271			
		R205-Rehabilitation Clinic-9	223	235	196	158	116
	Rehabilitation and Extended Care Services Total		703	594	196	158	116
R205 - Griffith Base Hospital Total			18389	21228	16910	15717	16585
Grand Total			18389	21234	16910	16026	17112

Source: Non-Admitted NAPOOS data provided by MLHD

D.2 Projected Acute Activity by SRG

Table 64 Base Case Acute Activity by SRG, Griffith Hospital

		Day Only								Overnight							
		Separations				Bed days				Separations				Bed days			
	SRG	2015	2021	2026	2031	2015	2021	2026	2031	2015	2021	2026	2031	2015	2021	2026	2031
Adult 16+	11 - Cardiology	81	114	117	126	81	114	117	126	614	609	626	688	1,694	2,001	1,974	2,121
	27 - Non Subspecialty Medicine	47	62	71	67	47	62	71	67	604	522	554	634	2,065	2,439	2,487	2,831
	24 - Respiratory Medicine	22	24	22	27	22	24	22	27	459	469	502	553	1,973	2,300	2,358	2,496
	72 - Obstetrics	77	67	70	62	77	67	70	62	585	547	532	514	1,704	1,497	1,368	1,219
	54 - Non Subspecialty Surgery	212	232	237	251	212	232	237	251	350	385	401	422	747	1,092	1,112	1,161
	15 - Gastroenterology	130	185	196	205	130	185	196	205	257	305	333	358	718	1,088	1,148	1,192
	21 - Neurology	35	91	106	110	35	91	106	110	246	259	269	302	814	1,180	1,151	1,195
	44 - Upper GIT Surgery	16	11	13	8	16	11	13	8	160	148	160	167	478	436	468	485
	49 - Orthopaedics	48	44	48	51	48	44	48	51	132	144	157	163	400	878	975	960
	52 - Urology	323	364	382	406	323	364	382	406	115	138	146	156	304	450	471	486
	71 - Gynaecology	226	190	188	195	226	190	188	195	174	151	150	152	351	303	275	253
	46 - Neurosurgery	5	5	4	5	5	5	4	5	87	87	102	111	317	458	523	552
	17 - Haematology	135	120	136	147	135	120	136	147	58	71	73	88	155	295	293	361
	22 - Renal Medicine	11	10	6	9	11	10	6	9	69	66	79	78	197	295	353	353
	16 - Diagnostic GI Endoscopy	374	372	388	392	374	372	388	392	52	61	56	67	196	218	195	237
	14 - Endocrinology	1	1	1	1	1	1	1	1	78	50	55	62	352	195	220	255
	43 - Colorectal Surgery	10	10	9	10	10	10	9	10	59	56	54	59	325	391	395	435
	81 - Drug and Alcohol	10	9	14	11	10	9	14	11	60	60	58	56	119	145	145	133

		Day Only								Overnight							
	82 - Psychiatry - Acute	4	8	9	7	4	8	9	7	58	31	34	40	103	113	117	114
	12 - Interventional Cardiology									32	34	35	34	167	119	112	103
	48 - ENT & Head and Neck	6	10	4	10	6	10	4	10	21	25	20	32	34	86	66	97
	51 - Plastic and Reconstructive Surgery	25	21	32	28	25	21	32	28	27	34	31	29	83	105	112	106
	53 - Vascular Surgery	6	9	10	7	6	9	10	7	30	26	32	28	91	133	188	164
	26 - Pain Management									14	12	17	21	23	44	65	77
	25 - Rheumatology	5	7	7	6	5	7	7	6	15	20	19	18	58	97	83	74
	18 - Immunology and Infections	61	86	92	98	61	86	92	98	17	14	15	15	65	48	43	46
	13 - Dermatology	4	3	3	1	4	3	3	1	17	16	19	13	54	71	85	48
	41 - Breast Surgery	12	17	14	18	12	17	14	18	12	12	12	12	34	36	34	34
	50 - Ophthalmology	183	200	226	249	183	200	226	249	7	6	7	11	18	25	30	38
	99 - Unallocated	1	1	1	1	1	1	1	1	4	4	4	4	34	34	34	34
	42 - Cardiothoracic Surgery		3		1		3		1	1	1	1	1	11	11	11	11
	47 - Dentistry	8	9	7	5	8	9	7	5	2	3	1	-	5	6	2	-
	62 - Extensive Burns			1				1									
	63 - Tracheostomy									3	3	-	-	50	85	-	-
Child 0-15	24 - Respiratory Medicine	9	9	10	7	9	9	10	7	161	186	191	206	302	391	398	423
	27 - Non Subspecialty Medicine	22	29	36	33	22	29	36	33	186	181	197	200	336	332	363	353
	73 - Qualified Neonate	2	2	2	-	2	2	2	-	131	151	149	138	620	924	909	845
	15 - Gastroenterology	12	10	17	13	12	10	17	13	80	93	93	93	109	167	165	173
	54 - Non Subspecialty Surgery	17	26	29	21	17	26	29	21	56	60	60	66	88	117	112	123
	21 - Neurology	2	4	7	6	2	4	7	6	26	24	21	20	35	48	41	39
	49 - Orthopaedics	3	7	9	5	3	7	9	5	18	14	20	16	20	38	50	39

	Day Only								Overnight							
51 - Plastic and Reconstructive Surgery	14	15	15	20	14	15	15	20	11	13	11	14	21	29	23	29
17 - Haematology	4	8	11	13	4	8	11	13	9	6	8	11	22	37	68	69
52 - Urology	18	17	20	19	18	17	20	19	6	10	8	10	11	19	14	20
82 - Psychiatry - Acute	-	-	-	-	-	-	-	-	7	8	7	9	8	33	30	36
14 - Endocrinology	1	2	2	2	1	2	2	2	3	8	8	9	11	22	24	25
13 - Dermatology	1	1	2	1	1	1	2	1	6	7	6	8	15	17	15	19
11 - Cardiology	2	2	2	2	2	2	2	2	6	6	6	6	9	9	9	9
48 - ENT & Head and Neck	5	3	2	3	5	3	2	3	4	7	5	5	7	12	9	9
18 - Immunology and Infections	1	1	1	-	1	1	1	-	5	5	5	5	13	13	13	13
81 - Drug and Alcohol	-	-	-	-	-	-	-	-	5	9	7	5	5	12	8	7
71 - Gynaecology		2				2			2	3	3	4	2	6	7	9
72 - Obstetrics									1	2	4	4	1	8	16	16
62 - Extensive Burns									2	1	1	2	2	1	1	3
44 - Upper GIT Surgery									2	2	2	2	5	5	5	5
22 - Renal Medicine	13	13	13	13	13	13	13	13	2	2	2	2	3	3	3	3
26 - Pain Management									1	1	1	1	2	2	2	2
16 - Diagnostic GI Endoscopy	3	1	2	4	3	1	2	4	1	1	1	1	1	1	1	1
41 - Breast Surgery			1				1									
47 - Dentistry	22	26	22	28	22	26	22	28								
46 - Neurosurgery	-	-	1	-	-	-	1	-	1	1	-	-	1	2	-	-
50 - Ophthalmology	1	2	1	2	1	2	1	2								
25 - Rheumatology		3	1	1		3	1	1								
43 - Colorectal Surgery				2				2								

	Day Only								Overnight							
Grand Total	**2,230**	**2,468**	**2,620**	**2,709**	**2,230**	**2,468**	**2,620**	**2,709**	**5,151**	**5,170**	**5,370**	**5,725**	**15,387**	**18,925**	**19,180**	**19,942**

Source: NSW Ministry of Health HealthApp Analytics Tool
Exclusions: SRGs Chemotherapy, Renal Dialysis Unqualified Neonates, Flags ED Only, HiTH Only

Table 65 Scenario Acute Activity by SRG, Griffith Hospital

		Day Only								Overnight							
		Bed days				Separations				Bed days				Separations			
	SRG	2015	2021	2025	2031	2015	2021	2025	2031	2015	2021	2025	2031	2015	2021	2025	2031
Adult 16+	11 - Cardiology	81	114	117	126	81	114	117	126	1,694	2,001	1,974	2,121	614	609	626	688
	12 - Interventional Cardiology									167	119	112	103	32	34	35	34
	13 - Dermatology	4	3	3	1	4	3	3	1	54	71	85	48	17	16	19	13
	14 - Endocrinology	1	1	1	1	1	1	1	1	352	195	220	255	78	50	55	62
	15 - Gastroenterology	130	185	196	205	130	185	196	205	718	1,088	1,148	1,192	257	305	333	358
	16 - Diagnostic GI Endoscopy	374	316	330	333	374	316	330	333	196	185	166	201	52	52	48	57
	17 - Haematology	135	120	136	147	135	120	136	147	155	295	293	361	58	71	73	88
	18 - Immunology and Infections	61	86	92	98	61	86	92	98	65	48	43	46	17	14	15	15
	21 - Neurology	35	91	106	110	35	91	106	110	814	1,180	1,151	1,195	246	259	269	302
	22 - Renal Medicine	11	10	6	9	11	10	6	9	197	295	353	353	69	66	79	78
	24 - Respiratory Medicine	22	24	22	27	22	24	22	27	1,973	2,300	2,358	2,496	459	469	502	553
	25 - Rheumatology	5	7	7	6	5	7	7	6	58	97	83	74	15	20	19	18
	26 - Pain Management									23	44	65	77	14	12	17	21

	Day Only								Overnight							
27 - Non Subspecialty Medicine	47	62	71	67	47	62	71	67	2,065	2,439	2,487	2,831	604	522	554	634
41 - Breast Surgery	12	17	14	18	12	17	14	18	34	36	34	34	12	12	12	12
42 - Cardiothoracic Surgery	-	3	-	1	-	3	-	1	11	11	11	11	1	1	1	1
43 - Colorectal Surgery	10	10	9	10	10	10	9	10	325	391	395	435	59	56	54	59
44 - Upper GIT Surgery	16	11	13	8	16	11	13	8	478	436	468	485	160	148	160	167
46 - Neurosurgery	5	4	3	4	5	4	3	4	317	389	445	469	87	74	87	94
47 - Dentistry	8	8	6	4	8	8	6	4	5	5	2	-	2	3	1	-
48 - ENT & Head and Neck	6	14	13	17	6	14	13	17	34	113	115	155	21	43	52	68
49 - Orthopaedics	48	93	151	150	48	93	151	150	400	1,493	2,131	1,981	132	271	410	404
50 - Ophthalmology	183	170	192	212	183	170	192	212	18	21	26	32	7	5	6	9
51 - Plastic and Reconstructive Surgery	25	18	27	24	25	18	27	24	83	89	95	90	27	29	26	25
52 - Urology	323	309	325	345	323	309	325	345	304	383	401	413	115	117	124	133
53 - Vascular Surgery	6	9	10	7	6	9	10	7	91	133	188	164	30	26	32	28
54 - Non Subspecialty Surgery	212	197	201	213	212	197	201	213	747	928	945	987	350	327	341	359
62 - Extensive Burns	-	-	1	-	-	-	1	-								
63 - Tracheostomy									50	85	-	-	3	3	-	-
71 - Gynaecology	226	162	160	166	226	162	160	166	351	258	234	215	174	128	128	129
72 - Obstetrics	77	67	70	62	77	67	70	62	1,704	1,497	1,368	1,219	585	547	532	514
81 - Drug and Alcohol	10	9	14	11	10	9	14	11	119	145	145	133	60	60	58	56
82 - Psychiatry - Acute	4	8	9	7	4	8	9	7	103	113	117	114	58	31	34	40
99 - Unallocated	1	1	1	1	1	1	1	1	34	34	34	34	4	4	4	4

		Day Only								Overnight							
Child 0-15	11 - Cardiology	2	2	2	2	2	2	2	2	9	9	9	9	6	6	6	6
	13 - Dermatology	1	1	2	1	1	1	2	1	15	17	15	19	6	7	6	8
	14 - Endocrinology	1	2	2	2	1	2	2	2	11	22	24	25	3	8	8	9
	15 - Gastroenterology	12	10	17	13	12	10	17	13	109	167	165	173	80	93	93	93
	16 - Diagnostic GI Endoscopy	3	1	2	4	3	1	2	4	1	1	1	1	1	1	1	1
	17 - Haematology	4	8	11	13	4	8	11	13	22	37	68	69	9	6	8	11
	18 - Immunology and Infections	1	1	1	-	1	1	1	-	13	13	13	13	5	5	5	5
	21 - Neurology	2	4	7	6	2	4	7	6	35	48	41	39	26	24	21	20
	22 - Renal Medicine	13	13	13	13	13	13	13	13	3	3	3	3	2	2	2	2
	24 - Respiratory Medicine	9	9	10	7	9	9	10	7	302	391	398	423	161	186	191	206
	25 - Rheumatology	-	3	1	1	-	3	1	1								
	26 - Pain Management									2	2	2	2	1	1	1	1
	27 - Non Subspecialty Medicine	22	29	36	33	22	29	36	33	336	332	363	353	186	181	197	200
	41 - Breast Surgery	-	-	1	-	-	-	1	-								
	43 - Colorectal Surgery	-	-	-	2	-	-	-	2								
	44 - Upper GIT Surgery									5	5	5	5	2	2	2	2
	46 - Neurosurgery	-	-	1	-	-	-	1	-	1	2	-	-	1	1	-	-
	47 - Dentistry	22	26	22	28	22	26	22	28								
	48 - ENT & Head and Neck	5	19	33	32	5	19	33	32	7	13	15	10	4	7	8	6
	49 - Orthopaedics	3	24	41	37	3	24	41	37	20	78	123	111	18	36	59	55
	50 - Ophthalmology	1	2	1	2	1	2	1	2								

	Day Only								Overnight							
51 - Plastic and Reconstructive Surgery	14	15	15	20	14	15	15	20	21	29	23	29	11	13	11	14
52 - Urology	18	17	20	19	18	17	20	19	11	19	14	20	6	10	8	10
54 - Non Subspecialty Surgery	17	26	29	21	17	26	29	21	88	117	112	123	56	60	60	66
62 - Extensive Burns									2	1	1	3	2	1	1	2
71 - Gynaecology	-	2	-	-	-	2	-	-	2	6	7	9	2	3	3	4
72 - Obstetrics									1	8	16	16	1	2	4	4
73 - Qualified Neonate	2	2	2	-	2	2	2	-	620	924	909	845	131	151	149	138
81 - Drug and Alcohol	-	-	-	-	-	-	-	-	5	12	8	7	5	9	7	5
82 - Psychiatry - Acute	-	-	-	-	-	-	-	-	8	33	30	36	7	8	7	9
Grand Total	**2,230**	**2,346**	**2,575**	**2,646**	**2,230**	**2,346**	**2,575**	**2,646**	**15,387**	**19,209**	**20,055**	**20,669**	**5,151**	**5,207**	**5,562**	**5,899**

Source: NSW Ministry of Health HealthApp Analytics Tool
Exclusions: SRGs Chemotherapy, Renal Dialysis Unqualified Neonates, Flags ED Only, HiTH Only

Table 66 Base Case Stroke Activity at Griffith, Leeton, Narrandera and WWRR Hospitals

Row Labels	2011	2015	2021	2026	2031
Griffith					
Episodes	35	52	53	52	60
Bed Days	171	260	315	282	298
Leeton					
Episodes	7	8	5	4	6
Bed Days	61	55	35	25	34
Narrandera					

Episodes	9	4	6	5	6
Bed Days	71	6	38	29	32
Wagga Wagga(CC)					
Episodes	1	1	0	0	1
Bed Days	11	7	0	0	6
Total Episodes	**52**	**65**	**64**	**61**	**73**
Total Bed Days	**314**	**328**	**388**	**336**	**370**

Source: NSW Ministry of Health HealthApp Analytics Tool

APPENDIX E WORKFORCE OVERVIEW

Griffith Health Service
Workforce Overview
August 2018



NSW GOVERNMENT Health
Murrumbidgee
Local Health District

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Introduction

The Griffith Health Service Workforce Overview forms a key component of the Griffith Health Service Plan.

The Workforce Overview is informed by and integrated with Murrumbidgee LHD's Strategic Plan 2013-2018, the NSW State Health Plan Towards 2021, Health Professionals Workforce Plan 2012-2022 and the current Griffith Health Service Services Statement.

Griffith is a major centre within the MLHD. It is the second largest clinical site in the LHD. While the catchment area of the Griffith Health Service varies across services, for planning projection purposes it supports the LGAs of Hillston, Lake Cargelligo and Leeton.

The delivery of effective, comprehensive and responsive health care services requires the integration of acute, non-acute, ambulatory, community and primary health services to meet the health care needs of the overall population. Addressing rising demand for health care, driven by an ageing population, and increasing chronic and complex health conditions, requires the delivery of new models of care in a re-focussed and re-visioned facility.

The Griffith Health Service Workforce Plan will be developed in two stages:

- Workforce Overview: identifying key workforce characteristics and trends to provide information to support strategic workforce planning; and following completion of the service plan,
- Strategic Workforce Plan: outlining projected workforce needs, identifying any critical capability gaps and workforce strategies to enable the Griffith Health Service to achieve the Service Plan.

Workforce Characteristics and Data

The following information provides an overview of the workforce and outlines a range of trends in the composition of the Griffith Health Service workforce.

- The period of time the FTE statistics are reported on within this document will be referred to as the reference period. The reference period refers to the average FTE usage over the first 6 weeks of the financial year 2018. This represents the first 3 fortnightly pays for the financial year 2018. All quantitative FTE and headcount data within this document refers to FTE and headcount usage within the reference period unless stated otherwise.
- FTE refers to the actual usage of staff over this period. In the following analysis staff were identified utilising in scope cost centres. There are 67 cost centres within the Griffith Health Service that incurred FTE activity within the reference period.
- No Visiting Medical Officers (VMO's) were utilised within the Griffith Health Service cost centres during the data reference period.
- Some key highlights of the Griffith Health Service workforce include:
- During the reference period of the report 386.04 FTE were costed to the Griffith Health Service
- 39% are part time workers
- 43% are full time workers
- 10% casually employed
- 8% are agency staff
- 1.55% identified as Aboriginal or Torres Strait Islander
- 23% are 55 years age or older
- By occupation group, nurses are by far the largest component of the Griffith Health Service workforce representing 51 per cent of the workforce. 43 per cent of the workforce work full time. They are predominantly female (81 per cent) and the average age is 45 years. The workforce is ageing, with 23 per cent over 55 years of age. 28 per cent are under 35 years of age.

The below figures show the total FTE utilised by Treasury occupational description and FTE by service grouped during the reference period

Figure 1 FTE by Treasury Group

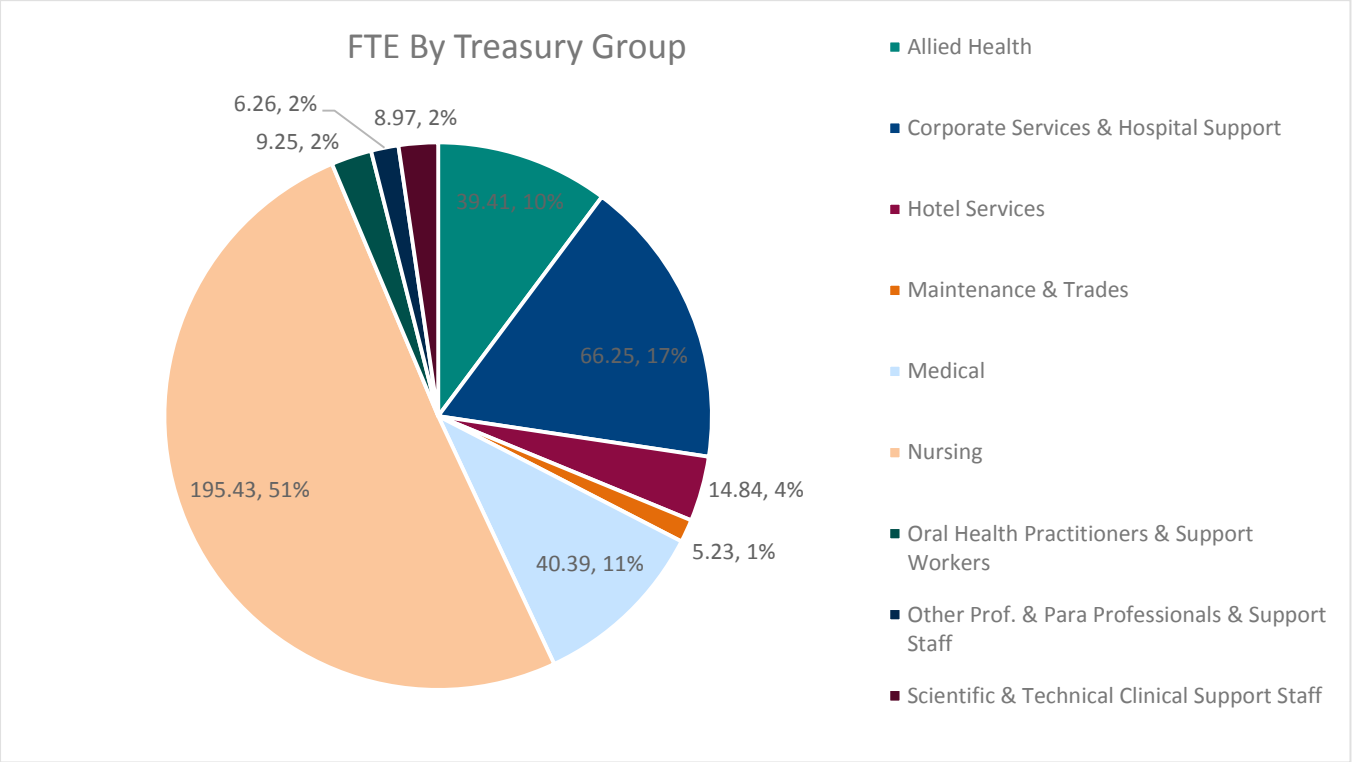


Figure 2 FTE by Services

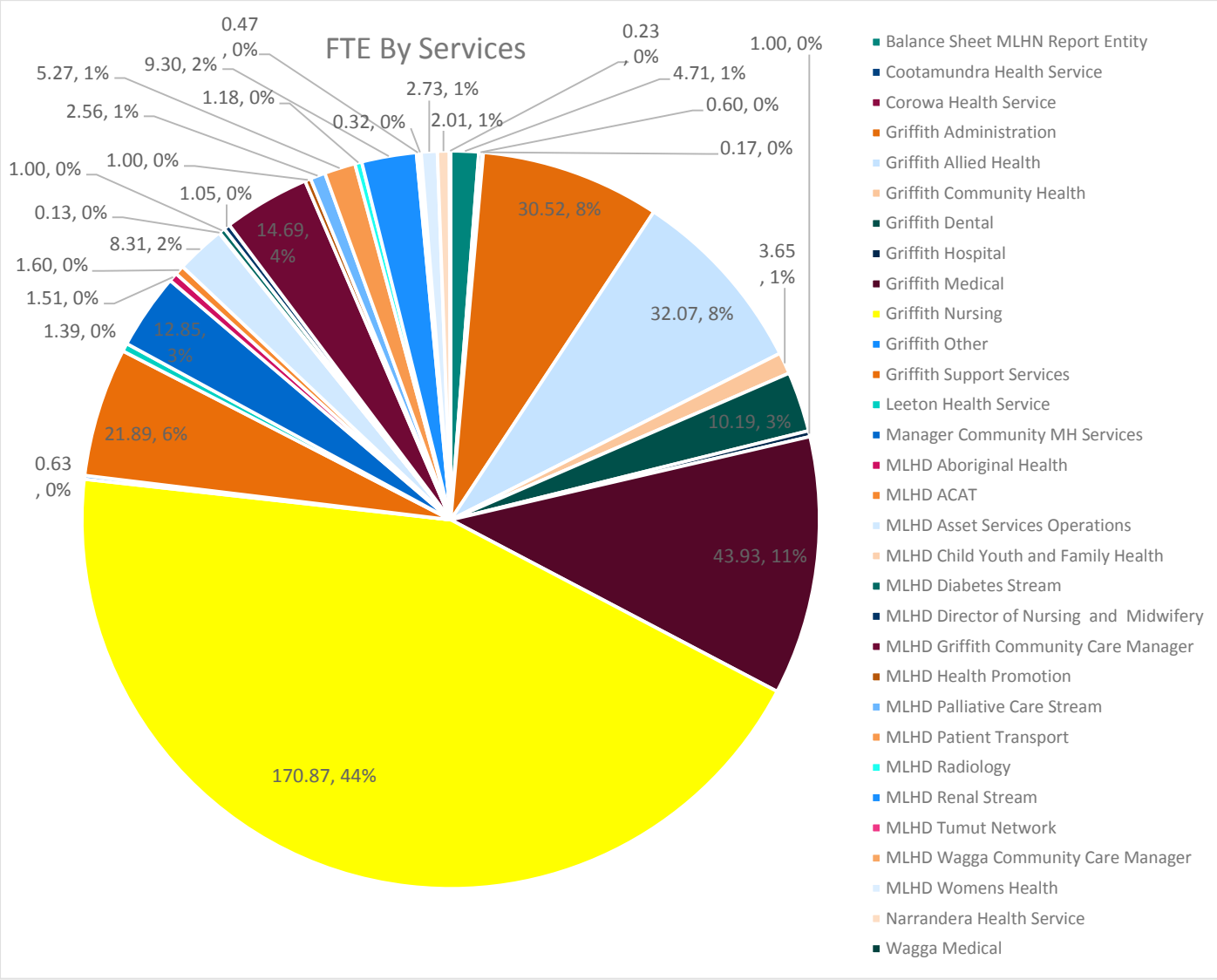


Table 1 FTE by Service

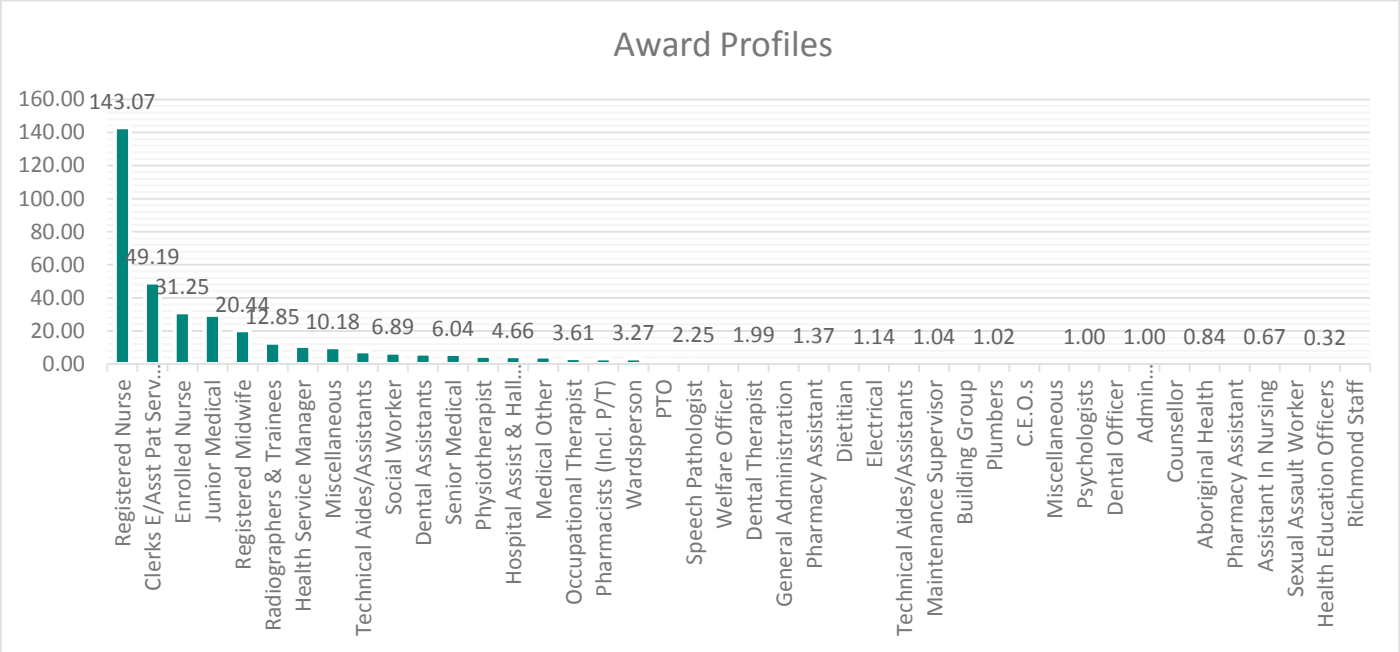
Service	FTE
Staff On LSL During Period	4.71
Cootamundra Health Service	0.60
Corowa Health Service	0.17
Griffith Administration	30.52
Griffith Allied Health	32.07
Griffith Community Health	3.65
Griffith Dental	10.19
Griffith Hospital	1.00
Griffith Medical	43.93

Griffith Nursing	170.87
Griffith Other	0.63
Griffith Support Services	21.89
Leeton Health Service	1.39
Manager Community MH Services	12.85
MLHD Aboriginal Health	1.51
MLHD ACAT	1.60
MLHD Asset Services Operations	8.31
MLHD Child Youth and Family Health	0.13
MLHD Diabetes Stream	1.00
MLHD Director of Nursing and Midwifery	1.05
MLHD Griffith Community Care Manager	14.69
MLHD Health Promotion	1.00
MLHD Palliative Care Stream	2.56
MLHD Patient Transport	5.27
MLHD Radiology	1.18
MLHD Renal Stream	9.30
MLHD Tumut Network	0.47
MLHD Wagga Community Care Manager	0.32
MLHD Women's Health	2.73
Narrandera Health Service	2.01
Wagga Medical	0.23
Grand Total	386.04

Award Profiles

Registered Nurses represent the largest component of the workforce comprising 37.1 per cent of the total paid FTEs in the reference period. The second largest occupation grouping are Clerical, Patient Services staff making up just 12.7 per cent of the workforce.

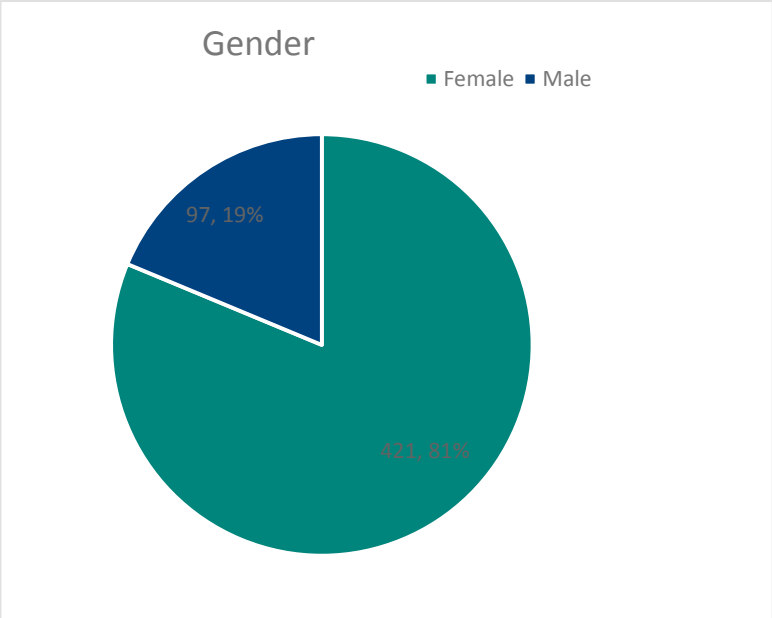
Figure 3 FTE by Award Profile



Gender

80.9 per cent of the workforce is female, the largest portion of male employees are in the medical occupation group; males represent 63 per cent of this group.

Figure 4 FTE by Gender



Gender	Count
Female	421
Male	97
Grand Total	518

Workforce Age

The average age of the Griffith Health Service workforce is 45 years. This is consistent with the average of the overall NSW Health Service (44 years) and the NSW Public Service workforce (45 years). The age profile is consistent across professional groupings, most significantly, the youngest average age is 39 within the Medical and Allied Health staff and the oldest group are Maintenance and Trades and Scientific & Technical groups at an average of 50 years. Medical staff are an average 9 years older than all MLHD medical staff.

Figure 5 Average Age Griffith Health Service and MLHD

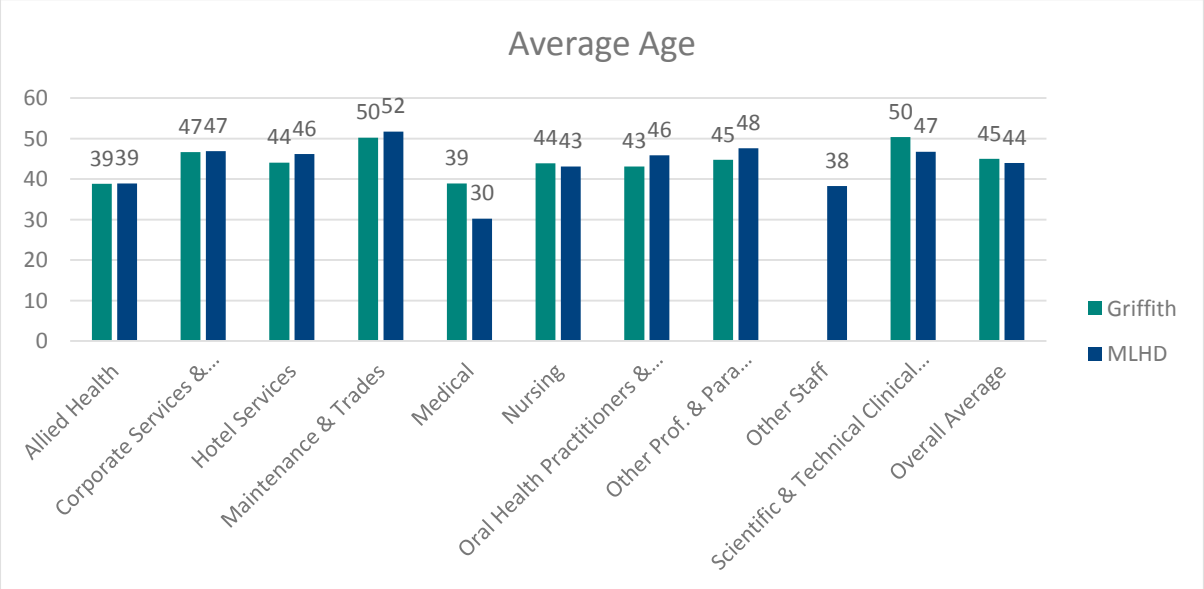
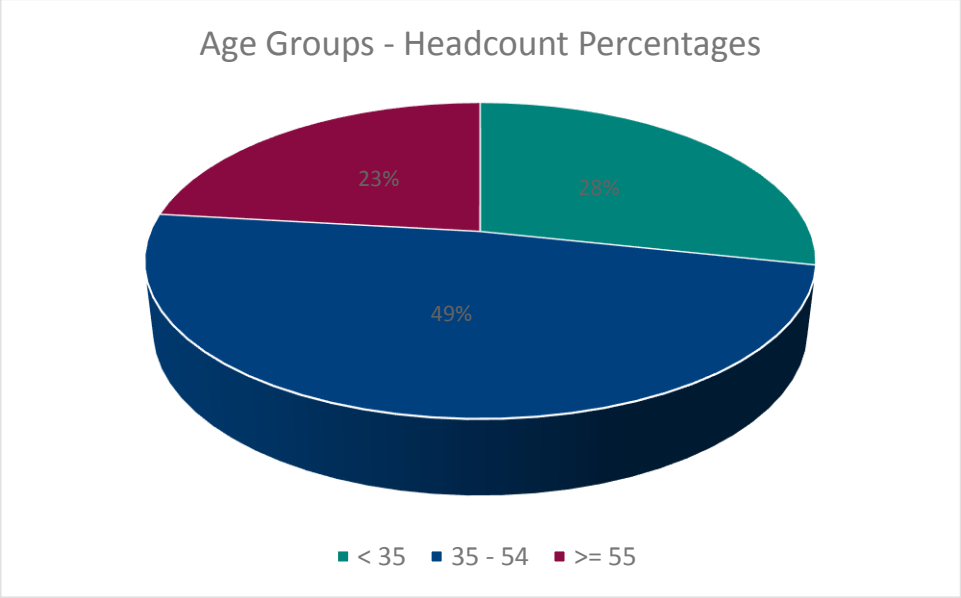


Figure 6 Age Groups Headcount Percentages



Vacancies

Sourced from the Position Detail Extract (report from the MoH SMRS Workforce payroll system) there are 434.67 FTE that are budgeted against Griffith Health Service cost centres.

321.29 FTE of the 434.67 FTE is filled by non-casual staff. The remaining variance of 113.38 FTE is either vacant or occupied by casual staff.

A vacancy represents a position that is not contracted to a full time or part time staff member. A proportion of the current vacancies may be occupied with casual staff. It may be economically advantageous to permanently maintain certain positions as casual. This decision is based on the fluctuating FTE demand of the position.

Table 2 FTE by Treasury Group

Treasury Group	Budgeted FTE	Contracted (NON-CASUAL) FTE	Vacancy
Allied Health	55.59	31.04	24.55
Corporate Services	72.15	62.57	9.58
Nursing	209.42	165.99	43.43
Other Professional	8.35	4	4.35
Scientific & Technical	11.1	9.42	1.68
Medical	46.79	19.43	27.36
Hotel Services	11.18	11.26	-0.08
Maintenance & Trades	5	5	0
Oral Health	15.09	12.58	2.51
Grand Total	434.67	321.29	113.38

Leave Management

Annual leave balances are not currently meeting the NSW Government target of 228 hours (30 days) maximum per FTE.

106 staff have excessive leave as at August 2018 (FY2018 FN03). This represents 25% of the total employees eligible for annual leave (full time and part time staff). Nursing workforce has 2,592 of excess leave days. Overall, MLHD's excess leave

is just below the NSW Health State average. Significant efforts have been made to reduce excess leave, including implementation of a local excess leave policy, leave management plans and more regular reporting of excess leave by cost centre.

In total there are 4,238 days of excess leave owing.

Performance Management

The MLHD online performance development system indicates 40.9 per cent of the workforce has a current performance review plan. This represents eligible full time and part time staff. While this does not meet the NSW Health target for all permanent employees to have a current performance plan in place, there has been a significant improvement from 20 per cent of employees with a performance plan in 2015.

Organisational Culture

The People Matter employee survey provides insight to the views of employees working for Griffith Health Service. The Survey report includes an Employee Engagement Index, a measure of respondent's commitment to the organisation and facility.

People Matter defines engagement as the employees' willingness to invest their personal effort in the success of the organisation, going beyond satisfaction.

The following questions were identified in the 2016 People Matter Survey result as being most aligned to Employee Engagement. The engagement level is positive and provides a reasonably strong foundation for the future.

Table 3 Employee Engagement

ENGAGEMENT	67% RESPONSE SCALE	AGREEMENT %	MURRUMBIDGEE LOCAL HEALTH DISTRICT	SECTOR
Q7o. I would recommend my organisation as a great place to work	19 44 27 8	63%	62%	60%
Q7p. I am proud to tell others I work for my organisation	20 55 16 7	75%	69%	68%
Q7q. I feel a strong personal attachment to my organisation	19 51 21	70%	65%	64%
Q7r. My organisation motivates me to help it achieve its objectives	13 44 30 11	57%	59%	55%
Q7s. My organisation inspires me to do the best in my job	16 44 26 12	59%	60%	55%

KEY: Strongly Agree | Agree | Neither agree nor disagree | Disagree | Strongly Disagree

63 per cent, 212 employees responded to the survey providing an overall engagement index of 67 per cent. People Matter 2017 will provide an important update to levels of engagement at Griffith, this information will be used to inform the Griffith Workforce Plan. The 2017 results were publically released mid-September 2017.

Workforce Issues

Development of the Workforce Plan will provide Murrumbidgee LHD with a clear direction to develop organisational capability to meet both the emerging needs identified within the Griffith Health Service Services Statement and future needs of the organisation.

MLHD has identified the following key workforce issues to be further explored in the development of the Workforce Plan:

Attraction and Retention of Skilled Workforce

MLHD's capacity to attract and retain skilled employees is critical to maintaining a capable and responsive workforce. Shortages of experienced health professionals in regional and rural NSW impacts the LHD's capacity to fill vacancies.

Furthermore, the impending wave of retirements in 5 – 9 years in parts of the workforce places significant emphasis on the need for Griffith Health Service to implement workforce strategies to enhance the workforce capacity. These strategies are anticipated to include:

- Streamlining and simplifying the recruitment processes to improve responsiveness to filling identified vacancies
- Developing manager's skills in recruitment and selection of employees
- Implementing a structured and planned process for succession planning and talent development
- Ensuring workforce planning is integrated with local service planning at all levels
- Continuing to develop recruitment marketing strategies, including articulating the Employee Value Proposition (EVP), strengthening MLHD's brand awareness with passive candidates and integrating the EVP into marketing activities and campaigns
- Harnessing the existing workforce through effective employee engagement strategies and leadership development to ensure a positive and healthy workplace culture

Identify and manage potential skill shortages in identified areas

Griffith Health Service faces shortages in particular areas of the workforce (such as experienced Registered Nurses and Midwives, medical officers, Adult Mental Health Clinicians and allied health professionals (physiotherapists). Strategies are needed to address specialist skill shortages and to retain those currently employed with the health service.

Consideration will be given to the main workforce issues currently identified:

- High level of part time and temporary employees and potential fragmentation of service delivery
- The impending wave of retirements that will occur in 5 – 9 years
- Increased provision of services to Aboriginal communities is identified as an important but significant challenge for Griffith Health Service
- There are reportedly shortages of appropriately qualified and/or experienced Aboriginal health workers and therefore it is anticipated recruitment may be difficult
- Changes to the model of care for maternity, although opportunity to recruit direct entry Midwives for Griffith Health Service is possible and this talent pool is currently an area of focus
- Overall, the existing Griffith Oral health workforce is stable. Supply of dental officers can be challenging with the increase in training places available both locally and within metropolitan cities
- The impending retirement of a small group of experienced dental officers' located in the rural sites may create challenges for the LHD
- Registered nurses are in short supply, there are a number of vacancies considered 'hard to fill' with particular concerns around midwives and ED experienced nurses
- MLHD has had success in recruiting overseas trained nurses however they require additional assistance to integrate into the workforce. The LHD continues to focus on this channel of potential talent for positions which are re-advertised
- For allied health, the supply issue is related to the level of skill and experience of applicants. Data indicates that experienced professionals are in scare supply due in part to the attraction of private sector work
- The MLHD allied health workforce is young and predominantly female. Higher levels of maternity leave and subsequent temporary back-fill leads to a less stable workforce
- Increased utilisation of allied health assistants (AHAs), particularly in rural areas can enable essential services to be delivered closer to home leading to improved employee satisfaction and patient outcomes.

Next Stage

In developing a detailed Workforce Plan for the whole of Griffith Health Service, further information gathering and analysis is necessary, including:

Consultation across operational, medical, senior leaders and important groups such as Community health, mental health, nursing, allied and population health and service planning

Critical benchmarking data to gain a better insight to the workforce's challenges, risks and current performance compared to peers

Exploring workforce redesign, improving innovation and change management capacity

Review of the Workforce Service function, scope, capability and stakeholder needs

Further analysis of workforce supply and projected workforce need within the Griffith Health Service Redevelopment following finalisation of the service plan.

Table 4 Griffith Health Service In scope Cost Centres

Facility / Service	Cost Centre
Griffith Dental Cluster	917367 : DENTAL CLINICS
Griffith Health Service	917001 : Griffith Surgical Ward 1
	917004 : MEDICAL WARD
	917009 : MATERNITY
	917011 : CHILDRENS WARD
	917013 : Griffith Ambulatory Rehabilitation Service
	917014 : REHABILITATION WARD
	917018 : Griffith Oncology
	917024 : ICU/HDU
	917032 : OPERATING THEATRES
	917033 : DAY ONLY
	917035 : Griffith Accident & Emergency Medical
	917036 : ACCIDENT & EMERGENCY
	917041 : SURGERY - GENERAL
	917042 : Griffith Medical Doctors
	917043 : Griffith Anaesthetics Medical
	917046 : VMO PHYSICIANS
	917047 : MEDICAL O&G
	917050 : PAEDIATRIC SERVICE
	917119 : SPECIALIST CLINIC
	917187 : Griffith ASET
	917203 : NEWBORN HEARING PROGRAM (SWISH)
	917211 : Griffith HITH
	917358 : Griffith Chronic & Complex Care
	917489 : Griffith Transitional Aged Care
	917625 : RADIOLOGY
	917628 : RHEUMATOLOGY
	917632 : PHARMACY
	917636 : Sterilising Services
	917638 : MED RECORDS/CLINICAL INFORMATION
	917640 : DIETETICS
	917645 : WARDSMEN
	917654 : GP Procedural Training
	917665 : NURSING ADMINISTRATION
	917687 : Casual Nursing

Facility / Service	Cost Centre
	917689 : NURSING PATIENT SERVICES
	917699 : Griffith Cluster Management
	917700 : PHYSIOTHERAPY
	917703 : OCCUPATIONAL THERAPY
	917735 : EMET Emergency Medical Education & Training
	917758 : GEN ADMIN EXECUTIVE
	917761 : TOTAL QUALITY MANAGEMENT (TQM)
	917762 : MEDICAL ADMINISTRATION
	917810 : OCCUP HEALTH & SAFETY
MLHD Aboriginal Health	984330 : MLHD Alternative Birthing Suites
MLHD Aged Care	917390 : Griffith ACAT Geriatric Assessment
MLHD Assets Services Manager	917869 : Griffith Maintenance Services
MLHD Diabetes Stream	917642 : Griffith Diabetes Educators
MLHD Griffith Community Care Manager	917128 : Griffith Community Primary Health Care
	917160 : Griffith McGrath Breast Care Nurse
	917339 : Griffith Sexual Hlth Sve - AIDS
	917401 : Griffith CHSP SERVICES
	917407 : HACC OCCUPATIONAL THERAPY
MLHD Health Promotion	984484 : MLHD Health Promotion
MLHD Mental Health Services	917176 : Griffith Consumer & Carer
	917517 : M/HLTH - COMMUNITY
	917531 : Aged Mental Health
	917534 : M/HLTH - CHILD & ADOLESCENT
	917541 : ED LIAISON ENHANCEMENT
	917545 : Administration - Mental Health
MLHD Palliative Care Stream	917158 : Palliative Care
MLHD Patient Flow Unit	917802 : GRIFFITH PATIENT TRANSPORT
MLHD Radiology	984625 : Medical Imaging Support
MLHD Renal Stream	917016 : RENAL SERVICES
MLHD Women's Health	917154 : SEXUAL ASSAULT SERVICE
	917198 : PANOC THERAPY SERVICES
Narrandera Cluster	923665 : NURSING ADMINISTRATION